Do Nonprofits Treat Their Employees Differently?
Incentive Pay and Health Benefits

Xinxiang Chen,[1] *Ting Ren,*[2] *David Knoke*[3]

[1]Mississippi State University, [2]Peking University, [3]University of Minnesota

We examine how nonprofit, public, and for-profit establishments vary in the provision of health benefits and insurance and performance-based incentives using the 2002 National Organization Survey of establishments in the United States. We found that in comparison to for-profit firms, both nonprofit and public organizations are less likely to use performance-based incentives, although they provide their employees with better health benefits and insurance. Sectoral differences in the provision of health benefits and insurance and use of performance-based incentives persist after controlling for correlates of sector that predict these outcomes, including establishment size, independence of establishment, market competition, establishment age, and unionization. We also found trade-offs between the provision of health benefits and insurance and use of performance-based incentives. Our results are generally consistent with the prediction from agency theory and also consistent with a view that

We thank Joachim Savelsberg, Jeylan Mortimer, Phyllis Moen, and other participants at the Eighteenth Annual Meeting of Sociology Research Institute (SRI), Department of Sociology, University of Minnesota, Minneapolis, and the 2009 Academy of Management Annual Meeting at Chicago, for constructive comments. Chen and Knoke are grateful for support from the 2008 Graduate Research Partnership Program Fellowship, University of Minnesota. We also acknowledge the help of editor Duncan V. Neuhauser and two anonymous reviewers, whose comments, advice, and suggestions proved invaluable for the revision.

Correspondence to: Xinxiang Chen, Mississippi State University, nSPARC, PO Box 6027, Mississippi State, MS 39762. E-mail: xchen@nsparc.msstate.edu.

Published online in Wiley Online Library (wileyonlinelibrary.com) DOI: 10.1002/nml.21093

public and nonprofit organizations are more concerned with the well-being of their employees.

Keywords: *agency theory, health benefits, intrinsic motivation, ownership, performance-based incentives*

SOME SCHOLARS DURING THE past decade have argued that nonprofit and public organizations have converged into patterns of behavior similar to those of for-profit organizations (Brody 1996; Ramirez and Janiga 2009; Becker, Antuar, and Everett 2011). They have also debated whether employees receive more concern for their well-being from nonprofit and public organizations than from for-profit firms. Conventional wisdom suggests that, because of the difference in organizational objectives and financial constraints, for-profit firms may drive employees harder toward the maximization of owners' interests, while nonprofit and public organizations may care more for their employees because of a broader social mission that incorporates the interests of employees as a group of key stakeholders. We investigated the issue empirically with evidence from the 2002 National Organizations Survey (NOS) of establishments in the United States and discover support for the theoretical ground underlying the phenomenon.

We asked the following research questions: What are the differences in health benefits as non-performance-based and performance-based incentives among the for-profit, nonprofit, and public sectors? Do employees of nonprofit and public organizations receive better health benefits than their counterpart for-profit firms? Are nonprofit and public organizations less likely to use performance-based benefits than for-profit firms? Answers to these questions have important implications for nonprofit managers because understanding these relationships will keep them informed about the current situation in managing different types of organizations and therefore will be helpful in formulating their strategies for managing nonprofit organizations.

The implementation and effects of performance-based incentives have been widely explored (for example, Appelbaum, Bailey, Berg, and Kalleberg 2000; Bowman 2010; Cappelli and Neumark 2001; Frumkin and Galaskiewicz 2004; Kalleberg, Marsden, Reynolds, and Knoke 2006; Theuvsen 2004). Performance-based incentives, such as gain-sharing plans, profit-sharing plans, and pay for learning new skills, are among the main components of high-performance work organizations (Kalleberg et al. 2006). Substantial research has also been conducted on ownership-related differences in the provision of wages, compensation, and incentives. Some studies have found that, because of the donation of labor by nonprofit employees (Preston 1989), the selection of intrinsically motivated employees into the

