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Human Resource Management in Initial Public Offering Firms: Validation of a Control Orientation Typology

Abstract

In this paper, we introduce a new typology that focuses on the way employees are managed in smaller, initial public offering (IPO) firms. Unlike many typologies in the human resource management literature, this typology is rooted in theory. Specifically, agency theory and organizational control theory suggest two forms of control over the entire employee population: bureaucratic control and outcome control. Examining IPO firms in terms of their choices to implement bureaucratic or outcome control for all employees results in a typology of four different human resource control orientations. The first type of control orientation uses neither form of control, the second uses only outcome control, the third uses bureaucratic control, and the fourth uses both bureaucratic and outcome control.

We validate the typology and the measures used to derive it by analyzing extensive descriptive data from a sample of 107 firms that went public in 1988. Differences emerge between firms in each of the four quadrants of the typology with regard to company characteristics, governance characteristics, approaches to employees, and firm performance. In addition, these differences appear to be related to control orientation rather than merely attributable to age, size and stage in life cycle (variables often examined in other typologies). Lastly, control orientation is linked to firm performance.

Keywords

employee, typology, human resource, management, IPO, theory, control, characteristic, company, performance

Comments

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Working Paper 97 - 20



**HUMAN RESOURCE MANAGEMENT
IN INITIAL PUBLIC OFFERING FIRMS:
VALIDATION OF A CONTROL ORIENTATION TYPOLOGY**

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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, conferences, and projects available to others interested in human resource management in preliminary form to encourage discussion and suggestions.

HUMAN RESOURCE MANAGEMENT IN INITIAL PUBLIC OFFERING FIRMS: VALIDATION OF A CONTROL ORIENTATION TYPOLOGY

ABSTRACT

In this paper, we introduce a new typology that focuses on the way employees are managed in smaller, initial public offering (IPO) firms. Unlike many typologies in the human resource management literature, this typology is rooted in theory. Specifically, agency theory and organizational control theory suggest two forms of control over the entire employee population: bureaucratic control and outcome control. Examining IPO firms in terms of their choices to implement bureaucratic or outcome control for all employees results in a typology of four different human resource control orientations. The first type of control orientation uses neither form of control, the second uses only outcome control, the third uses bureaucratic control, and the fourth uses both bureaucratic and outcome control.

We validate the typology and the measures used to derive it by analyzing extensive descriptive data from a sample of 107 firms that went public in 1988. Differences emerge between firms in each of the four quadrants of the typology with regard to company characteristics, governance characteristics, approaches to employees, and firm performance. In addition, these differences appear to be related to control orientation rather than merely attributable to age, size and stage in life cycle (variables often examined in other typologies). Lastly, control orientation is linked to firm performance.

The human resource management (HRM) literature is rife with typologies developed to help explain differences in human resource characteristics and their appropriateness for the firm's strategy, position in life cycle, or effectiveness. Walton's (1985) control versus commitment dichotomy and Dyer and Holder's (1988) typology of inducement, involvement and investment strategies are two notable examples that focus specifically on human resource strategies. In addition, Porter's (1980) model of cost, differentiation, and focus, and Miles and Snow's (1984) prospector, defender, and analyzer typology have been used extensively in the human resource literature (e.g. Jackson, Schuler, and Rivero, 1989) to try to account for differences in human resource approaches.

While these typologies have been helpful in providing a basis for conceptual discussions regarding the use of varying types of human resource practices, they have fallen short in empirically examining how HRM decisions can influence organizational outcomes. The typologies are based on the assumption that the role of HRM is to develop policies and practices that will direct employee action, support strategy, and lead to achievement of organizational goals. Thus, the typologies have primarily emphasized "fit" between HR strategies and organizational strategies, and authors using them have suggested that it is this "fit" that will drive corporate performance. Unfortunately, although these typologies are intuitively appealing, they are often used to infer the importance of varying HR strategies in the absence of any empirical grounding as to their validity.

Recently, scholars have begun to recognize the shortcomings of the taxonomies and have taken strides to correct them. Specifically, Arthur (1992, 1994) notes that the typologies have not been empirically validated. In an attempt to palliate the problem, he draws from data gathered from steel minimills to offer a typology based on Walton's (1985) model of control and commitment. Though this is a step in the right direction, the resultant typology itself is empirically derived rather than theoretically derived, and it is limited to a relatively small sample consisting of only one type of firm (steel minimills), thereby impeding its generalizability. Despite acknowledging Arthur's (1992, 1994) efforts, Dyer and Kochan (1994) call for more theory-based taxonomic research that is of an empirical rather than conceptual nature.

Thus, the purpose of this study is to propose a theory-based typology of human resource control and validate it in a sample of initial public offering firms. Rather than focusing on the "fit" between numerous HR policies and practices and firm strategy, a construct that has proven to be relatively intractable in prior research, we argue that choice of control over all employees offers a simpler and more manageable construct of study. We rely primarily on agency theory and, to a lesser extent, organizational control theory to develop a typology of control orientation

over all employees. According to agency theory, group or organizational outcomes are dependent upon the control choices made by firms to monitor employee behaviors (Wright & McMahan, 1992). Specifically, agency theory suggests two forms of control: bureaucratic or outcome. Using these, we develop a typology that will allow us to examine differences between firms that choose to implement neither bureaucratic nor outcome control, one or the other, or both.

In addition to developing and empirically validating a taxonomy that is based on theory, this research contributes to the existing literature by expanding our understanding to a new domain of organizations. A sample of initial public offering (IPO) firms (many of which do not have human resource management departments) is studied. This domain of younger, smaller firms has been virtually ignored by HRM researchers in the past. Snell (1992) highlights that much of the HRM literature has focused on large firms with formal human resource practices to the exclusion of smaller firms, thereby limiting the types of control mechanisms studied. The research described in this paper includes firms that choose less traditional forms of control as well as firms that choose to manage their human resources less formally. Thus, the human resource function represents but one control mechanism that can be manifested in organizations.

AGENCY THEORY, ORGANIZATION THEORY, AND CONTROL CHOICES

Agency theory has been used to understand situations in which an individual delegates responsibility for a task, or set of tasks, to other persons (Fama, 1980). The person delegating the work is called the principal, and the individual to whom tasks are assigned is referred to as the agent. Agency theory has been employed by researchers from a variety of academic fields (e.g. accounting, economics, finance) primarily to explain the exchange relationship between principal and agent. Specifically, it explicates alternative ways of controlling the behaviors of individuals who have been delegated work by someone, and two forms of control predominate: bureaucratic control and outcome control.

Agency theory assumes that the best way of aligning agent interests with those of the principal is through formal monitoring (i.e. bureaucratic control), and only when the cost of formal monitoring is prohibitively high should a company consider alternatives to formal monitoring. This type of situation is especially prominent in the case of executives, whose behavior is difficult to monitor through traditional mechanisms (i.e. direct supervision, close monitoring of behaviors). Thus, in lieu of formal monitoring, owners must rely on designing optimal incentive contracts (i.e. outcome control) that will align the interests of executives with

those of the firm. Several researchers (e.g. Tosi & Gomez-Mejia, 1989; Zajac & Westphal, 1994; Beatty & Zajac, 1994) have examined the relative merits and trade-offs of using bureaucratic versus outcome controls to monitor executives (for a review, see Gomez-Mejia, 1994).

Though agency theory has been classically applied to study the relationship between owners of organizations and the managers who run those firms (Fama & Jensen, 1983), it has also been applied to study the employment relationships for other types of workers, such as faculty (Gomez-Mejia & Balkin, 1992), sales representatives (Anderson & Oliver, 1987; Eisenhardt, 1985), and production workers (Welbourne, Balkin & Gomez-Mejia, 1995). Consistent with Welbourne, Balkin, and Gomez-Mejia (1995), who treated the organization as the principal and employees, as a group, as the agent, we argue that agency theory can be used to understand organizational control for the overall employee population.

Organizational theorists (i.e. Ouchi, 1979; 1980; Thompson, 1967) also point to two forms of control that are consistent with those implied by agency theory: "bureaucratic" and "market" mechanisms. The underlying premise of bureaucratic control is compliance with rules, routines, and policies in order to elicit and maintain appropriate employee behavior. Alternatively, "market" mechanisms rely on the use of incentives to ensure alignment with organizational goals (i.e. outcome control) (Ouchi, 1979; 1980). Eisenhardt (1985, 1989) combines the agency theory and organizational theory approaches to organizational control and notes that two underlying control strategies emerge from both theoretical perspectives; the first emphasizes behavioral monitoring and the second focuses on incentive alignment. More recently, Snell (1992) and Snell and Youndt (1995) also acknowledge the existence of bureaucratic and outcome control (they refer to them as behavioral and output, respectively) in their examinations of HRM controls on firm performance¹.

Thus, there is well documented support in favor of two types of control. One method of control implied by agency and organizational theories is bureaucratic control which involves direct monitoring of agents, the establishment of rules and procedures and the hiring of individuals to assure compliance. The second form of control is outcome-based. Principals (or owners) use outcome control when they design compensation contracts or other mechanisms to entice employees to behave in ways that will maximize the interests of the company. The two forms of control are not necessarily exclusive; they may be applied individually or in combination.

¹ Both Ouchi (1979, 1980) and Snell (1992, 1995) argue for the existence of a third form of control which they call clan control and input control, respectively. Although we have chosen to focus on only bureaucratic and outcome control in this paper, we do acknowledge the existence of the third type and will discuss its implications later in the paper.

THE CONTROL ORIENTATION TYPOLOGY

Viewing organizational control as the underlying construct allows development of a typology where control over all employees is conceptualized in terms of the two alternatives: bureaucratic control or outcome control. In our sample of smaller organizations, we argue that having an administrative HRM function is akin to applying bureaucratic control to all employees. Though the human resource function is shifting to a more strategic role (i.e. Dyer & Kochan, 1994), much of HRM remains bureaucratic and administrative in nature (Mohrman, Lawler, & McMahan, 1996). Many traditional HRM practices (i.e. performance appraisal, job postings, policy manuals) serve to control and standardize employee behavior and result in various bureaucratic systems that require maintenance and administration (Edwards, 1979). Alternatively, organizations may choose to focus on outcome control via incentive alignment. Controlling outcomes provides rewards for employees to engage in risk-taking behaviors that enhance long-run performance (Jensen & Murphy, 1990). In addition, long-term incentives are recommended in higher risk firms as a means of aligning employee goals with firm goals (Gomez-Mejia & Balkin, 1992; Schuler, 1987; Jensen & Meckling, 1976). Thus, we argue that, in our sample of IPO firms, offering incentive stock options to all employees is a reflection of using outcome control.

By examining firms in terms of their decisions to implement bureaucratic or outcome control for all employees, four categories of human resource control orientation emerge. Figure 1 illustrates the two control choices and the resultant types of control orientation that can exist in an organization. The four categories of human resource control orientation are labeled: (1) off-the-cuff, (2) responsive, (3) policing, and (4) comprehensive.

Figure 1
Control Orientation Typology

Bureaucratic Control:

		NO	YES
Outcome Control:	NO	Off-the-Cuff N = 44 (42%)	Policing n = 11 (10%)
	YES	Responsive N = 40 (38%)	Comprehensive N = 11 (10%)

The upcoming discussion of each type of human resource control will draw from existing typologies of strategic human resource management (e.g. Miles & Snow, 1984; Dyer & Holder, 1988) in order to highlight the distinctiveness of each category. Although the four approaches to control presented here overlap to some extent with facets of prior typologies, they are unique in two important ways. First, they are rooted in theory rather than being derived from organizational and environmental characteristics. Second, each approach to human resource control reflects a broad, firm-level perspective rather than a focus on specific HR policies and practices.

