AN ASCENDANT VIEW OF HUMAN RESOURCE MANAGEMENT AS A CRITICAL CONTENT DIMENSION IN NEW VENTURE STRATEGY

G. Page West III and Jennifer N. Bernhardt

ABSTRACT

Research on strategy in new ventures has increasingly drawn upon resource-based theory, and thus has emphasized intangible factors that confer sustainable competitive advantage. These include dynamic and combinative capabilities, networks, routines, and knowledge as resources of new ventures. Yet antecedent to every one of these intangible resources is the management of the venture. But research has seldom considered management and the human resources of new ventures as a critical dimension of strategy content. This paper develops such an argument, and explores the performance contribution of human resources as strategy content in a longitudinal study of technology new ventures.

Research on strategy content in new ventures has historically emphasized competitive strategy concepts originating from industrial economics. These include industry conditions that encourage or forestall new entry such as barriers to entry and industry rivalry dynamics (Bain, 1968; Caves & Porter,

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1977; Dean, Meyer, & DeCastro, 1993), type of generic strategy such as pursuing a low-cost or differentiated approach (Ireland & Hitt, 1997; Porter, 1985; Sandberg & Hofer, 1987; Shepherd & Shanley, 1999), speed of strategy such as first mover or rapid follower approach (Goodman & Lawless, 1994; Kim, 1999), and scope of strategy such as whether a new venture should be broad or narrow (Jelinek & Schoonhoven, 1990).

However, the nature of competitive environments today means that strategy for new ventures is now significantly more complex than this customary array of competitive strategy dimensions might suggest. This is true for two reasons in particular. First, technological revolution and increasing globalization present constantly evolving sets of conditions that organizations confront, including blurring of industry boundaries, rapidly escalating competition and strategic maneuvering, heightened innovation, and an inexorable march toward the frontier of price/quality combinations increasingly expected by customers (D'Aveni, 1994). New competitive dynamics such as these will lead to the more rapid obsolescence of existing products and services and to the faster erosion of competitive position based upon existing strategy and existing models of business (Goodman & Lawless, 1994; Jelinek & Schoonhoven, 1990). Second, the progression through organizational life cycle stages ensures that new technology ventures continually confront new strategic challenges (Kazanjian, 1988; West & Meyer, 1997).

Consequently, more recent research on strategy in new ventures has focused on internal dimensions that leverage the resource-based view (Barney, 1991). These studies highlight the importance of identifying and building resource positions for effective strategy (Brush, Greene, & Hart, 2001; Lichtenstein & Brush, 2001), especially knowledge resources (West & Noel, Forthcoming; Wiklund & Shepherd, 2003), the beneficial role of information processing (Simon, Houghton, & Lumpkin, 2007) and networking (West & Meyer, 1997), the capabilities for combining resources (Alvarez & Busenitz, 2001), and dynamically developing new resources (Gilbert, McDougall, & Audretsch, 2006).

Together, these more recent perspectives suggest that performance of new ventures depends critically on dimensions of strategy that are related to managers and management. Management must not only organize and act based upon the existing stage of firm development, but must also identify and navigate through dynamic changes occurring both internally and externally. Firms must attract and retain managers who are capable of handling these kinds of complex undertakings, and must engage in a set of human resource practices that align with and support the increasingly complex nature of the organizational tasks. Where new ventures lack accumulated physical and financial slack (Cyert & March, 1992; Stinchcombe, 1965), they must draw upon a well of human resource potential to maximize long-term potential and performance.

Thus an area of new venture strategy that demands top management's attention is that of human resource management as a critical strategic dimension affecting firm performance (Welbourne & Andrews, 1996). The relationship of strategic human resource management (SHRM) to the overall organizational outcomes of interest to strategy researchers and practitioners, such as firm performance or survival (Lundy, 1994; Welbourne & Andrews, 1996), should be particularly strong for new ventures.

Unfortunately, little serious research has been conducted which examines the importance of human resource factors in smaller firms (Katz, Aldrich, Welbourne, & Williams, 2000), and there has been "even less research focusing on the relationship between strategy, human resource practices, and small firm performance" (Chandler & McEvoy, 2000, p. 44). This is especially surprising for new ventures in light of the theoretical weight explicitly and implicitly placed on this domain within various models of new venture development. Academics often use the Timmons (1994) model in their entrepreneurship classes, a model which in fact places "management" at the top of the triangle. This is an emphasis that is also prominent in venture capitalists' assessments of a new venture's potential (Cyr, Johnson, & Welbourne, 2000; Zacharakis & Meyer, 1998). Furthermore, theoretical models that form the basis of research studies both generally and specifically highlight complexity and the human side of organizing as a dimension of strategic importance for new ventures as they start-up (Welbourne & Cyr, 1999; West, 2007) and as they develop (Barney & Wright, 1998; Milliman, Von Glinow, & Nathan, 1991).

This paper, therefore, investigates the human resource management factor as a critical *strategic* dimension of new venture development. The paper first draws upon the resource-based view to illustrate the theoretical connections that exist between human resources and strategy in new ventures. Next we provide a brief review of research on human resource management as a strategic dimension, and highlight how the concepts of SHRM fit and flexibility (Milliman et al., 1991; Wright & Snell, 1998) apply to new ventures. Hypotheses are offered on the importance of human resource management as a key strategic dimension, and on the effects on performance of the interaction of SHRM with both strategy and organizational development stage. Longitudinal data is collected from 120 top managers in technology-based firms over a 2-year period. We find evidence that: (1) strategy is a multi-dimensional concept going well beyond traditional competitive strategy concepts; (2) human resource management is a dimension that grows in strategic importance as firms develop; and (3) fit between human resource management and both strategy and stage of firm development is positively related to firm performance. A concluding section discusses implications of the study for strategic management of new ventures.

THE IMPORTANCE OF HUMAN RESOURCES IN NEW VENTURES

Resource-based theory is a valuable perspective for understanding new venture strategy, because the perspective provides a strong foundation for how initial organizing activities impact the long-term success of new ventures. There are two facets of the theory that support this argument and are particularly appropriate for its application to new ventures in this discussion. First is its focus on generating sustainable competitive advantage, and second is its recent focus on the management-related and -generated resources in entrepreneurial situations.

Attention to sustainability is the fundamental reason for invoking resource-based theory as an explanatory mechanism in new venture development. Successful new ventures are those which are able to create value while at the same time insulating themselves from competition. Without the benefits that accrue from valuable assets that are rare, inimitable, non-tradable, and non-substitutable, anything that a new venture might do could be competed away by competitors both large and small. Thus, if sustainability of its competitive position is of concern to the entrepreneur and the new venture investors, it must prompt the new venture to focus on resources at its very inception (West & Bamford, 2005).

