

**Compensation Structures Across Institutional Forms: Responses to Exogenous Revenue  
Constraints in the Hospital Industry, 1992-1997**

Burton A. Weisbrod and Burcay Erus\*  
Northwestern University

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**Abstract**

A fundamental challenge to every society is how to establish incentives for individuals and organizations to behave in ways that achieve social goals. This encompasses the design of institutions and associated labor reward structures—the subject of this paper. We hope to learn whether hospitals of various institutional forms respond differently to an exogenous change in demand—as would be the case if their objective functions differed but were stable over time. We recognize the difficulty of directly measuring some important dimensions of organization “performance” in mixed industries, where multiple forms of institutions coexist. Thus, our approach involves inferring performance in unobserved forms by examining financial reward structures, which are more easily observed. We focus on the 1990s in an attempt to capture the effects of growing emphasis on health care cost containment during that period. We hypothesize that responses to the exogenous fiscal stringency differed across institutional forms, reflecting differential objective functions, but only for top management, not for middle management or technical workers. For CEOs we find that while compensation (both base salary and “total” compensation--base salary plus bonus) increased industry-wide, religious nonprofits sustained the pattern of differential rewards, but secular nonprofits became substantially more like for-profits in their compensation structures. In lower level jobs, however, neither type of nonprofit hospital offered compensation that differed from for-profits, in total or in composition, at the beginning of the period or at the end.

\* Weisbrod is John Evans Professor of Economics and Faculty Fellow, Institute for Policy Research (IPR), Northwestern University. Erus is Ph.D. Candidate in Economics, Northwestern University. Weisbrod thanks the Andrew W. Mellon Foundation, The Atlantic Philanthropies, and the IPR for financial support, and The Hay Group, and particularly Richard Sperling and Janet Snow, for making their survey data available, and Nancy Kirby for her patience in answering our questions about the data. We thank Jeffrey Ballou, Richard Lindrooth, Maxim Sinitsyn, and participants at the NBER Pre-Conference Meeting on Not-for-Profit Organizations and at Northwestern University Departmental Seminar on Public Economics for helpful advice at various stages of our research.

## **I. Introduction**

A fundamental challenge to every society is how to establish incentives for individuals and organizations to behave in ways that achieve social goals. This encompasses the design of institutions and associated labor reward structures—the subject of this paper.

Economic systems utilize, in varying ways and degrees, private firms, government agencies, and nonprofit organizations, religiously affiliated and secular, as mechanisms for pursuing their social goals. Because these forms of institutions differ in the constraints they face, and, quite likely, in their objective functions, they may behave differently under specified conditions, in which case they would not be equally effective instruments for achieving various social goals.

Of particular importance is the question: Do these various forms of organization act in systematically different ways that are costly for principals—private or governmental—to monitor and, hence, to reward? This paper addresses that question indirectly. We recognize the difficulty of directly measuring some important dimensions of organization “performance” in mixed industries, where multiple forms of institutions coexist. Our approach involves inferring performance in unobserved forms from organizations’ choices of financial reward structures, which are more easily observed.

Mixed industries are common. In the U.S. they include not only hospitals—the empirical focus of this paper—but also, for example, nursing homes, higher education, museums, arts organizations, day care, and jails. On the assumption that the reward structures presented to employees—agents for the organization—affect organization behavior, our analysis sheds light on issues ranging from the theory of institutional behavior to the justification for public subsidies to nonprofit organizations.

Insofar as organizations define their “performance” relative to their objective functions, our focus on compensation structures provides evidence on similarities and differences in objective functions across institutional forms. This is fundamental to the modeling of organization behavior and to the evaluation of the efficiency of alternative institutional forms under specific conditions. Specifically, we examine financial reward structures—(a) in a number of dimensions, (b) in three forms of institutions--for-profit and each of two forms of nonprofit hospitals, religious (that is, affiliated with a religious group) and secular—and (c) for a number of types of jobs ranging from CEO to a variety of middle-management and technical job positions.

Prior research has examined differences in a variety of behavioral dimensions, among various institutional forms, in a number of industries, and at both theoretic and empiric levels.<sup>1</sup> Wage levels are one dimension in which behavior among institutional forms has been examined. Preston (1989), for example, compared wages between an aggregate of industries that have at least two-thirds of total employment in nonprofit organizations (which Preston defined as the nonprofit sector), and the aggregate of most other industries (the for-profit sector), separately for each of two labor groups--managerial and professional workers, and clerical and sales workers. Using cross-section data from the 1979 CPS, Preston found that employees of nonprofits were paid 6-15 percent less. Leete (2001) also examined cross-sectional compensation data (for 1989), but found little or no economy-wide differential between wages for workers who report working for nonprofit and for-profit organizations, again in broad job categories—“managerial and professional,” “technical, sales, and administrative,” as well as in blue-collar jobs such as “operators, fabricators, and laborers,” and other categories (table 5 and p.153). Of the five differences that were statistically

significant, two were positive, indicating higher wages at nonprofits, and three were negative. Clearly, there was no consistent pattern.

Wage differential across institutional forms have also been examined within specific industries, including registered nurses in nursing homes (Borjas et al. 1983), workers in day care centers (Preston 1988), and lawyers in law firms (Weisbrod 1983). No clear pattern has emerged. For nurses at nonprofit and for-profit nursing homes, the finding is of no significant difference; for lawyers, a substantial, 20 percent, negative difference (lower compensation at nonprofits) was estimated; and at day-care centers a smaller, 5-10 percent, but positive, difference, was found. All three of these sets of industry-occupation findings were sustained by subsequent analyses using later data (Leete 2001, table 5, p.154).

This literature on differential compensation across institutional forms has not resolved the question, however, of what is the most useful way to model the behavior of nonprofit organizations, let alone of such subtypes as religious and secular nonprofits. Nonprofits may not be profit maximizers. Apart from possibly having objective functions that differ from private firms, nonprofits differ from private firms in the constraints they confront. Nonprofits, but not private firms, face a “nondistribution constraint” which restricts the use of profit (Hansmann 1980); nonprofits and for-profits also face differential revenue constraints involving donations functions (Okten and Weisbrod 2000) and access to tax subsidies.<sup>2</sup>

In recent years there has been increasing attention to managerial incentives in nonprofit and for-profit hospitals. Roomkin and Weisbrod (1999), for example, examined data on CEO compensation and its decomposition into base salary and bonus, and found significantly stronger incentives for CEOs at for-profit hospitals. In another line of research,

Brickley and Van Horn (2002) argued that the nondistribution constraint may bar nonprofits from using explicit bonus payments, and therefore nonprofits might reward managerial performance by changing base salary. They also focused on job security, as measured by turnover rates, as part of a reward structure. While they found significant relationships between “financial performance” at nonprofit hospitals and both CEO turnover and compensation, they did not have compensation information for for-profit hospitals, and so could not compare the strength of incentives at the two institutional forms. A third study (Arnould et.al. 2000) focused on the effect on CEO incentives of market competition, finding that increased competition leads to closer ties between executive compensation and performance at nonprofit hospitals. Again, however, comparisons with for-profit hospitals were not made.

We add another dimension to the study of labor reward structures—their changes over time. We hope to learn whether hospitals of various institutional forms respond differently to an exogenous change in demand—as would be the case if their objective functions differed but were stable over time. We focus on the 1990s in an attempt to capture the effects of growing emphasis on health care cost containment during that period. Our “thought experiment” is to impose a new revenue constraint, holding all other constraints as well as objective functions constant for all hospitals, and then to determine whether each of three ownership forms of hospitals responds differently in the manner in which they reward their employees. Specifically, our goal is to determine whether religious nonprofit, secular nonprofit, and for-profit hospitals adjusted to the tightening financial constraints differentially, becoming more alike in their reward structures at the CEO level and, down the job ladder, at middle management, and at technical worker jobs (Table 1 lists job titles).

Objective functions may or may not vary systematically among forms of institutions. Nonprofits, religious or secular, could seek to maximize profits, and so behave indistinguishably from private firms--acting as For-Profits-in-Disguise (Weisbrod 1988), if the nondistribution constraint was essentially unenforced. In that case we would expect to find little, if any, difference in labor reward structures. If objective functions differ, however, compensation levels and incentive structures would be expected to differ, reflecting the diverse goals. Such differential reward structures may occur only among top managers or at a wider range of job levels.

We hypothesize that differential institutional objective functions, if they exist, will be manifest in labor compensation structures only for senior managers. This grows from the view that those managers have the knowledge and opportunity to affect organization behavior. Our expectation of no significant differences across institutional forms in lower-level employees' compensation levels and structures results from two assumptions. On the demand side we assume that organizations of all institutional forms demand the same thing from, say, a nurse, technician, or maintenance worker, and on the supply side, that these workers have no systematic preference for working for one or another form of institution.<sup>3</sup> Were we to find wage differentials and differential use of bonuses at lower job levels, contrary to our hypothesis, that would be subject to a variety of interpretations involving both demand and supply variables, including possible systematic worker preferences for being employed at each form of institution, differential institutional definitions of job responsibilities, and unobserved differential worker quality.

Understanding differential institutional objective functions across institutional forms, by inference from employee compensation contracts, is one major reason for focusing on job-

specific levels of pay, their composition in terms of base salary and performance-based bonus, and the implied incentives. A second reason is the understanding of labor market behavior. For example, we can shed light on the question of whether the labor markets for various forms of institutions are distinct or uniform.

A third reason to study labor contracts across institutional forms is its relevance for public policy. For example, a justification for governmental subsidies to nonprofit organizations is the view that the subsidies bring about socially preferred behavior (Nicholson et al. 2000).<sup>4</sup> If, however, nonprofit organizations offer the same incentive structures, through the employment contracts, as their unsubsidized private enterprise counterparts, then the efficiency justification for subsidization may be questioned. In addition, if “privatization” is being considered for a publicly-provided service, the question arises, Does it matter whether the service is transferred to for-profit or nonprofit organizations, and within the latter sector, to a religious or secular nonprofit? The presence or absence of systematically different behavior across institutional forms is also relevant to anti-trust policy. It does not distinguish between nonprofit and for-profit organizations, let alone between types of nonprofits; should it?