Off-the-cuff

Firms in the off-the-cuff category use neither bureaucratic nor outcome control in a systematic way. Rather than employing organization wide control systems such as administrative HRM or incentive alignment, these firms approach employee control in an informal, off-the-cuff, or seat-of-the-pants manner. Agency theory suggests that this approach to employee control is likely to occur primarily in the owner-managed firm in which the "chief executive attempts to monitor all activities, and the staff serves merely as an extension of the top executive's will" (Miles & Snow, 1984:39). Similarly, Baird and Meshoulam (1988) discuss this approach to control as a function of a firm's life cycle, and they note that employees are managed informally and primarily by the direction of the founder. This may be particularly characteristic of younger firms in the process of entering the public markets for the first time. Unfortunately, because HRM researchers (e.g. Dyer & Holder, 1988; Snell & Youndt, 1995) have tended to focus on large, established firms, little is known about the effect of this strategy versus others. This research seeks to explore the effects of this less structured approach to controlling all employees vis-a-vis more formal control mechanisms.

Responsive

Responsive firms choose to use only outcome control, relying on incentive stock options for all employees as a means of providing incentives for employees to act in the best interests of the organization. By definition, being responsive refers to reacting to suggestions, influences and efforts (The American Heritage Dictionary, 1982). As it relates to organizational control, being responsive can be characterized in two ways. First, relying only on outcome control encourages employees to impose self and peer control and to exhibit initiative and creativity in pursuit of organizational objectives. In effect, employees are afforded considerable flexibility in responding to changing environmental and competitive conditions. In turn, the company responds to and rewards the suggestions and efforts of all employees by offering them a stake in the company.

Being in the responsive category is similar to the involvement strategy described by Dyer and Holder (1988). The involvement strategy emphasizes high levels of employee involvement and commitment toward specified organizational goals. Similarly, the responsive style is consistent with the types of human resource strategies that Miles and Snow (1984) suggest are appropriate for prospector firms. In response to their facing relatively high degrees of risk and pursuing growth strategies, prospector firms tend to conduct human resource management informally and to emphasize pay for performance.

Policing

Firms that follow a policing approach to employee control use only bureaucratic control. Policing refers to regulating and controlling the affairs of a community (i.e. an organization) (The American Heritage Dictionary, 1982). Consistent with that notion, agency theory and organizational control theory indicate that bureaucratic control emphasizes formal monitoring and compliance with rules, routines and policies as primary drivers in controlling employee actions. In addition, Snell and Youndt (1995) suggest that the traditional "policing" role of the HRM group serves to minimize uncertainty and to establish predictable routines for employees. Thus, firms in the policing category focus on formal organizational structure (i.e. the human resource function) as a means of controlling the entire workforce.

Both Dyer and Holder (1988) and Baird and Meshoulam (1988) allude to this form of human resource control. Dyer and Holder (1988) refer to it as an inducement strategy in which firms require that employees adhere to narrowly defined roles and perform under tight supervision. While Dyer and Holder (1988) suggest that such a strategy may be appropriate regardless of stage in the life cycle, Baird and Meshoulam (1988) suggest that this form of human resource control may be appropriate, or most prevalent, during two particular stages of growth: functional and controlled. Baird and Meshoulam argue that companies moving through these two stages of growth have a need for controlling payroll, selection, and other employee-based functions. They note that in the controlled growth stage, in particular, "competition for resources is stiff, and pressure to control investment increases in all areas. The need for measurement and control, the growing diversity of employees, and the growing complexity of communications encourages investments in automation and the use of advanced tools for human resource management" (Baird & Meshoulam, 1988:118).

Comprehensive

The fourth type of control orientation is labeled comprehensive and relies on both bureaucratic and outcome control to achieve firm objectives. While agency and organizational control theories suggest that each form of control may be appropriate under different conditions,

the two are not mutually exclusive and can be used in conjunction with one another (Beatty & Zajac, 1994; Becker & Olson, 1989). In such cases, firms take a comprehensive approach to controlling employees; they provide incentives for employees to behave like owners and rely on the organizational structure (i.e. an HRM function) to regulate employee actions.

This pattern of human resource control is similar to what Dyer and Holder (1988) label an investment strategy, where companies utilize formal human resource programs (training, selection, development, etc.) in addition to expecting high levels of commitment, creativity and involvement in the organization. This form of control is also consistent with what Miles and Snow (1984) recommend for defender firms. These companies, which are in more established and stable businesses, emphasize retention of employees and commit significant resources to the training and development functions. At the same time, fairness and equity are important values in these companies, and those goals are often attained through the use of compensation systems that "share" the rewards of business performance with all employees.

Summary of Control Orientation Typology

The typology presented here originates from viewing a company's approach to controlling its entire workforce through an agency theory lens. Agency theory suggests two methods of aligning agent (i.e. employee) and principal (i.e. firm) interests: bureaucratic control and outcome control. Firms may choose from these two to achieve alignment. By dividing the firms in our sample on the basis of their decisions to implement neither bureaucratic nor outcome control, one or the other, or both, four types of firms emerge: off-the-cuff, responsive, policing and comprehensive. Whereas most prior models were derived by working from a typology of organizational strategy, structure, or life cycle and then identifying different approaches toward human resources (e.g. Miles & Snow, 1984; Baird & Meshoulam, 1988), this typology of human resource control orientation has solid theoretical underpinnings.

This theoretically-based typology further contributes to past research in that it encompasses an informal (i.e. off-the-cuff) control approach. Informal control techniques have been largely ignored in prior research as scholars have relied on samples consisting of more established companies that have formalized control functions in place. Inclusion of an informal approach to control in this research should broaden our understanding of the fuller domain of control options available to organizations and their implications for future performance.

In order to test whether the typology provides a unique contribution to understanding how varying approaches to controlling all employees may reflect other organizational characteristics, we will examine the firms in each category across a variety of dimensions. The data will be presented to understand how firms within the four categories differ with regard to

basic organizational demographics (e.g. size, age, riskiness), other forms of control throughout the organization (e.g. management, board of directors), overall approach to employees (e.g. compensation programs, labor relations), and firm performance (e.g. survival, stock price growth).

Although we do not develop specific hypotheses regarding how firms exercising the four types of control will differ, we do expect to find differences that may provide insights into the effects of control orientation on firm performance. Thus, this study is primarily exploratory in nature and seeks to address the following research question:

How do firms in the four categories of control orientation differ in terms of firm demographics, other indicators of employee control, and firm performance?

If the typology only yields differences that are functions of criteria such as age, size, or life cycle, then its usefulness would be limited. If, on the other hand, differences emerge with regard to other forms of control and structure, and if control orientation affects firm performance, this would suggest that the typology is informative and offers insights beyond those presumed by existing typologies.

RESEARCH METHOD

The exploratory nature of the study requires extensive data collection in order to analyze the distinctiveness of organizations in each of the four categories of the control orientation typology. Thus, rather than obtaining a large sample and collecting a small number of data points, we use a smaller sample and code in-depth data for each firm. In addition, the sample chosen allows us to examine differences among the four types of control orientation in firm performance and survival over a five-year period.

The sample contains 107 non-financial companies that initiated their IPOs in 1988 and completed the process in either 1988 or 1989. Approximately 250 firms filed securities registrations with the SEC in 1988. We pared down the list to 170 by deleting firms listed as closed-ends funds, real estate investment trusts, and those not producing a good or service. After receiving the prospectuses for the remaining 170 companies, we eliminated additional firms that also fell into the "not producing a good or service" category. In addition, this study only includes those firms for which we could obtain subsequent measures of financial performance starting in 1989².

² This is a sub-sample of the one used by Welbourne and Andrews (1996). While they were able to use a larger sample of 136 firms to study initial stock price and firm survival, firm performance data to measure our dependent variables (e.g. stock price) starting in 1989 were only available for 107 of those organizations.

Data were gathered from 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 firms to follow strict guidelines in the format. The document itself is usually written by members of the management team and then scrutinized by lawyers and accountants.

While the potential for positive bias exists in the prospectus, the firm is liable for any information that might mislead investors (O'Flaherty, 1984). The Securities Act of 1933 (with amendments) sets the requirements for the prospectus, thus assuring consistency in the type of information that is included in the document. The SEC also requires that the prospectus be accurate to the best knowledge of management. Given this requirement and the fact that the SEC requires a tremendous amount of detail regarding company operations, the prospectus is a useful data source (Marino, Castaldi, & Dollinger, 1989).

Data Collection and Coding

Prospectuses from 1988 are not readily available in public sources. Therefore, copies were obtained from Disclosure, which is a data clearing house for the Securities and Exchange Commission. We were able to acquire the prospectuses for all non-financial companies that initiated an initial public offering during 1988. Data were coded using a two-step process with two coders who were unaware of the survival status of the companies as they coded.

First, a five-page summary of each prospectus was constructed. Given the fact that the prospectus is not a traditional data source, this first step allowed for careful reading of each document, cross checking at the second stage of coding, and notation of any unusual firm characteristics. The second step involved numerically coding each five-page summary for specific information. Researchers cross-coded a sample of companies (two people coded the same prospectus), and they switched companies for the second stage of coding. Any questions about codes were resolved through group consensus, which involved meetings with the coders and an additional researcher. Data on the company, strategy, financial status, and members of the top management team were included in the coding process. A total of 250 different items were ultimately coded³, allowing for a thorough analysis of differences among companies exhibiting the four control orientations. In addition to the data collected from the prospectuses, financial data were gathered from COMPUSTAT.

³ Where possible, items were coded as continuous variables (e.g. percent of CEO ownership, salaries, number of directors, etc.). When coding dictated identifying the presence or lack of a certain variable (e.g. CEO is the founder, all employees mentioned as a strategic factor, benefits for all employees), 0 = No and 1 = Yes.

Sample Characteristics

At the time of its IPO, the average firm in the sample was almost 12 years old (s.d. = 17) and employed 675 (s.d. = 1,664) people. The typical firm, however, was much younger and smaller. Half of the firms were less than 6 years old and had fewer than 130 employees; in fact, only about 25% of the firms in the sample had more than 500 workers. The businesses were located throughout the United States, but were most heavily concentrated in the Pacific states, and they operated in numerous industries ranging from food service retailing to biotechnology to steel minimills. The average net profit at the time of the IPO for the sample was almost \$4 million (s.d. = \$12 million) with 36% of the firms reporting losses at the time of their IPO's.

Control Orientation

As previously mentioned, the four categories of control orientation were derived by crossing two forms control that can be exerted over all employees: bureaucratic or outcome. The operationalizations of the bureaucratic and outcome control variables reflect overall approaches to employees as communicated in the prospectuses of the IPO firms and will be validated in conjunction with the resulting control orientations. Thus, the emphasis in this study is on the high-level control decisions that firms make regarding their employee populations rather than the decisions that may take place lower in the organization.

Bureaucratic Control. We operationalized bureaucratic control over all employees as having a human resource function. A well established tenet in the human resources literature is that human resource activities (e.g., job design, performance appraisal) are designed specifically to establish predictable employee behaviors and routines that reduce uncertainty and contribute to achieving organizational objectives (Snell, 1992; Schuler, 1987). Snell and Youndt (1995) indicate that, operationally, bureaucratic control includes traditional HRM practices such as standardized procedures, performance appraisal, and supervision. Thus, the presence of an HR function in these small, growing firms is suggestive of higher levels of bureaucratic control over all employees than would be expected in the absence of an HR function.

