Australia's contemporary decentralized economic and business environment, not only industrial relations practitioners but human resource practitioners (who often supplanted industrial relations practitioners) have largely failed to demonstrate strategic contributions to "people management" and are therefore becoming increasingly marginalized in Australian enterprises. Much the same can, of course, be said about U.S. industrial relations and human resource practitioners which, to bring this full circle, is a key conclusion reached by Briscoe, Maxwell and Temin in the opening paper in this volume.

NOTES

1. Winner of and originally presented at the Advances in Industrial Relations/Labor and Employment Relations Association Best Papers Session, 57th Annual Meeting of the Labor and Employment Relations Association, Philadelphia, PA, January 9, 2005.
2. Winner of and originally presented at the Advances in Industrial Relations/Labor and Employment Relations Association Best Papers Session, 57th Annual Meeting of the Labor and Employment Relations Association, Philadelphia, PA, January 9, 2005.
3. Winner of and originally presented at the Advances in Industrial Relations/Labor and Employment Relations Association Best Papers Session, 56th Annual Meeting of the Labor and Employment Relations Association, San Diego, CA, January 5, 2004.
4. For a plant-level study of success followed by failure of a HPWS initiative, see R. Bruno and L. Jordan (1999). For an industry-level study of success of HPWS (or labor-management cooperation) initiatives, see S.A. Rubenstein (2003).
5. Winner of and originally presented at the Advances in Industrial Relations/Labor and Employment Relations Association Best Papers Session, 56th Annual Meeting of the Labor and Employment Relations Association, San Diego, CA, January 5, 2004.

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David Lewin
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H.R. VERSUS FINANCE: WHO CONTROLS CORPORATE HEALTH CARE DECISIONS AND DOES IT MATTER?☆

Forrest Briscoe, James Maxwell and Peter Temin

ABSTRACT

The past two decades have witnessed a transformation in the corporate human resource (HR) function – moving away from a role of balancing multiple interests toward a narrower focus on business objectives – yet we know little about how this change occurred. This study finds that the functional backgrounds of senior HR managers played an important role in determining the changing health benefits of large corporations. Managers with finance backgrounds controlled costs more than those with traditional HR backgrounds and contracted with fewer health plans – yet surprisingly without measured differences in health care quality management. These results suggest that more attention should be paid to the backgrounds of managers in the wider evolution of HR.

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The past two decades have witnessed a transformation in the corporate human resource (HR) function – moving away from a role of balancing multiple interests toward a narrower focus on business objectives (Kochan, Katz, & McKersie, 1986; Echinger & Ulrich, 1995). One prominent shift within this broad movement has been the 'financialization' of HR, under which a growing emphasis is placed on implementing and evaluating HR policies using financial and accounting practices (Pfeffer, 1997). Despite recognition of this shift, little evidence exists on how it is being implemented within companies, or what its effects have been.

This paper investigates the role of managers' financial backgrounds in this transformation of HR. We do this by documenting the part played by managers with finance backgrounds in making changes to one key component of corporate HR, employee health benefits. Health benefits have held a prominent place in HR for the past two decades because of the need to control spiraling health care costs. These cost increases, in addition to general pressure on labor costs, have affected health benefits decision-making in a number of ways. Employees have been moved into managed-care style benefits; the number and type of health plans has been constrained; and changes have been made in the way health plans are purchased from insurers (Bodenheimer & Sullivan, 1998; GAO, 1997; Maxwell et al., 1998).

These changes in the health benefits sub-function are consistent with an overall shift toward a more financially focused view of HR. What role did the use of managers with financial backgrounds play in determining changes to corporate benefits practices and associated outcomes? Our central result shows that among senior health benefits executives, those with finance backgrounds controlled costs more than did those with traditional HR backgrounds. The managers with finance backgrounds were also likely to have contracted with fewer health plans, apparently seeking greater market power through consolidated purchasing. Surprisingly, we did not find evidence that they pursued lower levels of health care quality management, even though such quality activities might be hard to justify in strict financial terms.

Our evidence comes from a survey of senior health benefits managers in large corporations. Based on extensive prior in-depth interviewing, we found this group to consist of individuals with differentiated backgrounds but comparable job requirements and activities. A significant minority of these managers had finance backgrounds, while most had backgrounds in HR. All such managers had responsibility for similar tasks of evaluating and selecting health plans, and negotiating and purchasing health insurance coverage. Our interviews also suggested that the differences in background were associated with different approaches to the central choices those managers made.

Understanding these specific choices, in turn, contributes to a larger debate over the transformation some believe to be underway in HR. The HR function and the health benefits sub-function have come under increasing pressure from the executive suite to help control labor costs and align policies more closely with business objectives. In some firms, HR managers have therefore been replaced by executives seeking to install individuals who will behave in a more cost-conscious fashion. Our findings on managerial background in this context suggest it has played an important role in achieving cost-control goals.

BACKGROUND AND THEORY

We briefly review below the organizational behavior literature on how managerial background affects practice. We then focus on describing the two backgrounds studied in our work on health benefits managers – HR/benefits and finance – and the origins of their differences. The historical origins of these managerial traditions lay a foundation for understanding their salience in the current corporate environment.

Literature on Managerial Backgrounds

A number of empirical studies have been conducted in the area of functional or career background effects. Overall, these studies have had mixed results; some found systematic differences by background and others have not. The majority of such studies have been based on quasi-experiments using executives or business students who are asked to read a hypothetical business case and report on the problems they identified in the case, the actions they would take to resolve those problems, and the information they focused on in the process (Dearborne & Simon, 1958; Walsh, 1988; Beyer et al., 1997). Fewer studies have reported on managerial decision making behaviors observed *in situ*.

In a review of this literature, Gunz and Jalland (1996) found a range of outcomes from cross-sectional studies of the effect of executive background on strategy formulation and performance. For example, CEO functional background has been found to be associated with a firm's strategy (Song, 1982; Michel & Hambrick, 1992) but other studies find no association (Reed & Reed, 1989) and the direction of causality is unclear (White, Smith, & Barnett, 1994).

A few studies have also been done of backgrounds among managers other than CEOs. Dougherty (1992) examined how engineering and marketing department membership affected beliefs, actions, and outcomes within five firms. The emphasis in this research was on individuals' present functional affiliation rather than historical career background. Gupta and Govindarajan (1984) examined business-unit managers in diversified firms to discover the impact of background on effectiveness, finding that the way in which managerial background impacted performance was contingent on business unit strategy. Melone (1994) found differences between Chief Financial Officers (CFOs) and Vice Presidents for Corporate Development in how they balanced financial and strategic priorities in alliance decisions, although no outcome measures were directly compared. As part of a wider study, Jacoby (2005) compared the values of HR executives and found that those with stronger 'professional HR career' backgrounds placed a lower priority on maximizing share price than did executives with other backgrounds.