A dimension of resource-based theory receiving considerable attention is the dynamic development of resource positions over time. As competition and contexts evolve, firms must consider the development of new or enhanced resource positions. This has led to the development of the dynamic capabilities argument (Teece, Pisano, & Shuen, 1997), and to the exploration of investments in either complementary or secondary resource positions by firms (Peteraf, 1993). For new ventures, the issue is different. New ventures by definition come into being at first as only an idea about a potential market opportunity and possess no resources of the type described in the literature (Greene, Brush, & Brown, 1997). Thus a key challenge for a new venture is the development of an initial resource position. Then, as it grows, the challenge is the development of a broader set of resources. Since new ventures confront a continuously shifting landscape of life cycle problems (Kazanjian, 1988) as well as evolving competition and strategy (Dess, Lumpkin, & Covin, 1997), they need to continuously adapt their resource positions in order to meet the evolving strategic challenges (Greene & Brown, 1997). This suggests that sustainable new ventures are likely to follow a path of resource development, starting with nothing and somehow progressing over time to a broad set that relates to new challenges they confront.

The new venture's need for initial resources, as well as evolving sets of resources over time, prompts basic questions about where such resources come from and how are they developed. Previous research highlights the critical role that human resources play in this resource acquisition and development process. Penrose (1959) explicitly mentions entrepreneurial capabilities of management as key to understanding how the firm attains growth and competitive position. Management's key role is to identify and evaluate resources (Barney, 1991), and then decide which resources to invest in and how to utilize them (Castanias & Helfat, 1991). Then, to the extent that managers are more adept in organizing and integrating underlying resources, new ventures will be able to compete more effectively (Kogut & Zander, 1992).

The types of resources that are important in new ventures also point to the critical instrumental role that human resources plays. These types include intangible categories of knowledge, networks, and combinatorial capabilities. A new venture's strategy – and thus its performance – depends upon the knowledge the firm has about its market, its opportunity, and appropriate conduct to take advantage of that opportunity. Building on the Cooper, Gimeno-Gascon and Woo (1994) finding that links relevant knowledge to new venture survival, three types of procedural knowledge (Wiklund & Shepherd, 2003) are believed to be especially important: knowledge about operating in a specific industry, knowledge about starting up a new venture, and knowledge about managing a particular type of strategic approach (West & Noel, Forthcoming). West and Bamford (2005) find that two types of procedural knowledge – about starting up, and about managing growth – are the most important resources present in new technology ventures. The presence and importance of managerial knowledge resources in new ventures helps to answer two questions about the new venture process. Since as mentioned above new ventures by definition begin with no resources, it provides perspective on how such ventures move from nothing to something: the first resources developed by a new venture are knowledge resources brought into the venture by the founder and management team. It also provides perspective on the evolution of resource positions, supporting the model suggested by Brush et al. (2001) who show how knowledge resources can then be used instrumentally to acquire and develop additional resources.

Managerial knowledge is also central in how new ventures address the dynamic capabilities criteria that is so important to sustaining competitive advantage once the new venture has been launched and begins to grow. Resource-based theory also holds that competitive advantage arises from an aggregation of resources (Grant, 1991; Prahalad & Hamel, 1990). Penrose (1959), in fact, views the firm as a collection of resources with each resource representing a bundle of potential services to be offered by the firm. Because Penrose (1959) discusses the capabilities of management to coordinate the development and use of different resources as key to understanding how the firm attains growth, it further implies the interdependence of resources and supports her contention that resource bundles are important. As the venture grows and encounters more complex problems, both internally and externally, competitive advantage arises to the extent that managers create higher order organizing principles (Kogut & Zander, 1992) for the assembly and integration of underlying resources. One manifestation of this is the development of value-creating routines and procedures, which essentially represent the articulation of previously tacit operating knowledge (Grant, 1996; Winter, 1987). For these reasons, Alvarez and Busenitz (2001) hold that the process of combining resources is itself an important resource for entrepreneurial firms.

Another intangible resource that has been the subject of significant new venture research is that of networks and the social or information capital that networking produces (e.g., Aldrich & Zimmer, 1986; Birley, 1985; Dubini & Aldrich, 1991; Johannisson, 2000). The information benefits to new venture managers who bridge "structural holes" between different network clusters are especially valuable (Burt, 1997; Rogers & Kincaid, 1981), enabling access to relevant knowledge that they cannot gain through their own experience or regular contacts. This information may assist them in their efforts to start and grow the company, as well as in the extent to which they are able to identify new opportunities.

The various terms used to describe this constellation of resources – dynamic capabilities, combinative capabilities, organizing principles, knowledge, networking, and routines – all fundamentally refer to what it is that

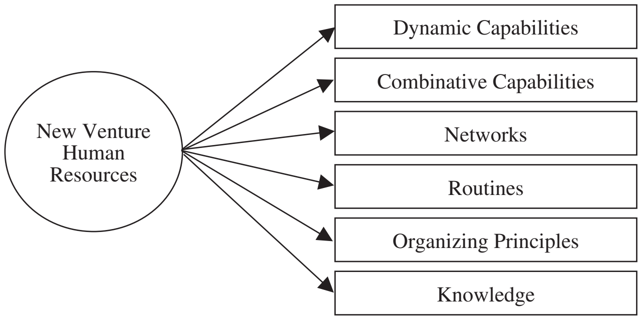

Fig. 1. Human Resources as Antecedent to Critical Strategic Resources.

human resources bring to the new venture to develop its strategic position (Fig. 1). Though previous research elevates these types of resources as the foundation for a new venture's strategy leading to sustainable competitive advantage, they are all processes and activities that spring from the human resources component. The strategic foundation of the new venture, therefore, depends on a strong human resources component.

HYPOTHESES ABOUT HUMAN RESOURCES

SHRM and Strategy

SHRM is a concept that integrates traditional human resource management within a firm's overall strategic planning and implementation, by fundamentally incorporating human resources with other physical, financial, and technological resources in the setting of goals and solving complex organizational problems (Legnick-Hall & Legnick-Hall, 1988). SHRM also emphasizes the implementation of a set of policies and practices that will build employee pool of skills, knowledge, and abilities (Jackson & Schuler, 1995) which are relevant to strategic goals. Thus a larger variety and more complete set of solutions for solving organizational problems are provided (Legnick-Hall & Legnick-Hall, 1988), and the likelihood that business goals of the organization will be attained is increased (Mechelin, 1996).

In order for SHRM to be effective, human resource dimensions must be effectively integrated with all phases of the strategic planning process in order to maximize benefit to the organization (Swiercz, 1995). SHRM includes both higher-level organizational dimensions as well as operational-level action dimensions. Organizational dimensions of SHRM include such items as reflection in the mission statement, appointment of an officer responsible for the function, a commitment to full-time employees, and corporate support for training programs (Welbourne, 1997). SHRM operational activities that collectively contribute to the achievement of the strategic objectives include team-based job designs, creating a flexible workforce, and implementing employee empowerment processes (Huselid, Jackson, & Schulman, 1997). Through these practices, it can be noted that – unlike traditional HRM – the SHRM perspective values employees as strategic assets (Bennett, Ketchen, & Schultz, 1998; Welbourne, 1997) that directly impact strategic effectiveness and performance, rather than as only factors with remote mediated effects.

