



Cornell University
ILR School

Cornell University ILR School
DigitalCommons@ILR

CAHRS Working Paper Series

Center for Advanced Human Resource Studies
(CAHRS)

November 1997

The View from the Top: How Strategic Human Resource Management Affects the Performance of Initial Public Offering Firms

Theresa M. Welbourne
Cornell University

Linda A. Cyr
Cornell University

Follow this and additional works at: <https://digitalcommons.ilr.cornell.edu/cahrswp>

Thank you for downloading an article from DigitalCommons@ILR.

Support this valuable resource today!

This Article is brought to you for free and open access by the Center for Advanced Human Resource Studies (CAHRS) at DigitalCommons@ILR. It has been accepted for inclusion in CAHRS Working Paper Series by an authorized administrator of DigitalCommons@ILR. For more information, please contact catherwood-dig@cornell.edu.

If you have a disability and are having trouble accessing information on this website or need materials in an alternate format, contact web-accessibility@cornell.edu for assistance.

The View from the Top: How Strategic Human Resource Management Affects the Performance of Initial Public Offering Firms

Abstract

We study SHRM by taking an organizational level perspective on control over all employees. Drawing from agency theory, control theory, and the resource-based view of the firm, we develop hypotheses regarding the differential effects on firm performance of various overarching approaches to human resource management (HRM) control implemented in small, growing firms. We test our hypotheses in a longitudinal study of 342 firms that went public in 1993. Results support the negative effect of bureaucratic HRM control on market-based measures of performance, while firm-specific HRM control and incentive-based HRM control are related to internal measures of firm growth.

Keywords

employee, organization, performance, work, studies, SHRM, HRM, human resource, market, incentive

Comments

Suggested Citation

Welbourne, T. M. & Cyr, L. A. (1997). *The view from the top: How strategic Human Resource Management affects the performance of initial public offering firms* (CAHRS Working Paper #97-27). Ithaca, NY: Cornell University, School of Industrial and Labor Relations, Center for Advanced Human Resource Studies. <http://digitalcommons.ilr.cornell.edu/cahrswp/168>

WORKING PAPER SERIES

The View from the Top: How Strategic Human Resource Management Affects the Performance of Initial Public Offering Firms

Theresa M. Welbourne
Linda A. Cyr

Working Paper 97-27



**THE VIEW FROM THE TOP:
HOW STRATEGIC HUMAN RESOURCE MANAGEMENT AFFECTS
THE PERFORMANCE OF INITIAL PUBLIC OFFERING FIRMS**

Theresa M. Welbourne
Cornell University
Center for Advanced Human Resource Studies
393 Ives Hall
Ithaca, NY 14853-3901
607/255-1139
FAX: 607/255-1836
tw19@cornell.edu

and

Linda A. Cyr
Cornell University
Human Resource Studies
393 Ives Hall
Ithaca, NY 14853-3901

Please direct all correspondence to Theresa Welbourne.

This study was partially supported by the Center for Advanced Human Resource Studies and the Entrepreneurship and Personal Enterprise Program, both at Cornell University in addition to the Society for Human Resource Management Foundation.

We wish to thank Alice Andrews, Jay Barney, John Bishop, John Boudreau, Lee Dyer, Pat Wright, the seminar participants at Ohio State University, and seminar participants at the Wharton School of Business.

This paper has not undergone formal review or approval of the faculty of the ILR School. It is intended to make results of Center research available to others interested in preliminary form to encourage discussion and suggestions.

<http://www.ilr.cornell.edu/cahrs>

THE VIEW FROM THE TOP: HOW STRATEGIC HUMAN RESOURCE MANAGEMENT (SHRM) AFFECTS THE PERFORMANCE OF INITIAL PUBLIC OFFERING (IPO) FIRMS

We study SHRM by taking an organizational level perspective on control over all employees. Drawing from agency theory, control theory, and the resource-based view of the firm, we develop hypotheses regarding the differential effects on firm performance of various overarching approaches to human resource management (HRM) control implemented in small, growing firms. We test our hypotheses in a longitudinal study of 342 firms that went public in 1993. Results support the negative effect of bureaucratic HRM control on market-based measures of performance, while firm-specific HRM control and incentive-based HRM control are related to internal measures of firm growth.

Today's fast-paced, competitive business environment has resulted in "rediscovery" of the human resource management function as a group that may be able to enhance firm competitiveness and performance by being "strategic" (Dyer & Kochan, 1995; Ulrich, 1997). The potential contributions of strategic human resource management (SHRM) appear to emanate from two perspectives. The first focuses on aligning human resource policies and procedures with business or corporate strategies, and the second is an organizational level approach that includes a senior HRM executive on the top management team who is in a position to influence firm level business decisions. SHRM's potential benefits have led to its growing popularity among practitioners and have prompted academics to pursue macro-oriented research that applies firm level strategy models to HRM (Huselid & Becker, 1997; MacDuffie, 1995; Martell & Carroll, 1995).

The results of the strategic HRM research have been impressive, with evidence mounting that certain types of "employee friendly" human resource practices can have significant effects on firm performance measures (e.g. Delery & Doty, 1996; Huselid, 1995; Huselid, Jackson & Schuler, 1997; Welbourne & Andrews, 1996). The research conducted to date tends to focus on the degree to which certain types of HRM practices (sometimes referred to as bundles) directly affect firm performance or have an impact on performance through their "fit" with the firm's strategy (Devanna, Fombrun & Tichy, 1984; Dyer, 1985; Miles & Snow, 1984; Schuler, 1987). This "fit" perspective predominates despite the argument that the study of SHRM might benefit most from the more strategic, organizational level perspective focused on firm-level issues (Truss & Gratton, 1994; Wright & Snell, 1991).

It seems that although the goal of SHRM is to master the telescopic view (looking at the business from a strategic or firm-level perspective), most SHRM research has involved mastery of the microscope (studying specific combinations of HRM policies and procedures). Dyer and Kochan (1995) in addressing the question "Is there a new HRM?," suggest that evaluations of SHRM must begin with "a view from the top." They start with this perspective "because strategies involve decisions about key goals, major policies, and resource allocations, (and) they tend to be formulated, or at least blessed, at the top of organizations" (pg. 3). The strategy process starts at the top of the organization, and in most cases, specific policies and procedures (such as those involving specific human resource tactical areas such as selection, training, etc.) follow the decisions made at the higher level of the organization. While much of the prior SHRM research has focused on the combinations of policies and procedures, we hope to contribute to the SHRM literature by studying the higher level decisions that might drive those. We refer to this as the "view from the top" (borrowing from Dyer & Kochan, 1995).

The "view from the top" allows us to investigate SHRM by defining it as the overarching approach an organization takes toward control of its employees.¹ Decisions about HRM control are made early in a firm's life cycle, they apply regardless of whether or not the firm has a formal HRM department, and they constitute an important step in the SHRM process. As Snell (1992: 321) points out, "the distinctions between strategy, control, and human resources are becoming less obvious (Goold & Quinn, 1990; Jaeger & Baliga, 1985)." Those distinctions are even less obvious when focusing on control decisions in the early stages of a firm's life cycle when such decisions might have a dramatic influence in shaping future strategy and employee relations.

In order to study SHRM from a more "telescopic" approach, we integrate three organizational theories that address the relationship between HRM control and firm performance. Specifically, we apply agency theory, control theory, and the resource-based view of the firm (supplemented with work from the field of SHRM), to develop hypotheses on how the three different types of HRM control should affect firm performance. The three forms of control are bureaucratic HRM control, firm-specific HRM control, and incentive-based HRM control.

We address the overall HRM control question by studying how early decisions regarding HRM control affect subsequent firm performance in a sample of young, growth-oriented firms. In particular, we focus on initial public offering (IPO) firms. IPO firms are opportune for our more "telescopic" approach because they are at earlier stages in their life cycles, are acquiring cash to grow, and face higher risks due to being newer firms. As a result, IPO firms are likely to be immediately and quite dramatically affected by their early HRM control decisions (Welbourne & Andrews, 1996).

In addition to providing an opportune sample for studying the effect of HRM control on firm performance, IPO firms are also of considerable interest to business professionals, investors, and politicians. These companies have potential to affect shareholder wealth, economic growth, job growth, innovation, and investment (Hornsby & Kuratako, 1990). According to Shane (1996), newer entrepreneurial firms (of which IPO firms are a part) account for 80% of the new jobs created in the United States. A recent Fortune article (Wyatt, 1996) titled "America's amazing IPO bonanza" characterized the IPO market as "big, powerful... and reinvigorating the U.S. economy." As a result, there has been increased interest in IPO firms, and these newly public companies are closely watched by the financial community and by their investors. In-depth analyses of their financial position and their progress in technology, management, and product development are reported to investors (by both the company and the investment bankers covering the firm). Thus, stock price, for newly public firms, is an overall

¹ We refer to firm-level control over all employees as HRM control.

measure of firm performance that represents a response to the firm's financial performance and expert judgement of the company's potential.

Given the relevance of stock price as a measure of firm performance for IPO firms, we think that it is a useful dependent variable for our research study. Therefore, we use three dependent variables that focus on stock price growth after the IPO. In addition, given the recognition of IPOs as potential catalysts for job and economic growth, we also consider three measures of firm growth. By examining effects on a combination of market-based dependent variables and firm-based growth measures, we hope to be able to more fully test the relationship between early HRM control form and firm performance.

To summarize, our study focuses on the effects of early HRM control decisions on subsequent firm performance. By doing so, we expand the SHRM literature into two domains: (1) the effect of HRM control, viewed from the top, rather than HRM policies and procedures on firm performance, and (2) the study of SHRM in small, young, growth-oriented firms. We also extend the agency and control theory literatures by merging concepts from the resource-based view of the firm and introducing a third form of control, which we call firm-specific control. The results of this work have implications not only for SHRM but also for the fields of entrepreneurship, small business management, and organization theory.