Much of the literature addressing *how* functional background influences practice focuses on common belief structures or perceptual tendencies shared by managers who have a given background (Hambrick & Mason, 1984; Walsh, 1988; Waller, Huber, & Glick 1995; Tyler & Steensma, 1998). In these accounts, the process of acquiring a background involves socialization (Van Maanen & Schein, 1979) and conditioning (Beyer et al., 1997) from participation in formal training, functional departments within firms, and professional associations. Shared beliefs, in turn, influence actions taken and alternatives chosen by managers in the course of administration (Hage & Dewar, 1972; D'Aveni & MacMillan, 1990).

Compared with beliefs and perception, few studies have emphasized the role of common skills and knowledge possessed by managers who share backgrounds (Gupta & Govindarajan, 1984; Gupta, 1984). This is somewhat surprising. Managers with a common background are likely to possess similar knowledge and skills, potentially leading to common preferences for work activities (or strategies) in which managers with those skills excel, or leading directly to improved performance on particular common tasks.

HR and Finance Backgrounds

In order to assess the role of functional background on HR practices, we studied the link between background and implementation among health benefits managers in *Fortune 500* firms, using a survey as well as in-depth interviews. This section describes the institutional context of corporate

health benefits found in these firms. Almost all (90%) of these managers were housed in the corporate HR function. The routine responsibilities of the health benefits function involve purchasing health insurance for the workforce and ensuring that those benefits are of a high quality and that they meet the needs of employer as purchaser and employees as consumers (Thompson, Draper, & Hurley, 1999; Maxwell, Briscoe, & Temin, 2000). Our interviews suggested that these activities, and the corresponding outcomes, were relatively comparable across large organizations.

Prior to conducting the survey, we conducted 91 in-person, in-depth qualitative interviews with health benefits managers in large corporations in four geographic regions and several industries, as well as associated health plans, consultancies, and industry associations. Two distinct managerial backgrounds emerged as particularly salient in the senior health benefits administration position. Health benefits managers' backgrounds most often followed a traditional HR/benefits background, but a newer and less prevalent finance background appeared to be in ascendance. This image was confirmed in the survey, in which almost two-thirds of respondents indicated HR and/or benefits backgrounds, while about one-fifth reported a finance background (details below). In addition, half of those with finance backgrounds reported having only finance backgrounds, while the others reported also having HR or benefits backgrounds.

Corporate executives and other observers viewed the finance background as influential in affecting managerial actions and outcomes. We were interested in this new role for managers with finance backgrounds within what was historically an HR domain. We sought to explore the consequences for health benefits administration. During interviews, evidence of distinct beliefs, skills, and orientations emerged between the two backgrounds.

Managers with an HR background tended to emphasize their role as *balancing* the interests of workers and the firm. They were particularly concerned with this role in the context of 'managed care,' a now-widespread way of organizing the provision of health care that was designed in part to curb rising costs. These managers often mentioned concerns with the uneven quality and choice available to employees under managed care. When asked about outcomes, managers with HR backgrounds tended to discuss traditional HR outcomes, such as turnover rates and employee satisfaction – which they believed to be linked to the benefits quality. The managers saw addressing employees' concerns and complaints regarding corporate benefits as an important part of their role. Some also mentioned incorporating union concerns into the design and implementation of benefits policies. With regard to work activities, HR-oriented managers often described facilitating interactions and

resolving conflicts, such as those between employees and health plans, suggesting that they used skills in these interpersonal areas often.

Managers with a finance background more often mentioned the need for change, both in employee expectations and corporate practices. They did not often use the language of balance, but rather a newer language of aligning HR practices with the financial goals of the corporation. With regard to employee attitudes, these managers often cited an 'entitlement attitude' among employees as problematic. The types of outcomes that these managers discussed were most likely to be in dollar terms rather than traditional HR measures. With regard to their own work activities, managers with financial backgrounds more often described their pricing negotiations with health plans, and the use of tactics and even staff from elsewhere in the firm (finance, procurement, and legal) in order to improve contracting outcomes. In general, they were clearly most interested in the cost-reduction challenge in their roles as health benefits managers.

In the companies we observed, some senior executives were acting on these differences by installing managers with finance backgrounds in increasing numbers. Our survey evidence was consistent with this image of finance backgrounds expanding in the ranks of health benefits managers at *Fortune 500* firms. Managers who came into their jobs somewhat more recently were more likely to have finance backgrounds. Among managers in our sample with less than five years in their jobs, 23% reported having had some finance background while 18% of those with five years or more did so. The figures for managers with only finance backgrounds were 12% and 8%, respectively.[1] Adding to the portrait of changing composition of health benefits managers, those with finance backgrounds were more likely to have come to their current job from outside the health benefits arena. Among those with at least some finance background, 50% came from outside heath benefits, and 61% of those with finance-only backgrounds came from outside, while only 28% of those without finance backgrounds were newcomers to the function. Managers with finance backgrounds were also more likely to have hired new finance staff under them in the past five years (36% versus 23%), while not being any more likely to have hired non-finance staff.

Historical Origins of the HR and Finance Functions

Why do such distinct differences emerge from the two types of background? To situate this phenomenon, we briefly review the historical context of the HR and finance backgrounds. The HR function originally developed in

large American firms during the first half of the 20th century as a response to the need for a stable and reliable workforce. To encourage long tenure and worker productivity in the face of tightening labor markets, union unrest, and government regulation, firms increasingly hired and relied on personnel and labor relations managers (Jacoby, 1985). These managers and departments were valued for their ability to address labor and personnel problems through peaceful means. Eventually, other parts of the firm acknowledged HR's legitimacy. HR departments expanded again during the 1960s and 1970s in response to new federal employment regulations, including regulation of health benefit and pension plans. During this period, HR managers retained their orientation toward the workforce and the government, not just the firm (Kochan & Cappelli, 1984; Dobbin & Sutton, 1998).

Throughout this period of HR expansion, the orientation of HR managers was influenced by an ideology, espoused by academics as well as practitioners, emphasizing that "through effective motivation, communication, and leadership in the workplace it is possible to create an organizational climate that promotes a mutuality of interests between management and labor and high levels of job satisfaction and productivity among employees" (Kaufman, 1993, p. 24). In other words, the HR manager was concerned with balancing the interests of both worker and firm.

