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A DYNAMIC PERSPECTIVE OF INTERNAL FIT IN CORPORATE VENTURING

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EXECUTIVE SUMMARY

Managers of corporate parents and their ventures have long been faced with the question of how closely to tie the parent and venture. A close connection may enable a venture to capitalize on the competencies and resources of the parent. However, venture autonomy could prevent corporate inertia and bureaucracy from constraining venture growth.

The lack of consensus on this issue leads us to the first of two complementary research questions that we address in this paper: "What is the effect of internal strategic fit between a corporate parent and its venture on venture performance?" We suggest that a tight fit is positively associated with venture performance because of the venture's access to its parent's resources.

Managers and researchers alike have often observed that growing enterprises are dynamic entities. In the case of corporate ventures, this implies that the relationship between parent and venture evolves over time. Our second research question directly addresses this issue by asking: "Does the relationship between a corporate parent and its venture(s) evolve over time, and if so, how?"

We identify two dimensions of the fit between corporate parents and their ventures: relational and economic. A relational fit reflects organizational culture and structure, while an economic fit is a function of the needs of the venture and the resources of the parent. We develop a series of hypotheses and test them with survey data from 97 Canadian corporate ventures. For the purposes of this study, we define success as the ability of a firm to meet internal milestones on schedule.

We find that the degree of fit between a corporate parent and its venture does affect the success of a venture, and that success is associated with high levels of awareness, commitment, and connection. Further, the relational dimension of the parent-venture interface appears to have a greater association with venture success than does the economic dimension.

Our data support the idea that the parent-venture relationship is dynamic in nature as ventures in our sample generally lessened their economic connections with their parents as they matured (or vice-versa). We did find, however, that the relational bonds remained more or less intact. The exceptions to

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these general trends were an increasing emphasis on financial targets along with decreasing CEO involvement as ventures matured. Both of these findings make intuitive sense. Greater financial independence is accompanied by greater financial accountability. And, as a venture gains in both independence and accountability, there is less need for the CEO to provide "air cover." These two issues aside, the basic model of enduring relational ties and diminishing economic ties was supported. As well, the increasing accountability is consistent with our expectation that a close connection is preferable to high venture autonomy. © *2000 Elsevier Science Inc.*

Firms with growth aspirations have several ways of reaching their goals. Mergers, acquisitions, and joint ventures are a few of the better-known approaches to firm growth. Another route, which is of interest to both managers and researchers, is corporate venturing—growing a business from the inside out. The motives for launching a corporate venture include improving corporate profitability, (Zahra 1991), generating strategic renewal (Guth and Ginsberg 1990), fostering innovation (Baden-Fuller 1995) and gaining knowledge that may be parlayed into future revenue streams (McGrath, Venkataraman, and MacMillan 1994).

Researchers have acknowledged the importance of the corporate venture (CV) as a vehicle for firm growth (Arrow 1982; Burgelman 1983) and have addressed several issues unique to this growth mechanism. The literature addresses the performance implications of corporate ventures (Biggadike 1979), the relationship between CV performance and environmental context (Covin and Slevin 1994; Tsai, MacMillan, and Low 1991; Zahra 1993), the role of compensation practices within corporate ventures (Block and Ornati 1987), and the influence of CV champions (Day 1994). The relationship between a corporate parent (CP) and its corporate venture has also been studied (Miller, Spann, and Lerner 1991; Sorrentino and Williams 1995). Little has been done, however, to empirically test whether the connection, or fit, between parent and venture influences CV performance. Although some authors have argued that high levels of relatedness between CP and CV are desirable (Dougherty 1995; MacMillan, Block, and Narasimha 1986), others have contended that tight coupling is antithetical to venture success (Burgelman 1983; Ginsberg and Hay 1994; Sykes and Block 1989). In his report on 37 ventures at Exxon Enterprises, Sykes (1986) identified reasons both for and against the practice of allowing venture autonomy.

The lack of consensus on this issue leads us to the first of two complementary research questions that we address in this paper: "*What is the effect of internal strategic fit between a corporate parent and its venture on venture performance?*" Following the resource-based view of the firm (Penrose 1959; Wernerfelt 1984), which argues that competitive advantage derives from idiosyncratic capabilities that firms develop internally, we suggest that a tight fit is positively associated with venture performance because of the venture's access to its parent's resources. This position, along with several specific hypotheses, is developed in the sections that follow.

A number of studies have argued that corporate venturing is a dynamic process, that is, one in which the relationship between parent and venture evolves as the venture matures (Burgelman 1983; Garud and Van de Ven 1992; Schrader and Simon 1997; Sykes 1986). Our second research question addresses this issue by asking: "*Does the relationship between a corporate parent and its venture(s) evolve over time, and if so, how?*"

In the following sections, we develop a model of the CP-CV relationship that incorporates the economic and relational dimensions of firm growth within a dynamic, evolutionary framework. This perspective is anchored in both the extant literature and a series

of interviews with corporate venture managers. We formulate specific hypotheses from the model and test them with survey data from a sample of 97 Canadian corporate ventures. Finally, we present and discuss the results of the empirical tests.

CONCEPTUAL DEVELOPMENT

Corporate Venturing

Our review of the literature on the processes and outcomes of corporate venturing (summarized in Table 1) reveals a few points of general agreement. First, it is generally agreed that corporate venturing has a positive effect on firm performance (Biggadike 1979; Zahra 1991, 1993; Zahra and Covin 1995), although such benefits are not guaranteed and ventures may take several years to become profitable. Second, ventures go through a series of stages as they mature (Garud and Van de Ven 1992; McGrath et al. 1994; Schrader and Simon 1997). Though a number of classification schemes have been suggested in the literature, there is general agreement that the nature of CVs is dynamic, not static. Third, and in keeping with the evolutionary nature of the ventures themselves, there is almost unanimous agreement that milestones are the best method for evaluating CV performance (Block and MacMillan 1993; Block and Ornati 1987).

Although it is reassuring that there are some areas of convergence in the literature, there are also several areas on which there is little or no agreement. Researchers disagree, for example, about the desired tightness of coupling or fit between parent and venture. The degree of fit may be thought of as a continuum, anchored at one end by what Sykes (1986) refers to as "total congruence." In this case, "the 'venture' is no more than a new product extension by an existing operating division, and, even if innovative, would probably not qualify as 'internal venturing'" (Sykes 1986, p. 281). At the other end of the continuum is an independent entrepreneurial enterprise (Miller et al. 1991; Schrader and Simon 1997). The debate revolves around which point on this spectrum is optimal for corporate venture performance.

The advantages of a close fit between parent and venture include resource sharing (e.g., access by the venture to the parent's suppliers and distributors) and the availability of internal corporate capital. On the other hand, ventures with greater autonomy may be free from the entrenched bureaucratic processes of the corporate parent and more flexible in their response to changing internal and external demands. Effective corporate venturing has been described as a balancing act with needs for creativity and change on one side and demands for cohesiveness and complementarity on the other (Lengnick-Hall 1992; Tushman and Nadler 1986).