A VIEW OF CONTROL FROM THE TOP

The concept of control is "at once the essential problem of management and organization and the implicit focus of much of organization studies" (Pfeffer, 1997: 100). This can be no truer than for managing people in organizations. Human resource management is largely a matter of control; its primary objective is to control employee behaviors so as to elicit desired outcomes that are consistent with the objectives of the organization (Schuler, 1989). Furthermore, control is an issue that is, first and foremost, addressed "from the top" of the organization, and the decisions that a firm makes regarding overall HRM control early in its life cycle are likely to dramatically influence its future performance (Snell & Youndt, 1995; Stace & Dunphy, 1991). In our sample of IPO firms, we argue that decisions about HRM control are reflected by where in the organization the HRM function reports and by whether or not firms have incentive programs for all employees. These are indicators of the overarching strategies of control over all employees that firms might implement.

Multiple theoretical perspectives contribute to our understanding of control over all employees. Specifically, application of agency theory, organizational control theory and the resource-based view of the firm, in conjunction with arguments from the strategic HRM

literature, yields three forms of control that we hypothesize will have differential effects on firm performance. We refer to these three forms of control as bureaucratic HRM control, firm-specific HRM control and incentive-based HRM control. Two forms, bureaucratic HRM control and incentive-based HRM control, emerge from well-established literatures in agency theory (Jensen & Meckling, 1976) and organizational control theory (Ouchi, 1979, 1980) and have been investigated simultaneously in prior empirical studies (e.g. Eisenhardt, 1985, 1989; Snell, 1992).

Bureaucratic HRM control focuses on controlling behaviors through bureaucratic mechanisms, and incentive-based HRM control focuses on using outcome-based incentives to align employee goals with those of the organization. For our purposes, bureaucratic HRM control is suggested by having a human resource function "buried" in an administrative department, and incentive-based HRM control is indicated by having various organizational incentive programs for all employees. The third form, which we call firm-specific HRM control, is indicated by the SHRM literature (e.g. Martell & Carroll, 1995) and supported by the resource-based view of the firm (Barney & Ouchi, 1986). We argue that firm-specific control exists when a senior level HRM manager is part of the executive team.

Bureaucratic HRM Control

Both agency theory and organizational control theory contribute to our conceptualization of bureaucratic HRM control. Agency theory is used to understand how alternative control forms work to reduce conflicts of interest that inevitably arise when principals (i.e. managers) delegate responsibility to agents (i.e. employees) (Fama, 1980; Jensen and Meckling, 1976). One alternative available to managers is to closely 'monitor' the behaviors of employees (e.g. hire supervisors to directly observe and control employee actions). Similarly, organizational theorists (e.g. Edwards, 1979; Ouchi, 1979, 1980; Thompson, 1967) suggest that 'bureaucratic control' establishes compliance with rules, routines, and policies in order to elicit and maintain appropriate employee behavior.

The underlying premises of bureaucratic control, as suggested by agency theory and control theory, remain the private domain of the traditional HRM function. Although the field of HRM is changing dramatically and attempting to move in a more strategic direction, many HRM organizations remain bureaucratic in nature. Beer (1997: 51) suggests that the HRM function has traditionally been concerned with administrative activities and garnering power by "ensuring compliance." The HRM function ensures compliance by creating and enhancing bureaucracy through its administration of performance appraisal, job analysis, job evaluation, human

resource audits, job postings, and through its establishment and formalization of policy and procedure handbooks. This traditional "policing" role of the HRM group serves to minimize uncertainty and to establish predictable routines for employees (Snell & Youndt, 1995) and results in numerous bureaucratic systems that require administration and maintenance (Edwards, 1979).

Bureaucratic HRM control can be very costly to organizations, particularly for our sample of small, growing firms. First, there are direct costs associated with implementation and maintenance of bureaucratic personnel systems (Jones & Wright, 1992). Second, there may be significant indirect costs associated with information asymmetries and inability to cope with environmental uncertainties. Consistent with agency theory, costs arise from agents (i.e. employees) having information that is not available to principals (i.e. managers), and yet bureaucratic systems often are not designed to facilitate the transfer of information between agent and principal. In addition to impeding information sharing, bureaucratic systems, specifically designed to eradicate uncertainty and routinize employee behavior, result in "unenthusiastic, purely compliant responses" from employees (Ouchi, 1979: 841). As Lado and Wilson (1994: 715) point out, bureaucratic HR systems "may lead to the development of core organizational rigidities (Leonard-Barton, 1992), to what Gouldner (1954) referred to as 'rule tropism' (or the tendency for employees to do things strictly 'by the book') and to de-skilling and demoralization of employees (Kanter, 1986; Morgan, 1986). According to Morgan (1986) mechanistic approaches (such as a control-based HR strategy) may produce dysfunctional effects, including the dehumanization of employees, and may cause organizational members to pursue their own self-interests at the expense of organizational goals."

These ill effects of bureaucratic HRM control are likely to be especially salient for firms facing high environmental uncertainty and resource scarcity. Under such conditions, firms require that employees participate fully with one another to pursue innovative solutions to the firm's real and rapidly changing problems (Burns & Stalker, 1961). Instead, bureaucratic HRM control achieves predictable employee behavior at the expense of exceptional individual efforts and performances that are the hallmarks of prosperous entrepreneurial firms (Edwards, 1979). Within our sample of IPO firms, we suggest that bureaucratic HRM control exist when the HRM function is found to be part of an administrative department within the firm. This is consistent with Mohrman, Lawler, and McMahan's (1996: 81) observation that "the HR function has been largely an administrative one headed by individuals whose roles are largely in cost control and administrative activities." Thus, we expect that choosing to approach human resource

management through bureaucratic means at the time of the IPO will have negative effects on the firm's later performance.

Hypothesis 1: Bureaucratic human resource management control (evident when the function is 'buried' in an administrative department) at the time of the IPO will have a negative effect on subsequent firm performance.

Firm-Specific HRM Control

Agency theory, control theory, and prior work in strategic HRM can be used to hypothesize as to the negative effect of bureaucratic HRM control on firm performance in small, growing firms; however, the negative view of bureaucratic control is fairly simplistic and incomplete. Edwards (1979) and, more recently, Adler and Borys (1996) suggest that bureaucratic control might have either negative or positive ramifications. These two competing faces of bureaucratic control are reflected in Walton's (1985) Control and Commitment model of strategic HRM which is the basis of much of the empirical SHRM research that finds positive effects of commitment-based bureaucratic HR mechanisms on performance (e.g. Arthur, 1994; MacDuffie, 1995). Therefore, to hypothesize only that bureaucratic HRM control will have negative effects on firm performance in our sample of IPO firms would be inadequate.

The SHRM literature and the resource-based view of the firm (Barney, 1991; Barney & Ouchi, 1986) suggest a form of control that is consistent with Adler and Borys' (1996) description of 'enabling bureaucracy.' Whereas having the HRM function 'buried' in an administrative department is likely to reflect a stifling form of bureaucratic control, a senior executive responsible for the HRM function might enable the firm to create value through people and to enhance the firm's competitive advantage. We call this form of control firm-specific HRM control and explore its development more closely.

The strategic HRM literature points to the ability of the high ranking executive to create systems and programs that "fit" the organization's strategy (Jackson, Schuler & Rivero, 1989; Miles & Snow, 1984). However, the contingency or fit perspective of strategic HRM is, to date, a conceptual argument that has not received overwhelming support (Becker & Gerhart, 1996, Delery & Doty, 1996). This may be due to the fact that the research focus has been on policies and procedures rather than on more macro, overarching business issues. For example, any attempt to design HRM policies and procedures to "fit" business strategy within our samples of IPO firms could be easily undermined by the continuous change that fast growing firms experience. "Fit" could, in fact, be associated with rigidity and inflexibility that could impair an organization's ability to respond to external crises (Truss & Gratton, 1994). Therefore, the

concept of "fit" between policies and procedures and business strategy seems to be more characteristic of bureaucratic HRM control (at least for firms facing high uncertainty) and less important than creating an overall approach to people management that supports the business.

This is where the strategic perspective of viewing HRM "from the top" becomes important. Many researchers argue that HRM will become more strategic, in part, by establishing a long-term focus and a tighter linkage between HRM and strategic processes; however, only by having an HR executive who assumes the role of "strategic partner" and has a position on the top management team, will HRM achieve its "strategic" focus (Dyer & Kochan, 1995; Martell & Carroll, 1995; Mohrman et al., 1996). Consistent with the arguments of SHRM scholars, having an executive on the top management team who understands the ways in which the "people issues" should and can be integrated into business decision making may provide unique benefits to the firm. Unfortunately, because much of the SHRM literature focuses on HRM policies and procedures, it is limited in its ability to explain the performance effect of this type of firm-specific control.

Our understanding of the performance effects of firm-specific HRM control is enhanced by the resource-based view of the firm (Barney, 1991). SHRM researchers (i.e. Jackson & Schuler, 1995; Wright & McMahan, 1992) enthusiastically endorse its application as a means of understanding the contribution of strategic HRM to firm performance. The resource-based view states that a firm can obtain long-term sustained competitive advantage through the acquisition and retention of resources that are valuable, rare and difficult for competitors to imitate (Wright & McMahan, 1992). Furthermore, the entire employee population may be a source of sustained competitive advantage (Wright, McMahan, & McWilliams, 1994) implying the importance of developing effective mechanisms of control that support firm strategy. Human resource management policies and procedures may be easily imitated; in fact, companies spend considerable amounts of money doing benchmark studies and hiring consultants to copy practices that have been found to be effective. Unlike policies and practices, which are replicable, forms of overall organization control that are developed and cultivated by the top management team are likely to be firm-specific thereby making them valuable, rare and inimitable.

We propose that firm-specific control, achieved by HRM executive involvement in the top management team leads to an integration of HRM control with the overall objectives of the organization, and that it is this high level HR involvement that can produce a sustained competitive advantage. This occurs in two ways: (1) by integrating people issues into firm-specific, business decisions that then focus attention on ALL of the firm's resources (capital,

financial, and people) and (2) by creating a more complete top management team (Chaganti & Chaganti, 1983; Roure & Kelley, 1990). Essentially, if employees are indeed a critical resource that can provide sustained competitive advantage (Lado & Wilson, 1994), then expertise in controlling the employee resource is as important to a firm's future performance as skill in controlling finance, marketing, or research.