We study a period, 1992-97, during which an exogenous tightening was occurring in hospitals’ revenue constraints, in the form of reduced patient fees. These reductions, occurring at all forms of hospitals, were operating through Medicare, Medicaid, and private insurance markets, and also involved economic pressure from the increasingly important HMOs. The process did not begin in 1992 nor did it end in 1997, but that interval was one in which hospitals’ fiscal constraints were tightening.

Our study of compensation “structure” is operationalized in four dimensions: (1) level of annual base salary, (2) eligibility for performance-based bonus (dichotomous), (3) amount of bonus paid, conditional on eligibility, and (4) level of “total compensation”—base plus bonus—paid in the previous year.

The next section sets forth our conceptual framework and describes the forces that may lead to systematic differences in the labor reward structures used by organizations of various institutional forms, as well as how these structures would be affected by tightened fiscal constraints. This leads to the specification in section III of hypotheses to be tested. Section IV describes the data used to test the hypotheses and presents our empirical methodology. Results are in section V, and section VI concludes.

## **II. Theoretic framework**

The theory underlying our empirical work is that compensation structures—specifically, reliance on relatively strong incentives in the form of performance-based bonuses, rather than on weaker incentives in the form of base salary—reflect organization objective functions as well as constraints (Holmstrom and Milgrom 1991). To identify the effects of differential objective functions among institutional forms we examine the responses of compensation structures and the incentives that they imply, to a change in exogenous constraints that applied to all types of institutions. The altered constraints involve reduced payments to all hospitals by governmental and private insurers, as part of increased efforts to achieve health care cost containment. By focusing on a particular time period—specifically, 1992-1997--we assume that there were no material changes in other constraints on hospitals that would affect institutional forms differentially.



In the latter half of the 1980s and in the 1990s, downward financial pressures increased on third-party payments to hospitals for patient care. “Managed care,” and especially HMOs, expanded, and they, as well as other private and public insurers, shifted emphasis from quality enhancement to cost containment. Lengths of hospital stays were cut by insurers. Patients were increasingly directed by insurers to hospitals with which discounted prices had been negotiated. Price competition intensified (Dranove et al. 1993, Keeler et al. 1999).

An important change affecting hospitals’ revenues was the system of Medicare payments to hospitals. Beginning in late 1985 Medicare no longer reimbursed hospitals based on “actual costs” of treating a given patient. The Prospective Payment System, increasingly adopted by other insurers in subsequent years, paid hospitals fixed prices for treating specific diseases, regardless of the actual cost incurred for a given patient, and downward pressure on those prices ensued.

The intensified financial stress affected hospitals of all institutional ownership forms. All were subject to the same pressures, although insofar as hospitals of various institutional forms occupied distinct market niches that differed, for example, in HMO penetration or hospital competitiveness the fiscal pressures could have differed among institutional forms. The effect of the financial pressures was to cut the resources that had previously been available to nonprofit hospitals for cross-subsidizing their provision of unprofitable but socially valuable collective goods such as charity care, medical research, and medical education. Our question is whether nonprofit hospitals, religious and secular, adjusted by turning to stronger managerial rewards—greater use of bonuses—and becoming more like the for-profits?

With revenue down, financial options and the associated changes in labor reward structures were limited. A hospital might be able to reduce costs—if it could cut input prices or increase productivity, although it is not clear why if such opportunities existed they were not previously seized. A hospital might be able to increase revenue from a source other than patient fees--e.g., from donations (private or public) or from profitable “unrelated business activity” such as commercial fitness centers. Such opportunities might exist insofar as nonprofit organizations were averse to such activities, and so did not maximize profit in those markets. Prior research has found that in many industries nonprofit organizations do not maximize net profits from either fundraising (Weisbrod and Dominguez 1986, Okten and Weisbrod 2000) or ancillary, unrelated, outputs (Segal and Weisbrod 1998).

Finally, though only temporarily, a hospital might be able to respond to reduced profit from patient care by drawing down assets to sustain output of their unprofitable mission output. In the long run, however, unless costs could be cut or revenue increased, a hospital would be forced to reduce collective-good output in quantity and/or quality.

Adjustments in the hospital industry took many forms. There were hundreds of mergers, acquisitions, and conversions of hospitals from one ownership form to another—most commonly, from nonprofit to for-profit—in an effort to cut costs and increase bargaining power against insurers whose monopsony bargaining power was growing as they expanded and merged. Hospitals also increased efforts to generate added profit through “unrelated” business activity—output that is not substantially related to the nonprofits’ tax exempt mission but that contributes profit.<sup>5</sup> Such ancillary activities that might provide net revenue for a nonprofit hospital could include selling pharmacy services to nonpatients, catering food services, selling laundry services, and providing fitness-center services to

healthy, paying patients.<sup>6</sup> Between 1990 and 1997 the proportion of hospitals reporting gross Unrelated Business Income (UBI) of \$10,000 or more increased from .38 to .52, while the total number of nonprofit hospitals decreased. For those hospitals reporting UBI, the mean level increased from \$615,000 to \$1,112,000 per hospital (in nominal dollars), an increase of 81 percent over the 7 years.<sup>7</sup>

Expansion of activity in unrelated markets in response to an exogenous decrease in revenue would appear to imply that nonprofit hospitals had previously not been maximizing profit in those markets, assuming that revenue and cost functions remained constant over time—that is, that opportunities to generate profit did not increase. As noted above, prior research has found unrealized profit potential for nonprofit organizations in a number of industries.

A model of the nonprofit firm as a producer of profitable goods that finance output of mission activities, which are unprofitable, was presented by James (1983). In a related model nonprofits are assumed to be averse to engaging in the ancillary activities, despite their profitability. That is, the nonprofit derives negative marginal utility from those activities, apart from the profit generated, and so they produce less of those outputs than would a profit-maximizing firm (Weisbrod 1998, chapter 3). As a result, an exogenous reduction in revenue would cause the nonprofit to increase ancillary output, approaching the profit-maximizing level (Segal and Weisbrod 1998).

Such behavior—engaging in profitable activity at a level lower than what would maximize profit—would also occur if cost functions for nonprofit organizations' mission activities and for ancillary activities were interdependent. If, for example, production of a nonprofit organization's mission good and an ancillary good involve a fixed input (e.g.

managerial effort, or space), an increase in the amount of the input used in one of the activities will reduce its availability to the other good, thereby increasing the marginal cost of the input to the other activity. That “external” cost of expanding ancillary output (the revenue good) on the cost of the mission good would lead a nonprofit to produce a lower level of ancillary output than would be produced by a profit-maximizing firm, which would produce only the profitable revenue good.

In the presence of such cost interdependence, the profit-maximizing firm and the utility-maximizing nonprofit would offer different incentives to their top managements. The nonprofit would offer weaker incentives with respect to the profitability of activities in the revenue-good market.

There is a second reason for expecting weaker incentives at nonprofit organizations—the greater difficulty of measuring and valuing, and hence rewarding, “performance” in the mission-good market than in the ancillary revenue-good market. While profitability is a reasonably good indicator of performance in the latter market, subject to the cost interdependency discussed above, measurement and valuation of output in nonprofit organizations’ mission-good markets is typically more problematic. “Quality” of care, “charity” care, and “research,” for example, can be measured with little precision, and converting the measures to monetary terms in order to reward good performance is an additional challenge. Thus, a nonprofit organization would be expected to utilize a low powered incentive scheme, to discourage managers from focusing on ancillary activities at the expense of mission outputs (Holmstrom and Milgrom 1991, Weisbrod 1988). While revenue from ancillary activity is necessary to maximize output of the mission good, it is not

sufficient. That requires efficient utilization of the resources for producing the mission good, which, as stated above, is typically difficult to monitor and value.

### **III. Hypotheses to be tested**

The association between institutional form and employee reward structure leads to examination of the following questions, which are then reformulated into testable hypotheses:

*Do hospitals change their labor reward structures in response to intensified fiscal pressure? Do the responses differ for top management, middle management, and technical personnel? Do responses differ for for-profit, religious nonprofit, and secular nonprofit organizations? If they differ, are labor reward structures at either form of nonprofit reoriented to become more like for-profits?*

Findings that the various institutional forms altered their reward structures so that for-profits and nonprofits (of either form) became more alike would suggest, though not prove, that (a) nonprofits do act differently from for-profits when revenue constraints are looser, but (b) in response to fiscal stress nonprofits choose to more closely emulate private firms.

If objectives of the three institutional forms of hospitals differ, and if one or both type of nonprofit pursued goals that are difficult to measure and reward—e.g., what is truly “charity care” and how should it be valued--then nonprofits would be less likely than for-profits to rely on strong, performance-based, bonuses in their employee compensation packages—at least for its top managers.

For lower-level employees, nonprofits and for-profits might seek to motivate workers identically even if goals for the organization differed. That would be so if employers of all institutional forms wanted a particular type of worker—say, an EKG medical technician—to perform in the same way.

Note that these expectations assume a model in which all forms of organizations, religious and secular nonprofits as well as for-profit firms, are efficient in optimizing their objective functions subject to the constraints they face. The assumption of efficient pursuit of goals, however, may be questioned. Indeed, it has been argued that nonprofit organizations, including governmental, are less efficient than private firms because their executives are not legally permitted to share in the profits that greater efficiency would bring (Alchian and Demsetz 1972). In terms of labor compensation, the claim of greater efficiency of private firms would imply that those firms differ from nonprofit organizations in their labor market behavior, in such terms as the level of compensation, the greater use by nonprofits of weaker incentives, in the form of base salary, and the greater use by for-profits of stronger incentives, performance-based bonus.