The few studies that have directly addressed internal fit have yielded mixed results. Ginsberg and Hay (1994), for example, argued that the flexibility associated with autonomy facilitates CV success. Similar conclusions were presented by Dougherty (1995) and Block (1989), based on the premise that the pressures and rigidities emanating from a corporate parent adversely affect venture performance. A similar argument contends that management practices that work for large corporations are inappropriate for ventures (Block 1983; Kanter 1985; Sykes and Block 1989).

A study of 88 industrial product corporate ventures from the PIMS STR4 database found that relatedness between corporate parents and ventures does not affect venture performance (Sorrentino and Williams 1995). This finding echoes the results of a similar study, also using PIMS data, in which the reporting level for CVs was found to have

TABLE 1 Summary of Corporate Venturing Research

Author(s)	Research Question(s)	Finding(s)
Baden-Fuller (1995)	Proposition: competitive advantage flows from the capacity to manage internal change, a capacity which is closely connected to corporate entrepreneurship	Strategic innovations are not necessarily profitable. Corporate entrepreneurship is not the only way to stimulate innovation is established firms.
Biggadike (1979)	What are the performance implications of corporate venturing?	Of the ventures studied, 18% achieved profitability in 2 years, 38% in 4 years. Median performance was 7% ROI in years 7 and 8. Companies should start fewer ventures with more resources rather than many with less. The time it takes to reach profitability can be reduced by spending more earlier to obtain market share.
Birkinshaw (1997)	An explatory study on initiatives in MNC subsidiaries	Two distinct entrepreneurial processes: (1) internal—initiatives subject to corporate selection mechanisms, and (2) external—initiatives subject to local environmental selection mechanisms (e.g., customer acceptance)
Block (1983)	How can corporate ventures succeed?	There are five pivotal decisions which can impact venture success: format, management and compensation, venture plan approval, positioning, and financing triggers.
Block (1989)	How can firms reduce the costs of corporate venture failure?	Two principal causes of large losses: (1) incorrect assumption and (2) pressures within the parent which inhibit altering or aborting venture strategies.
Block and Ornati (1987)	What compenation practices are in use among corporate ventures and do they impact performance?	"... the incentives and compensation used are not correlated with the rate of success ... (but) the compensation systems used weren't much of an incentive" (p. 44).
Burgelman (1983)	What are the processes by which a large diversified firm transforms new technology into new businesses through internal corporate venturing?	"Becuase corporate entrepreneurship ... seems to differ from traditional individual entrepreneurship, as well as from traditional organizational economic activity, it may be necessary to devise different arrangements between the corporate resource providers and their entrepreneurial agents" (p. 243).
Caruana, Morris, and Vella (1998)	How do centralization and formalization impact entrepreneurial behavior in export firms?	"The results suggest that entrepreneurial behavior is negatively affected by increases in centralization and size but positively influenced by increased formalization" (p. 24).
Chung and Gibbons (1997)	What is the role of culture in corporate entrepreneurship?	1. As superstructure, culture provides an ideology for organizational members 2. As a sociostructure, culture provides social capital which in turn enables the emergence of competitive advantage.

(*continued*)

TABLE 1 *continued*

Author(s)	Research Question(s)	Finding(s)
Covin and Slevin (1994)	What is the impact of industry technological sophistication and the strategy-related characteristics of entrepreneurial firms?	Industry technological sophistication moderates the strength of the relationships between many strategic and firm performance. The modes of competition differ for entrepreneurial firms in high and low technology industries.
Day (1994)	How does the championing process explain innovativeness in corporate venturing?	Ventures requiring modest resources may survive with low level champions and have the potential to be radically innovative. Top level champions are required for high-profile, expensive, innovative ventures.
Dougherty (1995)	How can managers assure an effective connection between ventures and the firm's core competencies?	Connecting core competencies with new products is problematic because of the existence and persistence of rigid core incompetencies with which the competencies have little interplay. Incompetencies must be managed so that competencies can be assessed.
Garud, and Van de Ven (1992)	What guides the development of a venture under conditions of uncertainty and ambiguity?	Three different periods: agenda setting, expansion, and contraction. Negative outcomes lead to greater involvement by corporate sponsors.
Hornsby, Naffziger, Kuratko and Montagno (1993)	Introduction of a model that describes the intrapreneurship process from initial decision to implementation	"Intrapreneurship is multidimensional and relies on the successful interaction of several activities rather than events occurring in isolation." (p. 35)
Jennings and Lumpkin (1989)	What differences exist between conservative and entrepreneurial firms?	In entrepreneurial organizations: decision making is more participative, performance objectives are jointly determined, and managers are not penalized for the failure of risky projects.
Knight (1989)	Examination and comparison of innovative practices in large and small firms	CV obstacles includes: lack of entrepreneurial talent, lack of CV fit with corporate strategy, and lack of commitment to the venture. IVs encountered problems with market assessment and operational and financial issues.
Lengnick-Hall (1992)	Can configurations for strategy and design of CVs be defined and tested and does the level of cohesion between strategy and CV design affect market performance with profitability?	Firms that are highly cohesive experience fewer obstacles and problems. Cohesiveness may be more advantageous for lean, value driven firms than for rigid firms requiring more resource diversity and organizational slack.

(*continued*)

TABLE 1 *continued*

Author(s)	Research Question(s)	Finding(s)
MacMillan, Block, and Narasimha (1986)	What obstacles face firms wishing to launch CVs?	Firms should attempt to acquire experience by starting with joint ventures or small ventures.
McGrath (1995)	What are the management opportunities inherent in CV disappointments?	Redirection is an important alternative to shutting down unsuccessful CVs. Linkages between a CV and other SBUs can facilitate the benefit of knowledge transfer if a CV fails.
McGrath, Venkataraman, and MacMillan (1994)	Development of a framework which combines extant CV theory with the RBV to depict CV potential for yielding future rents.	Ventures evolve through a series of developmental stages. CV progress should be assessed in terms of the development of new competencies and their subsequent exploitation.
Miller and Camp (1985)	What differences exist between the strategies of successful and unsuccessful corporate ventures?	Successful strategies differ between young ventures and matures SBUs (e.g., low cost strategy is better for mature SBUs while differentiation is more suitable for adolescent CVs)
Miller, Gartner, and Wilson (1989)	What is the effect of entry order on market share and competitive advantage among corporate ventures?	"Overall, pioneers typically gain significantly greater market share and some types of competitive advantage compared to followers (specifically, product and technological advantages)" (p. 203)
Miller, Spann, and Lerner (1991)	What is the impact of resource sharing, reporting level, and the relationship between sharing and reporting level?	Resource sharing benefits quality advantages but hurts cost advantages. No main effects for reporting level. Reporting level moderated quality and cost advantages of resource sharing (highest performance with lowest reporting levels).
Miller, Wilson and Adams (1988)	What is an appropriate measure for evaluating corporate venture success?	Velocity (V = product of regression coefficient of ROI over time (beta) and coefficient of determination (r-sq.) fit the observed data in 78% of the cases.
Pearce, Kramer and Robbins (1997)	What managerial behaviors indicate an entrepreneurial orientation and how are such behaviors evaluated by subordinates?	"Overall, this study developed and validated a scale of entrepreneurial behaviors and found that corporate entrepreneurship was well received by subordinates even when such behaviors were counter to the preexisting culture" (p. 158)
Schrader and Simon (1997)	1) Do IVs and CVs emphasize different resources? 2) Do IVs and CVs pursue different strategies? 3) Do IVs and CVs differ in performance? 4) Do IVs and CVs differ in the relationship between resources, strategies, and performance?	1) IVs placed importance on external capital and brand development; CVs developed proprietary knowledge and marketing. 2) IV's concentrated on customer service & specialty products & had greater strategic breadth. 3) No performance differences 4) Broad strategies improved IV performance and degraded CV performance.