Aside from actively incorporating human resource considerations within overall business strategy, Tokesky and Kornides (1994) propose other responsibilities of SHRM practice that are related to strategic management. Implementing SHRM activity involves careful analysis for the business of the socio-political environment. For the human resource function, this entails environmental scanning and watching trends (organizational, government regulations, demographic, social, and cultural) within the environment that can have an impact on the new venture. These might include, for example, health insurance legislation affecting small business or restrictions on the employment of foreign technology workers. SHRM also involves analyzing internal human resource practices for strategic contributions, such as effectiveness of innovation efforts or ability to lower costs. Human resource managers whose perspectives have been incorporated into strategic planning can more successfully attend to the strategic goals of the organization. In other words, strategic human resource managers can more carefully attune employee governance, incentives, and contributions to fit the business strategy. Another important function of SHRM is organizational analysis and design, where strategic human resource managers are depended upon to work out important organizational-design recommendations that will support the company's direction. Finally, due to increasing market competition and hostility, SHRM focuses on international human resource understanding as well as domestic comprehension (Milliman et al., 1991; Tokesky & Kornides, 1994). These practices assist SHRM teams in creating human resource practices and polices which are not easily replicated and consequently may lead to competitive advantage (Barney & Wright, 1998; Huselid et al., 1997).

Research has found evidence to support a link between SHRM and competitive advantage. For example, firms that offer domestic partner benefits increase the likelihood of being able to attract and retain the most qualified individuals for key positions (Wells, 1999). Studies have also shown that if an organization links human resource organization and practices to the strategic decision-making process of the firm, the organization will develop excellence in cost-oriented manufacturing strategies (MacDuffie, 1995; Snell & Dean, 1992) or innovation strategies (Bennett et al., 1998) and achieve greater economic success (Cook & Ferris, 1986; Huselid, 1995). Simerly and Tomkiewicz (1997) found that firms with proactive programs relating to human resource dimensions and firms that emphasize solutions to workplace issues experience higher return on investments. Another study demonstrates that when high-performance work practices are implemented, turnover rates decrease, productivity increases, and corporate financial performance improves (Huselid, 1995). Evidence has also been found that SHRM effectiveness (including human resource practices such as implementing effective communication systems) was positively associated with measures of employee productivity, profitability/cash flow, and firm market value (Huselid et al., 1997).

This background on the relationship of SHRM to strategy and firm performance finds some support in the research on new ventures, although as mentioned at the outset "there is an acute shortage of research ... on the relationship between strategy, human resource practices and small firm performance" (Chandler & McEvoy, 2000, p. 44). The literature on life cycle stage development, in contrast, offers some of the best insight on the nature of the human resource challenges, needs, and strategic contributions in new ventures. Virtually all of these studies discuss different aspects of human resource factors over different stages of organizational development, and the evolution that ventures must go through in this domain in order to be successful (e.g. Greiner, 1972; Kazanjian, 1988; Miller & Friesen, 1984; Quinn & Cameron, 1983). Kazanjian (1988) found that the "people" factor was consistently one of the strongest "dominant problems" confronted by new technology ventures across virtually every stage of the organizational life cycle. This factor included finding talent, attracting capable people, achieving management depth, developing networks, and defining roles and responsibilities. However, earlier studies tend to show that the human resource challenge changes in complexity and scope as organizations move from birth through growth stages. In the birth phase, the effectiveness of the venture predominantly depends on the founder(s) and recruited top management team, who work together without formal policies or structure, but whose individual experiences and expertise are relied upon for getting important foundational work accomplished. As new ventures move into the growth phase, however, the challenges of the business require the hiring of workers, more formal definitions of roles, organizational structure, better coordination, and more involved decision making (Miller & Friesen, 1984; Quinn & Cameron, 1983). This is because ventures at this stage must deal with scaling up operations, coping with the chaos of growth, developing a more sophisticated market interface, and learning how to execute and implement strategy consistently across a larger organization of people. The new venture's success at this stage depends upon "criteria such as human resource development, morale, cohesion, and human need satisfaction" (Quinn & Cameron, 1983, p. 44) in order for an expanded workforce to perform these functions effectively.

This background on SHRM in new ventures and its relationship to firm performance is also observed in practice. Following the data collection effort for this research, we conducted qualitative open-ended interviews with CEOs of technology-based companies to learn more about the challenges and issues they dealt with in starting up and growing their businesses. One CEO's reflections illustrates the strategic importance of the human resource dimension and its shifting nature as his firm developed:

> When we started up five years ago, it was just me and my two partners. I knew this industry and had contacts with people who might fund us. So I divided my time between strategy planning meetings where we would discuss design decisions for our system, and lots of outside work drumming up interest in the financial community. One of the partners took the lead on systems design, and the other was focused on developing customer relationships. We all three worked pretty independent at first, and it was crazy. But then it got even crazier once we started up, started selling, and started growing. We had all been functionally oriented, doing what we knew best based on our experiences. But suddenly we found ourselves in production mode for our hardware components, bringing on new sales people, having to hire customer support staff, collaborating with applications specialists for unique customer-demanded apps. I would come back from a trip to the west coast and wonder where all these people working for us had come from. Left hand, right hand: some people didn't understand what others were doing. Lots of people going in different directions. And though we had a strategic direction we'd all agreed on, we didn't have a way to integrate what all these new people were doing to make sure it was all happening the way we wanted. We recognized that we would only be successful if we started to pay considerable attention to how people were working, how we could make sure they were working together, and how we could align their own efforts and personal goals with those of the company. I felt it wasn't sufficient to have a 'personnel' manager; we needed to elevate human resource planning into every aspect of our strategy and planning discussions.

Brush et al. (2001, p. 66) also observed the critical importance of the human resources factor in the start-up of Handspring by two founders, Jeff Hawkins and Donna Dubinsky:

> Hawkins and Dubinsky were able to bring along an experienced management team .... While each team member was individually strong, their working together in a very similar setting meant they had significant tacit knowledge, not only about the product line and technology, but also about each other's personal strengths, weaknesses, and working styles .... The shared experiences of the team members became the basis of more complex resources, or firm capabilities, founded in learned understandings .... Both the transferred knowledge [of the founders and team] and the accumulated social capital that moved from Palm to Handspring were significant starting resources.

The above discussion suggests that human resource management is or should be an important strategic dimension that is considered by top management of new ventures. Table 1 illustrates how SHRM dimensions AU :4 map onto critical issues in stages of a new venture's development, as described above, such that human resources are a strategic asset. SHRM policies and practices can significantly aid in the development of competitive advantage where such advantage relies on the development of intangible business practices and knowledge resources.