These differences in rewards are observable. By examining them we can cast light on the property-rights-based prediction that institutional forms differ systematically in their labor market behavior. It is difficult, however, to identify causality since differential rewards could result from either differential efficiency in pursuit of the same goals, or the pursuit of different goals. By contrast, findings that labor compensation structures across institutional forms were the same would suggest that behavior in output and input markets are similar, although the possibility could not be ruled out that both goals and efficiency differed across institutional forms, the two differences having offsetting effects.

To advance toward testable hypotheses we consider adding some additional assumptions to the model presented above: (1) Objective functions differ across institutional forms: For-profit hospitals are profit maximizers; nonprofits are “bonoficers” (Weisbrod 1988)--maximizers of a function that includes outputs that are socially valuable but privately unprofitable, M. M encompasses collective goods such as charity care, basic research, and community education, as well as outputs involving quality that is costly for consumers to observe. (2) Diverse institutional objective functions affect differentially the optimal incentive structure for top managers but not for mid-level managers or technical personnel. (3) An exogenous reduction in revenue from one revenue source—e.g., patient fees--does not alter an organization’s optimal behavior in markets for revenue from other sources such as donations or ancillary activity. Under these assumptions, which may or may not be consistent with our findings, we hypothesize the following:

*Changes in Reward Structures over time.* For the period 1992-1997, while the exogenous revenue constraint tightened on all hospitals, we test:

Hypothesis I: *Top management reward structures* at nonprofit and for-profit hospitals became more equal over the 1992-97 period. We expect that nonprofit hospital behavior shifted toward more commercialism—more attention to ancillary, revenue-good markets, and that this was reflected in increased reliance on performance-based bonuses related to profitability.

Hypothesis II: *Reward structures for middle management and technicians* (IIA) were, indistinguishable between each of the nonprofit ownership forms and the for-profits in 1992,

and remained so in 1997, and (IIB) were overwhelmingly focused on base salary, with little bonus element in either year.

In summary, we focus particularly on the demand side of labor markets in the for-profit and in each of two nonprofit hospital sectors, over time and moving down the job ladder, using observable reward structures to infer behavior in forms that are difficult to observe. We expect that for top management the nature of reward structure is critical to optimization of organization objective functions, in which case different reward structures would imply different desired behavior and, hence, different organization goals. For lower-level jobs, by contrast, we hypothesize that for-profit and nonprofit organizations seek the same kinds of “performance,” find it is relatively costless to monitor, and hence reward it similarly, even when overall organization objective functions differ.

It is difficult to derive strong predictions as to the effects of an exogenous revenue reduction on compensation structures for top managers, middle-level managers, or technicians in any specific institutional form. Under the assumption, however, that private firms adjust to the exogenous revenue shock in a long-run profit-maximizing way, it is meaningful to determine whether nonprofit organizations respond similarly or differently. This is what we do.

#### **IV. Data and econometric model**

We utilize data from annual surveys administered by a proprietary compensation consulting firm, The Hay Group, for years 1992 and 1997.<sup>8</sup> The survey asks questions about compensation policies of hospitals for dozens of job titles. We have data for approximately 1,000 hospitals for each year. Data going back to the mid-to-late 1980s, following



introduction of the Medicare Prospective Payment System, would have been useful but were not available. We consider only general non-governmental hospitals; “specialty” hospitals are excluded.

While each hospital listed by the American Hospital Association was contacted each year (3732 and 3593 general non-governmental hospitals in 1992 and 1997 respectively), the number of respondents, 908 and 857 in 1992 and 1997 respectively, constituted a rate of less than 25 percent. With respect to possible selection bias, what is clear is that respondent hospitals are disproportionately large and in urban areas (that is, in MSAs). Not all respondent hospitals report compensation data for all jobs. Moreover, we cannot distinguish between cases in which a hospital does not have an employee with a specific job title and in which the hospital chooses not to provide the information.

It is also the case that hospitals that responded in one of the years 1992 and 1997 did not necessarily respond in the other. With respect to responses about compensation policies for CEOs, for example, 731 hospitals reported in 1992 and 696 in 1997, but only 249 reported CEO information in both years. For CEO and Senior Managerial jobs we used balanced sample but for Middle Management and Technician level jobs the balanced samples were sufficiently small at for-profit hospitals that we use the full, unbalanced, samples for each year. Also, we analyzed only those Middle Management and Technician level jobs for which we had more than 15 observations for each ownership type (list of job titles analyzed in this work are in table 1).

Hay data provide the following details about compensation packages for each job title: (1) base salary paid in the prior year; (2) whether the job is bonus-eligible; (3) the amount of bonus paid in the prior year; and, for CEOs, (4) the criteria used to determine the

bonus; see table 2 for the full list of criteria, which include quality of care, market share, etc. With respect to measuring whether a hospital offers a bonus as part of its CEO compensation package, we assume that it does if the hospital's survey respondent did one or both of the following: checked the bonus-eligible box or reported a positive amount of bonus paid. There are some hospitals that reported criteria they used to determine the bonus but did not report any amount of bonus or bonus eligibility. These cases are considered as not offering a bonus. Results when we considered those hospitals as offering bonus are similar and can be obtained from the authors on request.

Contrary to common opinion, the use of bonuses by nonprofit organizations is not precluded by law. Nonprofits are limited, however, in the extent to which they may base a bonus on the organization's profit or surplus. This "nondistribution" constraint on nonprofits is designed to prevent them from acting like private firms that may distribute profits to owners. Bonuses that are not based on organization profit or surplus are not restricted, and even bonuses that are so based are not precluded. Thus, nonprofit hospitals are permitted to reward "good performance" with bonuses. They may also choose the dimensions in which performance is measured. They are, however, restricted relative to private firms in their rewarding of profitability.

As controls we utilize a number of variables characterizing each hospital and the "complexity" of each of its jobs with a given title—"Hay Points." Developed by Hay Consultants the evaluation of job complexity considers specialized know-how, problem solving abilities and accountability required by the job. This measure helps us account for possible differences in the job definition across hospitals. For jobs other than CEO, however, missing values for this variable led us to drop it in order to obtain a reasonable sample size.

Control variables for other, arguably exogenous, characteristics of each hospital were obtained by matching the Hay Group survey data with data from AHA (American Hospital Association) hospital surveys for years 1992 and 1997. These include the ownership type, number of licensed beds, location (a dummy for whether the hospital is in an urban area—that is, in a MSA), and other dummies for geographic region: northeast, south, and midwest, with west being the omitted class. Summary statistics are in table 3, for CEOs only.

Specifically, we analyze four measures of “compensation structure” referred to above: (1) base salary, (2) bonus eligibility (whether a hospital offers a bonus or not), (3) amount of bonus, for those hospitals that offer a bonus, and (4) total compensation—base salary plus bonus. We have no data on other forms of compensation such as stock options, expense accounts, and fringe benefits, which may also vary in systematic ways across institutional forms and over time. All the values are in 1992 dollars corrected with the CPI-Health. (For CEOs, in work in progress we also examine (5) criteria used to determine bonus size.) Thus, we analyze institutional differences in reward patterns across time and down the job ladder, controlling for hospital size, job complexity, and location.

We conduct studies for balanced and unbalanced samples. With the job titles for which we have balanced samples of adequate size for analysis (specifically CEO), we first investigate whether hospitals of different ownership type reacted differently to change in financial constraints. For that we determine the percent change in base salary, bonus payment and total compensation between 1992 and 1997 for each job title at each hospital.

Then we regress the change, in percentage points, on ownership dummies (for-profit is the omitted class) as well as on control variables, using values in 1992. For bonus eligibility we create a new variable that takes a value of +1 if the hospital started to offer a

bonus—that is, it offered one in 1997 but not in 1992—a value of 0 if the hospital did not change its bonus policy, and a value of  $-1$  if the hospital stopped offering a bonus in 1997 although it did offer one in 1992. Then we use an ordered probit model to assess the impact of ownership type on the change in bonus policy. In all regressions the coefficient for a dummy variable reflects a differential response compared with a for-profit hospital, to financial stringency. If there were no cross institutional difference in the changes we analyze, the coefficient on institutional form would equal zero.

We also regress each of the four dependent variables, base salary, bonus payment, bonus eligibility, and total compensation, on ownership dummies (for-profit is the omitted class) and on control variables for each of the years 1992 and 1997 separately. For the total compensation and base salary estimations we use OLS. For the bonus eligibility equations, for which the dependent variable is a dichotomous dummy indicating whether the hospital offers a bonus, we utilize a logit model. For the amount of bonus, conditional on the job being bonus-eligible at a specific hospital, we estimate a tobit model to account for the occurrence of bonuses of size zero; that is, some employees whose jobs are bonus eligible do not receive a bonus. Since for-profit status is the omitted category, coefficients for secular and religious hospitals give the estimated difference between these types of hospitals and for-profit hospitals. Then we test whether there is a change in these coefficients across years.

For the analysis of middle management and technical jobs we utilize unbalanced samples since balanced samples are too small to be useful.

Our tests signal heteroskedasticity, which, while not causing OLS regression coefficients to be biased, does affect the estimated variances. We use a Huber/White/Sandwich estimator for robust variances. In the tobit analyses, however,

coefficients are biased when heteroskedasticity exists. To deal with this we assume that the error term variance can be expressed as a function of hospital size, which we suspect to be the reason for heteroskedasticity, and then estimate the model accordingly.

## **V. Results**

Before presenting our results it is useful to restate the two hypotheses:

Hypothesis I: *Top management reward structures* at nonprofit and for-profit hospitals became more equal over time. We expect that nonprofit hospitals responded to the fiscal stress by acting more like for-profit hospitals as reflected in increased reliance on performance-based bonuses.

Hypothesis II: *Reward structures for middle management and technicians* (IIA) were indistinguishable between each of the nonprofit ownership forms and the for-profits, and remained so, and (IIB) were overwhelmingly focused on base salary, with little bonus element in either year.