Furthermore, in our sample, the HR function is consistent with what Beer (1997) and Mohrman et al. (1996:4) characterize as "old HRM," a function that is largely administrative and bureaucratic. They suggest that administrative HRM exists when, rather than reporting directly to the CEO, the HR executive reports to someone at the next level in the organization. The prospectus includes a very thorough discussion of management team members and their responsibilities, and no organization had a vice president (VP) of HRM reporting directly to the CEO. Instead, the chief financial officer (CFO) or the VP of administration in twenty-two firms

(21% of the sample) had an HRM function reporting to him/her. Thus, we coded bureaucratic control as the presence of an HRM function reporting to the CFO or VP of administration.

Outcome Control. Each company was coded as using outcome control if it had an incentive stock option plan for all employees. Incentive stock options (ISOs) are the most common method of providing stock ownership to employees in initial public offering firms, and while incentive stock option plans are prevalent for top managers, they are relatively less so for all employees. As noted by Becker and Olson (1989), stock option programs are mechanisms for increasing alignment among all employees within an organization. These programs provide individual employees with incentives to work toward the organization's goals in the same way that CEO bonus plans provide incentives for executives to make decisions that will support the interests of the stockholders or owners. Thus, stock option programs help to create an environment in which employees are, in a sense, part owners of the business.

In this role as owners, employees are then expected to exert higher levels of self and peer control to ensure that their fellow employees are doing what is necessary to contribute to the corporation's success and long-term survival. Again, the fact that a firm is committed to including all organizational members in incentive stock option plans reflects a level of outcome control over its employee population that is higher than those firms that offer ISOs only to top managers. Fifty-one (48%) of the firms indicated that all employees participated in incentive stock option plans.

Typology. The resultant control orientation typology represents 44 firms (42%) in the Off-the-Cuff category (exerting neither bureaucratic nor outcome control), 40 companies (38%) in the Responsive category (relying only on outcome control), 11 (10%) organizations using the Policing approach (relying only on bureaucratic control), and 11 businesses (10%) coded as Comprehensive (using both bureaucratic and outcome control). See Figure 1.

Dependent Variables

One of our objectives is to examine the differential effects of control orientation on organizational performance. Abowd, Milkovich, and Hannon (1990) note that the organizational performance outcomes most commonly considered in the HR literature are employee behaviors and attitudes, while "economic performance" as defined by financial market measures has been less commonly examined. Furthermore, Gerhart and Milkovich (1990) encourage researchers to expand their definitions of organizational performance to include such measures as shareholder wealth and firm survival. In response, we examine the effects of control orientation at the time of the IPO on long-run stock price performance and survival.

Although our analyses will not assess the effects on firm performance of changes in control orientation after the IPO, we rely on theoretical and empirical evidence to support our approach. Organizational ecologists (e.g. Aldrich & Marsden, 1988; Hannan & Carroll, 1992) argue that internal structures in place at times when firms are past infancy and entering new stages of growth (such as the IPO) are not likely to change, and are therefore critical in determining long-run organizational outcomes. Similarly, compensation researchers (e.g. Gomez-Mejia & Balkin, 1992; Snell & Dean, 1994) have noted that administrative systems such as rewards programs are resistant to change once they are implemented. Thus, the study of longterm performance consequences of control orientation at the time of the IPO seems reasonable.

Long-Run Stock Price Performance. Not only are stock market measures the most prevalent in the IPO literature (see Ibbotson and Ritter, 1995 for a review), but accounting measures of performance (e.g., earnings per share, ROA, ROE) are susceptible to varying accounting methods and to manipulation (Lev and Thiagarajan, 1993). Thus, we obtained, from COMPUSTAT, stock prices for each company for the years ending 1989 through 1993 and measured stock price growth (logged to ensure normal distribution) from the time of the IPO through year-end 1993.

Survival. Survival has been virtually unexplored in the HRM literature (an exception is Welbourne and Andrews, 1996), and yet it may be the "ultimate" measure of performance. Survival is particularly salient to the study of IPO firms because they may be more vulnerable to survival threats. Eisenhardt (1989: 65) indicates that in newer ventures the "likelihood of failure looms large," and indeed, this is the case with IPO firms. Of the 3,186 companies that went public in the 1980's, 58% of them were no longer listed on stock exchanges at the end of the decade (Zeune, 1993).

All firms still in business at year-end 1993 were coded as survivors. Survival status is not easily determined; therefore, several steps were taken to assure proper identification of survivors. First, an on-line data base of current public firms was searched to find current information on the companies. Supplemental information was gathered from Disclosure, a data clearing-house for the Securities and Exchange Commission (SEC). Disclosure was able to identify some of the active and inactive companies. Additionally, we searched the *Directory of Obsolete Securities* (1994) and several on-line services including EDGAR, the Dow Jones News Retrieval Service, and Bloomberg Financial in order to identify bankruptcies, recapitalizations, delistings, and mergers. Firms operating under Chapter 11 (reorganization) of the 1978 Bankruptcy Reform Act were coded as survivors until such time as they entered Chapter 7

(liquidation) at which time they were deemed to be non-survivors. Several firms' securities were removed from the exchanges on which they were trading either for failure to file required documents with the SEC, or for failing to meet certain financial requirements of the exchange. These "delistings" were treated as non-survivors using the logic that such firms were no longer operating as they had when they went public, and had "failed" as public companies.

Finally, firms that had merged could be treated in one of two ways. Firms that were acquired or merged to form new entities could be considered non-survivors under the logic that the firm, as coded in 1988, had been joined with another set of management and organizational culture (Aldrich & Marsden, 1988; Kalleberg & Leicht, 1991; Welbourne & Andrews, 1996). Alternatively, depending on their performance records prior to the merger or the terms of the merger, merged firms could be considered organizational survivors using the logic that they were attractive merger candidates. Thus, we will conduct analyses first treating all mergers as nonsurvivors and then treating mergers as either survivors or non-survivors based on their stock price performance prior to the time of the merger and the terms of the merger. When all merged firms were coded as non-survivors, 66 companies, or 62% of the sample, were coded as survivors, and 41 (38%) were coded as non-survivors. When mergers were coded based on prior performance, 73 companies (68%) were survivors and 34 (32%) were non-survivors.

Control Variables

Several control variables, selected based on a review of both the strategic human resource management and initial public offering literatures (e.g. Huselid, 1995; Beatty & Zajac, 1994) were used in the analyses. Net profit at the time of the IPO, industry, initial offering price and measures of firm size, age, and risk serve as control variables in the analyses.

Long-run performance outcomes such as stock price growth and survival are affected by prior financial performance, initial stock offering price, and industry. Net profit at the time of the IPO, logged to correct for skewness, is included as a performance measure. As previously mentioned, there is considerable variance in performance of the firms in the sample, with many firms reporting net losses prior to their IPO's. Initial offering price is a strong indicator of future prices and is, therefore, included in the analyses. We controlled for industry by creating a dichotomous variable with "service" businesses coded as 1 and manufacturing firms coded as 0. We used the two category industry classification in order to conserve statistical power after reviewing the distribution of firms in the Small Business Administration's recommended categorization and finding that the majority of the firms in our sample were in the "service" or "manufacturing" sectors. Jackson and Schuler (1995) suggest that this simpler classification

captures many of the implications for a variety of aspects of HRM systems including compensation, use of temporary workers, and organizational cultures.

Additionally, we controlled for firm size, longevity, and risk. The total number of employees, logged to correct for skewness, was included as a measure of size. Though asset or sales values are also sometimes used, number of employees is the most commonly used size indicator used in HRM research (Jackson & Schuler, 1995), and is appropriate here because the focus of the study is on employee control mechanisms. Company age at the time of the IPO is included as a measure of longevity or viability of the IPO firm (Beatty and Zajac [1994] refer to it as a control for experience or "sophistication."). This is appropriate for this study because research suggests that over half of all company failures occur within the first five years after start-up (Romanelli, 1989), and much of the literature on life cycle indicates that the presence of a human resource function is related to company age (e.g. Baird and Meshoulam, 1988). Finally, a measure of risk (logged) is included in the analyses. Each prospectus contains a section listing all risk factors faced by the firm, which must be disclosed to meet the requirements of the Securities and Exchange Commission. 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). The presence of the following risk factors were included in this measure: technological obsolescence, new product, few or limited products, limited number of years in operation, inexperienced management, seasonality, customer dependence, supplier dependence, inexperienced underwriters, competition, legal proceedings against company, liability, and government regulation. Table 1 includes the means and standard deviations for the variables included in the analyses.

TABLE 1
MEANS AND STANDARD DEVIATIONS

<u>Variable Name</u>	<u>Mean</u>	<u>Standard Deviation</u>
Industry (0=Manufacturing, 1=Service)	0.54	0.50
Company Age	11.66	17.32
Net Profit at IPO	\$3,952,679	\$12,094,101
Number of Employees	675	1,664
Risk Factors at IPO (1 thru 11)	4.27	1.92
Offering Price	7.18	5.10
ISO for All (0=No, 1=Yes)	0.48	0.50
HR Function (0=No, 1=Yes)	0.21	0.41
Off-the-Cuff (n=44)	0.42	0.50
Responsive (n=40)	0.38	0.49
Policing (n=11)	0.10	0.31
Comprehensive (n=11)	0.10	0.31
Survival (0=No, 1=Yes) Mergers as Non-Survivors	0.62	0.49
Survival (0=No, 1=Yes) Mergers as Survivors	0.68	0.49
Stock Price Growth (n=77)	132%	303%

Data Analyses

Although this research is primarily exploratory and is designed to investigate the differences between firms that adopt varying approaches to controlling all employees, we were also interested in examining the differences in firm performance between the four types of control orientation. To achieve those ends, we ran a series of analyses of variance (ANOVAs) on numerous variables to detect differences between firms in each of the control orientation categories. We also ran correlations to assess relationships between variables used in the data analyses and to validate both the operationalizations of the two types of control and the resultant typology. Finally, we conducted ordinary least squares (OLS) regression and logistic regression analyses to assess the predictive ability of control orientation on stock price growth and survival, respectively. Logistic regressions are required for testing the survival variable because it consists of only two values (Allison, 1984), whereas ordinary regression suffices for testing stock price growth.

RESULTS

The upcoming discussion will address differences between each form of control orientation across four broad dimensions of interest: company characteristics (e.g., age, size, financial position), governance characteristics (e.g. CEO, top management team, and board of directors), overall approach to employees (e.g. compensation programs, labor relations), and finally, firm performance.

Starting with an examination of differences in company characteristics provides the context in which to evaluate the usefulness of the typology. If the typology yields differences only related to broad organizational criteria (i.e. age, size, life cycle) which have been the bases of prior typologies (e.g. Baird & Meshoulam, 1988), then its contribution would be limited and/or our operationalization of the typology questionable. However, if differences in governance structure and approach to employees reflect differences in control orientation, rather than simply the firm's age and stage in life cycle, then the typology will have added value, and we will obtain initial support for the validity of the measures used to develop the typology.