The development of the corporate finance function differs markedly. It evolved out of the need for resource-based systematization and control in large firms, epitomized in the 'multidivisional' form which spread in mid-century (Chandler, 1977) and gained prominence in corporations with diversification across unrelated product markets, a practice popularized in the 1980s (Fligstein, 1987). Financial methods of control offered a way to compare substantively unrelated investments. Importantly, the tools that evolved in corporate finance bore strong similarity to those used by the investor community to allocate capital, and those used by academicians who study financial markets (Lounsbury, 2002). The external legitimacy and common language with the investor community enhanced the roles of those with finance backgrounds in firms, elevating their importance during the rise of shareholder power in the 1980s and 1990s (Useem, 1996).

Formal training in finance is relatively uniform and covers a well-codified framework. Even on-the-job finance training involves learning specific routines that reference this framework in the economic evaluation of projects, balance sheets, transaction options, and so forth. The finance framework takes the firm's unified financial profitability as the central unit of analysis, addressing other entities or parties with respect to how they affect that unit. Finance textbooks characterize the ideal managerial role as one of the

perfect functional agency, and the challenges of finance managers are to fulfill that role under complex and uncertain conditions (Brealey & Myers, 2000). Once on the job, managers with finance backgrounds often maintain external ties to the investor and banking communities, reinforcing the orientation of the finance-trained manager.

Change in the HR Function

A shift in the background of HR managers has potential long-run implications in the context of the current transformation of the overall HR function. Over the past twenty years there has been pressure for the HR function to transform itself from a traditional role of balancing worker and employer interests to one that focuses more tightly on the objectives of top executives and shareholders. Pressure to increase product market competitiveness was translated into an interest in strategically designing the firm's HR policies in ways that reflect business objectives (Kochan et al., 1986). In contrast with the earlier tradition of balancing the interests of management and labor (Kochan & Cappelli, 1984; Jacoby, 1985), HR professionals were being asked to serve more narrowly as agents of the firm (Lewin, 1991; Kochan, 1999; Baron & Kreps, 1999). This often resulted in changes aimed at reducing labor costs or increasing labor flexibility (Osterman, 1996).

During this period, HR managers were increasingly asked to focus on financial measurement and firm outcomes (Pfeffer, 1997). Popular authors emphasized the use of measures such as return on investment as a way of proving the value of HR to top managers and investors (Fitz-Enz, 2002). Practitioners also described the need to shift from a functional orientation to a business orientation. In one survey, just 16% of HR executives thought the new role of HR encompassed "employee advocate," part of the traditional HR function, while 94% thought it included "business partner," reflecting the newer bottom-line focus (Csoka, 1995).

In response to these pressures, firms sought to either develop or import the new orientation and skills needed to fit the changing HR role. Fully 92% of HR executives reported believing that the current mix of skills in their departments "may not be the right ones to execute the new paradigm" (Csoka, 1995). As a result, the 1990s witnessed an expansion of training and consultancy services in the use of financial performance metrics in HR (e.g., Hanson, 1995). Corporate HR managers sought to acquire new skills by partnering with internal functional units such as finance and procurement, or by hiring them directly from outside the firm (Kramer, 2003). Executives

may have pursued the hiring of staff with financial backgrounds into the HR department and sub-functions under the belief that they would be more willing and equipped to focus on business objectives and the bottom line.

These changes appear to be quite sweeping, yet to date there are no empirical studies we know of that document how this transformation is occurring and the consequences of it for specific employee and organizational outcomes. We suggest that one way the transformation may be occurring is through a shift in the backgrounds of the people assigned to key positions in the HR function.

HYPOTHESES

Managers with HR/benefits and finance backgrounds are hypothesized to undertake different actions and produce different outcomes. We chose key outcomes based on what health benefit managers do in their daily activities: negotiate and procure health insurance products from vendors based on their price, attributes and quality, and market power. Our three key hypotheses, therefore, concern health benefit cost control, number of health plans contracted with, and health care quality management.

Expenditure Control

Health benefits managers whose backgrounds differ are likely to pursue and achieve different levels of expenditure control. Those managers with finance backgrounds are likely to achieve lower cost increases for the health care benefits that they purchase, relative to HR/benefits managers. This is because they are more oriented toward cost-based measures and evaluation, and also because they may be more skilled in financial analysis and negotiation.

Hypothesis 1. Health benefits managers with finance backgrounds will be associated with tighter expenditure control than those with HR/benefits backgrounds.

Number of Health Plans Contracted

One key decision for health benefits managers is the number and type of health care plans purchased and made available to employees. How would background influence the number of plans contracted? Finance managers

are hypothesized to purchase from *fewer* health plans, in order to gain market power and obtain better prices from the plans with which they do contract. This strategy is based on the economic precept of bulk purchasing, widely known among managers and likely to lead to lower cost outcomes – fitting a finance orientation.

The great majority of the *Fortune 500* are large purchasers of health insurance, by volume. Many are among the largest purchasers in one or more regional health care markets, and others that are less concentrated in one region are major purchasers on a national level. This market power can be used to obtain preferred pricing or other advantages. By narrowing the number of contracted heath insurance carriers, a firm effectively can guarantee more business to each carrier from its employees. In an extreme, though not uncommon, case, employers contract with only one health insurance carrier per region and offer all their employees' health insurance business to that plan. One-quarter of survey respondents followed this approach, offering no choice of health insurance carrier to at least three-quarters of their employees.

The mechanism advanced here is that managers with HR/benefits backgrounds are likely to put a higher value on employee choice than marginal cost advantage. In contrast, we found little evidence in interviews that managers did not know about bulk purchasing or lacked the skills to accomplish it. The sacrifice in pursuing bulk purchasing is that it reduces the scope for employee choice, a trend many health benefits managers with HR backgrounds may be reluctant to pursue.

Hypothesis 2A. Health benefits managers with finance backgrounds will contract with fewer health plans and consequently limit the range of choices available to employees, relative to managers with HR/benefits backgrounds.

Although our interviews suggested that health benefits managers focused on the advantages of bulk purchasing, it is also plausible that managers with finance backgrounds will focus on increasing the amount of competition for their business by increasing the range of choices available to employees. This could be the case if they were exposed to economic training, either formally or on the job, which emphasized the value of greater market competition in putting downward pressure on market prices.

Hypothesis 2B. Health benefits managers with finance backgrounds will contract with more health plans and consequently expand the range of choices available to employees, relative to managers with HR/benefits backgrounds.

Health Care Quality Management

Attending to health care quality is another responsibility of health benefits managers, one on which they vary widely in approach and level of activity. There is considerable debate regarding the extent to which health care cost and quality must be traded off, and one question raised here is whether managers with finance backgrounds are exchanging poorer quality for lower cost in their procurement of employee health benefits.