### **Findings**

#### ***Changes in Differential Compensation Structures Across Institutional Forms, CEOs, 1992-97***

Table 4 examines the differences in levels in 1992, and again in 1997. For each of the four compensation measures the first column shows the results of regressing the 1992 level on ownership dummies and control variables (coefficients for control variables are not shown in this or subsequent tables, but they are available upon request), and the second column shows the results for 1997. The third column shows the differences between coefficients for

year 1992 and 1997 as well as its standard error. A positive number in column 3 indicates an increase in the difference between for-profit and either secular or church-related hospitals, while a negative number indicates a decrease. Large variance causes insignificant change in all the measures except for bonus eligibility, for which difference between secular and for-profit hospitals decreased significantly and substantially. For other measures, secular hospitals became more like for-profit hospitals although not significantly. Differences in estimated total compensation decreased by about one-third for an average hospital, while differences in base salary decreased by \$3,000, about 13 percent, to \$23,000. The differential amount of (conditional) expected bonus increased by \$3,000. The predicted probability of offering a bonus increased substantially more at secular nonprofits than at for-profits, and so the two forms became more alike, although they remained significantly different in 1997.

Church related hospitals, by contrast, became less like for-profits over the period, although generally not significantly. The difference in total compensation increased by \$8,000 to \$14,000. In terms of base salary, church-related hospitals increased it less than did for-profits, and since the for-profits paid smaller base salaries the difference between the two types of hospitals decreased to \$18,000 from \$28,000, a decrease of 36 percent. At the same time, the church-related hospitals became less likely to offer a bonus, and the expected bonuses, relative to for-profits, became even more unequal.

Particularly notable are the differential responses of the two type of nonprofits, secular and church-related. In 1992 they were very similar in all four dimensions of compensation. In 1997, however, they were significantly different in both total compensation and bonus eligibility, secular hospitals offering higher compensation and more frequent bonuses.

Table 5 describes the changes in another way, analyzing the change in compensation measures in responses to financial constraints in the market for CEOs. The first column shows coefficients for ownership dummies from a regression of percentage point change in total compensation between 1992 and 1997. Our estimates show that the changes in total compensation of CEOs at secular hospitals did not differ from the change at for-profit hospitals (the coefficient is 0.20 percentage point and is statistically insignificant). Religious hospitals (denoted “church”), however, did not increase total compensation as much as did for-profits or secular non-profits. The increase is some 11 percentage points less than at for-profits, a difference that is statistically significant.

In terms of base salary (column 2 in table 5) the results are similar. Even though the difference between the changes at secular nonprofits and at for-profits is around 5 percentage points, it is not significant. By contrast religious hospitals increased the base salary by 11 percentage points less than did for-profits, and this difference is significant at the 1% level.

With respect to the change in the amount of bonus, conditional on bonus eligibility (column 3), standard errors are large and coefficients are insignificant. This could result from unobserved variation in hospital performance that we are unable to control for. However, we do observe an increase in the amount of bonus paid across all hospital forms, and although differentials are not significant, the coefficients for church and secular nonprofits are negative and quite substantial.

The last column is the analysis of the change in bonus eligibility. It addresses the question of whether the nonprofits that did not offer a bonus in 1992, when virtually all for-profits did, began offering a bonus by 1997. A positive coefficient (as for secular) indicates higher probability of switching to offer a bonus as compared with for-profits, while a

negative coefficient (as for church) implies a higher probability of stopping bonus eligibility compared with for-profit hospitals. As shown in the bottom, “expected values,” panel of table 5, secular nonprofits were significantly more likely than either for-profits or religious hospitals to begin offering a bonus. For an average secular nonprofit hospital the chances of beginning to offer a bonus is 15 percent, compared to 2 percent and 5 percent for religious and for-profit hospitals, respectively.

### **Middle Management**

Compensation schedules at middle level management positions, in sharp contrast with CEOs, vary little across ownership types. Table 6 shows that for only two job titles is total compensation significantly higher for religious and secular hospitals compared with the for-profit ones. From 1992 to 1997 the situation did not change markedly. The difference decreased for Head of Housekeeping (HH)—for secular nonprofits dropping from \$5,900 in 1992 to \$3,800 in 1997, though remaining significant at 10% level, and remained essentially unchanged for Head of Purchasing (HP), again remaining significant. For other jobs the differences remained statistically insignificant.

The same picture appears in base salary (table 7). For HH and HP, nonprofit hospitals pay significantly higher base salaries and continue to do so in 1997, while other jobs do not differ significantly in their pay across ownership types in either year.

Turning to bonus eligibility (table 8), we first observe that the tendency to offer bonuses to mid-level employees is much lower than it is for CEOs, even at for-profit hospitals, with one exception, Head of Nursing. For no type of hospital is the tendency to offer a bonus above 50% (this number is at least 90% at for-profits for CEOs). While for-



profits are somewhat more likely than are nonprofits to offer bonuses to mid-level employees, the differences are not statistically significant.

Similarly, the change in bonus eligibility across years is negligible for middle managers (table 9). Bonus eligibility for Head Nurse, however, is more like that of CEOs. At for-profit hospitals, an estimated 94 percent offer bonuses to their Head of Nursing, a significantly higher level than at either type of nonprofit—40 percent at secular nonprofits and 13 percent at religious nonprofits. From 1992 to 1997 we see that each type of nonprofit became more likely to offer bonuses to their Head Nurse, while the rate decreased slightly at for-profits.

#### **Technician Level Jobs:**

As we expected, for technician-level jobs there are virtually no differences across ownership types. Expected “total compensation” (table 10) in 1992 differs between for-profits and each type of nonprofit by about \$1,000 or less, and the differences are not significant statistically. Moreover, this situation is preserved in 1997, with but one exception. For nuclear medicine technicians, compensation at religious nonprofits, while only \$1,600 lower than at for-profits, is significantly lower.

Base salary (table 11) reflects a similar pattern, and eligibility for a bonus (table 12) is almost always below 10% for all jobs and hospital types in both years. With so few of the hospitals offering bonuses we cannot analyze differences in the amount of bonus.

## **VI. Conclusion**

We analyzed changes in compensation schemes at nonprofit—both religious and secular-- and for-profit hospitals between 1992 and 1997. While there are many reasons for wanting to

understand patterns of compensation and their changes over time, our principal motivation was to increase understanding of the objective functions of organizations that may, but may not, pursue goals other than profit maximization.

We focused on the reward or incentive structures that organizations of various ownership forms, which we term institutional forms, present their employee-agents. If either or both of religious and secular nonprofits were acting as profit-maximizers-in-disguise, we would expect them to utilize the same reward structures as do private firms in the same industry—in this case, hospitals. If, by contrast, one or both types of nonprofits were pursuing materially-different objective functions than profit-maximization, we would expect that to become manifest in differential reward structures as compared with for-profit firms, particularly in terms of the utilization of bonus compensation relative to base salary.

A natural experiment, involving an exogenous change in public and private health care policy, shifting it toward cost containment, permitted an analysis of how hospitals of various institutional forms responded to the resulting cut in patient revenues. Our data permitted analysis of changes in reward structures over the period 1992-1997. A key question is whether, in response to the budget stringency that confronted hospitals of all ownership forms, either or both forms of nonprofit hospitals altered their compensation structures to focus more sharply on measurable performance, particularly in terms of financial performance, thereby making their reward structures more like that of their for-profit counterparts.

We hypothesized that responses to the exogenous fiscal stringency would differ across institutional forms, reflecting differential objective functions, but only for top management, not for middle management or technical workers. These expectations reflected

the hypotheses that organizations of all institutional forms, and regardless of their objective functions, seek the same kind of performance from middle management and technical workers, and do not have great difficulty measuring that performance, but that differential objective functions would give rise to differential reward structures for top management.

Our findings are largely consistent with these expectations. For CEOs we found that while compensation (both base salary and total compensation) increased industry wide between 1992 and 1997, the differences between nonprofits and for-profits decreased for secular hospitals but not for religious ones. For-profit hospitals were far more likely to offer incentive-based compensation schemes to their top managers at the beginning of the 1992-97 study period, but by the end of the period the difference from secular hospitals diminished substantially. On the other hand, religious hospitals did not follow secular hospitals in imitating for-profits. Religious nonprofits did not increase their use of the relatively strong reward mechanism, performance-based bonus. As a result, by 1997 there were significant differences between these two types of nonprofits.

In lower level jobs, nonprofits and for-profits provided the same compensation, in total and in composition, at the beginning of the period, and at the end. As hypothesized, this suggests that regardless of organization objective function, hospitals measure performance of workers at these levels in the same terms. For these employees there appears to be a unified labor market within which institutional form does not matter. While further research is warranted, it appears that workers may be indifferent as to the institutional form of hospital at which they work, and institutions may be indifferent among workers, conditional on their observable productivity.

Public policy does not distinguish between nonprofit organizations that are religiously affiliated and those that are secular. Tax subsidies are offered to both, without distinction. We find, however, that they behave differently in response to fiscal stress. This suggests that they may also behave differently in other contexts, although further research is needed to achieve a more general understanding of their behavior. While this study did not examine the differential responsiveness of each type of organization to variation in the degree of competition, we conjecture that these would be similar to the findings reported in this paper, since both cost-containment policies and increased competition confront suppliers with diminished revenue.

Anti-trust law makes no distinction between either form of nonprofit and for-profit firms, applying equally to both. Prior study of the nursing home and mentally handicapped facility industry found systematic differences in performance among these forms of nonprofits as well as between them and for-profits, in a number of dimensions (Weisbrod 1988). Now, our examination of the hospital industry also finds that religious and secular hospitals reacted differently to altered financial constraints, secular nonprofits becoming more like for-profits during the 1992-97 period in the way they compensated their managers.

Behavior of any organization reflects both its objective function and the constraints faced. More-effective modeling of behavior of various forms of organizations in mixed industries requires better understanding of how to characterize both objective functions and constraints. The latter are not limited to the restriction on nonprofits' freedom to distribute profit or surplus to owners or managers. This paper, utilizing employee compensation structures as indicators of organization goals, advances this process, and by observing how compensation structures respond differentially to fiscal stress, permits some limited

inferences about the interplay of objective functions and constraints other than those that are constant over time. Sorting out the effects of the two forces, however, requires further study. So, too, attention to other institutionally mixed industries is needed to facilitate generalizations about differential institutional behavior.