(*continued*)

TABLE 1 *continued*

Author(s)	Research Question(s)	Finding(s)
Sorrentino and Williams (1995)	Does relatedness determine CV success?	"The degree to which a venture is related to its parent firm does not explain performance resutls or the entry strategy decisions at the venture level" (p. 70) [Performance is evaluated by market share)
Sykes (1986)	What factors determine corporate venture success?	"The data provide strong evidence that venture managers' prior experience in the venture's target market area and their general managerial experience are the factors most important to venture financial success" (p. 290).
Thornhill, Amit, and Belcourt (1998)	What are the influences of venture strategies, venture capabilities, and environmental hostility on corporate venture performance?	Corporate venture profitability is positively associated with venture age and negatively associated with environmental hostility. Differentiation appears to be an appropriate strategy in benign environments, while aggressive marketing and innovation are called for in hostile competitive conditions.
Tsai, MacMillan, and Low (1991)	What is the relative importance of environment and strategy for CV performance?	Both environment and strategy are important to CV success. Munificient markets are good; hostile markets are not. Quality strategy improves market share at the expense of ROI. Low prices and high promotion improve both market share and ROI.
Zahra (1991)	(1) What are the antecedents of corporate entrepreneurship? (2) What is the association between CV and company performance?	(1) CV activities increased as environments were perceived as increasingly dynamic, hostile, and heterogeneous. (2) There was a positive relationship between CV and company performance.
Zahra (1993)	What is the relationship between external environment, corporate entrepreneurship and financial performance?	CV activities differ in different environments. CV is associated with company financial performance.
Zahra (1995)	What is the impact of LBOs on corporate entrepreneurship?	Changes in corporate entrepreneurship activities after LBOs were positively associated with changes in company performance.
Zahra (1996a)	What is the relationship between corporate ownership, industry, and corporate entrepreneurship?	Executive stock ownership and long-term institutional ownership are positively associated with CV. Conversely, short-term institutional ownership is negatively associated with it, as is a high ratio of outside directors on a company's board. Finally, an industry's technological opportunities moderate the associations observed between corporate governance and ownership variables and corporate entrepreneurship.

(*continued*)

TABLE 1 *continued*

Author(s)	Research Question(s)	Finding(s)
Zahra (1996b)	(1) Do CVs and IVs vary in their technology strategies? (2) Do the dimensions of technology strategy influence the performance of CVs and IVs differently?	Both research questions can be answered in the affirmative: "The results suggest that the two venture types follow different paths to achieve success. The high performing IV focuses its R&D spending on pioneering a few new products. Conversely, the CV benefits from investing more in R&D to develop many products and by protecting these products with patents . . . the CV uses both internal and external R&D sources" (p. 310).
Zahra and Covin (1995)	What is the CV–performance relationship in different industry contexts?	CV is positively associated with firm performance and the strength of the relationship increases over time. Hostile environments reward CV activities more than do benign environments.

no main effects on venture performance (Miller et al. 1991). However, Lengnick-Hall (1992) presented evidence in favor of a close fit in her study of 86 firms sampled from the *Business Week 1000*. Based on the results of discriminant analysis, she concluded that "the price of neglecting organizational consistency is increased organizational problems" (Lengnick-Hall 1992, p. 147).

Internal Strategic Fit

Our model of the relationship between a firm and its corporate venture(s) borrows from the grounded theory methodology of Glaser and Straus (1967). We conducted 17 semi-structured interviews, 1 to 2 hours in length, with senior executives and venture managers of nine large Canadian corporations that had engaged in a wide range of corporate ventures. Our analysis of the interview transcripts guided our construction of a model in which the parent and venture interact on the basis of economic drivers (based on the resources of the parents and needs of the venture) and relational drivers (flowing from the structures and cultures of the parent and venture).

The economic aspect of the CP-CV relationship was expressed by one venture manager in his observation that "Certainly the deep pockets of (the parent company) helped because I had lost a lot of money." The nature of the economic ties is complex and often difficult to manage, a sentiment expressed by another senior executive who stated that "We're probably under-funding. . . . We're hobbling our young entrepreneurs too much." Yet, the same executive was quick to qualify his remark: ". . . but, then again, I'm not so sure that that doesn't create innovation."

Our interviews also revealed a relational dimension to the CP-CV structure. In the words of one CEO, "I think that building a new business is very much about managing relationships." Two of our interviewees also drew analogies between child-rearing and corporate venturing. This metaphor not only captures the relational issue; it also encompasses the evolving, dynamic nature of the relationship.

The economic dimension pertains to issues such as investment and compensation, while the relational dimension involves issues such as the levels of support and trust that exist between a venture and its corporate parent. These categories are similar to the intrinsic and extrinsic dimensions proposed by Sykes (1986). Under his typology, the extrinsic dimension captures the relationship between a venture and its corporate sponsor and includes structural and procedural sub-dimensions. The intrinsic dimension pertains to the characteristics of the venture itself and is divided into product-related and managerial facets. Although Sykes's dimensions are respectively parent-focused and venture-focused, our dimensions portray the parent-venture relationship in distinct economic and relational terms.

Economic Dimension

Our interviews revealed four aspects of the economic dimension of the parent-venture relationship. The first stems from the parent's reasons for launching a venture. Ventures launched with the objective of earning a target return on investment may be run very differently from ventures launched for defensive (responding to competitors' initiatives) or developmental purposes. McGrath (1995) argued that ventures must be able to demonstrate "market worth," (i.e., economic viability) without which they will be unlikely to survive. The prospect of turning a profit should also enhance support within

corporate top management, further enhancing the likelihood of venture success. We anticipated that ventures that are anchored in well-developed business plans with articulated, profit-based objectives would experience greater success than those that are not.

This raises the issues of performance evaluation and accountability. There are many ways to evaluate the success of a venture. For the purposes of this study, we define success according to a venture's ability to meet milestones on schedule (see *Method* section below). While there are as many different types of milestones as there are new ventures (e.g., target shipping dates, market share, ROI), profitability eventually enters the discussion. Block and MacMillan (1993) observed that lax financial controls are among the more common causes of corporate venture failure. We anticipated that firms that evaluate their ventures on the basis of financial targets would be successful more often than those that eschew financial benchmarks.

Another dimension of corporate venturing is the capital stake that the parent commits to a venture. How much the parent invests, whether the funds are sunk and/or restrict redeployment, and whether funds are delivered as promised all send signals to the venture team and external stakeholders such as clients, competitors, and suppliers about the level of commitment of the parent (Ghemawat 1991). We expected that economic commitments in the form of large, specialized, non-recoverable investments would be associated with venture success.