Managers with HR/benefits backgrounds are likely to have both greater substantive interest and greater expertise in issues of health care quality. They may also have a deeper normative commitment to pursuing quality on behalf of employees as a result of their dual orientation toward worker and firm. Since health care quality impacts employee well-being and productivity, goals and activities that address health care quality directly impact the traditional HR/benefits mission. We expect managers with HR/benefits backgrounds to more often require clinical quality improvements at the health plans with which they contract, relative to other backgrounds.

Hypothesis 3. Health benefits managers with finance backgrounds will be less engaged in health care quality activities, relative to those with HR/benefits backgrounds.

METHODS

Sample and Instrument

We tested these hypotheses on a sample of health benefits managers from the 1999 *Fortune 500* largest U.S. companies by revenues (which is based on 1998 revenues figures). These companies had median annual revenues in 1998 of $6.5 billion, ranging from $400 million to $160 billion. The median firm employed 16,700 full-time workers, and full-time employment ranged from 1,500 to over 200,000. All full-time employees were reported to be eligible for health benefits, although there was a much wider range in eligibility for the part-time workforce.

Data were collected through a structured telephone survey of the senior-most decision-maker in each organization with responsibility for health benefits. The surveys were extensively pretested on managers in 70 companies with sizes just below the *Fortune 500*. Since the respondents receive numerous requests for participation in benefits surveys, we deliberately selected interviewers

that could speak knowledgeably about the subject matter and engage the respondents. The interviewers participated in an initial 40-hour training, which reviewed the key concepts in health care purchasing, and received extensive training in 'nondirective' interviewing techniques that promoted uniform data collection procedures.

Of the 500 companies on the 1999 *Fortune 500* list, 13 were deleted because they had been the subject of merger or acquisition activity in the recent past, making many questions difficult to answer. Of the remaining sample population of 487 targeted firms, 406 finished surveys were obtained for a final response rate of 84%. This compares extremely favorably with other surveys of benefits managers (KPMG, 1999) and *Fortune 500* companies (Lawler, Mohrman, & Ledford, 1998). Missing and noncomparable data on firms in the Compustat financial database dropped the final response rate in one analysis to 68%.

In addition to questions about the backgrounds of health benefits managers, the survey included detailed information on health benefits purchasing practices. These findings were consistent with other recent surveys that cover similar material (e.g., RAND, 1997; KPMG, 1999). The survey asked questions covering the time period 1994–1999.

Dependent Variables

Summary statistics and, where appropriate, questionnaire items, are listed in Table 1 for all dependent, independent, and control variables. We obtained data on health benefits expenditures from a survey question about the company's health care cost increases over the past five years. Respondents reported their cost data in one of the five categories: decline, increase less than 2%, increase 2–5%, increase 6–8%, and increase more than 8%. These categories captured a good deal of variation in cost increases. During pretests, we determined that more detailed data on premium costs would be infeasible because of inaccurate reporting and concerns about confidentiality on the part of respondents. The median response was the middle option, increase 2–5%, with a standard deviation of almost exactly one category. The accuracy of informants' knowledge was found to be quite high due to the widespread use of these data by practitioners for comparison purposes.

The number of health plan carriers with which the manager contracted was measured by the percentage of the company's employees offered a choice of two or more health insurance carriers. The form of this variable reflects the fact that many health plans are regional, and as a result many

Table 1. Variables Used in Regression Analyses.

Variable	Description	Mean (S.D.)
Premium cost	During the last year, did your company's average per capita health insurance premium: decline, increase less than 2%, increase 2–5%, increase 6–8%, or increase more than 8% (coded 1–5).	3.24 (0.98)
Choice	What percent of benefits eligible employees are offered a choice of two or more health carriers? (0–100%)	68.27 (35.60)
Quality index	[linear index of 12 dichotomous component questions; see Table 2]	4.88 (2.63)
Finance background	What type of professional backgrounds do you have—benefits, finance, HR, medicine, or something else? (Indicate all that apply)	0.21 (0.40)
Other background	[same as above]	0.13 (0.38)
Mid-level	[Taken from archival source, and verified with respondent: I have your job title as ___. Is that correct? If not, what is your correct title? Responses were coded into three levels, see text.]	0.33 (0.47)
Low-level	[same as above]	0.12 (0.34)
Tenure	How many years have you held your current position/level of responsibility for health care benefits policy at *this* company (Coded 1 for less than 5 years tenure, 0 otherwise)	0.59 (0.49)
Non-HR department	Do you report into Human Resources? If not, to what department do you report? (Coded 1 if non-HR, 0 otherwise)	0.10 (0.31)
Log 1998 assets	[From Compustat; see text]	9.14 (1.32)
Eligible employees	Of those [full-time and part-time] employees, how many are benefits-eligible? (In thousands, range 0–300)	30 (35)
Union rate	Approximately what percent of your workforce is unionized? (0–100%)	18.67 (24.46)
Geographic concentration	For the next set of questions, I want to ask you about health care purchasing for the metropolitan area in which you have the most employees. ... What percent of your company's health benefits eligible employees are located in this area? (0–100%)	32.30 (23.03)
Indemnity	What percent of covered employees are currently enrolled in each type of health plan? Traditional indemnity: ___% Preferred Provider Organization (PPO): ___% Point of Service (POS): ___% Health Maintenance Organization (HMO): ___% (0–100%)	11.34 (17.66)
HMO	[same as above]	34.95 (24.02)

employers contract with different insurance carriers in different regions. This means that the number of health plan carriers with which a firm contracted overall is an inaccurate reflection of both bulk purchasing strategy and choices available to employees in a given location. The percentage of employees with choice, on the other hand, represents the manager's commitment to consolidating purchasing power as much as possible for each area in which the company has employees. The average percentage of employees offered choice was 68%, with a standard deviation of 36%. The range varied from 0% to 100%. Similar results to those reported here were obtained by using an alternative measure, the percentage of employees offered 1, 2, or 3 or more carrier choices in that geographical region with the greatest share of the company's workforce. This measure was not used, however, because it focused on a single region.

The survey included several measures of health care quality management in the domains of clinical quality, access to services, and customer service. The questions were based on the results of a two-year research project examining health care quality activities of similar firms as well as pretests as described above. We constructed an index of health care quality activities that is a simple linear combination of the twelve central quality measures from the survey. These items included the use of quality as a formal written criteria in carrier selection, quality requirements in contractual agreements with carriers, frequency of meetings on quality with carriers, collection and dissemination to employees of various forms of quality information, and probationary actions taken toward carriers because of quality concerns (see Table 2). Index scores ran from 0 to 12, with an average score of 4.9 and a standard deviation of 2.6. No weighting scheme was adopted because we had was no a priori reason for privileging one factor over another, and we were wary of cherry-picking strongly correlated items without any theoretical rationale.