Hypothesis 1. Human resource management is a significant dimension in the strategic considerations of new venture top managers.

Table 1. Mapping SHRM onto New Ventures.

Life Cycle Stage of Development	Dominant Problems in New Ventures	SHRM Dimensions
Birth, or conception	Innovation	Attracting top management with appropriate experience and contacts
Commercialization	Hiring management team	Achieving management depth
	Raising capital	Developing networks
	Starting up	HRM officer on management team
		Integration of HRM with strategy planning
Growth	Scaling up	Organizational design
	Marketing	Corporate support for training
	Managing chaos of growth	Empowered workforce
	Organization and culture	Position descriptions
		Team-based job designs
		Incentive and reward system design

SHRM and Flexibility

A crucial aspect concerning SHRM are the concepts of flexibility and fit (Milliman et al., 1991; Wright & Snell, 1998). The degree of fit determines the human resource system's integration with organization strategy. Flexibility describes the ability of a firm's SHRM to change by adding new human resource practices as other key aspects of firm strategy change. Firms must be able to detect environmental change, either within or outside of the organization, and then modify activities in order to maintain advantage and performance. Such a demand requires a flexible SHRM system. Qualities of behavioral flexibility, quick adaptation capability, and a broad source of human knowledge and skills characterize such a system (Wright & Snell, 1998). Flexibility is essential for organizational success since the goal of SHRM is to imbue an organization with the ability to adapt with facility in order to maximize fit (Wright & Snell, 1998). Fit and flexibility are thus often at odds with each other. Though it may enjoy a high degree of fit at a particular moment, a new venture operating in a dynamic and changing competitive environment needs to be flexible to modify SHRM as its competitive situation changes.

Integral to the success of new ventures are adjustments to strategy initiated progressively throughout stages of their life cycle development. Following Kazanjian's (1988) model, many of the problems faced by technology firms change significantly from one life cycle stage to the next. Thus a number of studies have concluded that both organizationally and strategically, new ventures must often change in order to achieve continued growth and success (Jelinek & Schoonhoven, 1990; Moore, 1995). Dess et al. (1997) find that entrepreneurial strategic behavior serves a firm well only so long as the firm's strategy is coaligned with demands on the firm from the competitive environment. As the interface between the firm and the market changes, so too must the firm's strategy adapt (West & Meyer, 1997). Those firms which are more entrepreneurial – recognizing and pursuing strategic change proactively – will flourish.

A limited amount of research has studied the impact of SHRM in different developmental stages of the organizational life cycle. Jackson and Schuler (1995) examine human resource management in terms of different internal and external contextual factors. Of particular interest to this paper is the consideration of life cycle induced changes in the internal context that impacts human resource management. In one study Milliman et al. (1991) theorize about different SHRM practices of MNCs as they progress through organizational life cycle stages. They are particularly interested how the degree of fit between international human resource activity and each stage of organizational development will affect strategic performance in foreign entry. In the earliest stage of international development line managers are held responsible for most human resource practices. International operations tend to be smaller and strategy is thus easily communicated and understood. The dominant international human resource practice at this stage is to recruit employees and deal with salary concerns (Baird & Meshoulam, 1988). Since the firm is just beginning, entrepreneurial endeavors and immediate survival concerns are prominent at this stage and little attention is given to support services that involve human resource activity.

New ventures experience a similar dynamic. Organizations are small and founding strategy is both easily communicated and well understood by the members of the top management team. The focus of efforts tends to be single-mindedly on technical aspects of creating the new service or product, while industry value chain and industry competitive issues are less prominent in day-to-day activities. At this early stage, new ventures need not have developed sophisticated SHRM systems and practices.

In contrast, during the growth stage of organizational development MNCs begin to emphasize more sophisticated production and market orientations. As a result, these organizations generally develop formal personnel practices and policies during this stage of life (Baird & Meshoulam, 1988). Unlike the initial stage of the life cycle, the growth stage begins to show dependence upon supportive human resources services. Milliman et al. (1991) propose that in this stage successful MNCs will have flexibility exhibited by significant increases in the importance of and kinds of human resource practices. Consequently, maximum organizational effectiveness during the growth stage of development will depend upon flexibility to adapt human resource policies and practices to the changing needs of the business.

Similarly, Kotter and Sathe (1978) outline the common human resource management problems among rapidly growing firms. They argue that these problems arise as a result of the need for rapid decision making, growing job demands, increased amount of recruiting and training, and constant changes within the organization and its environment. All of these problems strain an organization's resources, particularly human resources, and thus require increased attention to human resource management issues.

Thus there appears to be an interaction between attention to SHRM and organizational life cycle. In the early stage of its development, sophisticated human resource practices are unnecessary and would have no discernible effect on the activities among managers or the firm's performance.

However, these considerations become much more important during later stages of development when the firm confronts a significantly more complex array of internal and external factors. SHRM flexibility is, therefore, important for new ventures progressing through life cycle stages.

Hypothesis 2. Human resource management will increase in salience to management as a strategic dimension over time in new ventures.

Hypothesis 3. Change in new venture performance is positively associated with the interaction between change in importance of the human resource management strategic dimension and life cycle stage.

Hypothesis 4. Human resource practices associated with later life cycle stage issues will increase in importance over time.

SHRM and Fit

Fit is also a crucial aspect of SHRM (Milliman et al., 1991; Wright & Snell, 1998). This construct is further broken down into internal and external components. Internal fit (or horizontal fit) measures the degree of congruence between each of the human resource practices (Baird & Meshoulam, 1988). This paper is concerned with external fit (or vertical fit), on the other hand, which measures the degree of alignment between the overall business strategy and human resource practices as a collective whole (Schuler & Jackson, 1987). For example, a firm with a low-cost strategy can implement human resource practices such as a wage system based on minimizing defects and waste that is designed to complement a price sensitive production system (Swiercz, 1995). If a firm's strategy is to increase growth through innovation, on the other hand, stock options based on new business development would align behavior with the strategy.

These ideas, together with the previous hypotheses, suggest that it is not just competitive strategy dimensions that help determine the success or failure of organizations. Human resource management, as a critical dimension of strategy, must also play a role. Attention to competitive strategy is important, and attention to SHRM is also important. Either one, without the other being present, is insufficient to generate strong firm performance.

Hypothesis 5. New venture performance is positively associated with fit between SHRM and competitive strategy.

METHODOLOGY

Sample

Surveys and interviews were conducted among CEOs and top managers of technology-based firms or operating divisions of technology-based firms in three related SIC codes in one US region across a 2-year period. CEOs who agreed to participate in a study about strategy designated the names of managers in their companies who were involved in discussions and decisions on strategy and strategy-related issues as those who should be surveyed. The universe of firms in this geographic region with greater than 15 employees was 173; 51 CEOs agree to participate, and in the first year of the study 36 usable sets of surveys (including both CEO and all designated top managers) were returned. The second wave of the study was conducted 2 years later. After 2 years, 24 usable sets of surveys from intact teams (including the same CEOs and top managers) were available for longitudinal analysis.