The fourth facet of the economic relationship concerns the degree of congruence between the practices of a parent and its venture. This dimension speaks directly to the issue of tight fit versus autonomy. Are venture managers compensated differently than the managers of the parent company? Are training budgets larger? Is the budgeting process more flexible? Our preliminary interviews and subsequent theory development led us to predict that firms that maintain consistency in the administration of compensation and budgeting practices between parent and venture would be more successful than firms allowing autonomy among their ventures' financial practices. In other words, *we expected to see greater success among firms that treat their ventures more like divisions of the parent than like stand-alone entities.* This reflects our belief that corporate ventures that do not maintain close connection with the parent forego the resource-based competitive advantages of the parent, and thus hinder their own prospects for success. We thus have the following hypotheses:

H1: Ventures selected on the basis of economic decision making (e.g., rate of return) are more successful than those that are not.

H2: Venture success is associated with the use of financial targets.

H3: Venture success is associated with large, specialized investments of capital by the parent company.

H4: Venture success is associated with uniform financial practices between parent and venture.

Relational Dimension

Ventures often have to compete with other CVs or with other corporate divisions for a limited pool of resources. However, ventures can diminish the effects of competition by operating under the mentorship of a chief executive. Champions are often critical to the survival and success of internal ventures (Day 1994; Frost and Egri 1990). We predict that ventures that obtain top management sponsorship, in the form of active

support from the parent CEO and the CEO running interference for the venture, experience greater success than those that lack such support.

Another element of the relational dimension involves the visibility or preeminence of the venture within the parent company. Hornsby, Naffziger, Kuratko, and Montagno (1993) identified both management support and time availability as factors that contribute to the success of a corporate venture. Venkataraman, MacMillan, and McGrath (1992) emphasized the need to manage both the hierarchical processes and the institutional context within which corporate venturing activities take place. Preeminence may flow from efforts on the part of the venture manager to secure buy-in at the senior management levels of the parent company. Preeminence will also be indicated by the position of the venture on the parent's business agenda.

A third element of the relational dimension is confidence, or trust. Barney and Hansen (1994) have identified trustworthiness as a potential source of competitive advantage. Ventures that have faith that the parent will not abandon them when the going gets tough, and whose parents have solid track records of meeting commitments, should be more likely to succeed than ventures without such qualities.

A final aspect of the parent-venture relationship mirrors the issue of economic connection and consistency. We predict that autonomy, as indicated by empowerment of venture employees and managers and a strong culture within the venture, is negatively related to venture success. We thus have the following hypotheses:

H5: Venture success is associated with active protection and support by the parent CEO.

H6: Venture success is associated with preeminence in the eyes of the parent.

H7: Venture success is associated with high levels of commitment and trust between parent and venture.

H8: Venture success is associated with low levels of venture autonomy.

Parent-Venture Dynamics

Because of the dynamic nature of the parent-venture relationship, longitudinal studies of venture performance are highly valued and in high demand. Yet they tend to be the exception rather than the norm in entrepreneurship and strategy research. Those studies that have taken a longitudinal approach tend to be characterized by small sample sizes that limit their scope and generalizability. Although our survey is fundamentally cross-sectional, we capture some of the dynamic nature of the CP-CV relationship by asking respondents about parent and venture practices in progressive stages of venture growth and maturity. Our approach is exploratory and the following propositions are tentative, yet we believe that our research is a step in the direction of capturing the dynamic processes underlying the growth of corporate ventures.

We propose that the relationship between a CP and CV evolves as a venture matures but that the economic and relational dimensions of the CP-CV fit evolve in different ways. When a corporate parent launches a venture, the venture is critically dependent on the economic resources of the parent. As the venture begins to grow, this dimension may become less important. The relational ties between parent and venture, on the other hand, do not necessarily diminish in importance as a function of venture maturity. Returning to our original position that *the connection between CP and CV enables a venture to capitalize on the idiosyncratic, distinctive competencies of the parent*,

we contend that maintaining close relational fit serves a venture well, regardless of its stage of development. This view of the evolution of the economic and relational ties between parent and venture is captured in the following propositions:

P1: Economic ties tend to diminish between parent and venture as a venture matures.

P2: Relational ties tend to remain consistently strong between parent and venture as a venture matures.

METHODS

Sample

Our initial sample frame comprised 2,614 of Canada's largest companies. We sent a screening letter to these firms asking if they had developed any new business units as part of their growth strategy. A business was considered "new" if it had developed any three of the following: new markets, new methods of distribution, new products/services, and/or new technology. A total of 448 firms responded, 261 in the affirmative.

The interview phase of our research project, supported by an extensive review of the corporate venturing and strategic management literature, served as the foundation for a detailed survey of practices and processes. The survey, which we pilot tested with senior managers of parent corporations and their ventures, was sent to the CEOs of the 261 firms that had responded positively to our initial mailing. One follow up letter and a phone call to initial non-respondents yielded a total of 102 completed surveys.

Our rationale for using a mail survey as our method of data collection is consistent with Schrader and Simon (1997), who noted that "A survey was the most appropriate means of collecting data, because secondary sources did not contain detailed information regarding companies' resources, strategies, and performance. . . . Privately owned IVs (independent ventures) do not publish annual reports, and data on CVs are often subsumed into the sponsors' reports." (1997, p. 54).

Of the 102 responses that we received, one firm was excluded because we felt that its reported venture age (38 years) made it inappropriate to include that firm with a group of relatively young corporate ventures. Four other firms were excluded due to non-response to an item on milestone attainment which we use as the dependent variable of our study (see *Measures* below). The 97 remaining ventures have a mean age of 3.4 years (with a standard deviation of 3.4 years). The majority of the ventures (82%) are 5 years old or younger. Of the 448 firms that responded to our initial screening letter, we were able to obtain information about industry membership, revenue, and assets for 312 firms. Within the smaller sample of 97 firms that responded to our survey and were retained for analysis, this data is available for 56 firms. Table 2 contains summary information about the population frame, the initial response subset, and the final sample. There appears to be some over-representation in our sample in construction, manufacturing, and trade, and under-representation in agriculture and natural resources. However, it is not clear whether this is an artifact of our sample or representative of less corporate venturing in agriculture and natural resources. The mean values for assets and revenues of firms in the population frame, the initial response set, and the final sample do not differ significantly when compared by *t*-test. Thus, while not perfectly representative in terms of industry affiliation, our sample appears to be representative for size and revenue characteristics.

TABLE 2 Sample and Population Frame Characteristics

Sector	Final Sample	Initial Respondents	Population Frame
# of firms in total	97	448	2,614
# of firms with asset & revenue data	56	312	2,367
Assets ($M)	1,268 (2,930)	1,127 (6,418)	1,198 (9,136)
Revenues ($M)	546 (1,419)	430 (1,090)	391 (1,407)
Agriculture and natural resources	19 %	34 %	36 %
Construction, manufacturing, and trade	27 %	20 %	18 %
T.C.U. and F.I.R.E	28 %	31 %	29 %
Accommodation and consumer goods	7 %	9 %	12 %
Other	19 %	6 %	4 %

Most of the firms (80%) had prior venturing experience. Of those, 77% described their previous ventures as positive experiences. The reasons most often cited for launching corporate ventures were to complement existing products/services and develop new competencies. Other, less common reasons cited for venturing include the utilization of idle resources, and offensive or defensive moves relative to competitors' actions. The firms in our sample all chose to launch ventures in the same industry as the parent's primary business. We were thus unable to evaluate the potential influence of line-of-business similarity with this data.