Independent Variables

The independent variable of most interest is the respondent's self-reported background. Respondents were asked to categorize their background during the survey, and none declined to answer. Almost two-thirds of respondents (62.4%) indicated HR and/or benefits backgrounds, while about one-fifth (21.0%) reported a finance background. Because the survey allowed multiple background responses, half of those with finance backgrounds reported also having HR or benefits backgrounds and half reported only finance (10.6% of total). This distribution should not be surprising, since the vast

Table 2. Variables Used in the Quality Management Index.

Variable	Description	Mean (S.D.)
Coalition quality	Does your company participate in any quality management with a business coalition?	0.29 (0.46)
Carrier criteria	When selecting health carriers, does your company use quality as a *formal written criteria*?	0.83 (0.37)
Clinical improvement	Does employer require clinical improvements over time?	0.31 (0.47)
Consumer satisfaction	Does your company routinely collect quality data about health carriers from any of the following sources: Consumer satisfaction survey by employer or third party	0.58 (0.49)
HEDIS	Does your company routinely collect quality data about health carriers from any of the following sources: Healthplan Employer Data and Information System (HEDIS)	0.53 (0.50)
Coalition data	Does your company routinely collect quality data about health carriers from any of the following sources: Business coalition	0.27 (0.44)
Disseminate data	Does your company disseminate any quality data about health carriers to employees?	0.35 (0.48)
Adjust premiums	Does your company adjust employees premium contributions based on the quality ratings of health carriers?	0.07 (0.26)
Monitoring	In response to quality concerns with health carriers, have you: increased monitoring of that carrier's quality?	0.55 (0.50)
Frozen enrollment	In response to quality concerns with health carriers, have you: frozen enrollment in that carrier?	0.17 (0.37)
Dropped carrier	In response to quality concerns with health carriers, have you: dropped that carrier?	0.47 (0.50)
Quality meetings	Does your company sponsor mandatory meetings with representatives of its carriers to discuss quality issues?	0.39 (0.49)

Note: All 12 variables in this index are dichotomous, coded 1 in the direction of greater quality management activity and 0 otherwise. This index does not represent a scale, and therefore the extent to which the elements are correlated is not a primary concern. Nonetheless, it may be worth noting that the standardized Cronbach coefficient (α) is relatively high (0.70).

majority of respondents (90%) were structurally located within the HR department. A dichotomous finance background variable entered into all analyses, coded 1 for finance background and 0 otherwise. In analyses that considered the finance-only and finance-and-HR backgrounds separately, a dummy variable was entered separately for each.

It is a potential concern that managers of higher rank would be more likely to report multiple backgrounds, perhaps because they were promoted only after gaining a breadth of managerial experience. Seniority differences

might therefore be confused with background results. However, this problem is empirically trivial since one-third of highly positioned managers with finance backgrounds indicated also having HR or benefits backgrounds, while more than half of the managers with finance backgrounds in lower-ranked positions did so. Regardless, we control for respondent's seniority in all analyses. Managers with finance backgrounds were also not significantly over-represented in any one industry.

A significant minority (16.6%) of respondents indicated a background other than HR, benefits, or finance. These individuals most often indicated backgrounds in medicine or law, but others were also reported. To control for the possibility that these individuals differed significantly from the base case (HR/benefits), a second dichotomous background variable was included in all regressions coded 1 for other backgrounds. As a result, the base case for the background variables is composed solely of respondents who indicated having HR and/or benefits backgrounds.

Control Variables

All models included three sets of controls. These address characteristics of the individual, the firm, and the existing health care products at the firm. Additional controls of potential interest were used in regressions not shown here (see Appendix A). Controls concerning the individual include the structural level of the respondent in the organization's chain of command, the tenure of the respondent, and whether they reported into a department other than human resources.

The level of respondents was coded based on the titles of their supervisors. Fifty-seven percent of health benefits managers who responded to the survey reported to Vice Presidents or Chief Officers, while another 33% reported to Directors (usually of Compensation and Benefits) and 12% reported to Managers (usually the senior Health Benefits manager). This coding scheme is appropriate because the relationship between the respondent's background and the company's health benefits practices can be expected to strengthen as the respondent's position increases in the chain of command and his or her decision-making authority over health benefits structure correspondingly increases. Two dichotomous variables, one for being mid-level and another for low-level, were included in all analyses to control for positional effects. These two variables were coded 1 if respondents were classified in the mid- or low-levels, respectively.

We also asked respondents about their tenure in their current position with responsibility for health benefits at their organizations. Mean tenure

was just under five years. A dichotomous variable for tenure was used in all models, coded 1 if the respondent had been in their position less than five years. Tenure is an important control because new managers are less socialized in the organization's beliefs and practices, less invested in existing social networks within the firm, and may be more likely to be willing to make changes as a result.

A few respondents did not report directly to the HR department, but rather to the finance, legal, or other departments. These managers potentially could be influenced in their beliefs and practices less by their cumulative background and more by subunit. Accordingly, a dichotomous variable was entered, coded 1 if the manager reported into a subunit other than human resources.

Controls for firm characteristics included two firm-size variables as well as the firm unionization rate, employee geographic concentration, and industry dummies. The first size variable, log of 1998 asset size, was taken from Compustat data. The Compustat data for 1999 were unavailable at the time of analysis, and asset size should be relatively stable for a 12-month period (particularly relative to other measures, such as valuation). The second size variable, number of health benefits-eligible employees, was taken directly from survey responses. Both variables may be associated with health benefits practices, since they reflect the magnitude of resources potentially available for health benefits and the market power of the firm as a buyer of insurance. Several other specifications of both size variables were experimented with, with no better explanatory power or impact on the main findings.

Unionization rates were obtained directly from the survey respondents rather than secondary sources, which were determined to be less reliable. The measure obtained was the percent of the workforce who are represented by a union. These rates are important because unions often demand generous health benefits contributions as well as traditional indemnity-style health insurance products. The unionization rate was entered directly into all models. In addition, the comprehensive model shown in Appendix A also controlled for whether health benefits policies differed for the company's union members. The model in Appendix A also controlled for the possibility that health benefits policies differ significantly for other groups of workers such as those in particular geographical regions or business units.

Employee geographic concentration is important because firms with highly dispersed workforces have less market power in any one region of the country. This may limit their control over cost increases as well as the scope for health plan choices (e.g., favoring national health insurance carriers). Finally, intervention in clinical health care quality is lessened if the firm does

not have as much market share with its contracted carriers. The variable for geographic concentration reflects the respondents' estimate of the percentage of all health benefits-eligible employees located in the single metropolitan region with the greatest share.