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## Notes

<sup>1</sup> Empirical research on industries in which those forms of institutions coexist have disclosed systematic differences in a number of behavioral dimensions in a number of industries. These include general and psychiatric hospitals (Schlesinger and Dorwart 1984, Sloan 1998, Roomkin and Weisbrod 1999), nursing homes and facilities for the mentally handicapped (Weisbrod and Schlesinger 1986, Weisbrod 1988, 1998) and day care (Mauser 1998). Studies comparing private firms with governmental competitors, which are not examined in this paper, have been examined for railroads (Christensen et al 1980), airlines (Davies 1971), and trash collection (Savas 1977). Because these studies have been cross-sectional, they have not addressed the question of how exogenous changes in budgetary or price constraints affect behavior of each form of institution over time.

At the theoretic level, nonprofit organizations have been modeled as having a variety of objective functions including maximization of a function of quantity and quality of output (Newhouse 1970), self-interest of key input suppliers such as physicians at hospitals (Pauly and Redisch 1973), and “bonoficing” provision of collective goods (Weisbrod 1988), and as subject to a “nondistribution” constraint, which limits managers’ opportunity to share in organization profit or surplus (Alchian and Demsetz 1972; Hansmann 1980).

<sup>2</sup> Resource constraints have been examined in studies of donations functions for money (Weisbrod and Dominguez 1986, Okten and Weisbrod 2000, Khanna, Posnett and Sandler 1995, Khanna and Sandler 2000), for volunteer labor (Menchik and Weisbrod 1987, Segal and Weisbrod 2001), and for revenue from “ancillary” activities (Segal and Weisbrod 1998).

<sup>3</sup> There is some evidence, however, that such preference differentials do exist. In a survey of hospital volunteers such a preference was found (Wolf, Weisbrod, and Bird, 1993). While half of respondents reported no preference as to volunteering to a for-profit or a nonprofit hospital, the other half reported a preference for volunteering to a nonprofit.

<sup>4</sup> Whether such subsidies could be more effectively utilized, e.g., by governmental contracting with for-profit firms, is a separable matter.

<sup>5</sup> Profit from Unrelated Business Activity is taxable as ordinary corporate profit.

<sup>6</sup> Ancillary activities may or may not be interpreted by the IRS, the regulatory agency in the U.S., as “unrelated business activity,” profit from which is subject to ordinary corporate profit taxation. Conceptually, however, we define “ancillary” as any revenue-generating activity that the nonprofit organization would not engage in but for the profit it generates.

<sup>7</sup> Source: Our computations from IRS-Statistics of Income Division annual sample data tapes. The samples include all organizations with assets of \$10 million or more in current dollars, plus a small random sample of smaller organizations. Most hospitals would thus be included. The time trend during the 7-year period showed an increase of 3.5% per year in the number of hospitals reporting UBI, an increase of \$68,000 per year per hospital reporting UBI, and an increase of \$47,000 per all hospitals. (Data are not available prior to 1990).

<sup>8</sup> We also have data for years 1998 through 2000. We choose not to use these later years because of an extraneous exogenous shock to bonus policies of for-profit hospitals. After a fraud lawsuit against a major for-profit hospital chain, Columbia/HCA Health Corporation, the chain ceased using bonuses to reward managers, in order to reduce the incentives to expand profit by using questionable business practices.

**Table 1: Job Titles**

	CEO
Middle Management	
	Head of Nursing Services
	Head of Dietary and Food Services
	Head of Housekeeping
	Head of Imaging/Radiology (Non-Medical)
	Head of Medical Records
	Head of Patient Accounting/Business Office
	Head of Purchasing/Materials Management
Technician Level	
	Nurse Supervisor
	EKG Technician
	Nuclear Medicine Technologist
	Radiology Technologist
	Respiratory Therapist
	Staff Dietician
	Staff Medical Technologist
	Ultrasound Technologist

**Table 2: Bonus Criteria listed in Hay Survey**

Net Income/Operating surplus
Return on equity/assets/investment
Operating efficiency, defined as cost per adjusted patient day or ...
Quality of care
Growth in earnings/revenue/market share
Other(s)

**Table 3: Summary Statistics (CEO)**

	92				97			
	Fprof	Secular	Church	All	Fprof	Secular	Church	All
<b>Base Salary</b>	97.46 (33.51)	152.55 (45.50)	138.20 (45.29)	124.79 (47.71)	121.80 (34.81)	180.64 (50.89)	152.07 (48.37)	148.77 (51.10)
<b>Bonus</b>	47.97 (51.46)	20.68 (18.28)	17.90 (23.33)	36.89 (44.16)	60.09 (39.73)	44.00 (28.20)	27.40 (18.02)	52.29 (36.53)
<b>Number of Beds</b>	164.22 (100.34)	292.70 (179.16)	253.84 (154.36)	227.01 (154.57)	162.78 (95.34)	292.05 (169.99)	221.67 (126.79)	220.71 (144.57)
<b>Job Points</b>	1250.87 (227.62)	1780.71 (488.57)	1518.91 (399.00)	1491.87 (441.91)	1305.85 (237.69)	1916.72 (587.50)	1585.44 (382.54)	1579.84 (503.78)
<b>MSA</b>	0.66 (0.48)	0.73 (0.44)	0.73 (0.45)	0.70 (0.46)	0.66 (0.48)	0.74 (0.44)	0.72 (0.45)	0.70 (0.46)
<b>South</b>	0.75 (0.44)	0.27 (0.44)	0.23 (0.42)	0.48 (0.50)	0.75 (0.44)	0.29 (0.46)	0.19 (0.39)	0.48 (0.50)
<b>West</b>	0.20 (0.40)	0.19 (0.41)	0.16 (0.37)	0.19 (0.40)	0.20 (0.40)	0.18 (0.39)	0.19 (0.39)	0.19 (0.40)
<b>Northeast</b>	0.00	0.20 (0.40)	0.07 (0.25)	0.09 (0.28)	0.00	0.21 (0.41)	0.07 (0.26)	0.09 (0.28)
<b>N</b>	114	91	44	249	114	92	43	249
<b>N(giving bonus)</b>	112	51	28	191	108	60	17	185

Standard Errors are in parentheses.  
Base salary and bonus in \$ 000.

**Table 4: CEO: Differences in level of compensation measures in 1992 and 1997 across institutions**

	Total Compensation			Base Salary			Amount of bonus			Bonus Eligibility		
	92	97	Diff. #	92	97	Diff. #	92	97	Diff. #	92	97	Diff. #
<b>Secular</b>	-16.69	-10.92	-5.77	26.62 *	23.09 *	-3.53	-34.53 ***	-37.57 *	3.05	-3.79 *	-1.80 *	-1.99 **
(vs. for-profit)	(13.08)	(11.72)	(17.57)	(6.53)	(6.52)	(9.23)	(18.26)	(13.83)	(22.91)	(0.81)	(0.58)	(1.00)
<b>Church</b>	-14.40	-23.29 **	8.89	28.40 *	18.23 **	-10.17	-31.99 **	-36.12	4.13	-3.45 *	-2.73 *	-0.72
(vs. for-profit)	(13.47)	(11.15)	(17.49)	(7.09)	(7.25)	(10.14)	(14.30)	(24.94)	(28.75)	(0.84)	(0.60)	(1.03)
<b>N</b>	249	249		249	249		142	142		249	249	
<b>R-sq</b>	0.25	0.44		0.62	0.66					0.27	0.28	
<b>Log likelihood</b>							-666.88	-688.40				
<b>Expected values at mean levels of independent variables</b> (for bonus eligibility it is the probability that a hospital offers bonuses)												
<b>Secular</b>	143.57	180.76		136.66	160.18		9.87	20.93		0.57	0.71	
	(5.45)	(5.72)		(3.55)	(3.85)		(16.09)	(12.67)		(0.07)	(0.06)	
<b>Church</b>	145.86	168.40		138.45	155.32		12.41	22.39		0.65	0.49	
	(7.32)	(5.98)		(4.72)	(5.23)		(13.68)	(24.74)		(0.08)	(0.09)	
<b>For-Profit</b>	160.26	191.68		110.05	137.09		44.39	58.51		0.98	0.94	
	(9.23)	(7.90)		(4.26)	(3.98)		(4.77)	(5.03)		(0.01)	(0.03)	
<b>Test: Secular=Church</b>												
<b>F</b>	0.09	2.93		0.1	0.63		0.01	0		0.63	4.62	
<b>P-value</b>	0.76	0.08		0.74	0.42		0.91	0.95		0.42	0.03	

# Difference calculated by subtracting the coefficient for year 1992 from the coefficient for year 1997.

Notes:

Standard Errors are in parentheses.

\*, \*\*, and \*\*\* indicate statistical significance at 1%, 5%, and 10% levels respectively.

Results are obtained by OLS for total compensation and base salary, tobit for amount of bonus, and logit for bonus eligibility.

Total compensation, base salary and amount of bonus are in \$ 000.