Measures

Performance Criteria

Measuring the performance of corporate ventures shares many of the difficulties associated with evaluating the performance of small, entrepreneurial firms. The complexity of the issue has been addressed in the literature (Covin and Slevin 1989; Naman and Slevin 1993; Sandberg and Hofer 1987; Sapienza, Smith, and Gannon 1988) although it remains far from being resolved. Covin and Slevin (1989) identified three reasons for using subjective performance measures of small-firm performance over more objective, hard numerical data: (1) the inability and/or unwillingness of firms to provide financial data (Fiorito and LaForge 1986), (2) the difficulty of interpretation and comparison of data due to differing firm objectives (Cooper 1979), and (3) the influence of industry effects (Miller and Toulouse 1986). Their solution to the problem of performance evaluation was to create a weighted average performance index for firms based upon the product of 'importance' scores and 'satisfaction' scores on a series of questions about various financial criteria (e.g., sales, cash flow, profit margin).

A similar approach was used by Venkatraman (1990) who operationalized performance with three indicators, two of which reflect managerial satisfaction and a third that evaluates the performance of the competition. He argued that such measures are reasonable proxies for often unobtainable secondary-source data.

Respondents to our survey were asked to indicate on a scale of one to seven the degree to which they agreed or disagreed (1 = strongly disagree, 7 = strongly agree) with the statement that their venture had been able to meet milestones on schedule. We then categorized firms as either High or Low performers on the basis of their responses to this question. Fifty-two ventures, which gave responses of 5 or higher, were

classified as High performers while 45 ventures (with responses of 4 or less) were Low performers. Milestones included such measures as profit, revenue, market share, customer satisfaction, and technical objectives. Roughly half of the ventures (52%) relied primarily on measures of profitability such as ROI and ROA.[1] The milestones were typically established with input from both the parent company and the venture.

Economic Measures

Eleven items on the survey addressed the economic interaction between parent and venture. The first of these asked what proportion of the parent's capital budget had been invested in the venture to date. This item was designed to capture the level of financial commitment of the parent. Another item asked if the venture offered the best potential rate of return among alternative growth opportunities. The remaining nine items were designed to capture the dynamic processes of a growing business unit. Respondents were asked to answer questions categorized by the stage of development of the venture: *Early*, *Middle*, and *Established.* The *Early* stage was defined in the survey as commencing with financial investment in the venture and continuing until the venture began to generate revenue. The *Middle* stage begins with the beginning of a revenue stream and continues until the venture realizes a profit. At this point, the venture has become *Established.* Nineteen of the ventures in our sample described themselves as early stage entities and, consequently, responded only to the early stage portion of multi-stage survey items. Forty-nine firms were in the middle stage and 29 classified themselves as established. Samples of the multi-stage question format are included in the Appendix.

Our decision to adopt this unique format in our questionnaire stemmed from the preliminary interviews in which managers consistently noted that many aspects of the parent-venture relationship evolve as the venture itself matures. Pilot testing of our survey indicated that managers easily grasped the intent of the multi-stage questions and were receptive to describing the dynamic process of venture management.

The multi-stage, economic survey items asked whether funds promised to the venture are ever diverted, whether they are sunk, whether the investment restricts alternative venturing activities, and whether the investments in the venture are highly specialized. They also inquired into the relative budgets and compensation systems of parent and venture, the use by the venture of the parent's systems, and whether the venture is accountable to financial targets.

Relational Measures

The relational measures included one single-stage question that asked if the parent would withdraw support if the venture were to experience adverse conditions. The remaining eight items in this category were of the multi-stage format described above. Items included the level of support provided by the CEO, whether the venture manager works to obtain buy-in, the importance of venture culture, the venture's position on

[1] Many of the respondents indicated that they used multiple milestones, including both financial and non-financial measures of performance. As such, we were not able to control for the specific type of milestone(s) used.

TABLE 3 Mean Scores of Survey Items by Venture Stage and Performance Category

	Early Stage			Middle Stage			Established Stage		
	High	Low	Diff.[a]	High	Low	Diff.	High	Low	Diff.
Economic Dimension									
Venture offered best rate of return (H1)[b]	5.56	4.89	0.67**						
Venture must meet financial targets (H2)	4.77	4.86	−0.09	5.24	5.65	−0.41	6.14	6.28	−0.13
Level of investment in venture (H3)	2.77	2.48	0.29						
Venture restricts alternate venturing (H3)	3.86	3.43	0.43	3.50	2.91	0.59†	2.80	2.42	0.38
Investments in the V are specialized (H3)	5.52	5.40	0.12	5.39	5.03	0.36	5.50	4.09	1.41**
Funds in the Venture are sunk (H3)	5.54	6.24	−0.70	4.92	5.62	−0.69	4.10	4.93	−0.83
Funds are not diverted from venture (H3)	6.04	6.26	−0.22	6.15	6.06	0.09	6.06	6.36	−0.30
Importance to V of Parent's resources (H3)	6.33	5.76	0.57*	5.75	6.00	−0.25	5.07	6.00	−0.93
Venture budgeting is more flexible (H4)	4.33	4.43	−0.10	3.83	3.94	−0.11	3.15	3.40	−0.25
Venture compensation is different (H4)	3.35	3.49	−0.14	3.14	3.35	−0.21	3.45	3.71	−0.26
Venture has larger training budget (H4)	2.82	3.56	−0.74*	2.79	3.46	−0.67†	2.68	3.06	−0.39
Venture must use parent's systems (H4)	4.60	3.74	0.86*	4.57	4.00	0.57†	4.56	3.53	1.03*
Relational Dimension									
CEO actively supports venture (H5)	6.38	6.39	−0.01	6.26	5.95	0.32	6.27	5.53	0.74*
CEO runs interference for venture (H5)	4.39	5.07	−0.68	4.07	4.69	−0.61	3.41	3.81	−0.40
V manager works to obtain buy-in (H6)	5.75	4.85	0.90**	5.74	4.94	0.80*	5.82	4.80	1.02*
V near top of P's business agenda (H6)	4.83	4.38	0.45	4.90	4.18	0.73*	4.73	3.71	1.01*
P would withdraw if V in trouble (H7)	3.39	4.31	−0.92**						
P has record of meeting commitments (H7)	5.67	5.50	0.17	5.67	5.46	0.21	5.76	5.27	0.49†
Decision-making power of V EEs (H8)	4.21	4.89	−0.67*	4.10	4.97	−0.88*	4.28	5.00	−0.72†
Decision-making power of V manager (H8)	4.38	4.73	−0.35	4.05	4.94	−0.89*	4.24	4.87	−0.63
Importance of venture culture (H8)	6.18	5.93	0.25	6.07	5.71	0.37	6.03	5.87	0.16
Venture is protected from politics (H8)	4.16	4.29	−0.13	4.05	4.34	−0.29	3.85	5.06	−1.21*
Identification with V as distinct entity (H8)	4.90	6.17	−1.27**	4.66	5.57	−0.92*	4.96	5.80	−0.84
V EE sense of autonomy from Parent (H8)	4.49	5.07	−0.58†	4.50	5.24	−0.74*	4.41	5.60	−1.19*

[a] Superscripts indicate p-values for 1-tailed *t*-test: † < 0.10; * < 0.05; ** < 0.01.