Eleven industry dummies were constructed from two-digit standard industrial codes (SIC) taken from Compustat. The indices followed the aggregation scheme of Ferson and Harvey (1991) and Campbell (1996). The industries included petroleum, finance/real estate, consumer durables, basic industry, food/tobacco, construction, capital goods, transportation, utilities, textiles/trade, service, and leisure. This method categorized all but five companies in our survey, and these were left together in the analyses as a missing-data dummy variable.

All models included two controls for health care products. These are the percentage of employees enrolled in indemnity-style health insurance and the percentage enrolled in health maintenance organizations (HMOs) in 1999. Indemnity insurance is generally the least restrictive and most costly form of health insurance available, while HMOs are the opposite – generally the most restrictive and least costly options. In addition to these two ends of the spectrum, managed care plans such as Preferred Physician Organization (PPO) and Point of Service (POS) plans generally represent an intermediate level of restriction and cost.

The health care products controls are important because the costs of managed care health benefits are significantly lower than those of traditional indemnity-style insurance and have not been increasing as rapidly. Therefore, product mix may affect differences in health care costs increases. In addition, heavy reliance on traditional indemnity insurance arguably reduces the need for carrier choice since under that system employees are free to choose any physician or hospital for services. Product mix is partly a decision within the manager's discretion, but it is limited by the availability of managed care options in those geographic regions where each firm operates. Finally, the potential for intervention in clinical health care quality is greatly increased under managed care, since the managed care organization is designed to wield more control over physician and hospital practices than the indemnity-style insurer.[2]

RESULTS

Tables 1 and 2 report the mean and standard deviations of all variables used in the analyses, and Table 3 reports their correlations. To test Hypothesis 1,

Table 3. Correlations among Regression Variables.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Premium cost														
2. Choice	−0.07													
3. Quality index	−0.17**	0.19**												
4. Finance background	−0.16**	−0.04	0.05											
5. Other background	−0.08	0.05	0.08	−0.23**										
6. Mid-level	0.05	0.08	0.07	0.00	−0.07									
7. Low-level	−0.03	−0.01	−0.04	0.08	0.02	−0.28**								
8. Tenure	0.09	0.08	0.03	0.02	−0.01	0.09	0.02							
9. Non-HR department	−0.10+	−0.04	−0.03	0.05	−0.03	−0.07	0.16**	−0.06						
10. Log 1998 assets	−0.10+	0.35**	0.24**	0.10+	−0.01	−0.01	0.17**	0.04	0.02					
11. Eligible employees	−0.20**	0.14*	0.26**	0.09+	−0.05	0.08	−0.09	0.07	−0.03	0.37**				
12. Union rate	−0.13*	0.03	0.11+	0.08	−0.02	0.01	−0.04	−0.01	0.03	−0.03	0.21**			
13. Geogra. concentration	0.10+	0.10+	0.00	0.05	0.01	0.13*	0.07	0.08	−0.06	0.04	−0.29**	−0.03		
14. Indemnity	0.04	−0.07	−0.04	0.03	0.03	−0.03	0.02	0.02	0.07	−0.06	−0.02	0.24**	−0.01	
15. HMO	−0.08	0.40**	0.15**	0.05	−0.03	0.13*	−0.08	0.00	−0.03	0.16**	0.14*	−0.20**	−0.02	−0.23**

+ $p<0.10$;
* $p<0.05$;
** $p<0.01$.

we used an ordered probit regression model. The choice of the probit reflects the potential for the ordered polychotomous dependent variable to contain left- and right-hand censoring: some respondents could conceivably have experienced much greater than 8% inflation, or strong deflation, over the period. In addition, the variable is formally nonlinear since its categories are not of equal size.

The results for Hypothesis 1 are shown in Table 4. As hypothesized, managers with finance backgrounds obtained lower cost increases relative to managers with HR/benefits backgrounds. The coefficient is significant at better than the 0.01 level. This finding is quite robust. When additional financial controls are added to the model, the background coefficients retain very similar size and increase in significance (see Appendix A).

The finance background coefficient in these probit estimates cannot be easily interpreted. However, magnitude estimates *can* be obtained with an ordinary least-squares (OLS) regression model that uses mid-point settings on the dependent cost-increase variable (results in Appendix B). These estimates indicate that managers with finance backgrounds are associated with a $1\frac{1}{2}$% difference in average annual premium increases over the five-year period, compared to managers with an HR/benefits background. This difference becomes substantial as the gap widens over time. For example, at the end of the five years a company with 3.0% annual health care cost increases faces a compounded 15.9% rise in total costs – but a company with 4.5% cost increases faces a compounded 24.6% jump in costs (an 8.7 percentage-point difference). For the median firm in the sample, employing around 20,000 full-time workers, and expending $4000 per member per year in insurance premiums, this translates into an annual savings of $7.0 million in the fifth year, and a cumulative savings of $19.9 million over the five-year period.

An important control in the cost models is tenure. This variable did not diminish the background effect, suggesting that background is not simply a proxy for newly recruited managers who are acting as 'hired guns' to cut costs. Interacting the tenure and finance variables creates no further change (not shown). Further, the finance-background effects remain strong in controlled regressions using only the group of managers with less than five years tenure as well as using only those with five years or more of tenure. However, Table 4 shows that the effects are clearly strongest in magnitude and significance for those with five years or more of tenure, consistent with the notion that they would have had more time to influence health benefits purchasing practices and hence the company's five-year health care cost trend.

Table 4. Probit Regression Predicting Company Health Benefits Cost Trend.

Variable	Five-year Health Insurance Premium Cost Increases, 1994–1999	Five-year Health Insurance Premium Cost Increases, 1994–1999
Finance background	−0.47**	
	(0.16)	
Finance background and at least five years tenure		−0.69**
		(0.26)
Finance background and less than five years tenure		−0.35+
		(0.19)
Other background	−0.41*	−0.41*
	(0.17)	(0.17)
Mid-level	0.13	0.14
	(0.14)	(0.14)
Low-level	−0.05	−0.05
	(0.20)	(0.20)
Tenure	0.18	0.11
	(0.13)	(0.14)
Non-HR department	−0.36+	−0.36+
	(0.21)	(0.21)
Log of 1998 assets	−0.07	−0.07
	(0.08)	(0.08)
Eligible employees	−0.004+	−0.004+
	(0.002)	(0.002)
Unionization rate (%)	−0.004	−0.004
	(0.003)	(0.003)
Geographic concentration	0.002	0.002
	(0.003)	(0.003)
Indemnity (%)	0.004	0.004
	(0.004)	(0.004)
HMO (%)	−0.002	−0.002
	(0.003)	(0.003)
Intercept	2.41**	2.44**
	(0.79)	(0.79)
Industry controls	Yes	Yes
Observations	335	335
Log likelihood	−418	−417

Note: Standard errors are in parentheses.
+ $p<0.10$;
* $p<0.05$;
** $p<0.01$.