Hypothesis 2: Firm-specific human resource management control (evident when a senior human resource management executive is part of the top management team) at the time of the IPO, will have a positive effect on subsequent firm performance.

Incentive-Based HRM Control

As our perspective is the "view from the top," we are not focusing on the characteristics of various types of incentives (e.g. the degree to which they fit the overall HRM strategy, the mix of incentive vs. fixed pay, etc.). Instead, we consider the existence of organizational-based incentives for all employees as one HRM control choice. Thus, the question we investigate is the effect of the existence of incentive-based compensation on firm performance in a sample of IPO firms. Agency theorists (e.g. Jensen & Meckling, 1976) and organizational theorists (e.g. Eisenhardt, 1989; Ouchi, 1980) point to the effectiveness of incentive-based forms of control for ensuring alignment of employee goals with organizational goals and thereby eliciting behaviors that are in the best interests of the firm. Anderson and Oliver (1987: 79) comment that "agency theory is concerned with the design of control systems that realign the incentives of both principals and agents so that both parties desire the same outcome."

The agency theory concept of alignment is consistent with findings from the compensation literature and from motivation theory, specifically goal setting research. In their meta-analytic review of the literature, O'Leary-Kelly, Martocchio, and Frink (1994) confirm the synergistic effect that group goals have on increasing group performance. According to Gomez-Mejia and Balkin (1992: 253), "organizational performance does not result from the simple additive function of the performance of its individual members and units. Rather, it derives from a complex, synergistic interrelation of component parts." Moreover, Gerhart, Trevor, and Graham (1996) argue that synergistic behavior is critical for sustaining long-term competitive advantage. In reviewing implications of the resource-based theory of the firm for understanding compensation system effectiveness, Gerhart et al. (1996) note that at the heart of sustained competitive advantage for the firm (which ultimately predicts firm performance) is "the complicated nature of resource interdependencies (i.e. synergies), rather than the advantage driven by a solitary resource." Thus, organizational-based incentive systems have the potential

to result in employee behavior that creates the type of synergy that can lead to long-term firm performance gains.

Agency theory suggests that high risk firms will most benefit from implementing compensation systems that align the interests of employees with those of the owners (Jensen & Meckling, 1976; Jensen & Murphy, 1990). This conclusion is supported by work in the areas of strategic human resource management and compensation. For example, Miles and Snow (1984) suggest that prospector firms, which are characterized as higher risk organizations (e.g. changing products and markets, fast growth) should be more effective when the total compensation package places a heavy emphasis on incentives. Schuler (1987) proposes that entrepreneurial firms, which are described as younger and facing higher risks, should use long-term incentive programs. He specifically notes that by using this type of incentive system, the company should "stimulate and reinforce risk taking, and willingness to assume responsibility for a longer-term orientation" (1987: 10). The findings of Gerhart and Milkovich (1990: 685) support this argument; they suggest that "making many employees eligible for long-term incentives is associated with high organizational performance in the long run."

In a study of compensation conducted within a sample of high technology firms, Balkin and Gomez-Mejia (1987) find that organizationally-based incentive compensation is most effective for smaller, growing firms. They speculate that the positive effects are due not only to the employee alignment benefit but also to the fact that these firms incur lower costs by using incentives. Those lower costs (because a payout only occurs after performance goals are achieved) allow the smaller firms to compete with larger companies, thus enhancing their overall performance. This finding is confirmed in a later study by Gomez-Mejia (1992). He shows, using different types of classification schemes, that prospector (using the Miles and Snow, 1984 typology) and smaller firms benefit from pay plans that include organization-based incentives.

Lastly, in a study of IPO firm survival, Welbourne and Andrews (1996) find support for the relationship between organizationally-based incentives (such as profit sharing and stock plans) and firm survival. They applied concepts from the population ecology literature, suggesting that organization-based incentive systems encourage collective action among employees, which ultimately enhances firm performance.

Thus, from a number of theoretical perspectives, including agency theory, goal setting theory, the resource-based view of the firm, population ecology, and organizational control theory, there is support for the relationship between adoption of organizationally-based incentive programs for all employees and firm performance. The effect should be particularly evident in samples of higher risk firms, such as IPO organizations, where convergence of goals and

sharing of information is critical. As Lawler, Mohrman, and Ledford (1995: 18) noted in their study of high performance organizations "basing rewards on organization performance is one way to ensure that employees are involved in and care about the performance of the company."

Hypothesis 3: Incentive-based HRM control (evident when the firm offers organizational incentives to all employees) at the time of the IPO will have a positive effect on subsequent firm performance.

METHODS

The research strategy involves examining a sample of IPO firms that went public in 1993 and replicating that study with a smaller sample of firms that went public in 1988. We obtain an extensive profile of each firm at the time it goes public and then examine how those initial factors obtained at time 1 (the time of the IPO) affect the subsequent firm performance. When a company goes public, it is required to provide extensive information on not only its financial position, but also its internal structure, to the Securities and Exchange Commission and to the general public. That information is described in the firm's prospectus. We use the archival data available in the prospectus to capture the types of control forms that were being used at the time of the IPO. Then, after controlling for factors that are thought to be related to firm performance, we analyze the impact of the various HRM control forms (as detailed in the hypotheses) on multiple market-based measures and internal measures of firm growth.

We began the study with 535 companies that went public during 1993. A total of 706 firms went public during that year, and 585 of those companies produced a good or service (excluding real estate trusts, etc.). We were able to obtain the prospectuses for 535 of those organizations. For analysis purposes, we limited the sample to those companies that had at least 50 and fewer than or equal to 10,000 employees. This does three things: (1) it eliminates the outliers; (2) it limits the sample to those firms that are subject to most of the significant employment law (e.g. Title VII, The Family and Medical Leave Act, etc.); and (3) it eliminates very small organizations (fewer than 50 employees) where decisions about control over all employees may not yet have been formalized. In addition, we only ran the analyses on firms for which we could obtain stock price data for year-end 1996; thus, the final sample size for analysis purposes is 342.

Data Collection and Coding

The primary data source was the prospectus of each firm. The prospectus is the document provided to the Securities and Exchange Commission (SEC) prior to the public

offering, and it is also the document circulated by the underwriter to assess demand for the firm's stock. The SEC requires that firms follow strict guidelines in the format. In fact, the firm is legally liable for any information that might mislead investors (O'Flaherty, 1984). As noted by Beatty and Zajac (1994), top management is accountable to the SEC and to stockholders regarding the contents of the prospectus. The Securities Act of 1933 sets the requirements for the prospectus, thus assuring consistency in the type of information that is included in the document. The typical prospectus writing process involves at least three lawyers (one for the company and one for each of the investment bankers), two investment banking firms, and at least one certified public accountant. Each party has a vested interest in providing the public with an honest view of the company. Thus, we can be reasonably assured that the prospectus is a useful data source (Marino, Castaldi, & Dollinger, 1989).

Our coding strategy was developed and refined based on earlier research on IPO firms (see method used by Welbourne and Andrews, 1996). Code sheets and a coding handbook were given to each coder after each individual attended an initial training session. A total of five coders worked on the 1993 data. In addition, weekly meetings were held with coders to address problems and/or inconsistencies in the prospectuses. Finally, we randomly cross-coded prospectuses (every 10th prospectus). For the variables used in this study, agreement was 90% or higher among the coders. Financial data were also obtained from COMPUSTAT, Going Public: The IPO Reporter (for financial data at the time of the IPO), and from a database obtained from the Securities Data Corporation.

Sample Characteristics

At the time of its IPO, the average firm in the 1993 sample (n=342) was 8.21 years old (s.d. 0.42) and employed 911 people (s.d. 1,384). The median firm was 6 years old and employed 341 people. On average, net profit per share was \$0.30 (s.d. \$0.59) and initial offering price per share was \$12.13 (s.d. \$5.03). Using the classification scheme reported by the Small Business Administration to determine industry, the sample's highest concentration of firms was in manufacturing (46.6%). A total of 20% of the firms were in service industries, while 5.5% were in wholesale trade, 10% in transportation and/or communications, and 9.7% in retail trade. Other industries include .2% in agriculture, 3% in mining, 1.5 % in construction, and 3.2% in health care and financial services. Table 1 provides a summary of the means and standard deviations for variables used in the analyses.

TABLE 1
MEANS AND STANDARD DEVIATIONS
(FOR FIRMS USED IN ANALYSES)

VARIABLES	MEAN	MEDIAN OR FREQUENCY	STANDARD DEVIATION
Company age in years	8.21	6.00	.42
Net profit per share	.30	.35	.59
Number of employees	911	341	1,384
Risk factors (number of)	3.58	4.00	1.46
Initial stock price	12.13	10.00	5.03
Adjusted initial stock price	10.74	12.00	5.02
HR function reports to VP of administration	.04	Yes = 12 or 4%	.18
HR function reports to the VP of Human Resource Mgt.	.09	Yes = 32 or 9%	.29
HR function reports to other VP in executive team	.11	Yes = 38 or 11%	.31
Incentive stock option plan for all employees	.37	Yes = 126 or 37%	.48
ESOP for all employees	.07	Yes = 23 or 7%	.25
Stock purchase plan for all ees.	.28	Yes = 96 or 28%	.45
Profit sharing for all ees.	.12	Yes = 42 or 12%	.33
Beta, 1995	.96	1.07	1.10
Beta, 1996	.86	.86	.89
Union	.23	Yes = 80 or 23%	.42

VARIABLES	MEAN	MEDIAN OR FREQUENCY	STANDARD DEVIATION
Percentage change in adjusted stock price (IPO to year-end 1996) (Log)	89% -.02	0.5%	289% 1.23
Percentage change in total market value (IPO to year-end 1996) (Log)	115% .009	-0.2%	532% .51
Percentage change in Tobin's Q (IPO to year-end 1996) (Log)	-29% -.20	-43%	102% .36
Percentage change in earnings per share (IPO to year-end 1995) (Log)	-53% .20	13%	1322% .50
Percentage change in number of employees (IPO to year-end 1995) (Log)	121% .23	64%	220% .33
Percentage change in sales (IPO to year-end 1995) (Log)	266% .38	110%	877% .32