At the beginning of the study, the average age of the participating firms was 4.1 years, and the average life cycle stage of development was at the beginning of the growth stage (Kazanjian, 1988). The average number of respondents per firm in both years of the study was 4.9 managers, inclusive of the CEO. The average self-reported size of participating firms during the final year was 168 employees and $41.5 million sales. Through Dun & Bradstreet and local chambers of commerce, data was collected for all 173 firms on age, employment size, changes in employment over previous years, and legal form. χ^2 and *t*-tests were conducted to compare responding to non-responding firms, and no significant differences were observed.

Variables

Strategy dimensions are developed from the structure of top management thinking about strategy. Managers' perceptions about strategy represent an important mediating construct between environmental causes of change and change actions subsequently taken (West, 2007). The structure of top management strategic thinking is inductively identified using factor analysis of managers' ratings of a series of strategic goals and means gathered across the 2 years of the study. Respondents in each survey were presented with a list of 20 possible strategic goals and 21 possible means. The list contains items originally used by Bourgeois (1980), and was supplemented with items based on a review of recent work on strategic goals and means. Table 2 presents a list of the goals and means items.

For each item respondents were asked to rate its importance on a "scale of importance" ranging from 0 to 100, where 100 represented "critically important" and 0 represented "not at all important." Factor analyses were performed separately on the study's initial year and final year goals and means ratings data. The factors in each year were named after reviewing and interpreting orthogonally rotated factor matrices. Six key strategic dimensions were identified from the initial year factor analysis; six nearly identical strategic dimensions were also identified from the final year factor analysis (see Table 6 below). Factor scores for the key strategic dimensions were calculated for every respondent in each year. Consistent with the approach used in prior strategy research on top management consensus to aggregate individual perspectives to the company level unit of analysis (e.g., Bourgeois, 1980; Dess, 1987), company level factor scores for each year were then calculated as the average of the factor scores of all the respondents (CEO and top managers) within each company. Changes in strategy dimensions are calculated as differences in company level factor scores on key strategic dimensions between years of the analysis.

P*erformance* is measured by the subjective assessment of top managers about their firm's performance. Reflecting the concern that absolute measures of performance (such as sales or net income) do not appropriately capture the strategy and resource-based view focusing on competitive advantage (Gilbert et al., 2006), this study used a dependent variable that focused on performance relative to competition. Wiklund and Shepherd (2003) previously employed a similar approach to assess performance relative to competitors, reflecting the theoretical focus of the resource-based view. The participating companies were privately held; therefore detailed financial information was not available. Firm performance was measured by the subjective assessment of the respondent, using the ratings of three performance-related question items. One item, based on Dess and Robinson (1984), asked for an assessment of the percent of ideal performance being achieved, where ideal performance equated to 100%. Two other items build on the tradition of strategy as competitive advantage leading to enhanced performance. These items assessed growth and overall performance "relative to other companies facing similar business development challenges or who are in the same business." Each of these relative assessments used a seven-point agreement scale, and the score on each was then interpolated into a 0-to-100-range equivalent. The overall measure of performance used for the firm is the average of the three items described here, expressed as a

Table 2. Strategic Goals and Means Rated by Top Managers.

Possible strategic goals
Net profit over 5 years
Rate of sales growth
Recognition as an innovative or creative firm
Creation of an effective organizational structure
Employee satisfaction/morale
Development of new products/services
Net profit over 1 year
Management excellence
Firm prestige/reputation
Market share and penetration
Development of a management information system
Management development and retention
Lowest cost relative to competitors
Employee compensation and benefits
Growth in assets and reserves
Dividends distributed
Community service/ethical and environmentally sound activities
Customer/client support
Development of reliable vendors and customers
Uniqueness of products/services
Possible means to achieve goals
New product/service development
Customer/client service
Operating efficiency
Quality of products/services
Experienced/trained personnel
Maintain high inventory levels
Competitive pricing
Broad range of products/services
Refining and improving existing products/services
Brand identification and image
Innovation/creativity in marketing techniques and methods
Control of channels of distribution
Procurement of raw materials
Uniqueness of product/service
Minimizing the use of outside financing
Serving special markets or customer needs
Products in high-price market segments
Advertising
Reputation within industry
Forecasting market growth and competitive activities
Innovation

percent. A substantially similar scale has been reliably used in other research on private new ventures, and represents an effective proxy for objective measures of performance (Lumpkin & Dess, 1995). The composite measure at the firm level has a Cronbach's α coefficient of 0.87 in the first year of the study and 0.78 in the second year. *Change in performance* measures relative change, and is captured by dividing the change in performance between years of the study by performance in the initial year.

Because of concerns of possible common method bias due to self-report data from a single source, data collected in the surveys was compared to identical data collected independently on the responding companies from Dun and Bradstreet and the local chambers of commerce. Correlations between these different sources included 0.95 for company age, 0.94 for employment size, and 0.84 for changes in employment (all $p<0.001$), indicating that common method bias is not an issue.

Life cycle stage is measured by the average rating of all managers in each company, using Kazanjian's (1988) descriptions of five stages that firms experience: (1) conception and development; (2) commercialization; (3) growth; (4) stability; and (5) decline. The mean for all companies in the survey was 3.0 in the first survey and 3.4 in the second survey. A within-group interrater reliability statistic r_{wg} (James, Demarree, & Wolf, 1993) was calculated for each company; the average r_{wg} across all companies responding to the first survey is 0.91.

Reflecting the earlier discussion above, *SHRM flexibility* is operationalized as the interaction between organizational life cycle stage and changing attention to the human resource factor. *SHRM fit* is operationalized as the interaction between competitive strategy factors and the human resource factor.

RESULTS

Hypothesis 1 predicted that human resource management would be an important strategic dimension considered by top managers. Table 3 presents the results of the factor analyses. In both years that surveys were conducted, the human resource management factor explained the greatest variance among the surveyed managers' responses. The eigenvalues for this factor were 10.2 and 13.7 in the 2 years, explaining 27 and 34% of the variance, respectively. Hypothesis 1 is strongly supported.

Hypothesis 2 predicted that the human resource management dimension would increase in importance over time. Table 4 presents a summary of the

Table 3. Results of Factor Analyses.

Factor	Factor Name	Initial Year		Final Year	
		Eigenvalue	Variance explained	Eigenvalue	Variance explained
1	Human resource management	10.245	27.0	13.747	34.4
2	Relationship with customer	2.610	6.9	2.983	7.5
3	Differentiation	1.964	5.2	1.495	3.7
4	New products/growth	1.625	4.3	1.024	2.6
5	Low-cost leadership	1.383	3.6	1.065	2.7
6	Marketing/image	1.033	2.7	2.165	5.4

Table 4. Average Company Factor Scores and Changes.