[b] All responses are on a 7-point scale anchored by strongly disagree (1) and strongly agree (7) except the investment question which is scaled as follows: (1) < 1%; (2): 1%–5%; (3): 6%–10%; (4): > 10% of parent's capital budget. Items not reported for the middle and established stages were not framed in a multi-stage format.

TABLE 4 Composite Mean Score Comparisons between High and Low Performing Ventures

	Early			Middle			Established		
	# Var[a]	F[b]	Prob[c]	# Var	F	Prob	# Var	F	Prob
Economic									
H3: Large, specialized investments	5	1.69	0.15	5	1.22	0.32	5	1.08	0.40
H4: Uniform financial practices	4	1.92	0.12	4	1.02	0.40	4	0.91	0.47
Relational									
H5: CEO protection and support	2	1.70	0.19	2	1.96	0.15	2	1.99	0.15
H6: Venture preeminence	2	3.57	0.03	2	3.39	0.04	2	3.30	0.05
H8: Low venture autonomy	6	3.99	0.00	6	1.75	0.13	6	1.20	0.34

[a] # Var indicates the number of dynamic survey items used to evaluate the hypothesis (e.g., H3 evaluates restriction of alternate venturing, specialization of investments, sunk funds, diversion of funds, and importance of parent resources; a total of 5 dynamic variables. The level of investment by the parent is not multi-stage and is not included in the calculation of Hotelling's T^2).

[b] The F-test satistic is derived from Hotelling's T^2 by the formula $F = (N\text{-}p\text{-}1)/(N\text{-}2)*p))*T^2$. In this equation, $N = n_1 + n_2$ = the total number of observations; p indicates the total number o variables being evaluated (e.g., p = 5 for H3) (Stevens 1996).

[c] P-values are based on a null hypothesis that the mean vectors of the hgh and low performers are equal. (H_0: Hi = Lo).

the parent's business agenda, whether the venture is protected from politics, and the parent's track record of meeting commitments to the venture.

Analysis

The mean scores to the survey items, for the high and low performers, respectively, in each of the three stages of venture development are presented in Table 3. Simple means tests allowed us to evaluate hypotheses 1, 2, and 7, but the remaining hypotheses were operationalized by several multi-stage variables that should be tested concurrently. For this, we employed two tests, one on the mean scores themselves and the other on composite factor scores. In the first test, we used Hotelling's T-squared in each of the three stages of venture maturity. Results of this procedure for Hypotheses 3, 4, 5, 6, and 8 are presented in Table 4. For these multi-item hypotheses, we also used principal components analysis to derive factor scores for the combined variables associated with each hypothesis (the item regarding venture autonomy was reverse coded for consistency with the other variables in H4). Eigenvalues and alpha values for the factors are included in the Appendix (Table A.1). Once factor scores were derived, we ran logistic regression analyses for each of the three stages of venture development. The results of the logistic analyses are presented in Table 5.

We also used Hotelling's T-squared in our evaluation of the dynamic propositions of our model (P1, P2). Table 6 contains results of our within-firm comparisons of responses to the multi-stage survey items. First, the difference scores for each venture were calculated between the early and middle stages and between the middle and established stages. Only middle and established firms could be evaluated on their evolution from early-to-middle stage and only for established firms could these results be compared with the middle-to-established stage transition phase. The means of the difference scores, for all ventures in each transition phase, are presented in the columns labeled "Diff." in Table 6. Two separate tests were then performed for each variable. First, the mean difference was evaluated against a null hypothesis that the mean is equal to zero. If we could reject the null hypotheses, then we could conclude that the item varies with increasing venture maturity. Second, we compared the relative change between stages

TABLE 5 Logistic Regression of Factor Scores

	Early[a]	Middle	Established
H3: Large, specialized investments	−0.16	0.26	−0.35
H4: Uniform financial practices	−0.47	−0.34	−0.96
H5: CEO protection and support	−0.49†	−0.68†	−1.40
H6: Venture preeminence	0.92**	1.14*	1.02
H8: Low venture autonomy	−0.13	−0.30	0.78
Constant	0.33	0.44	1.88*
Observations	61	48	27
Chi-squared	13.81*	11.63*	5.74
Pseudo R^2	17	0.18	0.22
Log Likelihood	−34.71	−26.40	−10.07

[a] Superscripts indicate p-values: † < 0.10; * < 0.05; ** < 0.01.

across the groups of high and low performing ventures. In this case, the null hypothesis was that the change among the high-performers is the same as the change among the low-performers. F-statistics and p-values are provided for each test.

In addition to testing the changes of individual variables as the ventures matured, we were also interested in the aggregate changes of the variables that jointly formed our multivariate hypotheses. Tests were performed for the joint changes of the variables which represent Hypotheses 3, 4, 5, 6, and 8 (i.e., the vectors of mean difference scores are compared). Finally, we combined all economic variables and all relational variables, respectively, to evaluate the net change of the economic and relational dimensions in the parent-venture relationship.

RESULTS

Parent/Venture Strategic Fit

Although firms have numerous reasons for engaging in corporate venturing, our results indicate that a venture's anticipated rate of return significantly distinguishes the high performers in our sample from the low performers, as predicted by H1 (Table 3).

Our hypothesis regarding the use of financial targets (H2), however, is not supported by the data. The differences in mean scores indicate a greater use of financial targets by low performers in all three stages, although the results are not statistically significant. We observe, however, that the use of financial targets increases among all firms as the ventures mature.

Our expectation that venture success would be associated with significant, financial resource commitments by the corporate parent (H3) is not supported by the data. In fact, an inspection of the mean responses among high and low performers (Table 2) indicates that, contrary to our predictions, the low-performers reported sunk funds and non-diversion of funds to a greater extent than did the high-performers. The logistic regression also fails to support H3—none of the coefficients for the three stages of venture maturity is significant for the factor variable on investment (Table 5). One other noteworthy finding is that high-performers relied less on parent resources as they matured, while the opposite is evident for the low-performers, although this finding is not statistically significant when tested for within-venture mean differences.