Therefore, the first set of results focuses on broad organizational differences between firms in the four quadrants of the typology. Second, differences in governance characteristics relating to the CEO, top management team and board of directors are examined. We expect that choice of control over all employees should also be reflective of control over or within the management team. Next, choice of control orientation is likely to result in significant differences in overall approach to employees in terms of types of compensation programs implemented and importance of employees. Finally, validity of the typology will be assessed by studying

performance outcomes predicted by the control orientation typology. Agency theory suggests that firms make choices among control options, and ultimately, these decisions should affect overall firm performance. Therefore, if the typology captures control choices, then differences in firm performance should be detected.

Table 2 includes the means and standard deviations on numerous variables for firms in each of the four control orientation categories. In addition, the F statistics associated with the ANOVA tests and significant differences found per Scheffe tests (at the .05 significance level) are listed.

TABLE 2: CONTROL ORIENTATION - ANOVA ANALYSES

(Means listed in tables, standard deviations in parentheses; significant group differences at .05 level per Scheffe test listed in last column)

<u>VARIABLE</u>	<u>OFF-the-CUFF</u> Sign. diff. n = 44	<u>RESPONSIVE</u> n=40	<u>POLICING</u> n = 11	<u>COMPREHENSIVE</u> n = 11	<u>F</u>	
<u>Company Characteristics at IPQ</u>						
Company Age	11.82 (13.94)	5.72 (3.40)	48.45 (31.84)	15.27 (27.62)	5.86***	3 & 1,2
Number of Emps.	671 (1,503)	225 (386)	2,517 (3,729)	489 (539)	6.36***	3 & 1,2,4
Industry (O=M, 1=S)	0.61 (0.49)	0.53 (0.51)	0.36 (0.50)	0.45 (0.52)	0.89	
Risk Factors (#)	4.30 (1.82)	4.63 (1.85)	2.64 (1.12)	4.55 (2.46)	3.43**	2 & 3
Units Offering (0/1)	0.36 (0.49)	0.33 (0.47)	0.09 (0.30)	0.00 (0.00)	2.81**	
Net Profit (\$Million)	1.17 (2.63)	0.83 (3.42)	27.39 (27.52)	2.97(4.98)	26.88***	3 & 1,2,4
Net Sales (\$Million)	69.24 (153.23)	30.14 (63.95)	324.73 (359.53)	63.62 (64.56)	10.41***	3 & 1,2,4
Book Value / Share After IPO	2.84 (2.98)	1.56 (1.19)	3.03 (2.16)	3.70 (2.32)	3.72**	
Intend to Pay Dividends (0=No, 1=Yes)	0.25 (0.61)	0.00 (0.00)	0.73 (0.79)	0.10 (0.32)	7.01***	3 & 1,2,4
Offering Price (\$)	7.13 (5.33)	5.10 (3.62)	12.33 (5.79)	9.59 (3.99)	8.08***	3 & 1,2
Total Offering Size in S\$ Millions	14.03 (17.06)	9.39 (7.97)	56.36 (50.41)	23.13 (19.33)	15.49***	3 & 1,2,4
	*p ≤ .10	** p ≤ .05	*** p ≤ .01			

TABLE 2, continued
CONTROL ORIENTATION - ANOVA ANALYSES

<u>VARIABLE</u>	<u>OFF-the-CUFF</u> <u>Sign. diff.</u>	<u>RESPONSIVE</u>	<u>POLICING</u>	<u>COMPREHENSIVE</u>	<u>F</u>
<u>Governance</u>					
<u>Characteristics</u>					
Chief Executive Officer:					
CEO Age	47.45 (9.28)	43.50 (8.69)	49.64 (5.10)	45.45 (8.82)	2.17*
Years w/ Firm	7.55 (7.59)	3.90 (3.09)	10.45 (8.79)	4.27 (2.61)	4.89***2&3
CEO is Founder (0=No, 1=Yes)	0.42 (0.50)	0.43 (0.50)	0.18 (0.40)	0.45 (0.52)	0.82
CEO Stock Ownership					
After IPO	16.86 (14.67)	18.15 (22.45)	9.40 (10.53)	10.55 (11.61)	1.05
CEO Salary	\$178,967 (236,889)	\$129,889 (66,898)	\$409,614 (286,093)	\$155,900 (83,470)	6.18***3 & 1,2,4
CEO Bonus	\$34,511 (82,517)	\$22,795 (51,151)	\$137,008 (92,808)	\$35,350 (41,940)	4.03**3 & 1,2
Management Team (excluding outside Board Members):					
Team Size	5.11(2.59)	5.10 (2.34)	8.64 (2.25)	7.55 (2.02)	9.27***3&1,2; 4&1,2
Employment Contracts with Execs. (0/1)	0.68 (0.47)	0.55 (0.50)	0.45 (0.52)	0.18 (0.40)	3.36** 1 &4
Average Exec. Salary	\$94,959 (71,825)	\$84,618 (44,647)	\$175,222 (101,800)	\$99,575 (32,151)	5.98***3 & 1,2
Average Exec. Bonus	\$20,338 (73,535)	\$12,284 (25,017)	\$44,919 (46,007)	\$19,873 (16,607)	0.86

* $p \leq .10$
 $p \leq .01$

** $p \leq .05$

TABLE 2, continued

CONTROL ORIENTATION - ANOVA ANALYSES

<u>VARIABLE</u>	<u>OFF-the-CUFF</u> <u>Sign. diff.</u>	<u>RESPONSIVE</u>	<u>POLICING</u>	<u>COMPREHENSIVE</u>	<u>F</u>
Board of Directors:					
Total Number	5.43 (2.02)	5.28 (1.60)	6.45 (2.34)	6.09 (2.07)	1.45
Outside Directors	2.84 (1.63)	2.88 (1.40)	4.27 (2.00)	4.55 (2.25)	6.71 ^{***} 4 & 1,2
Annual Board Pay Per Meeting Board	\$1,693 (3,441)	\$925 (3,292)	\$8,091 (8,006)	\$2,182 (4,143)	8.91 ^{***} 3 & 1,2,4
Compensation	\$234 (349)	\$138 (427)	\$586 (758)	\$136 (323)	3.25 ^{**} 3 & 2
V.C. Backed (0/1)	0.18 (0.39)	0.38 (0.49)	0.27 (0.47)	0.55 (0.52)	2.46 [*]
<u>Approach to Employees</u>					
Mention Employees as Strategic Factor (0/1)	0.39 (0.49)	0.63 (0.49)	0.55 (0.52)	0.82 (0.40)	3.06 ^{**}
Mention ALL Employees as Important (0/1)	0.16 (0.37)	0.33 (0.47)	0.09 (0.30)	0.27 (0.47)	1.56
Executives are Important	0.05 (0.21)	0.05 (0.22)	0.09 (0.30)	0.27 (0.47)	2.45 [*]
Managerial Employees are Important	0.17 (0.32)	0.11 (0.31)	0.10 (0.32)	0.55 (0.52)	5.16 ^{***} 4 & 1,2,3
Manufacturing Employees are Important	0.09 (0.29)	0.08 (0.28)	0.10 (0.32)	0.27 (0.47)	1.15
	*p ≤ .10	** p ≤ .05	*** p ≤ .01		

TABLE 2, continued

CONTROL ORIENTATION - ANOVA ANALYSES

<u>VARIABLE</u>	<u>OFF-the-CUFF</u>	<u>RESPONSIVE</u>	<u>POLICING</u>	<u>COMPREHENSIVE</u>	<u>F</u>	<u>Sign. diff.</u>
Administrative Employees are Important	0.07 (0.26)	0.08 (0.28)	0.20 (0.42)	0.09 (0.30)	0.57	
Professional Employees are Important	0.07 (0.26)	0.05 (0.23)	0.00 (0.00)	0.09 (0.30)	0.30	
Sales/Mktg. Employees are Important	0.14 (0.35)	0.16 (0.37)	0.20 (0.42)	0.55 (0.52)	3.39**	4 & 1,2
Technical Employees are Important	0.19 (0.39)	0.24 (0.44)	0.20 (0.42)	0.55 (0.52)	2.13*	
Employee Programs: Profit Sharing for Key Employees (0/1)	0.23 (0.42)	0.15 (0.36)	0.45 (0.52)	0.36 (0.50)	1.89	
Profit Sharing for All Employees (0/1)	0.16 (0.37)	0.08 (0.27)	0.36 (0.50)	0.18 (0.40)	1.96	
Benefits for All	0.09 (0.29)	0.05 (0.22)	0.36 (0.50)	0.00 (0.00)	4.10***	3 & 1,2,4
401k Plans Offered	0.23 (0.42)	0.23 (0.42)	0.73 (0.47)	0.64 (0.50)	6.41***	3 & 1,2
Employee Training	0.23 (0.42)	0.05 (0.22)	0.09 (0.30)	0.18 (0.40)	1.97	

* p ≤ .10

** p ≤ .05

*** p ≤ .01

TABLE 2, continued

CONTROL ORIENTATION – ANOVA ANALYSES

<u>VARIABLE</u>	<u>OFF-the-CUFF</u> <u>Sign. diff.</u>	<u>RESPONSIVE</u>	<u>POLICING</u>	<u>COMPREHENSIVE</u>	<u>F</u>	
Labor Relations:						
Union (0/1)	0.20 (0.41)	0.05 (0.22)	0.27 (0.47)	0.27 (0.47)	2.16*	
Employee Relations (0=Poor, 1 =Good, 2=Very Good)	1.00 (0.48)	0.90 (0.59)	1.09 (0.54)	1.09 (0.54)	0.63	
In a Competitive Labor Market (0/1)	0.20 (0.41)	0.50 (0.51)	0.27 (0.47)	0.36 (0.50)	2.93**	2 & 1
<u>Firm Performance</u>						
Survival 1993 (0/1) All Mergers Coded as Non-Survivors	0.52 (0.51)	0.63 (0.49)	0.82 (0.40)	0.73 (0.47)	1.37	
Survival 1993 (0/1) Mergers Coded Based on Prior Performance	0.59 (0.48)	0.65 (0.48)	0.91 (0.30)	0.91 (0.30)	2.43*	
Stock Price Growth	104% (239%)	240% (407%)	-5% (63%)	40% (153%)	2.18*	

* p ≤ .10

** p ≤ .05

*** p ≤ .01

Differences in Company Characteristics

We tested for differences on a variety of organizational characteristics, and ANOVAs reveal significant differences between the four categories of control orientation on all but one, industry. Firms within the four categories are significantly different in terms of age, size, risk, and financial position at the time of the IPO and capital raised from the IPO. The Scheffe tests indicate that policing (i.e. use only bureaucratic control) firms are the most uniquely different from the other types of firms. On average, policing firms are the oldest, largest, least risky, most financially stable and executed the largest initial public offerings of the four types of firms. Specifically, at 48 years of age, the average policing firm is significantly older than the average off-the-cuff firm (12 years) and the average responsive (6 years) firm. Policing firms also employ significantly more people (mean of 2,517) than each of the other types of firms and demonstrate the most variance in employment (s.d. of 3,729). Responsive (i.e. use only outcome control) firms, on the other hand, have the fewest employees (mean of 225) with the least variance in employment (s.d. of 386).

Policing firms report being susceptible to the fewest number of risk factors (mean = 2.64) and differ significantly from responsive firms (mean = 4.63) in this regard. Off-the-cuff (i.e. use neither bureaucratic nor outcome control) and comprehensive (i.e. use both bureaucratic and outcome control) firms are similar to responsive firms in the average number of risk factors reported in their prospectuses, 4.30 and 4.55, respectively. The ANOVA also reveals differences between the four categories on another measure of risk, units offerings. Units offerings include both shares and warrants and have been shown to reflect riskier issues (Barry, Muscarella, and Vetsuypens, 1991). Thirty-six percent (36%) of off-the-cuff firms' and 33% of responsive firms' IPOs comprise units whereas only 9% and 0% of policing and comprehensive issues, respectively, comprise units.