Independent Variables

"The View from the Top." We used archival data, rather than survey data, to obtain our measures of HRM control "from the top." Because we did not want to limit our sample only to those firms with formal human resources departments, a research strategy different from what is traditionally done in the strategic HRM field was necessary. Specifically, we searched the prospectuses for two indicators of high-level approaches to control over all employees. The first indicator of control over the entire employee population is the reporting of responsibility for the "human resource" function by a member of the top management team. Thus, we examined the management section of the prospectus to determine who on the top management team was responsible for human resource management. The second indicator of control "from the top" is the type of incentive systems in place for all employees.²

Bureaucratic and Firm-specific HRM Control. We searched the prospectus for indicators of top management responsibility for the HRM function as measures of bureaucratic HRM control and firm-specific HRM control. The prospectus provides the reader with a listing of everyone in the top management team and a summary of the departments and/or functions that report to that individual. We coded the representation of human resource management on the top management team in one of four different ways. The function could either: (1) report to the Vice President of Administration or another executive who had "Administration" as part of his/her job title (e.g. Chief Administration Officer); (2) be represented by a Vice President of Human Resources who reported directly to the CEO or President; (3) report to another member of the top management team (in most cases this was the Chief Financial Officer); or (4) not be discussed in the management section at all.

We consider HRM control to be bureaucratic when the function reports to a VP of Administration. When HRM is one of the many administrative functions (e.g. supervising the secretarial staff, purchasing, etc.) for which the VP of Administration is responsible, HRM control is likely to be consistent with Mohrman, Lawler, and McMahan's (1996) characterization of HR as highly administrative and bureaucratic. Alternatively, HRM control is firm-specific when a company reports having a VP of Human Resources. Martell and Carroll (1995) argue that the presence of an HRM executive on the top management team facilitates integration between HRM and firm strategy. This is consistent with a "firm-specific" approach that might lead to a sustained competitive advantage. When another member of the top management team (e.g. the CFO or VP of Quality) has responsibility for HRM control, classification as either bureaucratic or

² In this paper, we do not provide details regarding validity of these measures; however, confirming evidence of the measures can be found in Cyr and Welbourne (1997).

firm-specific is much harder to determine. While it may be that HRM will be treated bureaucratically, as just another responsibility on the already full plate of that executive, it also may be the case that HRM control will emerge as firm-specific. For example, it may be perfectly appropriate for the CFO, who might best understand the objectives and human resource requirements of the business, to be responsible for HRM control. Thus, we consider examination of this type of HRM control as exploratory.

Unfortunately, responsibility for HRM is not reported in all of the prospectuses. This lack of HRM in our coding scheme does not necessarily mean that HRM, as an activity, does not exist within the IPO firm. For example, the firm may have a secretary to the CFO performing what would be called HRM activities (e.g. payroll), or each individual manager may be assuming responsibility for HRM activities. Instead, our coding scheme captures whether the top management team considers HRM to be a function that merits mentioning when they describe the company in the prospectus. This is consistent with our "view from the top." We are not interested in the specific ways in which the firm conducts its HRM activities (i.e. the policy and procedure approach), but rather in the overall approach to HRM control and its characterization as either bureaucratic or firm-specific.

A total of 82 firms (24%) indicated having a human resource function reporting to a member of the top management team. A total of 12 companies were coded as having bureaucratic HRM control (i.e. they reported having the Vice President of Administration responsible for HRM activities). Thirty-two firms (9%) were coded as using firm-specific HRM control (i.e. they had a Vice President of HRM who reported directly to the CEO). In addition, 38 organizations (11%) had an HRM function that reported to a specific operating executive (in most cases the CFO, but in a few other instances, HRM reported to the Chief Legal Officer, VP of Quality, or other functional area VP).

Incentive alignment. As noted by Becker and Olson (1989), stock plans and profit sharing are mechanisms for increasing alignment among all employees within an organization. Additionally, Lawler et. al. (1995), in their study of high performance organizations, found that profit sharing and stock ownership programs were the forms of compensation most likely to be available to all employees. These programs provide individual employees with incentives to work toward the organization's goals in the same way that executive bonus plans provide incentives for executives to make decisions that will support the interests of stockholders or owners.

Therefore, we searched the prospectus for data on the existence of profit sharing and various types of stock ownership programs. We coded the number of firms that had incentive

stock options (ISOs), stock purchase plans, employee stock ownership plans (ESOPs), and profit sharing for ALL employees. A total of 126 firms (37%) indicated they had incentive stock option plans for all employees, 96 companies (28%) had stock purchase plans for all employees, 23 firms (7%) had employee stock ownership plans, and 42 (12%) firms had profit sharing. We coded the variables as "1" if the company had the program in place for all employees at the time of the IPO and "0" if they either did not have such a program or implemented it only for key executives. Because the focus of our study is on control over all employees, we limit the variables to those that affect the entire employee population.

Dependent Variables

A combination of market-based performance measures and internal measures of firm growth will provide a comprehensive test of our hypotheses; therefore, we investigate the effects of HRM control on multiple measures of each. Given that the prime reason investors choose to put money into an IPO is to make money when the firm's stock price increases over time, we examined three different measures related to stock price growth. This is consistent with recommendations of researchers who suggested future strategic HRM studies should include measures of shareholder wealth and stock price (Abowd, Milkovich & Hannon, 1990; Gerhart & Milkovich, 1990). In addition, market-based measures represent the most prevalent and relevant firm performance measures in the IPO literature (see Ibbotson and Ritter, 1995 for a review).

The three capital market measures are:

- Percentage change in stock price (adjusted for splits) from the time of the IPO to year-end 1996.
- Percentage change in Tobin's Q (calculated as stock price per share / book value per share) from the time of the IPO to year-end 1996.
- Percentage change in total market value (shares outstanding * price per share) from the time of the IPO to year-end 1996.

A primary purpose of the IPO is to obtain resources for future growth; therefore we examine three measures of firm growth from the time of the IPO through year-end 1995.³ Although accounting measures of performance (e.g. ROA, ROE) are susceptible to varying accounting methods and to manipulation (Lev and Thiagarajan, 1993), earnings per share projections and announcements are followed closely by analysts and are considered an important measure of the firm's progress. Sales growth is also a well-established indicator of firm performance among

IPO firms (Fox, 1997; Hoy, McDougall, & Dsouza, 1992). Finally, IPO firms provide tremendous opportunity for job creation and economic growth (Asquith & Weston, 1994). Therefore, we measure the effects of HRM control on the following three indicators of firm growth:

- Percentage change in earnings per share (EPS) from the time of the IPO to year-end 1995.
- Percentage change in sales from IPO to year-end 1995.
- Percentage change in total number of employees from IPO to year-end 1995.

Control Variables

Several control variables, selected based on reviews of both the strategic human resource management and initial public offering literatures (e.g. Beatty & Zajac, 1994; Huselid, 1995; Welbourne & Andrews, 1996) were used in the analyses. The total number of employees, logged to correct for skewness, was included as a measure of size. Net profit per share at the time of the IPO was added as a performance measure. Company age (calculated as 1993 minus year incorporated) was also included as a control variable because much of the literature on life indicates that the presence of a human resource function is related to company age (e.g. Baird and Meshoulam, 1988). In addition, we coded whether the firm was unionized or not. We thought that this was an important control because a union presence may affect management actions affecting control over employees (Huselid, Jackson, & Schuler, 1997). Nine industry dummy codes were created, based on categories reported by the Small Business Administration, and used in the analyses.

Although our sample of IPO firms consists of firms that are considered to be higher risk investments than companies currently in the public market (due to their having no prior stock price history), we expect that each firm will be subject to varying degrees of risk. Therefore, an additional control variable (logged) indicates the level of risk faced by each firm. Each prospectus contains a section listing all risk factors faced by the firm. These risk factors must be disclosed to meet the requirements of the Securities and Exchange Commission. The presence of the following risk factors were included in this measure: new product, few or limited products, limited number of years in operation, inexperienced management, technical risk, seasonality, customer dependence, supplier dependence, inexperienced underwriters, competition, legal proceedings against company, liability, and government regulation. The summated risk measure ranged from 0 to 9, with a mean of 3.58 and a standard deviation of 1.46. Prior research on initial public offering firms found that this measure was a useful way to code risk (Beatty and Zajac, 1994; Rasheed and Datta, 1994). Finally, to control for the firm's sensitivity to overall

³ Year-end 1996 accounting data were not yet available from COMPUSTAT.

market movements, we included beta (obtained from COMPUSTAT for the periods ending December 1995 and 1996) as a measure of systematic risk.

RESULTS

Table 2 includes the correlations for the variables in the analyses. Bureaucratic HRM control as measured by having a VP of Administration responsible for HRM is negatively related to all three measures of market performance: stock price growth, change in Tobin's Q and growth in market value. Interestingly, though not significant, bureaucratic HRM control is also consistently and negatively related to each form of incentive-based HRM control. Firm-specific HRM control through a VP of HRM or an 'other' operating VP is positively associated with growth in earnings per share from the time of the IPO through 1995. The relationships between incentive-based HRM control and firm performance are not as distinct. Having a stock purchase plan for all employees is positively related to growth in number of employees whereas profit sharing is negatively associated with growth in earnings per share.