Factor Name	Initial Year	Final Year	Factor Score
	Factor scores	Factor scores	Change
Human resource management	−0.0633	0.0458	0.1091
Relationship with customer	0.0633	0.0317	−0.0316
Differentiation	0.0124	−0.0086	−0.0210
New products/growth	0.1226	0.0107	−0.1119
Low-cost leadership	0.0063	−0.0865	−0.0928
Marketing/image	0.0243	−0.0902	−0.1145

average company factor ratings and changes in factor ratings over the time of the study.[1] The human resource management dimension is the only factor that increased in importance over the period of the study. Of all six explanatory factors it is also the most important in the final year of the study, as evidenced by its positive factor score (Tabachnik & Fidell, 1989). Hypothesis 2 is strongly supported.

Hypothesis 3 predicted that change in firm performance would be positively associated with the interaction between change in the human resource management strategic dimension and life cycle stage. Table 5 shows the results of an OLS regression of change in performance on the interaction of change in the SHRM dimension and life cycle stage. The main effect of change in human resource management dimension is not significant in the overall equation, but the interaction of SHRM change with life cycle stage is a significant positive predictor of change in firm performance ($p < 0.10$). The regression equation in total is significant ($F = 2.43$, $p < 0.10$). Hypothesis 3 is supported.

Table 5. Regression of Performance Change on SHRM Flexibility.

Dependent Variable	Change in Firm Performance
Independent Variables	
SHRM Change	−0.512 (−1.550)
Life Cycle Stage	−0.103 (−2.337)**
Flexibility (change in SHRM × Life Cycle)	0.163 (1.744)*
R^2	0.258
Adjusted R^2	0.152
F (3, 21)	2.43*

t-values in parentheses.
*$p<0.10$, **$p<0.05$, ***$p<0.01$.

Hypothesis 4 predicted that human resource practices associated with later life cycle stage issues will increase in importance over time. Table 6 presents complete factor loading matrices for both the initial and final survey analyses, and Table 7 summarizes the factor loadings for the human resources management factor across both years. Referring to Table 7, several survey item loadings increased between the initial and final surveys: employee compensation and benefits, experienced and trained personnel, creating an effective organizational structure, and community services and ethical approaches. Each of these items reflects the increasing importance of structuring and managing a larger organization in a growth stage of development, and dealing more explicitly with the interface with the market. At the same time, the results show declines in item loadings that are presumably of paramount importance in the birth stage of a new venture (management development, management excellence). These results provide support for Hypothesis 4.

Hypothesis 5 predicted that firm performance would be positively associated with fit between SHRM and competitive strategy. Table 8 shows the results of separate OLS regressions of performance in the final year of the study on three strategy dimensions (low-cost leadership, differentiation, and human resource management) and their interactions. The interaction between the SHRM and differentiation factors is positively related to performance ($p<0.05$), and the regression equation in total is significant ($F=4.42$, $p<0.05$). The interaction between the SHRM and low-cost leadership factors is not significantly related to performance, and this regression equation in total is not significant. Thus Hypothesis 5 finds qualified support.

Table 6. Rotated Factor Loading Matrices.

	Human Resource Management	Relationship with Customer	Differentiation	New Products/ Growth	Low-cost Leadership	Marketing/ Image
Initial year						
Management development an retention	**0.818**	0.101	0.081	0.068	0.141	0.147
Employee satisfaction/morale	**0.697**	0.226	0.065	0.163	0.002	0.028
Management excellence	**0.689**	0.268	0.090	0.037	–0.053	0.154
Employee compensation and benefits	**0.640**	0.105	0.224	0.047	0.260	–0.071
Experienced/trained personnel	**0.470**	0.359	0.086	0.154	0.193	0.091
Effective organizational structure	**0.479**	0.090	0.110	0.112	–0.063	0.062
Customer/client service	0.241	**0.732**	–0.022	0.046	0.118	0.176
Customer/client support	0.392	**0.679**	0.067	0.006	0.144	0.171
Quality of products/services	0.200	**0.620**	0.189	0.086	0.092	0.056
Reliable vendors and customers	0.433	**0.566**	0.142	0.001	0.301	0.053
Reputation within industry	0.190	**0.475**	–0.015	0.014	0.060	0.122
Operating efficiency	0.231	**0.348**	0.166	–0.100	0.346	–0.006
Uniqueness of product/service	0.092	0.006	**0.820**	0.159	0.213	0.161
Uniqueness of products/services	0.203	0.087	**0.750**	0.210	0.123	0.096
Innovation	0.089	0.179	**0.580**	0.320	–0.021	0.174
Development of new products/services	0.183	–0.048	0.196	**0.762**	0.147	0.087
New product/service development	0.042	0.002	0.240	**0.716**	0.052	0.198
Rate of sales growth	–0.051	0.118	0.028	**0.455**	0.107	0.116
Market share and penetration	0.108	0.120	0.099	**0.446**	0.137	0.422
Lowest cost relative to competitors	0.161	0.070	0.072	0.148	**0.794**	0.065
Competitive pricing	–0.028	0.164	0.159	0.229	**0.671**	0.005
Procurement of raw materials	0.178	0.205	0.081	–0.002	**0.508**	0.255
Brand identification and image	0.103	0.065	0.116	0.094	0.002	**0.697**
Creativity in marketing techniques	0.114	0.251	0.203	0.151	0.139	**0.632**
Control of channels of distribution	0.168	0.066	0.069	0.270	0.059	**0.562**

Table 6. (*Continued*)

	Human Resource Management	Relationship with Customer	Differentiation	New Products/ Growth	Low-cost Leadership	Marketing/ Image
Final year						
Employee compensation and benefits	**0.783**	0.157	0.128	0.134	0.203	0.013
Employee satisfaction/morale	**0.672**	0.169	0.069	0.236	0.052	0.149
Experienced/trained personnel	**0.561**	0.353	0.031	0.173	0.025	−0.032
Management development and retention	**0.706**	0.176	0.145	0.041	0.041	0.129
Effective organizational structure	**0.540**	0.212	−0.023	0.098	0.182	0.039
Management excellence	**0.445**	0.415	0.091	0.209	0.030	0.052
Community service/ethical approaches	**0.521**	0.202	0.038	0.095	0.292	−0.053
Customer/client service	0.165	**0.775**	0.152	−0.031	0.095	0.285
Customer/client support	0.161	**0.743**	0.054	0.099	0.091	0.024
Quality of products/services	0.259	**0.600**	0.157	0.208	0.169	0.071
Firm prestige/reputation	0.474	**0.586**	0.230	0.113	−0.082	−0.064
Reputation within industry	0.388	**0.494**	0.282	0.007	0.046	−0.028
Reliable vendors and customers	0.402	**0.416**	0.016	0.192	0.208	−0.041
Advertising	0.144	0.084	**0.708**	0.045	0.052	0.197