nonprofit sector (Handy and Katz 1998; Steinberg 1990), and the compensating differentials favoring for-profit workers (Frank 1996; Weisbrod 1983), nonprofit workers receive lower compensation than their for-profit counterparts. Other studies have provided evidence that nonprofit and public organizations may provide greater fringe benefits to compensate worker efforts (for example, Ben-Ner, Ren, and Paulson 2011). At the same time, nonprofit and public organizations are much less likely than for-profit firms to use performance-based incentives such as gain sharing, profit sharing, or bonuses (Kalleberg et al. 2006). In a global context, Mosca, Musella, and Pastore (2007) suggested that nonprofit organizations offer fringe or nonpecuniary benefits in lieu of higher wages in Italian social services industries, and Noguchi and Shimizutani (2007) suggested that nonprofit organizations may pay higher wages than for-profit firms for the reason of attenuated property rights in the Japanese at-home elderly care industry.

However, little scholarly attention has been paid to the simultaneous comparison of the differences in using both performance-based incentives and non-performance-based incentives among for-profit, nonprofit, and public organizations, and to trade-offs between both kinds of incentives. Given the financial constraints to which every organization is subject, organizations may need to consider how to allocate their financial resources between performance-based and non-performance-based incentive alternatives to achieve a better motivating outcome while meeting specific organizational goals. Using the 2002 National Organization Survey, we examined the issue in a sectoral comparative context: the differences in and trade-offs between health benefits and performance-based incentives among for-profit, nonprofit, and public organizations.

The principal–agent model is the core of the theory of employee incentives.

Theory and Hypotheses

Organizations usually adopt several measures to motivate employee effort. Yet, given the financial constraints, organizations may also need to choose among those measures. Organizations may differ in their adoption of specific benefits or types of incentives as motivating tools. To frame our argument and guide the empirical investigation, we rely mainly on two theoretical perspectives, agency theory (especially relevant to the ownership-related comparison) and intrinsic motivation perspective.

Agency Theory

The principal–agent model is the core of the theory of employee incentives, which is well established in economics (see Core, Guay, and Verdi 2006; Dixit 2002; Gibbons 1998; Miller 2003; Prendergast 1999; Puyvelde, Caers, Bois, and Jegers 2012). In organizations,

economic relationships in which the principal (for example, an employer) wishes to affect the actions of the agent (for example, an employee) by means of incentives are ubiquitous. Such relationships enable three types of major agency problem possibly to arise simultaneously (Frank and Lewis 2004). The first is the moral hazard problem, that is, an agent's risky action may adversely affect the principal's payoff, although the action (such as shirking or incompetence) is not directly observable to the principal. The second is in the form of information asymmetry, often labeled *adverse selection*. This problem says that the agent has some private information at the time the contract with the principal is being considered. Principal must offer agent a suitable reward in the contract to induce him or her to reveal this information truthfully to the principal. The third issue is that the agent can observe some outcome better than can the principal; therefore, a reward scheme and a costly outcome verification scheme have to be devised. In this model, the moral hazard (hidden harm) is of particular importance (Dixit 2002). We do not have space to review the general theory of incentives, but we can be quite brief and selective, focusing on aspects that are particularly relevant here.

From the perspective of agency theory, the severity of the agency problem varies across organizational types.[1] Nonprofit and public organizations are likely to suffer from more difficult agency problems for two important reasons (Ben-Ner 2006; Steinberg 2008): First, because of the absence of distributable outcomes, principals in nonprofit and public organizations may be less interested in monitoring the performance of the organizations; and second, the objectives of nonprofit and public organizations are multifaceted, complex, difficult to articulate, and hard to quantify. However, using incentive pay to improve efficiency has been adopted by public sector agencies. For example, to improve public sector efficiency, using incentive pay is an important component of the UK government's public service modernization agenda (Burgess and Ratto 2003). Performance-based incentives were adopted and particularly emphasized to motivate staff and hence improve services to the public. Of course, to attract the best and brightest to public service careers, health benefits have often been used in public and nonprofit sector organizations (O'Leary, Lindholm, Whitford, and Freeman 2002).