TABLE2
CORRELATIONS FOR VARIABLES USED IN THE REGRESSION ANALYSES

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. VP of Admin.	1.00																		
2. VP of HRM	.10	1.00																	
3. Other VP	-.07	-.05	1.00																
4. Incentive stock option	-.05	.03	.08	1.00															
5. Stock purchase plan	-.08	.00	.09	.12	1.00														
6. E-SOII	-.05	-.01	-.02	-.01	.25	1.00													
7. Profit sharin2	-.07	.00	-.05	-.08	.10	.29	1.00												
8. Company age	.11	-.01	.01	.06	-.08	-.04	.003	1.00											
9. Number of employees	.07	.23	-.10	-.14	-.04	-.03	.009	.04	1.00										
10. Union	.08	.11	-.06	-.16	-.08	-.09	-.02	-.05	.47	1.00									
11. Risk factors	.02	-.15	.15	.09	-.04	-.05	-.06	-.02	-.33	-.16	1.00								
12. Beta for 1996	-.05	-.05	-.02	-.08	-.01	-.02	.03	.01	-.11	-.08	.15	1.00							
13. Net profit per share	.06	.06	-.03	-.13	-.05	-.01	.16	.18	.25	.16	-.17	-.07	1.00						
14. Percentage change in Earnings per share (IPO to 12/95)	.004	.09	.16	.03	.04	-.04	-.12	-.02	.02	.13	.06	.16	-.25	1.00					
15. Percentage change in Tobin's Q (IPO to 12/96)	-.13	-.06	.02	.02	-.03	-.06	.05	-.04	-.19	.04	.06	.28	-.08	.06	1.00				
16. Percentage change in total Market value (IPO to 12/96)	-.12	-.002	.01	.01	-.03	.03	.03	-.03	-.02	-.004	.05	.22	.03	.11	.57	1.00			
17. Percentage change in Adjusted stock price (IPO to 12/96)	-.10	.04	.01	.04	-.002	-.03	.04	.01	.10	.04	.01	.24	.12	.15	.58	.91	1.00		
18. Percentage change in sales (IPO to 12/95).	-.04	-.06	-.01	.05	-.01	.02	-.07	-.12	-.03	-.09	.03	.06	-.17	.11	-.03	-.08	-.09	1.00	
19. Percentage change in Number of employees (IPO to 12/95)	-.06	-.05	.07	.02	.13	.05	-.02	.02	-.13	-.03	.04	.01	.06	.05	.11	.24	.29	-.21	1.00

All correlations about .08 are significant at the .10 level; above .10 are significant at the .05 level, above .12 are significant at .01 level, and above .17 are significant at the .001 level.

Tests of Hypotheses

We tested the hypotheses by running a series of ordinary least squares (OLS) regression equations. Each equation included all of the control variables and the independent variables of interest and predicted a different dependent variable. Table 3 summarizes the results of the models to predict the market-based measures of firm performance (i.e. change in stock price, Tobin's Q, and total market value). Each of the equations is significant at the 0.01 level, with the R^2 ranging from .12 to .14.

Hypothesis 1, that bureaucratic HRM control will have a negative effect on firm performance, is supported for each of the market-based measures. When HRM reports to the Vice President of Administration, there is a significant and negative effect in all three equations. The unstandardized beta coefficients range from a high of -.74 for adjusted stock price growth to -.19 for percentage change in Tobin's Q. These analyses provide consistent support for the harmful effects of bureaucratic HRM on capital market measures of firm performance. Neither firm-specific HRM control nor incentive-based HRM control is significant in any of the equations to predict market-based measures, indicating no support for hypotheses 2 and 3.

Table 4 includes the results of equations to predict internal measures of firm growth (sales growth, change in number of employees, and earnings per share growth). For these dependent variables, hypothesis 1 receives no support; bureaucratic HRM control through a VP of Administration has no effect on measures of firm growth. Hypothesis 2 receives some support; firm-specific HRM control through a VP of HR or an 'other' operating VP has a positive effect on growth in earnings per share. Hypothesis 3 stated that incentive-based HRM control would positively affect firm performance. The findings for hypothesis 3 are mixed; profit sharing has a negative effect on sales growth, and having stock purchase plans for all employees has a positive effect on percentage change in number of employees.

TABLE 3
RESULTS OF REGRESSION ANALYSES FOR MARKET-RELATED VARIABLES (n=342)

Percentage change in stock price (IPO to year-end 1996)		Percentage change Tobin's Q (IPO to year-end 96)		Percentage change in total market value (IPO to year-end 1996)	
	s.e.	beta	s.e.	Beta	s.e.
Variables Unstandardized beta	.58	-8.84	.14	-.38t	.23
Constant -1.25*					
Company age	.02 .08	.01 .02		-.01 .03	
Number of employees 11 +	.06	-.04*	.02	.01 .03	
Risk factors	.02 .05	-.003 .01		.02 .02	
Net profit per share	.24+ .12	-.01 .03		.05 .05	
Union (0/1)	-.05 .18	.09* .04		.02 .07	
Beta, 96	.27*** .08	.06*** .02		.09** .03	
VP of Admin.	-.74* .36	-.19* .09		-.32* .14	
VP of HRM	.13 .23	-.003 .05		.05 .09	
Other VP	-.01 .21	-.01 .05		-.01 .09	
Incentive stock option for all	.11 .14	-.004 .03		.008 .06	
Profit sharing for all	.14 .21	.05 .05		.03 .09	
Stock purchase plan for all	.05 .15	-.03 .04		-.03 .06	
ESOP plan for all	-.24 .27	-.07 .07		.06 .11	

R ²	.13	.14	.12
F	2.19**	2.55***	1.97**

*** p ≤ .001; ** p ≤ .01; * p ≤ .05, + = p ≤ .10

Note: Industry codes are included in the analyses.

Table 4
RESULTS OF REGRESSION ANALYSES FOR FIRM GROWTH VARIABLES (n=342)

Variables	Percentage Change in Sales (IPO to year-end 1995)		Percentage Change in Number of Employees (IPO to year-end 1995)		Percentage Change in Earnings Per Share (IPO to year-end 1995)	
	Unstandardized Beta	s.e.	Beta	s.e.	Beta	s.e.
Constant	.46	.14	.09	.12	-.28	.44
Number of employees	-.007	.02			-.02	.02
Company age	-.04*	.02	.004	.02	-.002	.03
Risk factors	.003	.01	.02	.01	.01	.02
Net profit per share	-.01	.03	.07*	.03		
Union (0/1)	-.07+	.04	.003	.04	.15**	.06
Beta, 95	.03*	.02	.003	.01	.06**	.02
VP of Admin.	-.02	.09	-.09	.09	-.03	.12
VP of HRM	-.08	.06	-.02	.06	.14†	.08
Other VP	.05	.05	.03	.06	.20**	.07
Incentive stock option for all	-.02	.03	.001	.04	.02	.05
Profit sharing for all	-.09+	.05	-.03	.06	-.11	.07
Stock purchase plan for all	.02	.04	.07+	.04	.02	.05
ESOP plan for all	.02	.07	.02	.07	-.01	.10

R²

.13

.09

.11

F

2.27***

1.61*

2.03**

*** p ≤ .001; ** p ≤ .01; * p ≤ .05; + = p ≤ .10 Note: Industry codes are included in the analyses.

Replication of the Study

In order to supplement our findings, we ran similar analyses with a second cohort of IPO firms (n=92) that went public in 1988. We were unable to completely replicate the analyses from the 1993 study due to small sample size and missing data. For example, there were no vice presidents of HRM who reported to the CEO; however, there were several Vice Presidents of Administration or Vice Presidents of Finance and Administration who reported having responsibility for HRM (n=22). Therefore, we could test the effect of bureaucratic HRM control, but not firm-specific HRM control, on performance. In addition, we had data on the existence of profit sharing, stock purchase plans, and incentive stock option plans for all employees. Thus, we could also test the effect of incentive-based HRM control on firm performance.

For purposes of replication, we limited our analyses of the effects of HRM control on market-based measures to change in adjusted stock price (IPO to year-end 1991). The overall equation to predict stock price growth was not significant; however, the initial equation approaches significance ($F = 1.49$ and $p < 0.15$) and the pattern of results, based on an investigation of the unstandardized beta coefficients, was similar to that obtained in the 1993 study. To further explore these relationships, we conducted backward elimination regression analyses to predict stock price growth. Backward elimination yields a single, "best" subset of independent variables by beginning with a model containing all potential independent variables and dropping predictors, on subsequent iterations, that do not meet a predetermined F value (Neter, Wasserman, & Kutner, 1989). Thus, each of the variables used in the previous analyses are included in the equations.

The findings for the effect of bureaucratic HRM control on stock price growth are consistent with those from the 1993 sample. The final iteration of the backward regression yields an R^2 of 0.07 ($F = 3.22$, $p \leq 0.05$), and has two predictors left in the equation, net profit per share and the variable for bureaucratic HRM control. Having a VP of Administration has a negative effect on stock price growth (unstandardized beta = -0.22 , $s.e. = 0.09$, $p \leq .02$). This provides further support for our first hypothesis.

Similarly, the overall equations to examine the effects of HRM control on firm growth measures were not significant, but the patterns of results suggested support of the 1993 findings. We again employed backward elimination analyses to more closely examine the relationships. The final iteration to predict percentage change in number of employees from the time of the IPO through 1991 yields an F of 4.47 ($p \leq 0.01$). The only remaining variables in the equation are the dummy for stock purchase plans (unstandardized beta = 11.73 , $s.e. = 4.48$, $p \leq 0.01$) and company age (unstandardized beta = -0.15 , $s.e. = 0.07$, $p \leq 0.05$). In combination, these two variables explain 9% of the variance in change in number of employees. The final iteration to predict earnings per share growth yields only one significant predictor, the presence of profit sharing for all employees. Profit sharing is a negative predictor (unstandardized beta = -4.47 , $s.e. = 2.35$, $p \leq 0.06$) of earnings per share growth ($R^2 = 0.04$, $F = 3.63$). The final equation for change in sales was not significant.

In general, the results of the replication analyses are consistent with the findings in the 1993 sample. Again, we find support for the negative effect of bureaucratic HRM control on stock price growth for the first three years following the IPO. The analyses also yield the mixed results for the effects of incentive-based HRM control on measures of firm growth. As in the 1993 sample, stock purchase plans appear to be a positive predictor of percentage change in

number of employees, but profit sharing has a negative effect on an important measure of firm growth (in this case, earnings per share).