Creativity in marketing techniques	0.114	0.114	**0.696**	0.173	0.139	0.049
Brand identification and image	0.099	0.350	**0.658**	−0.027	−0.069	−0.048
Control of channels of distribution	0.008	−0.009	**0.568**	0.070	0.109	0.133
Rate of sales growth	−0.058	0.009	**0.554**	0.311	0.379	0.049
Net profit over 5 years	0.031	0.136	**0.439**	−0.064	0.011	0.089
Market share and penetration	−0.104	0.399	**0.430**	0.290	0.311	0.181
Refining/improving existing products	0.278	0.270	**0.333**	0.230	0.178	0.016
Uniqueness of products/services	0.177	0.137	0.052	**0.754**	−0.038	0.077
Innovation	0.272	0.145	0.063	**0.645**	−0.007	0.276
Uniqueness of product/service	0.149	0.004	0.195	**0.595**	0.108	0.053
Recognition as an innovative firm	0.540	0.247	0.051	**0.549**	−0.028	0.177
Competitive pricing	0.146	0.178	0.349	−0.036	**0.749**	0.254
Lowest cost relative to competitors	0.164	0.093	−0.013	−0.014	**0.702**	0.034
Procurement of raw materials	0.230	0.142	0.252	0.215	**0.423**	−0.124
Development of new products/services	0.117	0.062	0.041	0.143	0.043	**0.933**
New product/service development	−0.055	0.114	0.227	0.159	0.140	**0.758**

Table 7. Factor Loadings for Human Resource Management Dimension.

Survey Items	Initial Year	Final Year	Change in Factor Loadings
	Factor loadings	Factor loadings	
Management development and retention	0.818	0.706	−0.112
Employee satisfaction and morale	0.697	0.672	−0.025
Management excellence	0.689	0.445	−0.244
Employee compensation and benefits	0.640	0.783	+0.143
Creating effective organizational structure	0.479	0.540	+0.061
Experienced and trained personnel	0.470	0.561	+0.091
Community service and ethical approaches		0.521	+

AU :2

Table 8. Regression of Performance on SHRM Fit. AU :3

Dependent Variable	Firm Performance	Firm Performance
Independent variables		
Differentiation strategy factor	−0.075 (−2.266)**	
Low-cost leadership strategy factor		−0.027 (−0.995)
SHRM strategy factor	−0.084 (−2.465)**	−0.024 (−1.114)
SHRM × differentiation	0.116 (2.368)**	
SHRM × low-cost leadership		0.033 (0.970)
R^2	0.376	0.148
Adjusted R^2	0.287	0.026
F (3, 21)	4.21**	1.21

t-values in parentheses.
*$p<0.10$, **$p<0.05$, ***$p<0.01$.

DISCUSSION

This study proposes that SHRM is a critical factor in the strategy of developing new ventures. The empirical tests investigating the presence and explanatory power of SHRM provide strong support for this general proposition. SHRM is important in the strategic deliberations of top managers, in fact it is the most salient strategic dimension among the companies in both surveys administered 2 years apart. SHRM flexibility is also critically important, as evidenced by its increasing prominence as a strategic dimension over these 2 years. The importance of flexibility is also supported by the apparent shift within the SHRM dimension to sub-dimensions that are increasingly salient for these firms, given their stage of development. Furthermore, SHRM fit with a generic differentiation strategy positively impacts firm performance.

This fit relationship between SHRM and the differentiation generic strategy (Table 8) bears further scrutiny. The main effects of the differentiation and SHRM strategy factors each bear a negative relation to firm performance. This is counterintuitive and not what we expected, until we recall that a main effect in a regression with an interaction term is conditional on the other interacting variable. The appropriate interpretation for each variable is that this is its effect on performance when the other interacting variable has a value of zero (Jaccard, Turrisi, & Wan, 1990). Thus we can conclude that a differentiation strategy with no SHRM has a negative relationship with performance, just as SHRM without a differentiation strategy is also not effective. This surely speaks to fit as being important.

But we can go further still, by examining the interaction itself. Fig. 2 plots the interaction of two levels of SHRM (plus and minus one standard deviation from the sample mean) across five levels of differentiation. Here it can be observed that performance is enhanced when high levels of SHRM are present at the same time the company is aggressively pursuing

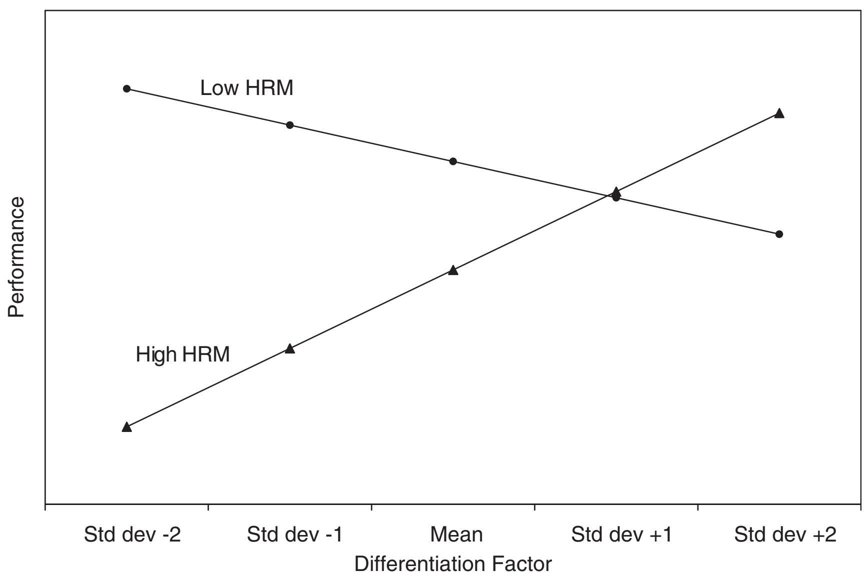

Fig. 2. Interaction between SHRM and Differentiation.

a differentiation strategic approach; the two work in synch together, suggested by the upward sloping "High HRM" line. In contrast, where a new venture increasingly pursues a differentiation approach but has low levels of SHRM, performance will suffer since low levels of SHRM apparently do not provide the kind of support that makes this generic strategic approach successful. It is again apparent that fit is critically important.

The results of this study should be treated with appropriate caution. The small sample size limits the number of variables that can be simultaneously examined in regression analyses; there may be interactions between variables, such as between generic competitive strategy factors, that have not been explored here. However, where significant results are reported in the analyses, the effect is quite likely strong in actual practice. Still, the results of the research do offer face validity in that differentiation as a strategic factor is significantly related to performance, while low cost as a strategic factor does not. This seems to make sense, since the population of firms we are investigating are young technology-based firms, which generally do not enter turbulent and competitive markets seeking low-cost positions of advantage.