However, as Dixit (2002) argued, because of some public sector agencies' special features—most notably a multiplicity of dimensions such as the stakeholders and the tiers of management and front-line workers and tasks—using competitive or performance-based incentives as magic-bullet solutions are inappropriate and naïve (also see Frumkin and Galaskiewicz 2004).[2] Burgess and Ratto (2003) also found that the use of performance-related incentives is more problematic in the public sector than in the private sector because of aspects such as multi-tasking, multiple principals, the difficulty of defining and measuring output, and the issue of the intrinsic motivation

of workers. By comparing the choice of contracts between the private and public sectors, Burgess and Ratto (2003) also found big differences in the way workers are rewarded: A public organization is less likely to operate a performance-related pay scheme than a private organization.

Analyzing a survey of establishments in the United States, Kalleberg et al. (2006) examined how nonprofit, public, and for-profit establishments vary in the use of high-performance work organization practices. They found that nonprofit and public organizations are less likely than for-profit organizations to use performance incentives (gain sharing and bonuses) and some multi-skilling practices. In contrast, in a study of a single industry, Minnesota nursing homes, Ben-Ner et al. (2011) found that nonprofit and local government organizations offered more fringe benefits to employees than did their for-profit counterparts. The results are consistent with the prediction from agency theory that nonprofit organizations pay efficiency wages to elicit employee effort on both observable and unobservable tasks, while in the absence of owners to compensate, nonprofit organizations were more concerned with the well-being of their employees.

Intrinsic Motivation Perspective

In the intrinsic motivation perspective, nonprofit status can serve as a signal to employees with high levels of intrinsic motivation that they can safely engage effort levels for the sake of the "'cause,"' trusting that their extra efforts will not be exploited for the owners' gain (Flanigan 2010; Frank and Lewis 2004; Hirth 1999; Millesen, Carman, and Bies 2010; Rose-Ackerman 1996; Rothschild and Milofsky 2006). In contrast, with the emphasis on profitability, for-profit organizations tend to adopt performance-based incentives to reward the employees, which may cause those less measurable outcomes such as interpersonal treatment of vulnerable customers to be neglected. Nonprofit and public organizations, which emphasize less observable outcomes, tend to attract employees with stronger intrinsic motivation.

In the labor market, the processes of employee self-selection into the for-profit, nonprofit, or public sector may compel employees with common preferences to choose the same kind of sector (Delfgaauw and Dur 2007). Mirvis and Hackett (1983) found that nonprofit managers were more likely than their for-profit counterparts to report that their work is more important than the money they earn. If employees who self-select into nonprofit organizations derive their well-being from serving the mission of the nonprofit sector rather than from maximizing the organization's or the employees' personal gains, they will be more willing to accept lower wages than will their counterparts working in for-profit organizations. As a result, nonprofit and public organizations are able to reduce monitoring and

increase their efficiency by attracting employees with stronger self-motivation (Handy and Katz 1998; Steinberg 1990).

In the context of our sectoral comparison, agency theory suggests that outcomes are less measurable in nonprofit and public organizations than in for-profit ones, and the intrinsic motivation perspective clearly argues that nonprofit and public employees are more intrinsically motivated. Despite such motivation, the intrinsic motivation perspective still argues that, in order to attract workers, nonprofit and public managers care more about their employees' well-being than do for-profit managers. Therefore, our hypotheses derive from a theoretical framework combining both these theories:

> *Hypothesis* 1. Nonprofit and public organizations are more likely than for-profit firms to provide their employees health benefits and health insurance.

> *Hypothesis* 2. Nonprofit and public organizations are less likely than for-profit firms to use performance-based incentives.

Given the financial constraints to which every organization is subject, an organization may need to consider a trade-off in allocating financial resources between performance-based and non-performance-based incentive alternatives to achieve a better motivating outcome while meeting the specific organizational goals. Hence, we derive a "trade-off" hypothesis:

> *Hypothesis* 3. Non-performance-based incentives and performance-based incentives are inversely related.

Data and Methods

The study specifies and estimates regression models to test the effect of the sectoral differences on the provision of health benefits and insurance and the use of performance-based incentives. The data source, variable selection, and analysis approaches are presented in this section.