DISCUSSION

The goal of this research was to expand the strategic HRM literature by exploring another dimension of strategic HRM, which we refer to as the "view from the top." This unique view led us to consider the organizational control component of SHRM and how various forms of HRM control affect firm performance. We took a somewhat different research strategy and tested our hypotheses in a sample of younger, smaller, initial public offering firms. The results, to some extent, suggest support for the hypotheses, although the data are not consistent across dependent variables. In order to integrate our findings, we first review our results and then combine them into an overall model. Next, we build propositions that link our results with concepts from theory, and offer suggestions for future research based on the integrated model.

The Effects of HRM Control on Firm Performance

In each of the analyses that included a market-based measure of performance, we found that bureaucratic HRM control had a negative effect on firm performance. Similar results were obtained in two separate longitudinal studies of IPO firms. In the 1993 sample, stock price growth is lower for firms that have a VP of Administration who is responsible for the HRM function. This finding was replicated with the 1988 sample. Thus, it seems that our studies provide evidence in support of hypothesis one, which states that bureaucratic human resource management control "from the top" (at the time of the IPO) will be negatively associated with the firm's subsequent performance. Hypotheses 2 and 3 were not supported for any of the market-based measures of firm performance.

The mixed findings for the effects of HRM control on measures of firm growth in the 1993 study provide only partial support for hypotheses 2 and 3. Hypothesis 2, that firm-specific HRM control would have a positive effect on firm performance, was supported only for earnings per share growth. In addition to finding support for the positive effect of having a Vice President of Human Resources, our results also show that HRM reporting to an operating VP has a positive effect on earnings per share growth. Thus, it seems that firm-specific HRM control may be obtained by either having a VP of HRM or an operating VP responsible for HRM. That interpretation is consistent with our argument that firm-specific control exists when someone in top management is integrating HRM decisions into business decisions.

Hypothesis 3, that incentive-based HRM control would positively affect firm performance, received mixed support. Stock purchase plans were positively related to change in number of employees in both samples, while profit sharing was negatively related to change in sales in the 1993 sample and to earnings per share growth in the 1988 sample. Not only are the results inconsistent in the direction of the relationship (profit sharing was negative while stock purchase plans were positive), but the incentive systems predict different measures of firm growth. Given our data, we cannot assess whether the relationship between specific type of incentive plan and the particular growth term is systematic, perhaps representing an intentional firm strategy, or driving a certain type of behavior that results in the performance effects we uncovered. Additional research needs to be conducted to investigate that question.

It is interesting to note that the one incentive plan that is positively related to firm performance is "voluntary." This result can be understood in the context of agency theory, which also suggests areas for future research. The effect of incentive-based HRM control in aligning interests of employees with those of the firm (and positively affecting firm performance) may be a function of the risk bearing preferences of employees. Although a complete review of risk is beyond the scope of this paper, our results do suggest an area for future research. Even though risk sharing is often characterized in the agency theory and SHRM literatures as something that is "good" for the organization (e.g. aligning interests of employees with those of owners), when risk is transferred to employees, it may result in negative outcomes because individual employees cannot diversify their risk portfolios (Bloom & Milkovich, 1997; Jensen & Murphy, 1990).

Stock purchase plans require that employees put some of their own income at risk; money from their pay checks is used to purchase discounted shares of stock in the company. However, the plan is voluntary. It could be that this form of incentive alignment works well for sharing risk because each employee can decide whether some of his/her pay will be at risk. Future research studying the reasons why employees participate in stock purchase plans and the outcomes of their participation on individual behaviors would be particularly useful in further understanding the implications of agency theory for risk sharing and risk bearing.

Model of HRM Control and Firm Performance

The overall results seem to indicate that both firm-specific and incentive-based HRM control can have effects on internal measures of firm growth (earnings per share, sales, and number of employees). In order to supplement our findings, we tested whether these three measures of firm growth (through 1995) had an effect on overall stock price growth from the

time of the IPO through 1996. Table 5 shows the results of the OLS regression analysis. The R² for the equation is .22, and all measures of firm growth are significant and positive in predicting change in adjusted stock price. It is interesting to note that firm-specific and incentive-based HRM control can have a positive effect on measures of firm growth which, in turn, have a positive effect on stock price growth. Furthermore, the negative effect of having a VP of administration responsible for HRM continues to be significant even upon controlling for important measures of firm growth.

Table 5
RESULTS OF REGRESSION ANALYSES FOR GROWTH MEASURES INCLUDED AS
INDEPENDENT VARIABLES (1993 AND 1988 COHORTS)

Percent Change in Stock Price (IPO to year-end 1996)			Percent Change in Stock Price (IPO to year-end 1991)	
1993 sample of IPO firms, n=342			1988 sample of IPO firms, n=92	
Variables	Unstandardized beta	s.e.	Unstandardized beta	s.e.
Constant	.82	1.22	.70	.22
% change in EPS	.33*	.16	.01**	.003
% change in sales	.43+	.24	.0005	.0002
% change in #ees	.94***	.22	-.001	.003
Number of employees	.16**	.06	.02	.02
Company age	-.01	.08	.002	.002
Risk factors	.004	.05	.35	.23
Net profit per share	.20+	.12	.03	.02
Union (0/1)	-.13	.18	-.04	.09
Beta,96	.23**	.07		
VP of Admin.	-.65*	.34	-.20*	.08
VP of HRM	.12	.22		
Other VP	-.13	.20		
Incentive stock option for all	.11	.14	.03	.03
Profit sharing for all	.24	.20	-.03	.08
Stock purchase plan for all	-.01	.08	-.07	.10
ESOP plan for all	-.26	.27		

R² .22
 F 3.65***

R² .22
 F 1.83*

*** p ≤ .001; ** p ≤ .01; * p ≤ .05; + = p ≤ .10

Note: Industry codes are included in the analyses; for the 1988 study only one dummy code is included -- whether company is manufacturing or service.

We replicated the analysis with the 1988 cohort of firms, predicting change in adjusted stock price from IPO to year-end 1991. The equation has an R^2 of .22 ($F=1.83$, $p \leq .05$), and two variables are significant at the $p \leq .05$ level of analysis. The significant variables are growth in earnings per share (unstandardized beta = 0.01) and bureaucratic HRM control (unstandardized beta = -0.20). Thus, with a second sample of IPO firms, representing a cohort of firms that should be relatively more conservative due to the fact that they went public after the stock market crash of 1987, we find a consistent pattern of results in that bureaucratic HRM is negatively related to change in market-based measures of performance.

The results suggest that bureaucratic HRM control is the only HRM control variable that directly affects change in stock price. After controlling for internal measures of firm growth (percentage change in earnings per share, sales, and number of employees), this negative relationship holds in two different cohorts of IPO firms.

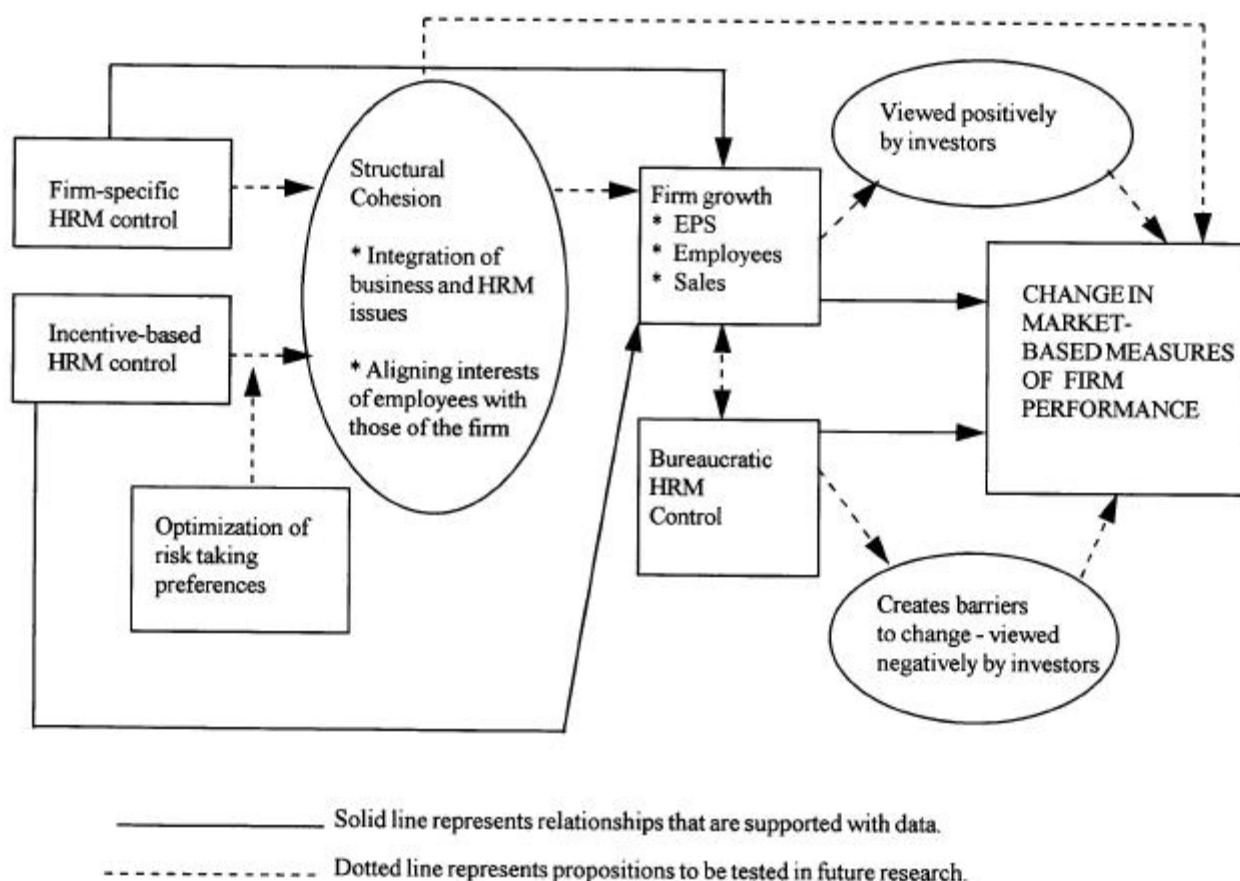
Agency theory, control theory, and much of the literature in SHRM suggest that bureaucratic HRM control can have a negative effect on firm performance because employees may be constrained from taking advantage of opportunities; they may not be encouraged to take prudent risks, and they may not share information. In addition to increasing agency costs, this type of employee behavior is likely to lead to an organization that cannot change quickly. If investors react negatively to firms that cannot or do not take advantage of new opportunities (which should be particularly important for IPO firms), and bureaucratic HRM control negatively affects the firm's ability to change, then it seems consistent with theory that bureaucratic HRM control would be negatively related to the firm's stock price growth.