Our prediction that successful ventures would be distinguished by uniform financial

TABLE 6 Dynamic Evolution of Parent-Venture Relationship

	Early to Middle Stage					Middle to Established Stage				
		H_0: Diff=0		H_0: Hi=Lo			H_0: Diff=0		H_0: Hi=Lo	
	Diff[a]	F[b]	Prob	F	Prob	Diff	F	Prob	F	Prob
Economic										
H2 Venture must meet financial targets	0.92	60.60	0.00	0.00	0.95	1.00	36.03	0.00	0.73	0.40
H3 Venture restricts alternate venturing	−0.39	9.77	0.00	0.03	0.85	−0.56	7.58	0.01	2.54	0.12
H3 Investments in the V are specialized	−0.11	0.76	0.39	0.01	0.92	−0.12	0.45	0.51	7.62	0.01
H3 Funds in the venture are sunk	−0.58	17.14	0.00	0.00	0.96	−0.82	17.95	0.00	0.88	0.35
H3 Funds are not diverted from venture	−0.16	3.74	0.06	1.35	0.25	0.00	0.00	1.00	0.76	0.39
H3 Importance to V of P's resources	−0.47	10.71	0.00	1.98	0.17	−0.56	12.35	0.00	0.76	0.39
Test of combined H3 Diff. scores		7.90	0.00	0.74	0.60		7.63	0.00	0.54	0.75
H4 Venture budgeting is more flexible	−0.43	13.00	0.00	0.15	0.70	−0.42	11.63	0.00	1.13	0.24
H4 Venture compensation is different	0.11	2.33	0.13	0.05	0.83	0.11	0.42	0.52	1.64	0.21
H4 Venture has larger training budget	−0.13	1.95	0.17	0.50	0.48	−0.13	1.52	0.22	0.01	0.91
H4 Venture must use parent's systems	0.11	0.65	0.42	0.80	0.37	0.17	1.00	0.32	0.53	0.47
Test of combined H4 Diff. scores		4.50	0.00	0.50	0.74		3.63	0.01	1.23	0.31
Test of combined Economic hypotheses		5.70	0.00	0.86	0.56		5.20	0.00	0.40	0.92
Relational										
H5 CEO actively supports venture	−0.19	6.52	0.01	4.68	0.03	−0.09	0.66	0.42	1.58	0.22
H5 CEO runs interference for venture	−0.30	5.55	0.02	0.31	0.58	−0.38	8.52	0.01	2.37	0.13
Test of combined H5 Diff. scores		5.16	0.01	2.10	0.13		3.77	0.03	3.10	0.06
H6 V manager works to obtain buy-in	0.12	1.33	0.25	0.26	0.61	0.02	0.03	0.87	0.71	0.41
H6 near top of P's business agenda	0.00	0.00	1.00	0.40	0.53	0.04	0.08	0.78	1.19	0.28
Test of combined H6 Diff. scores		0.66	0.52	0.36	0.70		0.04	0.96	1.47	0.24
H7 CP record of meeting commitments	−0.10	0.74	0.39	0.26	0.61	−0.10	0.30	0.59	0.13	0.72
H8 Decision making power of V EEs	−0.08	0.64	0.43	1.00	0.32	0.02	0.02	0.88	0.05	0.82
H8 Decision making power of V mgr	−0.05	0.31	0.58	0.24	0.63	0.06	0.19	0.67	0.00	0.96
H8 Importance of venture culture	−0.01	0.04	0.84	0.05	0.82	−0.10	1.09	0.30	0.06	0.81
H8 Venture is protected from politics	0.00	0.00	1.00	0.04	0.85	0.02	0.01	0.93	0.02	0.89
H8 Identify with CV as distinct entity	−0.35	4.19	0.05	3.76	0.06	0.26	2.56	0.12	5.15	0.03
H8 CV sense of autonomy from CP	0.02	0.02	0.88	1.06	0.31	0.00	0.00	1.00	1.19	0.28
Test of combined H8 Diff. scores		1.23	0.31	1.30	0.28		0.58	0.74	1.16	0.36
Test of combined Relational hypotheses		1.48	0.18	1.16	0.34		1.47	0.22	1.13	0.39

[a] The difference score is obtained by subtracting the earlier period from the later period for a given venture. The number reported in the Diff. column of this table is the average of the within venture difference scores for all ventures. Mean difference scores for the high and low performers, respectively, are not reported.

[b] The F-test statistic is derived from Hotelling's T^2 by the formula $F=((N-p-1)/(N-2)*p))*T^2$. In this equation, $N = n_1 + n_2$ = the total number of observations; p indicates the total number of variables being evaluated (e.g., p = 5 for H3) (Stevens 1996).

practices between parent and venture (H4) is partially supported by the data. Use of the parent's systems is positively and significantly associated with high performance in all three stages. Differences between parent and venture in their budgeting, compensation, and training practices are associated with low performance, as predicted, yet the differences are statistically significant only in the case of training budgets in the early and middle stages. Tests of the combined mean vectors of the H4 variables indicated a low level of statistical significance in the early stage and virtually no significant differences between high and low performers in the middle and established stages, although the sign of the differences does correspond to our hypothesis. The logistic regression coefficients are not statistically significant for the H4 factor variables.

The items regarding protection and support of the venture at the CEO level (H5) yield mixed results. Active CEO support is significant in the established stage of successful ventures. However, having the CEO run interference for the venture is more pronounced for the less successful ventures. The combined test of the two variables yields results of weak statistical significance, yet because the two variables are quite different in nature (CEO support predominates among high performers while having the CEO run interference is more characteristic of the low performers), the meaning of this result is not clear. The factor variables in the logistic analysis produce negative coefficients of weak statistical significance, consistent with the influence of the CEO interference item among the sub-sample of low performers.

Venture preeminence in the eyes of the parent (H6) does, however, distinguish firms that met milestones on schedule from those that did not. Ventures that were near the top of the parent's business agenda and whose managers worked to obtain buy-in of the parent are among the success stories of our sample. The univariate results are confirmed by Hotelling's T-squared, yielding significance at the 0.05 level in all three stages. As well, the logistic analysis indicates significant, positive coefficients in the early and middle stages and a non-significant positive coefficient in the established stage.

Our expectation that successful firms would believe that the parent would not withdraw support if the venture experienced adverse conditions (H7) is supported by a single-stage survey item. As well, the direction of the difference between high and low performers on a multi-stage assessment of the parent's track record of meeting commitments is consistent with our prediction, although the difference is statistically significant only in the established stage.

Finally, our hypothesis regarding the level of autonomy of the venture (H8) is partially supported by the data. Indications of high venture autonomy are characteristic of the low performers, although the degree of statistical significance varies across the individual items. The strongest differences are evident in the items pertaining to relative decision making authority of venture managers and employees, the level of identification of employees relative to parent or venture, and the perceived sense of autonomy of the venture from the parent. In these instances, the data strongly and significantly support the notion that close ties are associated with venture success. The combined tests of mean differences indicate a strong difference between high and low performers in the early stage, and moderate to weak differences in the middle and established stages, respectively. The combined factor variables run in the logistic analysis are not significant predictors of venture performance.

Our proposition that the economic ties between parent and venture would diminish with venture maturity (P1) is strongly supported (Table 6). In the early-to-middle stage transition phase, the combined test of H3 and H4 variables (Hotelling's T^2) indicate

decreasing mean responses with significance at the 0.01 level. The combined test of all multi-stage economic variables is also negative (as predicted) and significant at the 0.01 level. These results are also found across the middle-to-late transition phase. The sole exception to the pattern of decreasing economic connection between parent and venture is found in the H2 variable—use of financial targets—which is strongly and significantly negative (significant at the 0.001 level). It appears that although economic dependence decreases with increasing venture maturity, accountability increases. The level of economic change across the phases of venture maturity is not significantly different between the high and low performers.

The predicted stability of relational ties (P2) is also generally supported although, as is the case for P1, there is one important exception. The individual and combined significance tests for the relational, multi-stage variables for H6, H7, and H8 do not allow us to reject the null hypothesis of no change from the early-to-middle stage. The same is true of the middle-to-late stage transition. We infer from this that the relational ties do not differ across stages. The one relational aspect that does evolve across the stages of venture maturity is H5—CEO interference and support. In this case, the mean scores of both variables decrease with increasing venture maturity. The relational difference scores across the transition phases do not differ significantly when we compare the high and low performing ventures.