Also related to risk and financial stability are reported net sales, net profits, book value, and intention to pay dividends. Responsive firms report the smallest net sales (mean = \$30M) and net profits (mean = \$834K), and policing firms report the greatest net sales (mean = \$325M) and net profits (mean = \$27M) at the times of their IPOs. Policing firms differ significantly from each of the three other categories on these dimensions. In addition, 34% and 52% of the off-the-cuff and responsive firms, respectively, report net losses at the times of their IPOs whereas all policing firms are experiencing net profits at the times of their IPOs. Thus, responsive firms appear to be relying most heavily on future growth opportunities rather than past performance. This argument is bolstered by analyzing differences in book values and intentions to pay dividends across categories of control orientation. Responsive firms have the

lowest average book value per share at the time of their IPOs, and no company in the responsive category indicates an intention to pay dividends to shareholders in the foreseeable future. The low book value per share is an indication that responsive firms have fewer "assets-in-place" than other companies and that investors may be willing to purchase shares based on the firm's future growth prospects.

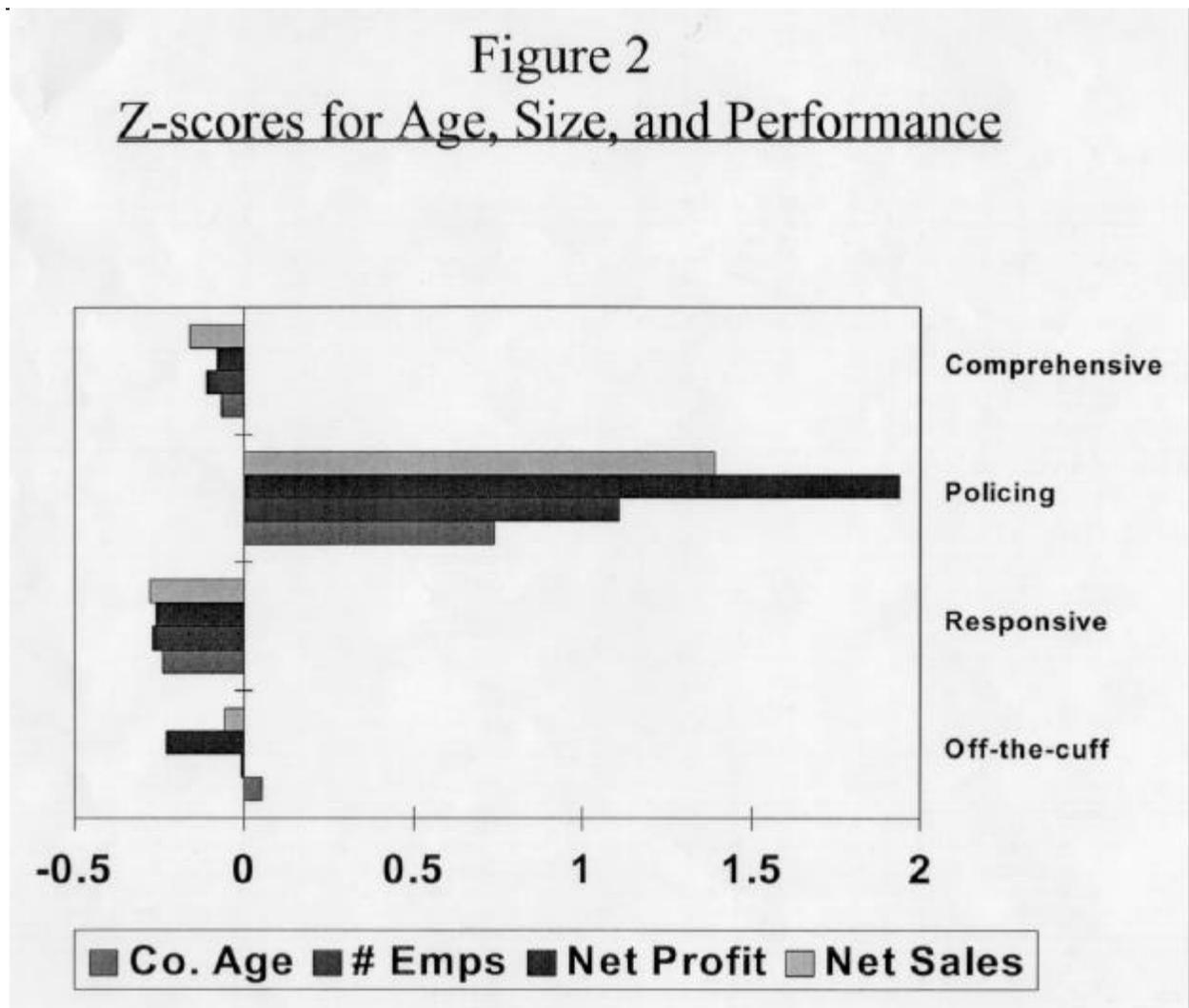
Additionally, a plethora of research exists that investigates the signaling effects of dividend policy (see Allen and Michaely, 1995 for a review). One line of thinking suggests that a firm's intention to pay dividends may be a signal to investors that the firm's investment opportunities (i.e. high return projects) have stagnated. Alternatively, firms will only pay dividends when they are reasonably assured that future earnings will be sufficient to accommodate increased levels of payouts. Therefore, announcements to pay or increase dividends are positive signals to investors of sustained higher earnings levels. In sum, responsive firms' lower book value per share and their intentions not to pay dividends indicate reliance on future growth opportunities and intentions to invest excess cash in pursuit of those opportunities. Policing firms, on the other hand, are significantly more likely to distribute excess cash to shareholders (73% report an intention to pay dividends) than firms in each of the other three categories, and while they are financially more stable, they may enjoy fewer growth prospects.

Finally, significant differences emerge in terms of initial public offering price and total offering size. Responsive and off-the-cuff firms offer their shares at the lowest prices (\$5.10 and \$7.13, respectively) and raise the least amount of capital (\$9.39 million and \$14.03 million, respectively). In fact, they differ significantly from policing firms (offer price = \$12.33, and offering size = \$56.36 million) on both dimensions. Policing firms also raise significantly more capital than comprehensive firms (\$23.13 million). In addition, responsive firms offer their stock at a significantly ($p < 0.10$) lower average price (\$5.10) than comprehensive firms (\$9.59).

Overall, responsive firms differ most dramatically from policing firms; they appear to be on opposite ends of a continuum with regard to age, size, risk, financial stability and IPO attributes. Firms that choose only outcome control (i.e. responsive firms) are smaller, younger, more risky, sell their shares at lower initial prices, and raise less capital from their IPOs than firms that choose only bureaucratic control over all employees (i.e. policing firms). The off-the-cuff (use neither bureaucratic nor outcome control) and comprehensive (use both firms of control) firms fall somewhere in the middle and are more difficult to characterize because no significant differences emerge between the two categories. Thus, the firms that make distinct

choices regarding use of bureaucratic and outcome control (i.e. choose either one or the other) appear to be more distinctly different than those that choose either none or both.

In order to graphically depict the pattern of differences between groups, we calculated and plotted z-scores of means for the variables for which we ran ANOVAs. Figure 2 shows the z-scores for a set of company characteristics (i.e. age, size, performance). Consistent with the ANOVA results, the greatest differences occur between the policing and responsive categories. If this same pattern is repeated for governance characteristics and for employee-related variables, then the value added of the control typology would be suspect. However, if the pattern is different and reflects criteria other than age, size, or stage in life cycle, then the research will provide initial support for the validity of the typology and the measures used to develop the typology.



Differences in Governance Characteristics

Next, we investigated the differences among the four categories of control orientation in terms of characteristics of the CEO, top management team, and board of directors. Particularly in our sample of smaller firms, these may serve as alternative forms of control over all employees. Thus, we examine how differences in choices to use bureaucratic and outcome control are reflected in differences on such dimensions as executive compensation, top management team size and director influence.

Again, using ANOVAs, a number of significant differences emerge between the four categories. CEOs in responsive firms are, on average, the youngest (43.5 years) and policing firm CEOs are the oldest (49.6 years). Perhaps reflecting the differences in both company and CEO ages, CEOs in responsive firms have spent significantly fewer years with their respective firms (3.9 years) than CEOs in policing firms (10.5 years). ANOVAs yield no significant differences between groups for the likelihood that the CEO is a founder or for stock ownership of the CEO, but interesting patterns of means emerge. For example, only 18% of the CEOs in the policing group are founders whereas the likelihood that the CEO is the founder is similar for the other three groups, ranging from 42% in the off-the-cuff group to 45% in the comprehensive group. With regard to CEO stock ownership, the off-the-cuff and responsive firms appear most similar (16.86% and 18.15%, respectively) and different from the policing and comprehensive firms (9.40% and 10.55%). Finally, significant differences emerge for CEO compensation. Policing firms offer their CEOs significantly higher average salaries than each of the other three types of companies and significantly higher bonuses than firms in both the off-the-cuff and responsive categories. CEOs of responsive companies are compensated the least.

A similar pattern exists for compensation of the entire management team. The average executive salary and bonus are highest in policing firms (\$175K and \$45K, respectively) and lowest in responsive firms (\$85K and \$12K, respectively), and the average member of the top management team in a policing firm receives a significantly higher salary than one in an off-the-cuff or responsive firm. Similarly, average annual compensation to outside board members of policing firms is significantly higher than to outside board members of firms in each of the other three categories, and policing firm board members receive significantly more than responsive firm board members on a per meeting basis. To this point, the patterns of differences in means among the four types of firms could be attributable to age and size.

Unique differences in top management team size, board composition, and venture capital backing do emerge between the four groups that appear to be related to control orientation for all employees. Policing and comprehensive companies have significantly larger

top management teams (8.64 and 7.55, respectively) than off-the-cuff and responsive firms (5.11 and 5.10, respectively). Although not significantly different, a similar pattern also emerges for board size. Policing and comprehensive boards are larger and include more outside directors than off-the-cuff and responsive boards.

Types of firms also differ in terms of whether or not they had venture capital (VC) backing when they went public. Like outside directors, venture capitalists are considered to provide intensive monitoring services to the companies that they assist in going public (Barry, Muscarella, Peavy, & Vetsuypens, 1990). Comprehensive firms are most likely to have venture capital backing (mean = 55%), and off-the-cuff firms are least likely to have venture capital backing (mean = 18%). Interestingly, VC backing is also positively associated ($r = .23, p \leq .05$) with having incentive stock option plans for all employees, and a strong proportion (38%) of responsive firms also have VC backing. It may be that venture capitalists encourage their firms to exercise outcome control as a mechanism for enhancing their investments.