**Table 5: CEO: Differences in change of compensation measures from 1992 to 1997 across institutions**

	<b>Total Compensation</b> (percentage point change) <sup>#</sup>	<b>Base Salary</b> (percentage point change) <sup>#</sup>	<b>Amount of bonus</b> (percentage point change) <sup>#</sup>	<b>Bonus Eligibility</b> (change in policy) <sup>##</sup>
<b>Secular</b> (vs. for-profit)	-0.20 (7.28)	-5.64 (4.96)	-52.43 (51.82)	0.63 <sup>**</sup> (0.25)
<b>Church</b> (vs. for-profit)	-11.64 <sup>***</sup> (6.30)	-11.48 <sup>*</sup> (4.35)	-42.36 (51.17)	-0.36 (0.27)
<b>N</b>	249	249	133	249
<b>R-sq</b>	0.0871	0.0806	0.03	
<b>Log likelihood</b>				-151.00
	<b>Expected values at mean levels of independent variables</b> (for bonus eligibility it is the probability that a hospital will start offering bonuses)			
<b>Secular</b>	30.124 (4.27)	21.8653 (3.14)	102.767 (43.11)	0.15 (0.03)
<b>Church</b>	18.6845 (3.67)	16.0262 (2.84)	112.844 (50.38)	0.02 (0.00)
<b>For-Profit</b>	30.3242 (4.73)	27.5093 (3.05)	155.2 (45.97)	0.05 (0.01)
<b>Test: Secular=Church</b>				
<b>F</b>	4.64	2.03	0	14.24
<b>P-value</b>	0.03	0.156	0.95	0.00

# Calculated using the following formula:  $[(\text{Value}_{97} - \text{Value}_{92}) / \text{Value}_{92}] * 100$

## Dependent variable takes value 1 if hospital started to offer bonuses, 0 if it did not change its bonus policy and -1 if it stopped to offer bonuses

Notes:

Standard Errors are in parentheses.

\*, \*\*, and \*\*\* indicate statistical significance at 1%, 5%, and 10% levels respectively.

Results are obtained by OLS for total compensation, base salary and amount of bonus, and by ordered probit for bonus eligibility.

Total compensation, base salary and amount of bonus are in \$ 000

**Table 6: Middle Managerial Jobs: Differences in level of total compensation in 1992 and 1997 across institutions**

	Head of Nursing			Head of Dietary Services			Head of Housekeeping			Head of Imaging			Head of Medical Records			Head of Patient Accounting			Head of Purchasing		
	92	97	Diff.#	92	97	Diff.#	92	97	Diff.#	92	97	Diff.#	92	97	Diff.#	92	97	Diff.#	92	97	Diff.#
<b>Secular</b> (vs. for-profit)	-1.33 (3.04)	-18.49 (5.19)	17.16 (6.02)	1.62 (2.49)	0.66 (1.79)	-0.96 (3.07)	5.91 (1.97)	3.81 (2.21)	-2.09 (2.96)	1.70 (2.02)	1.03 (1.78)	-0.67 (2.69)	2.67 (1.99)	2.87 (1.75)	0.20 (2.65)	-0.43 (1.65)	0.69 (2.23)	0.26 (2.77)	6.00 (1.84)	6.01 (1.82)	0.00 (2.59)
<b>Church</b> (vs. for-profit)	-9.95 (5.96)	-18.53 (5.80)	8.58 (8.31)	2.86 (2.64)	0.44 (1.99)	-2.42 (3.31)	4.96 (2.10)	3.91 (2.35)	-1.06 (3.15)	1.21 (2.11)	0.85 (2.03)	-0.36 (2.93)	2.61 (2.07)	2.12 (1.94)	-0.49 (2.84)	-2.08 (1.75)	-1.23 (2.64)	-0.85 (3.17)	5.36 (1.93)	6.00 (2.12)	0.64 (2.87)
<b>N</b>	92	92		292	236		294	206		375	328		406	328		301	272		343	288	
<b>R-sq</b>	0.38	0.26		0.49	0.42		0.47	0.37		0.43	0.31		0.44	0.38		0.37	0.37		0.41	0.33	
<b>Expected values at mean levels of independent variables</b>																					
<b>Secular</b>	66.66 (2.19)	66.16 (3.20)		48.45 (0.61)	49.26 (0.80)		42.69 (0.61)	42.03 (0.78)		52.14 (0.54)	54.59 (0.70)		46.31 (0.45)	48.98 (0.65)		48.12 (0.72)	50.26 (0.93)		50.69 (0.71)	53.03 (0.87)	
<b>Church</b>	58.04 (5.51)	66.12 (4.41)		49.69 (1.06)	49.03 (1.15)		41.75 (0.95)	42.12 (1.16)		51.65 (0.83)	54.41 (1.29)		46.26 (0.69)	48.23 (1.16)		46.47 (0.97)	48.33 (1.53)		50.04 (0.97)	53.02 (1.41)	
<b>For-Profit</b>	67.99 (1.96)	84.65 (3.16)		46.83 (2.42)	48.59 (1.58)		36.78 (1.87)	38.22 (2.09)		50.44 (1.95)	53.55 (1.62)		43.65 (1.94)	46.10 (1.61)		48.55 (1.49)	49.56 (2.07)		44.69 (1.67)	47.02 (1.58)	
<b>Test: Secular=Church</b>																					
<b>F</b>	2.25	0		1	0.02		0.67	0		0.23	0.01		0	0.29		1.77	1.14		0.26	0	
<b>P-value</b>	0.13	0.99		0.31	0.87		0.41	0.94		0.69	0.9		0.94	0.58		0.18	0.28		0.6	0.99	

# Difference calculated by subtracting the coefficient for year 1992 from the coefficient for year 1997.

Notes:

Standard Errors are in parentheses.

\*, \*\*, and \*\*\* indicate statistical significance at 1%, 5%, and 10% level respectively.

Results are obtained by OLS.

Values are in \$ 000.

**Table 7: Middle Managerial Jobs: Differences in level of base salary in 1992 and 1997 across institutions**

	Head of Nursing			Head of Dietary Services			Head of Housekeeping			Head of Imaging			Head of Medical Records			Head of Patient Accounting			Head of Purchasing		
	92	97	Diff.#	92	97	Diff.#	92	97	Diff.#	92	97	Diff.#	92	97	Diff.#	92	97	Diff.#	92	97	Diff.#
<b>Secular</b> (vs. for-profit)	4.50 <sup>***</sup> (2.70)	-3.76 (3.71)	-0.74 (4.59)	1.57 (2.42)	1.24 (1.73)	-0.33 (2.98)	5.53 (1.96)	4.20 <sup>***</sup> (2.17)	-1.32 (2.92)	1.53 (1.89)	1.42 (1.67)	-0.11 (2.52)	2.67 (1.79)	3.25 <sup>***</sup> (1.65)	0.58 (2.44)	-0.86 (1.65)	0.81 (2.17)	-0.05 (2.72)	5.74 (1.75)	6.03 (1.76)	0.28 (2.48)
<b>Church</b> (vs. for-profit)	-4.33 (5.39)	-2.94 (4.78)	-1.39 (7.20)	2.77 (2.58)	1.15 (1.88)	-1.62 (3.19)	4.63 <sup>**</sup> (2.10)	4.27 <sup>***</sup> (2.30)	-0.36 (3.12)	1.17 (1.99)	1.50 (1.91)	0.33 (2.76)	2.60 (1.88)	2.40 (1.82)	-0.19 (2.61)	-2.19 (1.76)	-0.55 (2.58)	-1.64 (3.12)	5.16 (1.84)	6.08 (2.01)	0.92 (2.73)
<b>N</b>	92	92		292	236		294	206		375	328		406	328		301	272		343	288	
<b>R-sq</b>	0.49	0.19		0.44	0.43		0.46	0.38		0.41	0.33		0.43	0.38		0.36	0.36		0.40	0.34	
<b>Expected values at mean levels of independent variables</b>																					
<b>Secular</b>	65.81 (2.15)	63.87 (2.81)		48.02 (0.60)	48.64 (0.77)		42.31 (0.60)	41.67 (0.76)		51.61 (0.53)	53.72 (0.65)		45.92 (0.44)	48.33 (0.63)		47.73 (0.71)	49.38 (0.90)		50.09 (0.68)	52.24 (0.83)	
<b>Church</b>	56.97 (4.97)	64.69 (4.16)		49.22 (1.07)	48.55 (1.08)		41.41 (0.96)	41.74 (1.13)		51.25 (0.82)	53.79 (1.22)		45.85 (0.69)	47.47 (1.06)		46.39 (0.97)	48.02 (1.46)		49.51 (0.94)	52.29 (1.30)	
<b>For-Profit</b>	61.30 (1.59)	67.63 (2.04)		46.45 (2.36)	47.40 (1.52)		36.78 (1.87)	37.46 (2.06)		50.08 (1.82)	52.30 (1.52)		43.26 (1.75)	45.07 (1.52)		48.58 (1.50)	48.57 (2.03)		44.35 (1.59)	46.21 (1.53)	
<b>Test: Secular=Church</b>																					
<b>F</b>	2.8	0.02		0.94	0		0.62	0		0.13	0		0.01	0.45		1.18	0.62		0.23	0	
<b>P-value</b>	0.09	0.87		0.33	0.94		0.43	0.95		0.71	0.95		0.92	0.5		0.27	0.43		0.63	0.97	

# Difference calculated by subtracting the coefficient for year 1992 from the coefficient for year 1997.

Notes:

Standard Errors are in parentheses.

\*, \*\*, and \*\*\* indicate statistical significance at 1%, 5%, and 10% level respectively.

Results are obtained by OLS.

Values are in \$ 000.