Data

The data come from the 2002 National Organizations Survey of establishments in the United States (Smith, Kalleberg, and Marsden 2002). The National Organizations Survey is a survey of business organizations across the United States in which the units of analysis are workplaces. This survey was funded by the National Science Foundation, the National Institute for Occupational Safety and Health, and the Commonwealth Fund to investigate the nature of policies and benefits and the structure of organizations in the

Table 1. Sectoral Differences in Established Characteristics

	Sector		
	For-Profit (N = 360; 70.31%)	*Public (N = 113; 22.07%)*	*Nonprofit (N = 39; 7.62%)*
Mean size (log full-time employees)	2.4	4.9	4.2
Mean age (in years)	23.7	62.4	50.2
Percentage that are independent establishments	73.0	39.8	66.7
Percentage that have any foreign competition	42.5	76.9	53.9
Percentage that are unionized	10.1	58.0	18.0

United States. The survey was administered by the National Opinion Research Center (NORC) and is a follow-up to the 2002 General Social Survey (GSS; Davis, Smith, and Marsden 2002), a nationally representative survey of the noninstitutionalized U.S. population ages eighteen and older. The sample size is 516 organizations; a single informant within each organization provided information about each establishment. The unadjusted response rate was 59 percent, and the adjusted response rate was 62 percent (adjusted for all cases that were not located or were duplicates of another physical location). Sectoral differences of establishment characteristics are presented in Table 1.

Measuring the Dependent Variables

Health benefits and insurance and performance-based incentives (including gain sharing, profit sharing or bonus, and pay for skills) are the dependent variables. To measure health benefits and insurance, we used four questions:

1. Does (ESTABLISHMENT NAME) offer medical or hospital insurance to any of its employees? Yes = 1, no = 0.
2. Must an employee work at (ESTABLISHMENT NAME) for a period of time before he or she is eligible to participate in your health benefits program, or are employees eligible when hired? Employees eligible when hired = 1, must wait for a period of time = 0.
3. How many of your full-time employees are currently eligible for health insurance? 100 percent = 1, otherwise = 0.
4. Is there a health clinic or health professional on site at (ESTABLISHMENT NAME) that employees go to if they are injured or become ill at work? Yes = 1, no = 0.

We used two sets of questions to measure performance-based incentives. One is the percentage of employees who are eligible for

performance-based pay, bonuses, or profit sharing based on three levels of performance: individual performance, workgroup or departmental performance, and overall organizational-level performance. The other set includes gain sharing, profit sharing or bonus, and pay for skills about the workplace "core" occupation. Three questions include:

1. Are any (COREs) paid using group incentives, such as gain sharing?
2. Do any (COREs) receive pay for learning new skills?
3. Do any (COREs) participate in a profit-sharing or bonus program? Yes = 1, no = 0.

To examine the trade-off relationship, we combined dependent variables into three: health benefits, incentive practices, and performance-based incentives.

1. *Health benefits variables*. These are binary indicator variables. We used logistic regression to predict their probabilities, then summed up the four sets of predicted probabilities and divided by 4. The result is a dependent variable presenting health benefits in examining a tradeoff relationship.
2. *Incentive practices* (that is, the second set of questions to measure performance-based incentives). We used the same method as health benefits, the mean of the three sets of predicted probabilities as our dependent variable.
3. *Performance-based incentives* (that is, the first set of questions to measure performance-based incentives). We added three sets of performance-based incentives and divided by 3.

Independent Variables

Ownership types of organization were the primary independent variable. The three types were applied to for-profit, nonprofit, and public organizations. In the set of three dummy-coded variables, the for-profit organizations were the reference category that was omitted from the regression equations. Therefore, the two estimated coefficients made comparisons between nonprofit and for-profit organizations, and between public and for-profit organizations, respectively.