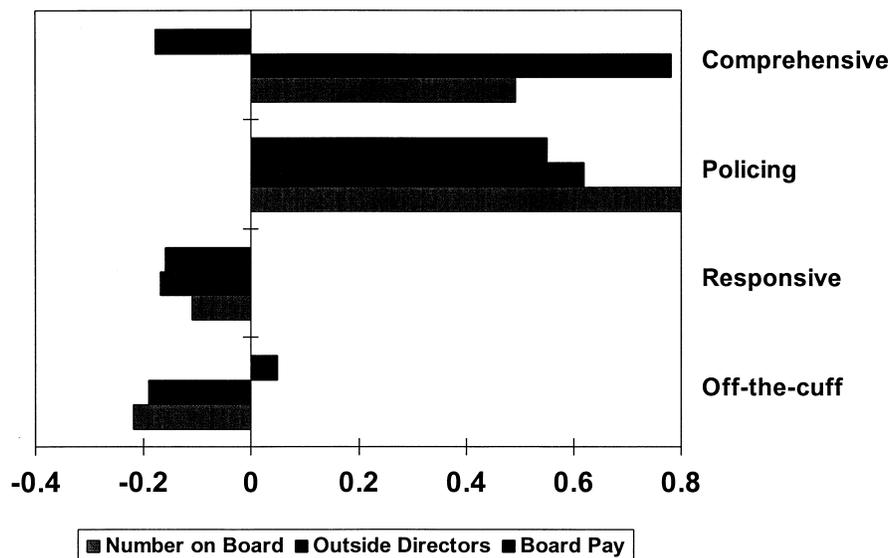
Thus, in terms of top management team size and board composition, there appears to be a bifurcation based on having bureaucratic control for all employees, whereas VC backing is bifurcated based on outcome control. Firms that report the existence of the HR function reporting to a top management team member tend to have larger management teams, larger boards and more outside directors than those firms that do not use bureaucratic control for all employees. Moreover, firms with ISOs for all employees are more likely to be VC backed than those that do not offer ISOs to all employees.

Finally, we examined differences in the use of employment contracts with key executives. Employment contracts may signal the degree to which firms (i.e. boards of directors) are dependent on executives. Firms often use employment contracts for key personnel to guarantee the services and expertise of executives for a specified period of time and to ensure that they will not leave the company and join a competitor. Executives in organizations that exhibit the least systematic approach to all employees (off-the-cuff) are the most likely to be bound to their firms by employment contracts. Sixty-eight percent of the firms in the off-the-cuff category report having employment contracts for executives. In contrast, only 18% of the firms that use both forms of control for all employees (comprehensive firms) have employment contracts with executives. Responsive firms and policing firms fall in between at 55% and 45%, respectively. There appears to be an inverse relationship between the degree to which companies link executives to the firm via employment contracts and the use of control mechanisms for all employees.

Differences and similarities in governance characteristics among the four types of firms are much more difficult to categorize than were company characteristics. In some cases, the policing firms emerge as significantly different from each of the other three types of firms (e.g. CEO salary and annual board pay), but in other cases (e.g. management team size and number of outside directors) they appear to be similar to comprehensive firms and together, differ from off-the-cuff and responsive companies. In yet another case (i.e. employment contracts for executives), responsive and policing firms appear similar while off-the-cuff and comprehensive firms differ significantly from one another.

These varying patterns of results suggest that the control orientation typology is capturing differences beyond those attributable to age, size or stage in life cycle. Again, plotting z-scores of means for firms in each category illustrates the unique patterns that emerge in the analysis of governance characteristics. Figure 3 includes the z-scores for board characteristics and shows that policing and comprehensive firms are similar and together, differ from responsive and off-the-cuff firms. Comprehensive and policing firms' using formal HR systems may be a reflection of their larger boards whose members bring in suggestions from their own (perhaps larger) organizations. In summary, the patterns detected in examining governance characteristics are different from those that emerge by examining organizational factors (e.g. age, size, etc.), and the differences seem to be associated with choice of control orientation.

Figure 3
Z-scores for Board Variables



Differences in Approach to Employees

The analysis of governance characteristics provides initial evidence to support the validity of the typology, but the broad dimension that should be most informative in terms of validating the measures and the typology is approach to employees. If, as we proposed, the typology captures differences in control over all employees, then we should find other differences in the way that employees are managed. Those differences should reflect choice of control orientation (i.e. whether outcome or bureaucratic control is used), and they should be different from what we would expect based solely on age and size (e.g. more established firms with more money can provide more benefits). We coded a number of different employee related items from the prospectuses of each company. These items included the perceived importance of different types of employees, programs for employees, and labor relations.

The strategy and business sections of the prospectuses were examined to find statements that first, employees were a factor in the firm's overall strategy, and second, that all employees were important to the ongoing success of the firm⁴. In their prospectuses, only 39% of the off-the-cuff firms reported that employees are a strategic element of the firm, whereas 82% of comprehensive firms consider employees to be a strategic factor. Responsive and policing firms fell within that range at 63% and 55%, respectively. Although alternative explanations are plausible, one could posit that off-the-cuff firms' viewing employees as less strategic than comprehensive firms is reflected in their informal approach to controlling employees whereas comprehensive firms' believing that employees are a strategic factor is reflected in their using both forms of control over employees.

No significant differences surface between the groups with regard to whether or not the companies' prospectuses indicate that all employees are important to the ongoing success of the firm. However, an interesting pattern of means is present. Responsive and comprehensive firms are most likely to mention all employees as important (33% and 27%, respectively). Alternatively, only 16% of off-the-cuff and 9% of policing firms mention that all employees are important. In fact, having ISOs for all employees is significantly correlated with considering employees as a strategic element ($r = .25$ and $p \leq .01$) and viewing all employees as important ($r = .20$ and $p \leq .05$). Having an HR function, on the other hand, is significantly associated with neither.

⁴ The strategy or business sections are used to explain which employees are important for the firm. To some extent, it informs the reader about a potential risk factor (i.e. consequences due to loss of key employees). Whereas many firms note that executives and top management are important, fewer comment about all employees.

We also captured whether or not different types of employees (e.g. executives, managerial, or sales) are mentioned as important in the prospectuses. There are significant differences between groups for the importance of executives and managerial, sales, and technical employees. Comprehensive companies are most likely to mention each of these four types of employees as important. Additionally, comprehensive companies differ significantly from each of the other three types of companies when it comes to the likelihood of mentioning managerial employees as important and differ significantly from the off-the-cuff and responsive companies in terms of the importance of sales and marketing employees. Though not significant, comprehensive firms also seem more likely to identify manufacturing employees as important. Perhaps more interestingly, policing firms appear to think that administrative employees are more important than do the other types of firms. Furthermore, bureaucratic control (i.e. policing and comprehensive) is significantly correlated to executives ($r = .21, p \leq .05$), managerial ($r = .25, p \leq .01$), and sales ($r = .24, p \leq .05$) employees being mentioned as important whereas using outcome control is not significantly correlated to mentioning any particular employee group as important. Thus, bureaucratic control may serve to emphasize the differences between employees, whereas outcome control projects the message that all employees are essential to the firm's future success.

Firms in the four categories also differ in terms of the types of programs and compensation offered to all employees. It appears that policing firms are most likely to have compensation programs for employees that tie employees to the firm and offer higher levels of job security. Although the ANOVAs do not reach significance at the 10% level, an interesting pattern of means emerges for the four groups on the degree to which each type of firm uses profit sharing for its key employees and all employees. Profit sharing, while intended to link employee behavior to organizational goals and financial outcomes, requires substantial administration and is often viewed as relatively riskless by employees. It often provides an upside with little downside. In addition, profit sharing is only effective in firms in which there are profits to be shared. These facts may account for policing firms being most likely (45% for key employees, 36% for all employees) to implement profit sharing. After all, policing firms are the most profitable and have the administrative mechanisms in place (i.e. have the HR function and report administrative employees as important) to accommodate such programs.

Policing firms are also significantly more likely than the other types of firms to provide benefits and 401k plans for all employees. In fact, using only bureaucratic control (i.e. policing) is significantly associated with each of these employee programs whereas having ISOs for all employees is negatively associated with each of these programs. Thus, it appears as though

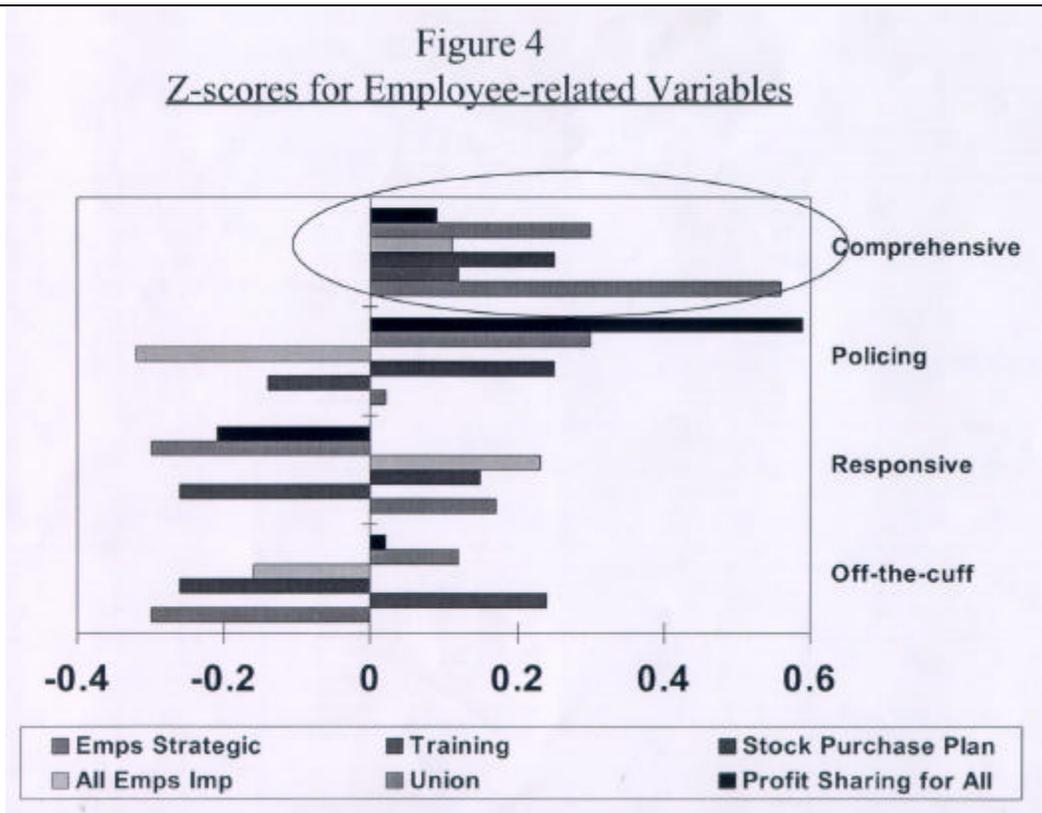
policing firms offer programs that could come to be construed as "entitlements" and serve to reduce the amount of risk allocated to employees while firms relying on outcome control seek greater levels of risk sharing with employees.

Finally, each company must report its state of labor relations (i.e. union presence, employee relations, competitiveness of labor market) in its prospectus. Significant differences emerge between the four types of firms in terms of the likelihood that each will have employees represented by a union. Responsive firms are the least likely (only 5%) to have unionized employees. Furthermore, outcome control (i.e. ISOs for all employees) is negatively associated with unions whereas bureaucratic control (i.e. having an HR function) is positively associated with unions. No significant differences surface between the groups in terms of their employee relations. On a 3-point scale ranging from "poor" to "very good," the average firm reports that relations with employees are "good." Differences do arise, however, when asked to characterize the competitive nature of the labor market in which the firm operates. Responsive firms are significantly more likely (50%) than off-the-cuff firms (20%) to indicate that they do business in competitive labor markets. Comprehensive firms are the second most likely (36%) to report that their labor markets are competitive. This is consistent with the fact that outcome control is significantly correlated with competitiveness of labor market. It may be the case that firms in competitive labor markets use ISOs for all employees as a mechanism to attract and retain valuable employees in the face of heated competition.