At the same time, we find that having firm-specific and incentive-based HRM control does not directly affect market-based measures of performance, but both control forms affect internal growth measures, which then affect stock price growth. We speculate that both of these forms of control create firm-specific resources that are not easily communicated or understood by investors. In fact, these forms of HRM control should result in firm-specific competitive advantage that an organization would not want to communicate. By not sharing firm-specific decision patterns, the firm reduces the risk that competitors can copy their strategies, and the firm retains its competitive advantage. This is one of the keys to enhancing long-term firm performance according to the resource-based view of the firm (Barney, 1991; Wright & McMahan, 1992).

In summary, the pattern of results seems consistent with agency theory, control theory, and the resource-based view of the firm. Therefore, we suggest two general propositions for future research. The first is that bureaucratic control inhibits a firm's ability to react quickly to

change, and this inability to be flexible has a direct impact on market-based measures of firm performance. The second proposition is that firm-specific and incentive-based HRM control create firm-specific resources that are not easily understood by investors; therefore, no direct effects on market-based measures of performance are expected. However, we do anticipate an indirect effect through measures of firm growth (which are more easily communicated and understood by investors). Figure 1 summarizes the relationships that we found in the data and the propositions that we introduce.

FIGURE 1
PROPOSED MODEL OF HRM CONTROL AND FIRM PERFORMANCE



We expect that firm-specific and incentive-based HRM control result in something that Welbourne and Andrews (1996) refer to as structural cohesion. They define structural cohesion as an "employee-generated synergy that propels a company forward" (pg. 896). We propose that firm-specific HRM control results in HRM issues being integrated into general business

decisions; this occurs because someone who has responsibility for the HRM function is part of the business decision making process. This type of high level decision making results in structural cohesion, which then creates firm-specific advantage.

At the same time, incentive-based HRM controls can either increase or decrease structural cohesion. When the incentive plans optimize employee risk taking, structural cohesion can increase. Alternatively, when risk taking is not optimized (e.g. employees are in a position to maintain stability or don't react to new business conditions, etc.), then structural cohesion can decrease. Whereas firm-specific HRM control starts with business decisions and assumes that people issues are integrated into that decision making process, incentive-based HRM control begin with the employees and can create an environment where employees take business issues into account as they make decisions within their own jobs. Thus, both forms of HRM control can affect structural cohesion, which in turn can impact firm growth measures. In addition, we think that structural cohesion has the potential to directly affect market-based measures of firm performance because it should lead to the firm's taking advantage of opportunities and changing quickly and effectively. This type of analysis is beyond the scope of our data and is something that needs to be addressed in future studies.

Limitations

Although we conducted two studies in an attempt to minimize the limitations of this research, there are still issues that need to be considered when interpreting our data. First, our focus "from the top" results in sacrificing the detail that is often present in other strategic HRM studies. Our data do not include information about specific HRM practices that are enacted when HRM reports through the VP of Administration, VP of HRM, or an operating VP. The relationship between more traditional measures of HRM policies and procedures or work group practices must be left for future research. Furthermore, we do not know the extent of employee involvement in the various organizational incentives programs. Future research should investigate the effects of employee participation on firm performance.

Our sample includes a wide range of firms, in terms of size, profitability, and industry. Future research focusing on a particular industry may shed additional light on how HRM control is conducted "from the top" and the effects on the firm's subsequent performance. However, given that this is one of the first studies focusing on HRM "from the top" in IPO firms, we think that the multi-industry focus has advantages for purposes of generalization.

Another limitation of this study is survival bias as a result of our sample size diminishing over time due to mergers, acquisitions, and failure. Thus, the results are biased by the fact that

they are based on the sample of firms that not only went public but that were able to survive in their current forms throughout the period of time that we study. However, this bias, to some extent, strengthens the results of the paper because we have eliminated additional variance in the dependent variable (due to bankruptcy and buyouts). Thus, our sample suffers from somewhat reduced variance in performance, which then decreases the likelihood of finding significant results.

In addition, there is potential bias in that many firms did not report having an HRM function reporting to the top management team, and we do not know whether that omission is the result of their not having HRM, having it "buried" in a lower level HRM department, or deciding not to include that information in the prospectus. Given the strict reporting requirements for the prospectus, we suspect that most firms would report the existence of the department if it did indeed appear within the responsibilities of the top management group, but we have no guarantee of this. Future research is needed to clarify how HRM control is being handled in firms where the HRM function is not reported.

One last concern is the issue of causality. Even though our research design is longitudinal in nature, studying how events at the time of the IPO predict changes in firm performance, the issue of causality can still be questioned. For example, consider the results for profit sharing and stock purchase plans. The positive effect for stock purchase plans on growth in number of employees may be associated with the fact that companies instituting these plans knew they planned to hire large numbers of employees, and they used the stock purchase plan successfully to attract those employees. At the same time, profit sharing plans may be used by firms that expect to have low sales growth. They may be trying to improve firm performance through efficiency gains, thus implementing profit sharing to create an environment where employees improve quality and efficiency. This may explain the negative relationship between profit sharing and sales growth. Even though these arguments bring the issue of causality somewhat into question, the longitudinal nature of our study, and the replication of results, provide reasonable support for the relationships posited. Future studies, to more adequately address the causality question, should consider not only the existence of the types of controls that we studied but also the reasons that firms are implementing these systems.

Conclusion

Even though there are several limitations to this study, we believe that it makes important contributions to the strategic HRM research and to the fields of strategy, organization theory, entrepreneurship, and small business management. Although the study was conducted

with a unique sample, it is possible that the results generalize to larger firms that are undergoing change. If the underlying process is control over all employees, there is no reason to believe that this issue is not just as essential to larger firms as to IPO firms. To quote Simons (1995: 80), "a fundamental problem facing managers in the 1990s is how to exercise adequate control in organizations that demand flexibility, innovation, and creativity." Thus, our findings might generalize equally well to divisions or business units of rapidly changing corporations.

Snell and Youndt (1995: 712) recently stated that "organizational performance is the *raison d'etre* for HRM control - its mismanagement can lead to confusion, inefficiency, and the like..." We agree with that statement, and our research attempted to extend the boundaries of "HRM control" beyond the confines of the policies and practices of the human resource department. By doing so, we have suggested another approach for strategic HRM research. On one hand, research has been anchored in the HRM department; we have placed another anchor in the strategic HRM literature by focusing on top management decisions about HRM control over all employees. There is quite a bit of work to be done between these two positions, and we think that work represents the "process issue," and that exploring those important issues requires additional research.

REFERENCES

- Abowd, J.M., Milkovich, G.T., & Hannon, J.M. 1990. The effects of human resource management decisions on shareholder value. Industrial and Labor Relations Review, 43(Special Issue): 203S-236S.
- Adler, P.S., & Borys, B. 1996. Two types of bureaucracy: Enabling and coercive. Administrative Science Quarterly, 41: 61-89.
- Anderson, E. & Oliver, R.L. 1987. Perspectives on behavior-based versus outcome-based salesforce control systems. Journal of Marketing, 51, October, 76-88.
- Arthur, J.B. 1994. Effects of human resource systems on manufacturing performance and turnover. Academy of Management Journal, 37: 670-687.
- Asquith, D., & Weston, J.F. 1994. Small businesses, growth patterns and jobs. Business Economics, 29(3): 31-34.
- Baird, L. & Meshoulam, I. 1988. Managing two fits of strategic human resource management. Academy of Management Review, 13(1): 116-128.
- Balkin, D.B. & Gomez-Mejia, L.R. 1987. Toward a contingency theory of compensation strategy. Strategic Management Journal, 8, 169-182.
- Barney, J.B. 1991. Firm resources and sustained competitive advantage. Journal of Management, 17: 99-120.
- Barney, J. & Ouchi, W. 1986. Organizational economics. San Francisco, CA: Jossey-Bass.
- Beatty, R.P., & Zajac, E.J. 1994. Managerial incentives, monitoring, and risk bearing: A study of executive compensation, ownership, and board structure in initial public offerings. Administrative Science Quarterly, 39: 313-335.
- Becker, B. & Gerhart, B. 1996. The impact of human resource management on organizational performance: Progress and prospects. Academy of Management Journal, 39(4), 779-801.
- Becker, B. E. & Olson, C. A. 1989. Unionization and shareholder interests. Industrial and Labor Relations Review, 42(2): 246-261.
- Beer, M. 1997. The transformation of the human resource function: Resolving the tension between a traditional administrative and a new strategic role. Human Resource Management, 36(1): 49-56.
- Bloom, M.C. & Milkovich, G.T. (forthcoming). The relationship between risk, incentive pay, and organizational performance. Academy of Management Journal. (Available as working paper, Center for Advanced Human Resource Studies, Cornell University).
- Burns, T., & Stalker, G.M. 1961. The management of innovation. London: Tavistock.