Control Variables

Control variables included establishment size, independent establishment, market competition, establishment age, and employee unionization, which are factors that may also influence organizations' adoption of performance-based incentives or non-performance-based benefits in addition to the ownership status.[3]

Key informants indicated the number of employees at their establishment. This variable was used to assess *organizational size*. It was transformed into log form to make it less skewed. *Independent establishment* measured whether the workplace is part of a larger organization or is completely autonomous; Completely independent = 1, part of a larger organization = 0. *Market competition* was measured by "How much competition would you say there is in your main market or service area?" The four categories were none = 1, very little = 2, a moderate amount = 3, and a great deal = 4. *Establishment age* equals 2002 minus year in which organization began operations at any location. Employee unionization was measured by "Are any of your employees represented by a union or unions?"

Estimation

We estimated the effects of type of ownership on health benefits and performance-based incentives using the following multivariate model:

$$Y_i^k = a^k + X_i\beta^k + \tau^k S_i^k + \mu_i^k$$

In this model, Y_i^k is employee health benefits or performance-based incentives, where k may denote health benefits and insurance including medical or hospital insurance providing, insurance eligible when hired, full-time employee eligible for insurance, health clinic on site, and performance-based incentives such as gain sharing, profit sharing or bonus, pay for skills, and pay, bonuses, or profit sharing based on different three-level performance. X_i is a vector of characteristics of organizations. S_i denotes a particular set of sectors (public, profit, or nonprofit), where i denotes an organization. The null hypothesis can be restated as H_0:$\tau^k = 0$, jointly for all outcomes k. Rejecting this hypothesis indicates that the particular sector has a significant effect on the organizational adoption of employee health benefits or performance-based incentives.

To test our hypotheses, we used seemingly unrelated regression (SUR), which estimates three systems of equations (one equation for each of all health benefits and performance-based incentive measure outcomes) and allows the errors in different equations in a system to be correlated (Miguel 2004; Tsai 2007). Using SUR to look simultaneously at multiple measures of health benefits and performance-based incentives in different sectors has a number of advantages over combining these measures into three (or two) single indices of health benefits and performance-based incentives. Organizations often have to make choices about how to provide health benefits and incentives because of limited resources and different missions of organizations. Few organizations can afford to provide simultaneously strong health benefits and insurance and performance-based incentives. Thus, correlations among those health benefits and incentive measures were low, and the measures did not scale

together. Using SUR to look simultaneously at multiple measures of health benefits and performance-based incentives allowed for the possibility that different organizations prioritize different health benefits or incentives. The SUR software routine produces the covariances between estimators from different equations, which allowed us to test joint hypotheses involving parameters in different equations (Wooldridge 2002).

To test our "trade-off" hypothesis, in addition to using seemingly unrelated regression, we estimated health benefits as a function of the variables (all control variables in testing sectoral differences in health benefits and performance-based incentives) with the addition of one or two outcomes (incentive practices and/or performance-based incentives) as explanatory variables, and we also estimated either performance-based incentives as a function of the variables with the addition of health benefits and/or the other performance-based incentives as explanatory variables. We report the estimation of the relationship among health benefits, incentive practices, and performance-based incentives.

Results

We present our results in four sections. The first examines the effects of different sectors on the adoption of health benefits. The second investigates the prevalence of incentive practice adoption. The third section estimates the sectoral differences in the adoption of performance-based pay, bonuses, or profit-sharing based on different three-level performance. The final section reports the trade-offs between non-performance-based and performance-based incentives.

Adoption of Health Benefits

Table 2 shows the SUR estimation of organizations' adoption of health benefits with a system of four equations, one for each of the four health benefits and insurance outcomes listed across the top of the table. In each model, each of the four health benefits and insurance outcomes was regressed on the same sectoral measure and the same array of controls.