**Table 8: Middle Managerial Jobs: Differences in level of bonus amount in 1992 and 1997 across institutions**

	Head of Nursing			Head of Dietary Services			Head of Housekeeping			Head of Imaging			Head of Medical Records			Head of Patient Accounting			Head of Purchasing		
	92	97	Diff.#	92	97	Diff.#	92	97	Diff.#	92	97	Diff.#	92	97	Diff.#	92	97	Diff.#	92	97	Diff.#
<b>Secular</b> (vs. for-profit)	-7.75 (3.09)	-14.6 (3.98)	6.85 (5.04)	1.441 (1.57)	-0.55 (0.62)	-0.89 (1.69)	No convergence (56 obs, 16 censored)			2.89 *** (1.61)	-0.04 (0.81)	-2.85 (1.80)	2.04 (1.46)	-0.87 (0.75)	-1.17 (1.64)	No convergence (47 obs, 17 censored)			2.64 (1.75)	0.27 (0.89)	-2.37 (1.96)
<b>Church</b> (vs. for-profit)	-0.3 (6.79)	-12.8 (9.51)	12.52 (11.68)	2.823 (1.71)	-0.04 (0.76)	-2.78 (1.87)	in 92			3.28 *** (1.75)	0.16 (1.00)	-3.12 (2.02)	2.93 *** (1.56)	0.38 (0.87)	-2.55 (1.79)	in 92			3.52 *** (1.87)	0.81 (1.07)	-2.71 (2.15)
<b>N</b>	58	57		54	55					70	73		76	71					67	61	
<b>Log likelihood</b>	-176	-205		-106	-104					-141	-167		-149	-147					-142	-137	
<b>Expected values at mean levels of independent variables</b>																					
<b>Secular</b>	2.52 (0.19)	6.51 (3.30)		1.68 (0.40)	2.64 (0.30)					2.03 (0.39)	3.58 (0.39)		1.39 (0.35)	2.73 (0.32)					2.27 (0.40)	3.47 (0.41)	
<b>Church</b>	7.64 (6.81)	8.3 (9.73)		3.06 (0.08)	3.14 (0.56)					2.42 (0.82)	3.8 (0.72)		2.29 (0.67)	4 (0.57)					3.15 (0.80)	4.01 (0.73)	
<b>For-Profit</b>	7.94 (1.18)	21.11 (2.39)		0.24 (1.51)	3.19 (0.51)					-0.85 (1.57)	3.63 (0.70)		-0.64 (1.42)	3.61 (0.63)					-0.37 (1.69)	3.2 (0.77)	
<b>Test: Secular=Church</b>																					
<b>F</b>	1.02	0.03		2.35	0.64					0.19	0.07		1.43	3.86					0.97	0.41	
<b>P-value</b>	0.31	0.86		0.13	0.42					0.66	0.78		0.23	0.05					0.32	0.52	

# Difference calculated by subtracting the coefficient for year 1992 from the coefficient for year 1997.

Notes:

Standard Errors are in parentheses.

\*, \*\*, and \*\*\* indicate statistical significance at 1%, 5%, and 10% level respectively.

Results are obtained by OLS.

Values are in \$ 000.



**Table 9: Middle Managerial Jobs: Differences in level of bonus eligibility in 1992 and 1997 across institutions**

	Head of Nursing			Head of Dietary Services			Head of Housekeeping			Head of Imaging			Head of Medical Records			Head of Patient Accounting			Head of Purchasing		
	92	97	Diff.#	92	97	Diff.#	92	97	Diff.#	92	97	Diff.#	92	97	Diff.#	92	97	Diff.#	92	97	Diff.#
<b>Secular</b> (vs. for-profit)	-3.15 (0.83)	-2.20 (0.77)	-0.95 (1.13)	-0.36 (0.63)	-0.72 (0.45)	0.36 (0.78)	-0.40 (0.64)	-0.91 (0.52)	0.52 (0.83)	-0.52 (0.58)	-0.70 (0.38)	0.19 (0.69)	-0.72 (0.58)	-0.70 (0.38)	-0.02 (0.69)	-0.20 (0.70)	-0.65 (0.41)	0.46 (0.81)	-0.18 (0.62)	-0.61 (0.40)	0.43 (0.73)
<b>Church</b> (vs. for-profit)	-4.61 (1.26)	-3.90 (1.22)	-0.71 (1.75)	-0.86 (0.68)	-1.28 (0.53)	0.42 (0.87)	-0.77 (0.70)	-0.81 (0.59)	0.04 (0.92)	-0.94 (0.63)	-1.24 (0.46)	0.31 (0.78)	-0.99 (0.62)	-0.93 (0.45)	-0.06 (0.76)	-0.52 (0.74)	-1.16 (0.51)	0.65 (0.89)	-0.50 (0.65)	-1.14 (0.47)	0.64 (0.80)
<b>N</b>	92	92		292	236		294	206		375	328		406	328		301	272		343	288	
<b>R-sq</b>	0.37	0.31		0.01	0.04		0.03	0.07		0.02	0.06		0.01	0.03		0.01	0.04		0.01	0.04	
<b>Expected probability of offering bonus at mean levels of independent variables</b>																					
<b>Secular</b>	0.40 (0.11)	0.53 (0.11)		0.22 (0.03)	0.26 (0.04)		0.19 (0.03)	0.18 (0.04)		0.22 (0.03)	0.24 (0.03)		0.19 (0.02)	0.24 (0.03)		0.19 (0.03)	0.23 (0.03)		0.24 (0.03)	0.25 (0.03)	
<b>Church</b>	0.13 (0.13)	0.17 (0.16)		0.15 (0.04)	0.16 (0.05)		0.14 (0.04)	0.19 (0.06)		0.16 (0.04)	0.16 (0.04)		0.16 (0.04)	0.20 (0.05)		0.15 (0.04)	0.15 (0.04)		0.18 (0.04)	0.16 (0.04)	
<b>For-Profit</b>	0.94 (0.04)	0.91 (0.04)		0.29 (0.13)	0.41 (0.09)		0.25 (0.12)	0.35 (0.11)		0.32 (0.12)	0.39 (0.08)		0.33 (0.12)	0.39 (0.08)		0.22 (0.12)	0.36 (0.08)		0.27 (0.12)	0.38 (0.08)	
<b>Test: Secular=Church</b>																					
<b>F</b>	1.55	1.98		1.89	1.94		0.94	0.06		1.66	2.47		0.75	0.48		0.76	1.66		1.06	2.08	
<b>P-value</b>	0.21	0.15		0.16	0.16		0.31	0.8		0.19	0.11		0.38	0.48		0.38	0.19		0.3	0.14	

# Difference calculated by subtracting the coefficient for year 1992 from the coefficient for year 1997.

Notes:

Standard Errors are in parentheses.

\*, \*\*, and \*\*\* indicate statistical significance at 1%, 5%, and 10% levels respectively.

Results are obtained by logit.

**Table 10: Technician Level Jobs: Differences in level of total compensation in 1992 and 1997 across institutions**

	Nurse Supervisor			EKG Technician			Nuclear Med. Tech.			Radiology Technologist		
	92	97	Diff. #	92	97	Diff. #	92	97	Diff. #	92	97	Diff. #
<b>Secular</b>	1.85	0.98	-0.86	-0.50	-0.08	-0.42	-1.15	-1.20	0.04	-1.20	-0.34	-0.86
(vs. for-profit)	(1.47)	(1.11)	(1.84)	(1.48)	(1.23)	(1.93)	(1.20)	(0.78)	(1.43)	(1.08)	(0.62)	(1.24)
<b>Church</b>	1.18	-0.08	-1.10	-0.66	-0.34	-0.32	-0.95	-1.60 ***	0.65	-1.59	-0.43	-1.16
(vs. for-profit)	(1.59)	(1.20)	(1.99)	(1.51)	(1.26)	(1.96)	(1.27)	(0.86)	(1.53)	(1.11)	(0.67)	(1.30)
<b>N</b>	335	306		304	255		352	345		378	355	
<b>R-sq</b>	0.25	0.20		0.14	0.09		0.15	0.17		0.16	0.27	
<b>Expected values at mean levels of independent variables</b>												
<b>Secular</b>	43.53	43.13		18.07	18.65		32.12	31.93		26.25	25.82	
	(0.39)	(0.48)		(0.22)	(0.37)		(0.23)	(0.28)		(0.19)	(0.21)	
<b>Church</b>	42.86	42.07		17.90	18.39		32.33	31.53		25.87	25.73	
	(0.73)	(0.65)		(0.39)	(0.50)		(0.47)	(0.47)		(0.34)	(0.36)	
<b>For-profit</b>	41.68	42.15		18.57	18.74		33.27	33.12		27.45	26.16	
	(1.41)	(0.96)		(1.46)	(1.14)		(1.18)	(0.72)		(1.06)	(0.58)	
<b>Test: Secular=Church</b>												
<b>F</b>	0.63	1.82		0.13	0.18		0.15	0.55		0.48	0.24	
<b>P-value</b>	0.42	0.17		0.71	0.67		0.69	0.45		0.47	0.65	

**Table 10: Technician Level Jobs: Differences in level of total compensation in 1992 and 1997 across institutions(cont.)**

	Respiratory Therapist			Staff Dietician			Staff Med. Tech.			Ultrasound Tech.		
	92	97	Diff. #	92	97	Diff. #	92	97	Diff. #	92	97	Diff. #
<b>Secular</b>	0.75	-0.27	-0.48	-1.55	-0.82	-0.73	-0.21	-0.35	0.14	-0.59	-0.66	0.08
(vs. for-profit)	(1.32)	(0.72)	(1.50)	(0.99)	(0.72)	(1.22)	(1.11)	(0.71)	(1.31)	(1.09)	(0.84)	(1.38)
<b>Church</b>	0.49	-0.95	0.46	-1.65	-0.87	-0.78	-0.51	-0.77	0.26	-0.83	-0.81	-0.02
(vs. for-profit)	(1.37)	(0.77)	(1.57)	(1.02)	(0.81)	(1.31)	(1.16)	(0.75)	(1.38)	(1.14)	(0.88)	(1.44)
<b>N</b>	372	352		344	333		356	349		356	341	
<b>R-sq</b>	0.11	0.19		0.15	0.09		0.26	0.35		0.17	0.11	
<b>Expected values at mean levels of independent variables</b>												
<b>Secular</b>	28.72	28.18		29.84	29.72		30.85	30.88		31.68	31.63	
	(0.22)	(0.26)		(0.23)	(0.28)		(0.21)	(0.23)		(0.24)	(0.27)	
<b>Church</b>	28.46	27.49		29.74	29.66		30.55	30.46		31.44	31.48	
	(0.46)	(0.37)		(0.41)	(0.45)		(0.41)	(0.35)		(0.47)	(0.37)	
<b>For-profit</b>	27.97	28.44		31.39	30.53		31.06	31.23		32.27	32.29	
	(1.30)	(0.66)		(0.95)	(0.65)		(1.08)	(0.66)		(1.05)	(0.80)	
<b>Test: Secular=Church</b>												
<b>F</b>	0.25	2.42		0.05	0.01		0.39	1.04		0.21	0.1	
<b>P-value</b>	0.61	0.12		0.82	0.91		0.53	0.3		0.64	0.74	

# Difference calculated by subtracting the coefficient for year 1992 from the coefficient for year 1997.

Notes:

Standard Errors are in parentheses.