- Chaganti, R. & Chaganti, R. 1983. A profile of profitable and not-so-profitable small businesses. Journal of Small Business Management, 21(3), 43 -5 1.
- Cyr, L.A. & Welbourne, T.M. 1997. Human resource management in IPO firms: Validation of a control orientation typology. In J.J. Katz (Ed.) Advances in entrepreneurship, fir emergence, and growth. Vol. 3, JAI Press, Greenwich, CT.
- Delery, J.E. & Doty, D.H. 1996. Modes of theorizing in strategic human resource management: Tests of universalistic, contingency, and configurational performance predictions. Academy of Management Journal, 39(4), 802-835.
- Devanna, M.A., Fornbrun, C.J. & Tichy, N.M. 1984. A framework for strategic human resource management. In: C.J. Fombrun, N.M. Tichy and M.A. Devanna (Eds.), Strategic Human Resource Management, 33-51, New York: Wiley.
- Dyer, L. 1985. Strategic human resource management and planning. In: Research in Personnel and Human Resource Management, 3: 1-30. JAI Press.
- Dyer, L. & Kochan, T. 1995. Is there a new HRM? Contemporary evidence and future directions. In: B. Downie, P. Kumar & M.L. Coates (eds.) Managing HRM in the 1990s and beyond. Is the workforce being transformed? Kingston, Ontario: Industrial Relations Centre Press, Queens University.
- Edwards, R. 1979. Contested terrain: The transformation of the workplace in the twentieth century. New York: Basic Books, Inc.
- Eisenhardt, K. M. 1985. Organizational control: Organizational and economic approaches. Management Science, 31: 134-149.
- Eisenhardt, K. M. 1989. Agency theory: An assessment and review. Academy of Management Review, 14: 57-74.
- Fama, E. F. 1980. Agency problems and the theory of the firm. Journal of Political Economy, 88: 288-307.
- Fox, J. 1997. Learn to play the earnings game (and Wall Street will love you). Fortune, March 31: 77-80.
- Gerhart, B., & Milkovich, G.T. 1990. Organizational differences in managerial compensation and financial performance. Academy of Management Journal, 33: 663-691.
- Gerhart, B., Trevor, C.O. & Graham, M. 1996. New directions in compensation research: Synergies, risk, and survival. In: Research in Personnel and Human Resource Management, 14, 143-203. JAI Press, Inc.
- Gomez-Mejia, L.R. 1992. Structure and process of diversification, compensation strategy, and firm performance. Strategic Management Journal, 13(5), 381-397.
- Gomez-Mejia, L.R. & Balkin, D.B. 1992. Compensation, organizational strategy and fir performance. Cincinnati, Ohio: Southwestern Publishing Co.

- Goold, M., & Quinn, J.J. 1990. The paradox of strategic goals. Strategic Management Journal, 11: 43-57.
- Gouldner, A.W. 1954. Patterns of industrial bureaucracy. Glencoe, IL: Free Press.
- Hornsby, J.S. & Kuratko, D.F. (1990). Human resource management in small businesses: Critical issues for the 1990s. Journal of Small Business Management, 28(3), 9-17.
- Hoy, F., McDougall, P.P. & Dsouza, D.E. 1992. Strategies and environments of high-growth firms. In D.L. Sexton & J.D. Kasarda (Eds.), The state of the art of entrepreneurship. Boston, MA: PWS-Kent Publishing Company.
- Huselid, M.A. 1995. The impact of human resource practices on turnover, productivity, and corporate financial performance. Academy of Management Journal, 38(3): 635-672.
- Huselid, M.A. & Becker, B.E. 1997. The impact of high impact work systems, implementation effect, and alignment with strategy and shareholder wealth. Proceedings of the Academy of Management, 144-148.
- Huselid, M.A., Jackson, S.E. & Schuler, R.S. 1997. Technical and strategic human resource management effectiveness as determinants of firm performance. Academy of Management Journal, 40(1), 171-188.
- Ibbotson, R.G. & Ritter, J.R. 1995. Initial public offerings. In R.A. Jarrow, V. Maksimovic, & W.T. Ziemba (Eds.), Finance: North-Holland handbooks in operations research and management science, 9: 993-1016.
- Jaeger, A.M., & Baliga, B.R. 1985. Control systems and strategic adaptation: Lessons from the Japanese experience. Strategic Management Journal, 6: 115-134.
- Jackson, S.E. & Schuler, R.S. 1995. Understanding human resource management in the context of organizations and their environments. Annual Review of Psychology, 46: 237-264.
- Jackson, S. E., Schuler, R. S. & Rivero, J. C. 1989. Organizational characteristics as predictors of personnel practices. Personnel Psychology, 42: 729-786.
- Jensen, M.C. & Meekling, W.H. 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. Journal of Financial Economics, 3: 305-360.
- Jensen, M. C. & Murphy, K. J. 1990. Performance pay and top-management incentives. Journal of Political Economy, 92(21): 225-264.
- Jones, G.R. & Wright, P.M. 1992. An economic approach to conceptualizing the utility of human resources management practices. In K. Rowland & G. Ferris (Eds.), Research in personnel and human resource management, vol. 10: 271-300. Greenwich, CT: JAI Press.
- Kanter, R.M. 1986. The new workforce meets the changing workplace: Strains, dilemmas, and contradictions in attempts to implement participative and entrepreneurial management. Human Resource Management, 25: 515-532.

- Lado, A.A. & Wilson, M.C. 1994. Human resource systems and sustained competitive advantage: A competency-based perspective. Academy of Management Review, 19(4), 699-727.
- Lawler, E.E., III, Mohrman, S.A. & Ledford, G.E. 1995. Creating high performance organizations. San Francisco. CA: Jossey-Bass Publishers.
- Leonard-Barton, D. 1992. Core capabilities and core rigidities: A paradox in managing new product development. Strategic Management Journal, 13: 111-125.
- Lev, B. & Thiagarajan, R. 1993. Fundamental information analysis. Journal of Accounting Research, 31 (Autumn): 190-215.
- MacDuffie, J.P. 1995. Human resource bundles and manufacturing performance: Organizational logic and flexible production systems in the world auto industry. Industrial and Labor Relations Review, 48: 197-221.
- Marino, K.E., Castaldi, R.M., & Dollinger, M.J. 1989. Content analysis in entrepreneurship research: The case of initial public offerings. Entrepreneurship Theory and Practice, Fall: 51-66.
- Martell, K. & Carroll, S.J. 1995. How strategic is HRM? Human Resource Management, 34(2): 253-267.
- Miles, R.E., & Snow, C.C. 1984. Designing strategic human resource systems. Organizational Dynamics, Summer: 36-52.
- Mohrman, S.A., Lawler, E.E., & McMahan, G.C. 1996. New directions for the human resources organization: An organization design approach. University of Southern California, Center for Effective Organizations.
- Morgan, G. 1986. Images of organizations. Beverly Hills, CA: Sage.
- Neter, J., Wasserman, W., & Kutner, M.H. 1989. Applied Linear Regression Models, 2nd edition. Irwin: Burr Ridge, IL.
- O'Flaherty, J.S. 1984. Going public: The entrepreneur's guide. New York: John Wiley & Sons.
- O'Leary-Kelly, A.M., Martocchio, J.J., & Frink, D.D. 1994. A review of the influence of group goals on group performance. Academy of Management Journal, 37(5), 1285-1301.
- Ouchi, W.G. 1979. A conceptual framework for the design of organizational control mechanisms. Management Science, 25: 833-848.
- Ouchi, W. G. 1980. Markets, bureaucracies, and clans. Administrative Science Quarterly, 25: 129-141.
- Pfeffer, J. 1997, New directions for organization theory: Problems and prospects. New York: Oxford University Press.

- Rasheed, A., & Datta, D.K. 1994. Determinants of price premiums: A study of initial public offerings in the medical diagnostics industry. Paper presented at the Academy of Management Annual Meeting, Dallas, TX.
- Roure, J.B. & Kelley, R.H. 1990. Predictors of success in new technology ventures. Journal of Business Venturing, 5, 201-220.
- Schuler, R.S. 1989. Strategic human resource management and industrial relations. Human Relations, 42: 157-184.
- Schuler, R.S. 1987. Personnel and human resource management choices and organizational strategy. Human Resource Planning, 10(1): 1-17.
- Schuler, R.S. & Jackson, S.E. 1987. Organizational strategy and organizational level as determinants of HR practices. Human Resource Planning, 10(3), 125-141.
- Shane, S. 1996. Explaining variation in rates of entrepreneurship in the United States: 1899-1988. Journal of Management, 22(5), 747-781.
- Simons, R. 1995. Control in the age of empowerment. Harvard Business Review, March-April, 80-88.
- Snell, S.A. 1992. Control theory in strategic human resource management: The mediating effect of administrative information. Academy of Management Journal, 35: 292-327.
- Snell, S.A., & Youndt, M.A. 1995. Human resource management and firm performance: Testing a contingency model of executive controls. Journal of Management, 21: 711-737.
- Truss, C. & Gratton, L. 1994. Strategic human resource management: A conceptual approach. The International Journal of Human Resource Management, 5(3), September, 663-686.
- Thompson, J.P. 1967. Organizations in action. New York: McGraw-Hill.
- Thompson, J.P. & Strickland, A.J., III. 1992. Strategic Management. Homewood, IL: Irwin.
- Ulrich, D. 1997. Human resource champions: The next agenda for adding value and driving results. Boston. Massachusetts: Harvard University Press.
- Walton, R.E. 1985. Toward a strategy for eliciting a commitment based on policies of mutuality. In: R.E. Walton & P.R. Lawrence (Eds.) Human resource trends and challenges, 35-65. Boston: Harvard Business Press.
- Welbourne, T.M. & Andrews, A.O. 1996. Predicting performance of initial public offerings: Should human resource management be in the equation? Academy of Management Journal, 39(4), 891-919.
- Wright, P.M., McMahan, G.C. & McWilliams, A. 1994. Human resources and sustained competitive advantage: A resource-based perspective. International Journal of Human Resource Management, 5(2): 301-326.

Wright, P.M. & McMahan, G.C. 1992. Alternative theoretical perspectives for strategic human resource management. Journal of Management, 18: 295-320.

Wright, P.M. & Snell, S.A. 1991. Toward an integrative view of strategic human resource management. Human Resource Management Review, 1: 203-225.

Wyatt, J. 1996. America's amazing IPO bonanza. Fortune, May 27: 76-102.