In summary, firms in the four control orientation groups do differ on a variety of "employee-related" dimensions. As one might expect, companies that exhibit no explicit control over employees (i.e. off-the-cuff) differ significantly from those that use both forms of control (i.e. comprehensive) with regard to their believing that employees are a strategic element. Furthermore, viewing employees as strategic and important is most strongly associated with a company's decision to implement outcome control for all employees. There is no correlation, on the other hand, between using bureaucratic control and the stated strategic nature or importance of employees. In fact, using bureaucratic control, may be associated with highlighting the importance of certain employee groups over others and in tying employees to the firm by offering more job security and less risk. Alternatively outcome control may be used to share risk with employees, emphasize the importance of all employees, and attract and retain qualified employees in competitive labor markets.

Figure 4 summarizes some of the employee-related variables, and it highlights the differences among firms in the four quadrants of the typology. Most striking is the difference between the comprehensive group and the other three categories. The "comprehensive" label

given to this group seems most appropriate when examining the employee-related variables. Comprehensive firms are, in fact, most comprehensive in their use of employee programs and in their belief that employees are critical to future success. Reflecting their use of both bureaucratic and outcome control, comprehensive firms view employees as important, tend to have profit sharing, offer training, and engage in a number of other employee centered initiatives. Firms in the other categories, tend to make distinct choices with regard to specific employee programs that are consistent with their use of either bureaucratic or outcome control for the employee population.



Firm Performance

The data presented to this point indicate that the control orientation typology captures organizational differences that might not be captured by relying on prior typologies. However, we think it is important for the establishment of validity to go a step further and examine performance differences of firms in the four quadrants. As we noted in our introduction, few of the existing typologies of human resource strategies have been empirically linked to organizational outcomes (an exception is found in Arthur, 1994). This may be the direct result of their not being based in theory. Agency theory and organizational control theory suggest that

firms make choices with regard to control of all employees and that those choices will affect overall costs and, ultimately, firm performance (Wright & McMahan, 1992; Jones & Wright, 1992). Thus, we expect that choice of control orientation will be related to future performance, and we investigate the relationship in an exploratory manner.

First, we assessed differences in performance between the four categories by running ANOVAs and correlations. Next, we conducted OLS regressions to predict logged stock price growth from the time of the IPO through year-end 1993, followed by logistic regressions to predict survival at year-end 1993. In combination, these analyses provide a fairly rigorous assessment of the degree to which the control orientation typology is informative in explaining organizational outcomes.

Table 2 includes results of the ANOVAs to test for significant differences in mean survival and stock price growth between firms in the four categories. No significant differences emerge between groups when merged firms are coded as non-survivors. However, differences do emerge when merged firms are coded based on prior performance and terms of the merger. In both cases, policing and comprehensive firms "out-survive" off-the-cuff and responsive firms. Significant differences also surface for stock price growth. Responsive firms enjoy the highest stock price growth (240%), and policing firms experience a slight degradation (-5%) in stock price in the first five years after the IPO.

Table 3 includes the correlations for variables used in the regression equations to investigate firm performance. Consistent with the results of the ANOVAs, there are significant correlations between many of the control variables and being either responsive or policing. No significant relationships emerge between the control variables and the other two types of control (i.e. off-the-cuff and comprehensive). Several control variables are significantly correlated with survival, while only initial offering price is significantly related to stock price growth. Older, larger, more profitable companies enjoy greater chances of survival five years after their IPOs, and firms with lower initial stock prices experience higher stock price growth in their first five years as public companies. These relationships are consistent with those that emerge for control orientation. Using neither form of control (i.e. off-the-cuff) is negatively related to survival regardless of treatment of mergers, and using bureaucratic control (i.e. policing and comprehensive firms) is positively associated with survival when mergers are coded according to prior performance. Finally, stock price growth is positively associated only with being in the responsive category.

TABLE 3
CORRELATIONS FOR VARIABLES USED IN FIRM PERFORMANCE ANALYSES

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Industry	1.00												
2. Company Age	-.28	1.00											
3. Log of Net Profit	-.13	.48	1.00										
4. Log # of Employees	.04	.37	.46	1.00									
5. Log of Risk Level	-.00	-.33	-.43	-.39	1.00								
6. Offering Price	-.07	.46	.61	.60	-.36	1.00							
7. Off-the-Cuff	.13	.00	-.15	-.05	.01	-.01	1.00						
8. Responsive	-.02	-.26	-.24	-.20	.16	-.31	-.66	1.00					
9. Policing	-.12	.33	.60	.27	-.33	.35	-.29	-.26	1.00				
10. Comprehensive	-.06	.07	.02	.11	.05	.16	-.29	-.26	-.12	1.00			
11. Surviving in 1993 Mergers Coded as Non-Survivors	-.19	.25	.23	.24	-.03	.28	-.16	.02	.14	.08	1.00		
12. Surviving in 1993 (0/1) Mergers Coded Based on Performance	-.15	.21	.24	.31	-.14	.36	-.16	-.05	.17	.17	.87	1.00	
13. Stock Price Growth IPO thru 1993	-.12	-.13	-.17	-.18	-.00	-.36	-.07	.27	-.17	-.12	.18	.16	1.00

All correlations above .20 are significant at the .05 level; above .25 are significant at the .01 level, and above .33 are significant at .001 level.

Survival. We performed logistic regression analyses to assess the differential effects of control orientation on survival five years after the IPO. Each equation includes a set of control variables (industry, company age, net profit, number of employees, firm risk, and offering price), and dichotomous variables for being in the responsive, policing, and comprehensive categories. Consistent with the procedures for dummy variables recommended by Neter, Wasserman, and Kutner (1989), the off-the-cuff category is omitted from the equations. Thus, use of each form of control, either alone or in combination, will be compared to using neither.

Table 4 includes the results to predict survival when mergers are coded as non-survivors, and Table 5 includes the results predicting survival when mergers are coded according to prior performance and merger terms. Both tables present the results of three models: one including only the control variables, one including only the control orientation variables, and a full model including both control variables and the control orientation typology variables.

In Table 4, the model including only control variables is significant at the 0.01 level, but none of the control variables emerge as a significant predictor of survival. The model including only the control orientation variables is not significant. The full model (including control variables and variables of interest) is significant at the 0.01 level, and the classification table indicates that the model predicts survival at the 65.71 % accuracy level. In the overall equation, company age and being responsive are positive predictors of survival. Responsive firms tend to enjoy higher survival rates than off-the-cuff firms while off-the-cuff, policing and comprehensive firms do not differ significantly in terms of survival. Thus, although the ANOVA indicates that there are no significant differences between groups and that policing and comprehensive firms enjoy higher survival rates, being a responsive firm is a positive predictor of survival when controlling for a number of important factors.

TABLE 4

LOGISTIC REGRESSION ANALYSIS FOR SURVIVAL
WITH MERGERS CODED AS NON-SURVIVORS
(Off-the-Cuff Category Omitted)

<u>VARIABLES</u>	<u>Controls Only</u>		<u>Control Orientation</u>		<u>Full Model</u>	
	<u>B</u>	<u>S.E.</u>	<u>B</u>	<u>S.E.</u>	<u>B</u>	<u>S.E.</u>
Intercept	-12.22	11.83	.09	.30	-13.00	12.83
Industry	-.62	.45			-.52	.48
Company Age	.06	.04			.07*	.04
Log of Net Profit	.62	.73			.62	.43
Log of Employees	.10	.13			.08	.11
Log of Risk	2.45	1.67			2.53	1.74
Initial Stock Price	.08	.06			.10	.07
Responsive (Outcome Control Only)			.42	.44	.98**	.52
Policing (Bureaucratic Control Only)			1.41	.84	.49	1.03
Comprehensive (Bureaucratic and Outcome Control)			.89	.74	.39	.83
Chi ²	20.38***		4.31		24.14***	

*** p ≤ .01

** p ≤ .05

* p ≤ .10

Note: Unstandardized logistic regression coefficients reported.

Table 5 includes results of the logistic regression to predict survival when mergers are coded according to prior performance and merger terms. The model including only control variables is significant at the 0.01 level, and only initial offer price is a significant predictor of survival. The model including only the control orientation variables is also significant, and consistent with the ANOVA results, policing and comprehensive firms are significantly more likely to survive than are off-the-cuff firms. The full model (including control variables and variables of interest) is significant at the 0.01 level, and the classification table indicates that the model predicts survival at the 74.29% accuracy level. In the overall equation, only initial offering price is a significant positive predictor of survival. Firms that implement control strategies (i.e. responsive, policing, comprehensive) do not significantly "out-survive" off-the-cuff firms at the 10% level, but the coefficient for responsive firms does approach significance (B = 0.76, p = 0.14). Again, after controlling for initial conditions, being in the responsive category appears to have power in predicting survival.

TABLE 5

LOGISTIC REGRESSION ANALYSIS FOR SURVIVAL
WITH MERGERS CODED BASED ON PRIOR PERFORMANCE
(Off-the-Cuff Category Omitted)

<u>VARIABLES</u>	<u>Controls Only</u>		<u>Control Orientation</u>		<u>Full Model</u>	
	<u>B</u>	<u>S.E.</u>	<u>B</u>	<u>S.E.</u>	<u>B</u>	<u>S.E.</u>
Intercept	-10.95	14.02	.7	.31	-9.94	15.26
Industry	-.61	.49			-.49	.50
Company Age	.02	.03			.03	.04
Log of Net Profit	.62	.86			.53	.94
Log of Employees	.14	.14			.11	.12
Log of Risk	.71	1.75			.61	1.78
Initial Stock Price	.14	.07			.15**	.07
Responsive (Outcome Control Only)			.25	.45	.76	.52
Policing (Bureaucratic Control Only)			1.93*	1.09	.95	1.25
Comprehensive (Bureaucratic and Outcome Control)			1.93*	1.09	1.36	1.16
Chi ²	22.25***		8.8**		25.64***	

*** p ≤ .01

** p ≤ .05

* p ≤ .10

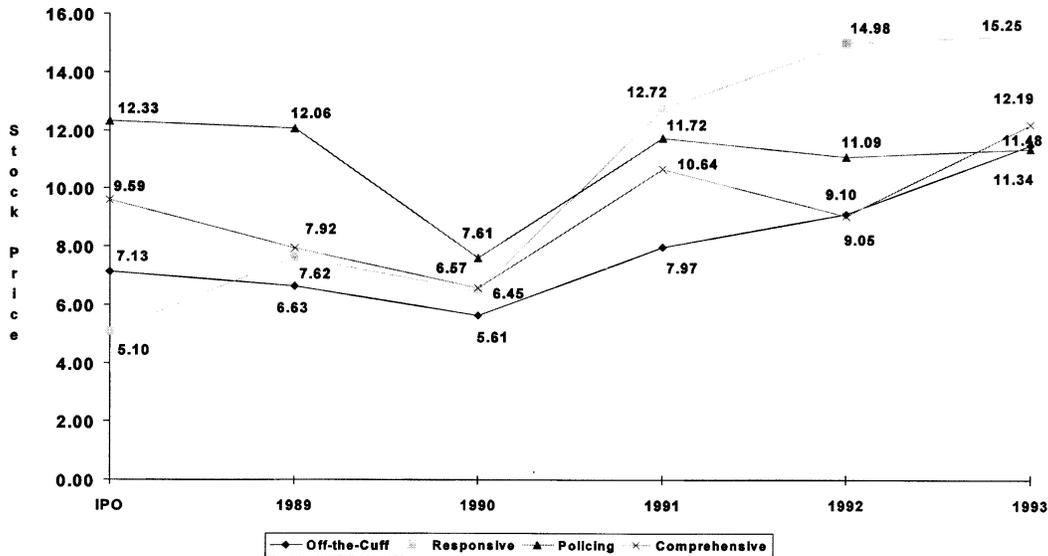
Note: Unstandardized logistic regression coefficients reported.