\*, \*\*, and \*\*\* indicate statistical significance at 1%, 5%, and 10% levels respectively.

Results are obtained by OLS.

Values are in \$ 000.

**Table 11: Technician Level Jobs: Differences in level of base salary in 1992 and 1997 across institutions**

	Nurse Supervisor			EKG Technician			Nuclear Med. Tech.			Radiology Technologist		
	92	97	Diff. #	92	97	Diff. #	92	97	Diff. #	92	97	Diff. #
<b>Secular</b>	1.84	0.90	-0.94	-0.46	-0.10	-0.36	-1.06	-1.24	0.18	-1.13	-0.40	-0.73
(vs. for-profit)	(1.42)	(1.11)	(1.81)	(1.47)	(1.24)	(1.92)	(1.15)	(0.79)	(1.39)	(1.04)	(0.62)	(1.21)
<b>Church</b>	1.21	-0.05	-1.16	-0.62	-0.34	-0.28	-0.84	-1.62 ***	0.78	-1.51	-0.47	-1.04
(vs. for-profit)	(1.55)	(1.19)	(1.95)	(1.50)	(1.26)	(1.96)	(1.21)	(0.86)	(1.49)	(1.07)	(0.67)	(1.26)
<b>N</b>	335	306		304	255		352	345		378	355	
<b>R-sq</b>	0.25	0.21		0.14	0.09		0.15	0.17		0.16	0.26	
<b>Expected values at mean levels of independent variables</b>												
<b>Secular</b>	43.40	42.97		18.06	18.61		32.10	31.87		26.24	25.77	
	(0.39)	(0.48)		(0.22)	(0.37)		(0.23)	(0.28)		(0.19)	(0.21)	
<b>Church</b>	42.76	42.02		17.91	18.37		32.32	31.49		25.86	25.69	
	(0.73)	(0.65)		(0.39)	(0.50)		(0.47)	(0.47)		(0.34)	(0.36)	
<b>For-profit</b>	41.55	42.06		18.52	18.71		33.16	33.11		27.36	26.17	
	(1.37)	(0.95)		(1.45)	(1.14)		(1.12)	(0.72)		(1.02)	(0.58)	
<b>Test: Secular=Church</b>												
<b>F</b>	0.58	1.48		0.12	0.14		0.18	0.49		0.56	0.17	
<b>P-value</b>	0.44	0.22		0.73	0.7		0.66	0.48		0.45	0.66	

**Table 11: Technician Level Jobs: Differences in level of base salary in 1992 and 1997 across institutions (cont.)**

	Respiratory Therapist			Staff Dietician			Staff Med. Tech.			Ultrasound Tech.		
	92	97	Diff. #	92	97	Diff. #	92	97	Diff. #	92	97	Diff. #
<b>Secular</b>	0.81	-0.32	-0.49	-1.47	-0.86	-0.61	-0.12	-0.39	0.27	-0.51	-0.71	0.20
(vs. for-profit)	(1.31)	(0.72)	(1.49)	(0.97)	(0.72)	(1.21)	(1.03)	(0.71)	(1.25)	(1.08)	(0.84)	(1.37)
<b>Church</b>	0.56	-0.98	0.41	-1.56	-0.91	-0.66	-0.40	-0.79	0.39	-0.75	-0.83	0.09
(vs. for-profit)	(1.36)	(0.77)	(1.56)	(1.00)	(0.82)	(1.29)	(1.08)	(0.76)	(1.32)	(1.13)	(0.88)	(1.43)
<b>N</b>	372	352		344	333		356	349		378	355	
<b>R-sq</b>	0.11	0.19		0.15	0.09		0.26	0.35		0.27	0.33	
<b>Expected values at mean levels of independent variables</b>												
<b>Secular</b>	28.70	28.12		29.83	29.66		30.84	30.83		31.67	31.56	
	(0.22)	(0.25)		(0.23)	(0.28)		(0.21)	(0.22)		(0.24)	(0.27)	
<b>Church</b>	28.45	27.46		29.74	29.62		30.55	30.42		31.44	31.44	
	(0.46)	(0.36)		(0.41)	(0.45)		(0.41)	(0.35)		(0.47)	(0.37)	
<b>For-profit</b>	27.89	28.43		31.30	30.52		30.96	31.21		32.18	32.28	
	(1.28)	(0.66)		(0.92)	(0.65)		(1.01)	(0.67)		(1.04)	(0.80)	
<b>Test: Secular=Church</b>												
<b>F</b>	0.23	2.28		0.04	0.01		0.37	0.96		0.2	0.07	
<b>P-value</b>	0.63	0.13		0.84	0.92		0.54	0.32		0.65	0.78	

# Difference calculated by subtracting the coefficient for year 1992 from the coefficient for year 1997.

Notes:

Standard Errors are in parentheses.

\*, \*\*, and \*\*\* indicate statistical significance at 1%, 5%, and 10% levels respectively.

Results are obtained by OLS.

Values are in \$ 000.

**Table 12: Technician Level Jobs: Differences in level of bonus eligibility in 1992 and 1997 across institutions**

	Nurse Supervisor			EKG Technician			Nuclear Med. Tech.			Radiology Technologist		
	92	97	Diff. #	92	97	Diff. #	92	97	Diff. #	92	97	Diff. #
<b>Secular</b>	-0.58	0.72	0.15	-0.95	0.99	0.04	-1.00	1.21	0.21	-0.96	1.67	0.71
(vs. for-profit)	(0.82)	(0.67)	(1.06)	(1.17)	(1.09)	(1.59)	(1.14)	(1.07)	(1.56)	(1.13)	(1.06)	(1.55)
<b>Church</b>	-0.96	0.27	-0.68	-1.78	0.31	-1.47	-1.31	0.99	-0.32	-1.33	1.30	-0.03
(vs. for-profit)	(0.90)	(0.79)	(1.20)	(1.48)	(1.21)	(1.91)	(1.30)	(1.14)	(1.72)	(1.29)	(1.14)	(1.72)
<b>N</b>	335	306		304	255		352	345		378	355	
<b>R-sq</b>	0.02	0.02		0.04	0.04		0.04	0.02		0.06	0.03	
<b>Expected probability of offering bonus at mean levels of independent variables</b>												
<b>Secular</b>	0.10	0.12		0.03	0.09		0.03	0.07		0.03	0.09	
	(0.02)	(0.02)		(0.01)	(0.02)		(0.01)	(0.02)		(0.01)	(0.02)	
<b>Church</b>	0.07	0.08		0.01	0.05		0.03	0.06		0.02	0.06	
	(0.03)	(0.03)		(0.01)	(0.03)		(0.02)	(0.03)		(0.02)	(0.03)	
<b>For-profit</b>	0.16	0.06		0.07	0.03		0.09	0.02		0.08	0.02	
	(0.11)	(0.04)		(0.07)	(0.03)		(0.09)	(0.02)		(0.08)	(0.02)	
<b>Test: Secular=Church</b>												
<b>F</b>	0.59	0.72		0.56	1.03		0.15	0.16		0.59	0.66	
<b>P-value</b>	0.44	0.39		0.45	0.3		0.7	0.68		0.44	0.42	

**Table 12: Technician Level Jobs: Differences in level of bonus eligibility in 1992 and 1997 across institutions (cont.)**

	Respiratory Therapist			Staff Dietician			Staff Med. Tech.			Ultrasound Tech.		
	92	97	Diff. #	92	97	Diff. #	92	97	Diff. #	92	97	Diff. #
<b>Secular</b>	-0.97	0.83	-0.14	-0.91	0.67	-0.24	-1.26	0.81	-0.45	-0.99	0.86	-0.13
(vs. for-profit)	(1.14)	(0.79)	(1.39)	(1.14)	(0.80)	(1.39)	(1.17)	(0.78)	(1.40)	(1.15)	(0.79)	(1.39)
<b>Church</b>	-1.38	0.53	-0.85	-2.10	0.20	-1.90	-2.05	0.45	-1.59	-1.18	0.59	-0.59
(vs. for-profit)	(1.29)	(0.89)	(1.57)	(1.47)	(0.93)	(1.74)	(1.47)	(0.89)	(1.72)	(1.30)	(0.90)	(1.58)
<b>N</b>	372	352		344	333		356	349		356	341	
<b>R-sq</b>	0.06	0.02		0.07	0.02		0.05	0.01		0.07	0.02	
<b>Expected probability of offering bonus at mean levels of independent variables</b>												
<b>Secular</b>	0.03	0.08		0.04	0.08		0.03	0.09		0.03	0.08	
	(0.01)	(0.02)		(0.01)	(0.02)		(0.01)	(0.02)		(0.01)	(0.02)	
<b>Church</b>	0.02	0.06		0.01	0.05		0.01	0.06		0.02	0.07	
	(0.02)	(0.03)		(0.01)	(0.02)		(0.01)	(0.03)		(0.02)	(0.03)	
<b>For-profit</b>	0.08	0.04		0.09	0.04		0.09	0.04		0.07	0.04	
	(0.08)	(0.03)		(0.09)	(0.03)		(0.08)	(0.03)		(0.08)	(0.03)	
<b>Test: Secular=Church</b>												
<b>F</b>	0.27	0.3		1.22	0.63		0.52	0.44		0.05	0.25	
<b>P-value</b>	0.6	0.58		0.26	0.42		0.47	0.5		0.81	0.61	

# Difference calculated by subtracting the coefficient for year 1992 from the coefficient for year 1997.

Notes:

Standard Errors are in parentheses.

\*, \*\*, and \*\*\* indicate statistical significance at 1%, 5%, and 10% levels respectively.

Results are obtained by logit.