This study examined growth-oriented technology ventures in one geographic region. The results may be generalizable primarily to technology ventures. And yet it is not a big stretch to see how what we observe here can also apply to other types of new ventures. One of the co-authors of this study, for example, has spent years working in the retail sector and has observed very similar dynamics. When new retail ventures start-up, they are usually not pursuing low-cost strategies or seeking to join battle with the big box stores that now dominate the landscape in the United States. Instead, the success of new retail ventures initially depends upon the execution of a unique concept that achieves effective differentiation in the market. Founders and a small number of experienced partners are heavily involved in raising capital, setting up supply relationships, and jiggering executional details in (generally) one shop. With validation of the business model, founders seek to grow by adding additional stores. Just like technology businesses or other ventures that scale up, the same human resource issues come in to play, for example, hiring a workforce, training, organizational design, creating incentive, and reward structures. These must coalesce well with the validated differentiation approach in the first store in order for the growth model to succeed.

The most striking finding in these factor analyses is the strong emphasis placed on human resource management facets as a critical explanatory strategic dimension. This parallels qualitative comments heard in interviews following the administration of the survey. One interviewed CEO mentioned that of four factors he believes are essential for success, one is to "hire well."

Virtually all managers interviewed stressed the importance of management excellence and experienced management as key success factors for starting up. The team relationship was often mentioned as a key component in sustainable success, and was tied in with other human resource dimensions such as satisfaction, commitment, and personal performance. Another CEO strives for "unity development" in the management team as well as across the business, a concept she thought that stresses the dual importance of excellent performance and strong, fulfilling working relationships unified by common vision. Most managers, in fact, discussed sharing vision as a function of having a unified workforce and involvement by all levels, leading to the unfettered sharing of ideas and empowerment as important components of strategy.

What is surprising about these ideas is that managers associate them easily and clearly with the pursuit of effective strategy in their firms. That respondents rate the human resource dimension so highly is borne out by the final year factor analysis, wherein this factor received the highest factor rating overall, while other factors received negative ratings and are all perceived as less important. This is surprising because literature on strategy (Porter, 1980, 1985) or technology strategy (Goodman & Lawless, 1994) tends to emphasize the strength of industrial organization economics arguments, such as barriers to entry, economies of scale and scope, or the economics-based generic strategies that arise from them. The findings in the factor analyses provide quantitative support for ideas offered recently regarding the substantive importance of the management dimension in competitive strategy (Castanias & Helfat, 1991; Hambrick, 1989; Jackson, 1992). With regard to new ventures these results focus attention on the balance between content and process (e.g., Lumpkin & Dess, 1996; West & Meyer, 1997) and on human resource management systems and policies (Welbourne, 1997; Welbourne & Andrews, 1996) as a central part of effective strategic planning.

The findings here challenge traditional ideas about strategy in new ventures. Ireland and Hitt (1997) extend our understanding of the importance of strategy by empirically examining types of strategies and implementation of strategies in fast growth entrepreneurial firms. They find that high-quality and low-cost strategies are both effective generic strategic approaches when implemented correctly, and that fast growth firms tend to rely more on a differentiated high-quality approach than the low-cost approach (Ireland & Hitt, 1997). The current study qualifies this finding. The current study suggests that these generic strategic approaches may only be effective so long as they are coupled with top management attention on supportive human resource practices.

The findings here also modify recently advanced ideas about SHRM fit and flexibility. Milliman et al. (1991) argue that firms must cycle between fit and flexibility as they progress from one life cycle stage to the next. Both the theory about new venture dynamics and the results of the present study imply that flexibility is a characteristic of SHRM that new ventures should strive for continuously. Fit, on the other hand, is context-dependent. For the technology-based new ventures participating in this study, an interaction between SHRM and low-cost leadership strategy had no relationship with performance. It may be that these firms and the industries in which they compete are still in the innovation-driven stages of development (Moore, 1995), but that in years to come maturation and saturation of the industries will heighten the importance of cost-oriented strategies (Hill, 1988).

The apparent conflict between fit and flexibility is especially important in managing strategy content. Even within an overall domain of an innovative strategy approach, increased attention to human resource management practices can have positive effects on firm performance. The positive relationship of performance to the interaction of innovation and SHRM implies this is the case. The challenge for all top managers is to attend to developing human resource needs, in much the same way as they attend to developing competitive strategy needs. Like competitive strategy, anticipatory changes in SHRM may actually facilitate enhanced firm performance.

Finally, this study is suggestive of three areas for additional research in the future. First, despite the longitudinal nature of this study, it is unclear how causality works in the results reported. Do new venture managers think long and hard about SHRM because they consider it an important strategic dimension, and then spend time on related human resource issues? Or do human resources issues swamp the management team as the new venture grows, forcing them to finally think about this dimension? Future research might investigate whether anticipation of human resource issues leads to enhanced performance, as opposed to only addressing these issues when they arise and begin to compromise strategic effectiveness.

Second, the items used to explore strategic dimensions in this study were derived from previous research on strategy and consensus where much of the productive activity of the firm was done internally. Yet new ventures today – especially technology-based new ventures – are often characterized by joint ventures and cooperative relationships with other companies, as well as outsourced design, software development and manufacturing. For these reasons, SHRM for new ventures – and its interaction with strategy – may be different than in larger established firms. The challenges of creating SHRM flexibility and fit under these circumstances are enormous, since direct contact with and control of people who do much of the work of the venture is not always possible. Increasingly, new ventures which operate more virtually have substituted an external for an internal "agency" problem, yet the nature of agency relationships and contracts likely limits the degrees of freedom that new venture managers have in structuring relationships with "employees" that coalesce with the type of generic strategic approach taken. Exploring how to structure these complex joint venture, cooperative, and outsourced relationships will be especially useful.

The last suggestion for future research actually returns to where this paper began – to resources. This study has examined the relationship between SHRM and generic strategies. Yet strategy discussions are increasingly grounded in the resource-based view, especially where the issue of sustainable competitive advantage is paramount. As we stated at the very beginning of this paper, entrepreneurs are not only interested in the success of the start-up but also in the sustainability of their efforts. This is why we invoke the resource-based view. But there are many types of resources that have been identified, and these often involve significantly more complex content and process than the simple differentiation – low-cost generic strategy dichotomy. How does SHRM interact with these other types of resources, and which resources combinations produce the strongest performance effects? Future research into these questions would provide great value to researchers and practitioners.

NOTE

1. The sum of factor scores is zero across all subjects (Tabachnik & Fidell, 1989). Company level factor scores are averages of subjects within companies, the mathematical artifact of which can be non-zero factor scores at the aggregated level across all companies.

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