The variable controlling for whether the manager reported into a department other than HR was significant at the 0.05 level. The coefficient suggests that managers who report into other departments, the majority of which are finance, achieve lower cost increases. This is also consistent with our overall theory in which a finance background leads managers to achieve lower cost increases.

To further explore the impact of different background combinations, we tested for a differential effect from finance-only as opposed to finance-and-HR 'hybrid' backgrounds (using the same mid-pointed premium cost variable from Appendix B). The mean premium cost increase for finance-only managers was 3.47%, while for finance-and-HR backgrounds it was 4.02% and for nonfinance backgrounds it was 4.90%. However, in controlled regressions the difference between finance and finance-and-HR backgrounds was not statistically significant, possibly owing to the smaller sample size of these finer-grained categories.

We also found support for Hypothesis 2A, that managers with finance backgrounds will contract with fewer health plans in order to increase market power. Table 5 shows that finance managers were associated with a reduced scope of employee choice, and the background coefficient was significant at better than the 0.05 level. We found no support for the converse Hypothesis 2B, which stated that managers with finance backgrounds will contract with more health plans in order to increase market competition.

The model suggests that the finance background on average decreases the number of employees with at least two health plan carrier options by roughly 10%. This result is strengthened by findings (not shown) from further regressions that predict the percentage of employees with a choice of health plan carriers among those working in the metropolitan region where the company has the most employees. These models produce highly comparable, statistically significant results for the influence of the finance background.

Additional support for differences in health plan contracting comes from variation in the number of health plans added in the past five years. Finance-only managers were found to have added the fewest plans on average (0.70), with finance-and-HR managers adding slightly more on average (0.88) and HR managers adding the most (1.33; differences significant at the 0.01 level). These differences contribute to the image of systematic variation in the approach of managers with different backgrounds to maintaining a range of health plan choices for employees.

The third hypothesis, that background influences the health care quality activities of managers, was not supported (Table 5). Managers with benefits backgrounds were not more likely to be engaged in health care quality

Table 5. OLS Regressions Predicting Health Plan Choice and Quality Management.

Variable	% Employees with a Choice of Health Insurance Carriers	Health Care Quality Management Index
Finance background	−9.52*	0.07
	(4.42)	(0.37)
Other background	2.21	0.54
	(4.68)	(0.38)
Mid-level	−1.72	0.13
	(3.96)	(0.33)
Low-level	−4.48	−0.23
	(5.61)	(0.45)
Tenure	3.80	0.00
	(3.60)	(0.29)
Non-HR department	−4.98	−0.26
	(5.73)	(0.46)
Log of 1998 assets	13.07**	0.61**
	(2.21)	(0.18)
Eligible employees	−0.099	0.006
	(0.062)	(0.005)
Unionization rate	0.056	0.015+
	(0.098)	(0.008)
Geographic concentration	0.120	0.0001
	(0.084)	(0.007)
Indemnity	0.027	−0.007
	(0.102)	(0.009)
HMO	0.56**	0.012+
	(0.08)	(0.006)
Intercept	−81.22**	−2.26
	(23.07)	(1.92)
Industry controls	Yes	Yes
N	349	326
R^2	0.32	0.11

Note: All values in parentheses are standard errors.
+ $p<0.10$;
* $p<0.05$;
** $p<0.01$.

management, relative to managers with other backgrounds. Much of the variance in quality management that was explained derived from the size of the company (measured by number of health benefits-eligible employees). This is unsurprising, since firms with larger investments in health benefits may perceive greater potential value in improving health care quality management.

We also tested the quality variables in the index individually with similarly negative findings. We tried various combinations of the measures in our survey to make sure we were not prejudicing our results by the particular form in which we tested attention to quality. No experiment generated widely different results from those in Table 5. However, a small scale covering the extent that contracted heath plans engaged in preventive-medicine practices did show suggestive differences among companies with managers of different backgrounds. On a scale of 0–3, HR/benefit managers averaged highest (1.35) on this scale, while finance-and-HR managers averaged in the middle (1.22) and finance-only managers averaged lowest (1.07). However, these differences were not statistically significant.[3]

DISCUSSION

The results support two of three main hypotheses concerning the link between managerial background and practice. Health benefits managers with finance backgrounds clearly reported lower premium increases. These savings, in turn, were consistent with our second finding that those with finance backgrounds contracted with fewer health plans. Surprisingly, however, we found no evidence that while finance managers were engaging in these cost-control practices they were skimping on the health care quality management activities we tracked.

This research has implications for the wider HR profession. The corporate HR function underwent a transformation in the 1980s and 1990s. Although trade publications and academic discussions reflect these evolving demands on HR, the institutionalization of the former orientation has slowed change inside organizations. One way corporations may have sought to overcome this inertia is by cycling functional backgrounds other than HR into the department's leadership positions. In the case of health benefits, our research suggests that the effects of such an approach can be dramatic.

If this trend has been occurring in other HR functional domains such as compensation, training and development, and labor relations, and producing equally dramatic shifts in outcomes, then the long-term effects could be even more profound. The HR function, the profession, and the constituencies these professionals are expected to serve (i.e., firms and employees) are likely to experience associated changes. Future studies of whether and how this is occurring in other sub-areas of HR are therefore warranted.

Further research is also needed to document the way in which managers with particular backgrounds enter their positions. The presence in these

positions of managers with different backgrounds was not random; senior executives choose whom to install. Finance managers may be picked more often to fill positions in HR by executives who desire to control expenditures. In that case, use of finance managers may indicate how an executive implements his or her desire to keep down costs. Future research in this area should aim to better understand the relationship between the hiring executive and the background of HR managers and others in functions undergoing systematic change.

The way in which HR managers' backgrounds influence their decision making also requires further exploration. The standing literature we reviewed focused on the impact of differing beliefs and perceptual tendencies, while de-emphasizing differences in skills. This is consistent with our finding that financial managers are likely to limit health plan choice – an action that is arguably less about utilizing strong financial skills and more about a strong willingness to focus on cost objectives over employee preferences. Thus it may be the case that the financial background is acting as a signal in the corporate labor market of an individual manager's hard-to-observe orientation, much as Spence (1973) hypothesized that formal education could be acting as a signal in the general labor market of an individual's cognitive abilities.