Stock Price Growth. Next, we ran an OLS regression to predict firm stock price growth (logged to correct for skewness) from the time of the IPO through 1993. The equation included a set of control variables (industry, company age, net profit, number of employees, firm risk, and offering price), and dichotomous variables for being in the responsive, policing, and comprehensive categories. Although the overall equation is not significant, the responsive category does appear to be a positive predictor of stock price growth (t-statistic = 1.87). To further explore this relationship, we conducted a backward elimination regression analysis 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 equation. The final iteration yields an F of 5.92 (p < 0.05) and includes only the variable for being responsive. Each of the other predictors is dropped because they do not meet

an F value that is significant at the 0.01 level. Being a responsive firm is a positive predictor and accounts for 13% of the variance in stock price growth.

Both the ANOVA results and the regression results indicate that being in the responsive category has a positive effect on stock price growth. In order to better understand this relationship between control orientation category and stock price growth, we plotted the mean stock prices for each group at the time of the IPO and for each year ending 1989 through 1993. Figure 5 shows those mean stock prices. Responsive firms enjoy the greatest increases in mean stock prices (\$5.10 at the IPO to \$15.25 at year-end 1993), while policing firms show a slight decrease in mean stock prices (\$12.33 at IPO to \$11.34 at year-end 1993). Thus, the trend lines are consistent with the conclusion that using only outcome control results in positive stock price growth while using only bureaucratic control has deleterious effects on stock prices. Using neither or both appears to result in moderate levels of stock price growth.

FIGURE 5
Stock Price by Control Orientation



DISCUSSION

The goal of this paper was to introduce and validate a theoretically-based typology of human resource control. Agency and organizational control theories suggested two forms of control that, in combination, resulted in four different human resource control orientations. We

validated the typology in a sample of smaller, growth-oriented firms in which the presence of the HR function was but one form of control over employees. The typology appears to contribute to understanding organizational differences beyond those that are explained by traditional indicators such as age, size, or stage in life cycle. In addition, control orientation seems to play a key role in explaining firm performance and detecting organizational level differences in company characteristics, governance characteristics, and overall approaches to employees. The study also demonstrates initial validity for the usefulness of incentive stock option for all employees and the existence of an administrative HR function as measures of outcome and bureaucratic control, respectively.

Implications for HRM

Traditional research in human resource management assumes that a formal HRM department exists, thus limiting the types of underlying control forms that have been studied (e.g. Snell, 1992). Dyer and Kochan (1994: 9), after reviewing the HRM research and typologies used to date, note that "human resource strategists show a distinct bias toward large, private sector corporations ... but as Dunlop (1994) shows, such firms employ only about 14% of the U.S. labor force." Indeed, smaller, younger firms using informal or alternative methods of managing their human resources have been virtually ignored by HRM researchers, even though these organizations are critical for job creation and economic growth (Dennis, Phillips, & Starr, 1994; Asquith & Weston, 1994). Thus, we have extended the work in HRM by developing a typology that includes the human resource function as one optional form of control and encompassing multiple approaches to employee control.

This research highlighted the potential benefits of using outcome control and the possible pitfalls of bureaucratic control in our sample of smaller, growing companies. All else equal, firms that offer ISOs to all employees (i.e. responsive) enjoy greater stock price growth and higher chances of survival than do firms that control employees bureaucratically via administrative HRM. Although this study was conducted in a sample of IPO firms, there is no reason to believe that the conclusions might not generalize to smaller divisions of larger companies. Though they may have more resources at their disposal, start-up divisions within established organizations often face similar competitive threats and uncertainty.

Bureaucratic control may be ill-equipped to accommodate the rapid pace of change and uncertainty that characterize the firms in our sample or start-up divisions. Beer (1997) and Mohrman, Lawler, and McMahan (1996) suggest that the FIR function traditionally assumes an administrative and compliance role in controlling employees. Furthermore, Ouchi (1979: 841) argues that "a control mode which depends heavily upon monitoring, evaluating, and correcting

in an explicit manner is likely to offend people's sense of autonomy and self-control and will probably result in an unenthusiastic, purely compliant response." He proceeds to intimate that this creates a downward spiral or a self-fulfilling prophesy in which employees will then need even closer supervision because they have been alienated from the organization as a result of the control mechanism in place. This may be precisely the opposite of the type of control that is useful for these smaller, growing firms or divisions. Instead, outcome control, which encourages employees to behave like owners, may serve to highlight the importance of all employees and to stimulate and harness the employee commitment that leads to positive long-term organizational success and survival.

Implications for Future Research

The control orientation typology that we have proposed and validated in this research focuses on two types of control suggested by agency theory and organizational control theory. However, in addition to bureaucratic and outcome control, each theoretical perspective points to the existence of a third form of control over the employee population. Agency theorists describe owner management while organizational control theorists suggest clan control as the third form of control. Excluding this third form may have implications for the completeness of the typology.

To better assess what those implications might be, a clearer understanding of the third form of control is required. According to agency theory, the optimal form of control is owner management. When control is vested in the owner or "entrepreneur" who both owns and manages the business, conflicts of interest are reduced, formal control systems (i.e. bureaucratic or outcome control) are not required, and agency costs are thereby minimized (Fama & Jensen, 1983). As control by owners (usually led by the CEO and his top management team) becomes increasingly difficult, firms make choices regarding use of bureaucratic or outcome control. Similarly, organizational control theory suggests a third form of control in which conflicts of interest between employees and managers or owners are virtually non-existent. Under clan control, "employees' natural inclination is to do what is best for the firm," and "it is not necessary for organizations to measure performance to control or direct their employees" (Ouchi, 1980: 132).

Thus, clan control is to organizational control theory what owner management is to agency theory. Both clan control and owner management seem to represent "best case" situations, and only when the ideal cannot be obtained, do organizations choose either bureaucratic or outcome control. Snell (1992: 294, 302) suggests that each is an "informal mode of personal influence," and that "the transition from personal forms of control to more formal,

bureaucratic" controls can only be captured by including examinations of smaller firms as we do in this study.

One could argue that this third form of control is captured in the off-the-cuff category of the typology. The most obvious indicator that the third form of control may be operating is the absence of either bureaucratic or outcome control. In addition, the data present a profile of off-the-cuff firms that suggests that they are being controlled primarily by tightly-knit top management teams. Many of the CEOs are founders (42%), CEOs retain a relatively high proportion of ownership after the IPO (17%), top management team sizes are small, and many off-the-cuff firms bind their executives with employment contracts. In addition, outside influence is minimized; outside directors on the board are few and the likelihood that off-the-cuff firms are venture capital backed is relatively low (18%). In combination, these attributes might be indicative of owner management or clan control.

It would be a mistake, however, to infer the presence of owner management or clan control based on the data presented or the absence of alternative forms of control in the off-the-cuff category. Furthermore, although owner management and clan control may be analogous they cannot be considered equal. Owner management could be measured very directly based on CEO ownership. Clan control, a complex social system that encourages self-monitoring and performance that benefits the company (Ouchi, 1980), is a much more intractable construct to measure. Future research should attempt to develop measures of this third choice of control and incorporate it into the control orientation typology.

In addition, the strategic human resource management literature adds another dimension to control orientation. We used the existence of administrative HRM as a measure of bureaucratic control, but the existence of what is being called "strategic HRM" has not been examined. HRM is believed to be "strategic" when the HR executive reports to the CEO and has influence over the business strategies of the firm (Martell & Carroll, 1995). Is strategic HRM present in clan organizations? If so, does it support or harm the organization culture present in a clan type organization? Does a strategic HRM function support CEO control or a more informal mode of control? Or does strategic HRM simply raise the bureaucracy of the HRM function to a new level? These questions, to date, are unanswered.

Our research was conducted with a sample of IPO firms, but future research could just as well apply the typology to larger organizations at later stages of the life cycle or to firms at even earlier stages. A number of questions remain open for study: How do control orientation decisions get made? What is the effect of the CEO (personal experience, personality, background, etc.), the dynamics of the management team, board members, and/or venture

capitalists on the choice of control form? In addition, the growing literature on family businesses could be supplemented by examining how family traditions affect choice of control form over the firm. Does one type of control orientation work best for firms pursuing a given type of strategy or for firms within a specific type of industry? Our study did not address these issues. However, given the burgeoning literature on human resource strategy and the tradition of considering the "fit" between the human resource strategy and the firm's strategy, control orientation may be a useful construct for pursuit of such research.

Finally, the typology proposed here focuses on control systems over all employees. There might also be benefits gained from studying the relationship between control form used for the top management team and forms of control applied to the entire organization. What is the effect of using outcome control for only the management team vs. for the entire organization? What is the impact of HRM practices that are applied to non-management employees but not to top management? Although there is considerable research on human resource management and on top management team monitoring, the two literatures have not, to date, been combined. Given that both focus on control over employees, it would seem fruitful to extend the research by merging these two literatures.

Limitations

Though the study does provide initial evidence as to the validity and usefulness of the control orientation typology, it does have a number of limitations that should be considered when interpreting the findings. These limitations relate to measurement of the variables and to the sample itself. Although our measures of bureaucratic and outcome control are consistent with the objective of the research, to capture a firm level approach to employee control, they are still quite coarse. These measures have not been used in prior research and will benefit from further validation in other samples. In addition, survival, as evidenced by our dual treatment of mergers, is often difficult to determine and open to multiple interpretations. Further development and use of the measures in other research will contribute to validating them.

The conclusions might also be limited by the nature of the sample used in the study. Despite being one of the study's unique contributions to the existing HRM literature, the sample does limit generalizability. First, because this group of companies went public just after the 1987 market crash, a period characterized by market caution, the sample may not be representative of all IPO firms. Second, the sample is relatively small from the beginning and dwindles over time making the stock price analysis particularly susceptible to survivorship bias. Third, the fact that the firms are not evenly distributed throughout the four categories of control orientation further limits the generalizability and interpretation of the findings. Future research that

examines the effects of control orientation in other samples might corroborate the conclusions yielded from this study.

Conclusion

Boxall (1993) suggests that only by investigating the linkages between HRM variables and firm-level variables will progress be made in understanding 'the significance of human resource management.' Our choice of control orientation as the HRM variable is appropriate for investigating linkages to firm-level characteristics and outcomes, and our choice of sample highlighted the effects of HRM on firm performance. Not only did we investigate such linkages in this research, but we also conceptualized HRM variables at a broader level than has been done in the past. Prior investigations have focused solely on organizations with formal human resource management functions thereby emphasizing human resource policies and procedures to the exclusion of higher level approaches to managing employees. This research accounted for alternative control mechanisms of smaller firms that may be equally as (or more) effective as (than) instituting formal HR and highlighted the potential benefits of those alternative control mechanisms.

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