DISCUSSION

The hypotheses developed in this paper address the effects of the economic and relational dimensions of parent-venture strategic fit on venture performance. The eight hypotheses fall into 3 general categories: H1, H2, H5, and H6 pertain to *characteristics* of a specific venture; H3 and H7 address the level of parent-venture *commitment*; and H4 and H8 speak directly to the level of *connection* or autonomy that exists between parent and venture. The hypotheses and the results of our empirical investigation are summarized in Table 7.

Of the four hypotheses related to venture-specific characteristics, two are supported by the data, one gives mixed results, and one—use of economic performance criteria—is not supported. The hypotheses on *commitment* and *connection* are fully or partially supported in the relational dimension, yet they receive only partial support or no support when evaluated in economic terms. In fact, sunk funds are significantly associated with low performance, contrary to our expectations.

From these findings, we conclude that the degree of fit between a corporate parent and venture does affect the success of a venture, and that success is associated with high levels of awareness, commitment, and connection. Further, the relational dimension of the parent-venture interface appears to have a greater association with venture success than does the economic dimension.

Our second research question, regarding the dynamic nature of the parent-venture relationship (P1 and P2) is also addressed in Table 5. Support is found for our model in that ventures generally lessened their economic connections with their parents as they mature (or vice-versa) while the relational bonds remain more or less intact. The exceptions to these general trends are an increasing emphasis on financial targets and decreasing CEO involvement as ventures mature. Both of these findings make intuitive sense. Greater financial independence (the defining characteristic of the stages in our model) is accompanied by greater financial accountability. And, as a venture gains in

TABLE 7 Summary of Hypotheses and Results

	Economic Dimension		Relational Dimension	
	Hypotheses	Results	Hypotheses	Results
Characteristics of the Venture	H1: Success assoc. with ROR selection criteria	Supported	H5: Success assoc. with CEO protection and support	Mixed results
	H2: Success assoc. with economic performance criteria	Not supported	H6: Success assoc. with preeminence in eyes of parent	Supported
Commitment	H3: Success assoc. with large, sunk investments	Not supported	H7: Success assoc. with commitment and trust	Supported
Connection	H4: Success assoc. with uniform financial practices	Partial support	H8: Success assoc. with low autonomy	Partial support
Dynamic	P1: Diminishing economic ties as venture matures	Supported	P2: Consistently, strong relational ties as V matures	Supported

both independence and accountability, there is less need for the CEO to provide "air cover." These two issues aside, the basic model of enduring relational ties and diminishing economic ties is supported most notably in the areas of *commitment* and *connection.* As well, the increasing accountability is consistent with our expectation that close connection is preferable to high venture autonomy.

Our finding that the degree of change in the parent-venture relationship does not differ between high and low performers may be due to a number of factors. The simplest of these is that there is no difference. However, it may be that our relatively crude measurement instrument, coupled with a fairly small sample size, is not sensitive enough to allow us to detect differences that may be quite subtle. Larger-scale studies of a truly longitudinal design may address this issue with greater power and precision. Another area that may prove to be of value in future research is the possible interaction of the relational and economic aspects of the CP-CV interface. Although beyond the scope of this paper, it is an issue that may yield interesting insights into the dynamic processes of corporate venture development.

Two aspects of this research that differ from other studies are our use of a multi-stage questionnaire format and our criteria for venture success. With respect to the first issue, the dynamic trends within the parent-venture managerial processes support our use of the multi-stage format. Although our survey is strictly a cross-sectional method of data collection, containing all of the weaknesses of retrospective, self-reported data, the format was well received and allowed respondents to indicate which practices changed over time and whether they had improved or degraded. Future development of this data collection method may yield additional insights into the evolutionary nature of management and decision processes.

The issue of how to define "success" is still unresolved (see Miller, Wilson, and Adams 1988). Any method or measure of venture performance has both strengths and weaknesses and an "ideal" criterion is yet to be defined. The prevalent use of milestones by corporations, and the near unanimous support for this method of performance evaluation in the academic and practitioner press, convinced us that this was a useful way to categorize corporate ventures.

CONCLUSION

We have taken a dynamic, multi-dimensional approach in our investigation of corporate venturing. We have identified distinct relational and economic dimensions of the parent-venture relationship. Contrary to conventional wisdom, our data indicate that a close fit between a corporate parent and its venture is positively associated with venture performance. Further, our multi-stage survey instrument allows us to confirm that the relationship between parent and venture evolves as the venture matures, and that the nature of the changes are consistent with consistently strong relational ties, low venture autonomy, and decreasing economic connection.

Although there is still a pressing need for longitudinal studies of corporate ventures, this paper hints at the type of findings that may result as we move from static, cross-sectional research designs to those that can capture the dynamic processes underlying the growth of corporate ventures. Like any organization, corporate ventures have the potential to grow and flourish or contract and wither away. As we improve our ability to identify and measure dynamic elements within organizations, we will improve our ability to understand the dimensions that underlie the processes of venture growth.

Given the prevalence of corporate venturing as a growth mechanism, it is important to continue to explore these dimensions, their components, and the way they interact during venture growth and development.

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APPENDIX

Sample items from corporate venturing survey

Many of the following questions ask for a response in three time periods. Please indicate, for your venture, approximately when each stage as defined below occurred. If your venture has not reached the Established Stage, for example, respond only for the stages appropriate to your venture.

Early Stage—First financial investment in the venture: 19__
Middle Stage: The Venture has begun to generate revenue: 19__
Established Stage: The Venture has become profitable: 19__

28. Venture employees are empowered with greater decisions making authority than are their counterparts in the parent company:				54. The budget for training venture personnel is proportionally greater than the training budget of the parent company:			
Strongly Agree	7 ○ 6 ○ 5 ○ 4 ○ 3 ○	7 ○ 6 ○ 5 ○ 4 ○ 3 ○	7 ○ 6 ○ 5 ○ 4 ○ 3 ○	Strongly Agree	7 ○ 6 ○ 5 ○ 4 ○ 3 ○	7 ○ 6 ○ 5 ○ 4 ○ 3 ○	7 ○ 6 ○ 5 ○ 4 ○ 3 ○
Strongly Disagree	2 ○ 1 ○	2 ○ 1 ○	2 ○ 1 ○	Strongly Disagree	2 ○ 1 ○	2 ○ 1 ○	2 ○ 1 ○
	Early Stage	Middle Stage	Established Stage		Early Stage	Middle Stage	Established Stage

TABLE A.1 Alpha Scores and Eigenvalues for Composite Variables

	Alpha Coefficient	Eigenvalue (Early)	Eigenvalue (Middle)	Eigenvalue (Established)
Economic				
H3: Large, specialized investments	0.74	1.41	1.44	1.16
H4: Uniform financial practices	0.85	1.60	1.59	1.86
Relational				
H5: CEO protection and support	0.80	1.27	1.09	1.09
H6: Venture preeminence	0.85	1.27	1.30	1.43
H8: Low venture autonomy	0.91	2.69	2.88	2.94