Finally, two caveats are merited concerning our findings in the domain of health benefits. First, finance managers might be contracting with fewer health plans simply to enjoy greater internal economies of scale achieved from consolidation. Our interviews suggest, however, that acquiring market power over the health plans is a more important motive. Second, while we found no evidence that finance managers were sacrificing measured quality while reducing costs, it may be that our health care quality management measures were insufficiently specified. Our index attempted to combine the varied activities undertaken by companies, but it may simply be too early in the development of quality management to define a set of practices for comparison.

CONCLUSION

In this study, we identified two groups of managers, divided by well-defined, quasi-professional backgrounds, who perform the same functions with regard to health benefits. HR managers traditionally had been responsible for managing health benefits in most large firms. They believed that they could simultaneously represent the interests of workers and firms. With the advent of rising health costs in the 1980s and 1990s, some large firms hired staff with financial backgrounds. Managers with finance backgrounds were

brought in part to control health care costs, during a period in which similar pressures were being brought to bear across the HR department.

Our study linked the presence of finance managers to lower rates of increase in health care premiums. The effects were large; the presence of a finance manager was associated with substantial reduction in health care expenditures over five years. The net effect of this and other changes in HR appears to be the rapid evolution of policies and structures to better reflect corporate objectives. Further scholarship should be directed toward understanding the process and implications of such changes for firms as well as workers.

NOTES

1. These numbers are suggestive evidence rather than proof of an increasing trend, since it is possible that these differences reflect varying attrition rates between the two groups.

2. However, because of a potential endogeneity concern arising from managerial discretion over the health care product mix, all models were also run without these indemnity and HMO controls. Models that omitted these controls showed no notable differences in the effects of interest. Also in models not shown, an additional control was added for the change in indemnity enrollment from 1994 to 1999. This variable did not alter the models and was not significant. Because it was missing for many respondents, this control was excluded from the final analyses.

3. One other management practice that those with finance backgrounds were more likely to report was the use of a database linking employee health care claims with other costly areas of HR, such as worker's compensation, disability, or absenteeism. Interviewees suggested that these databases were *not* viewed as a component of health care quality management, but rather as a tool for better understanding the health-related causes of high costs in these other HR areas. They can be used to develop policies and interventions that target groups of high-cost or high-risk workers. These databases were twice as likely to be found under managers with finance backgrounds (20.0%) compared with nonfinance backgrounds (9.8%; significant at the 0.01 level). This finding is consistent with the image of managers with finance backgrounds being highly focused on improving cost outcomes in the HR function.

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APPENDIX A. ANALYSES WITH ADDITIONAL CONTROLS

In additional analyses, further variables were added to all models to control for firm performance, firm strategy, overall employee health benefits costs, and the use of separate benefits for particular segments of the workforce. First, controls were included for company resource slack and overall performance. These measures could be important because poor performance may put external pressure on managers to reduce health benefits costs in any way possible, dominating the impact of background. However, both measures were found to be insignificant and did not change the significance or general magnitude of the background variables. They have been excluded from the presented models because of missing and noncomparable data in Compustat, particularly for insurance and financial services companies.

Following Haunschild (1993), slack was computed as the average of annual cash flow for the 5 years from 1994 through 1998:

$$\text{Cashflow} = [\text{operatingincome} - \text{taxes} - \text{interestexpense} - \text{preferreddividends} - \text{commondividend}]/\text{equity}$$

The measure for performance used the percentage change in operating income (net of deferred taxes) between 1993/1994 (2-year average) and

1997/1998 (2-year average). This income growth measure captured change over the survey period while still somewhat dampening the effect of unusual individual years. Several other specifications were also tested, with no notable differences.

A proxy measure for workforce health care costs (ratio of retirees to employees) was included to see if firms with older health plan enrollees behaved differently because they had higher health insurance costs. Further controls for firm policy were also investigated, including a measure of CEO or CFO involvement in health benefits administration and three measures of labor-market strategy (payment of high wages relative to competitors, use of a deliberate 'total compensation' strategy, and a subjective measure of the employment relationship).

Finally, dummy variable controls were added to account for the possibility that companies which used separate benefit policies for their unionized workers, or for workers in particular business units or geographical regions, might behave differently than companies with more uniform policies. None of these additional controls had any effect on the magnitude or significance of the key independent variables. Table A1 shows results of a probit regression with all of these controls included. This table also presents coefficients for the full set of industry control variables.

Table A1. Comprehensive Probit Regression Predicting Company Health Benefits Cost Trend.

Variable	Health Insurance Premium Cost Increase, 1994–1999	Variable	Health Insurance Premium Cost Increase, 1994–1999
Finance background	−0.673** (0.213)	1998 income (millions)	−0.000 (0.000)
Other background	−0.463* (0.227)	Growth in income, 1994–1998	−0.000 (0.000)
Mid-level	0.302 (0.190)	Total compensation policy	0.449* (0.193)
Low-level	0.207 (0.272)	High wage employer	−0.047 (0.205)
Tenure	0.386* (0.174)	Number of part-timers (000s)	−0.003 (0.008)
Non-HR department	−0.486+ (0.296)	Industry: petroleum	0.057 (0.931)
Log of 1998 assets	−0.027 (0.139)	Industry: finance and real estate	0.743 (0.902)
Number of eligible employees (000s)	−0.001 (0.004)	Industry: durables	−0.583 (0.825)
Union membership (%)	−0.002 (0.005)	Industry: basic industry	−0.182 (0.816)
Geographic concentration	−0.000 (0.004)	Industry: food and tobacco	−0.031 (0.859)
Indemnity enrollment (%)	0.012* (0.005)	Industry: construction	−0.189 (0.934)
HMO enrollment (%)	−0.009* (0.004)	Industry: capital goods	−0.402 (0.829)
Benefits vary for union members	−0.320 (0.202)	Industry: transportation	−1.002 (0.987)
Benefits vary by region	0.148 (0.240)	Industry: utilities	0.011 (0.834)
Benefits vary by business unit	0.047 (0.217)	Industry: textiles and trade	−0.061 (0.858)
Benefits vary in another way	0.063 (0.241)	Industry: service	0.197 (0.889)
Ratio of retirees to workers	−0.234 (0.656)	Industry: leisure	−0.622 (0.918)
CEO involved in benefits	0.038 (0.218)	Intercept	1.93 (1.57)
CFO involved in benefits	0.045 (0.221)	*N*	206
		Log Likelihood	−242

Note: Standard errors in parentheses.
+ $p<0.10$;
* $p<0.05$;
** $p<0.01$.