The results in Table 2 present the multivariate SUR estimates for the effects of different sectors on health benefits and insurance by controlling for the other explanatory variables including establishment size, independent establishment, market competition, establishment age, and employee unionization. We found that both nonprofit and public sectors are more likely than the for-profit firms to offer employees medical or hospital insurance. Establishment size is positive and statistically significant at the .001 level. Age is also positive and significant. So the difference between nonprofit sector and for-profit organizations in medical or hospital insurance provision

Table 2. Logistic Regression Analyses for Medical or Hospital Insurance in Health Benefits

	Medical or Hospital Insurance	*Eligible When Hired*	*Full-Time Employee Eligible for Insurance*[1]	*Health Clinic On Site*
Public sector	0.53 (0.59)	2.03*** (0.36)	1.10** (0.40)	0.70! (0.42)
Nonprofit sector	−0.30 (0.63)	1.40*** (0.43)	0.86! (0.48)	0.74 (0.51)
Establishment size (log)	0.82*** (0.11)	−0.08 (0.06)	−0.08 (0.06)	0.49*** (0.08)
Independent establishment	−0.78! (0.40)	−0.06 (0.27)	−0.01 (0.27)	−0.25 (0.32)
Extent of foreign competition	−0.08 (0.14)	0.12 (0.15)	0.15 (0.14)	0.01 (0.18)
Unionized	0.79 (0.82)	0.58! (0.34)	0.64! (0.37)	0.34 (0.39)
Establishment age	0.02* (0.01)	−0.00 (0.00)	0.00 (0.00)	−0.00 (0.00)
Chi-square	208.24	60.3	19.42	90.37
p-value	0.00	0.00	0.01	0.00
Pseudo R^2	0.40	0.14	0.05	0.25
N	445	315	317	443

Note: Standard errors are in parentheses.
[1]Logistic regression analyses for full-time employees currently eligible for health insurance (100% vs. partial or 0%).
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$, !$p < 0.10$ (all two-tailed tests).

might be accounted for by establishment size and age. However, the data show that nonprofit organizations tend to be larger and older than for-profit organizations (see Table 1). The estimated effect of nonprofit is negative for medical or hospital insurance outcome, but the parameter could be zero in the population. For a health clinic on site, the difference between nonprofit sector and for-profit organizations is positive but not significant. Size matters again. Using SUR we can reject the null hypothesis that the coefficient estimate on public and nonprofit sectors is equal to zero jointly across all the health benefits and insurance provision outcomes at a 99 percent confidence level (*p*-values = 0.0023 or = 0.0000). Overall, the analysis supports hypothesis 1 that employees of nonprofit and public organizations receive more health benefits and health insurance than do employees of for-profit firms.

For-profit establishments are more likely than other establishments to use performance incentives.

Adoption of Incentive Practice

Table 3 reports the results of the estimation of the prevalence of incentive practice adoption. For each model, SUR estimated a system of three equations, one for each of the three incentive practices outcomes listed across the top of the table. In each model,

Table 3. Logistic Regression Analyses for Prevalence of Incentive Practices

	Gain Sharing	*Profit Sharing or Bonus*	*Pay for Skills*
Public sector	−1.65*	−2.55***	0.32
	(0.79)	(0.50)	(0.31)
Nonprofit sector	−0.46	−0.84*	−0.05
	(0.65)	(0.42)	(0.40)
Establishment size (log)	0.13!	0.13*	0.10*
	(0.07)	(0.05)	(0.05)
Independent establishment	−0.33	−0.71**	0.06
	(0.35)	(0.25)	(0.24)
Extent of foreign competition	0.30*	0.29**	−0.07
	(0.14)	(0.11)	(0.11)
Unionized	−0.34	−0.43	0.10
	(0.55)	(0.37)	(0.31)
Establishment age	−0.01	0.00	−0.01
	(0.01)	(0.00)	(0.00)
Chi-square	22.91	69.76	9.49
p-value	0.00	0.00	0.22
Pseudo R^2	0.07	0.12	0.02
N	439	440	439

Note: Standard errors are in parentheses.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$, !$p < 0.10$ (all two-tailed tests).

each of the three incentive practices outcomes was regressed on the same sectoral measure and control variables. Consistent with hypothesis 2, for-profit establishments are more likely than other establishments to use performance incentives. We found, however, that the correlates of output-related incentives and incentives for skill acquisition differ sharply. This finding is largely consistent with Kalleberg et al.'s (2006) study.

The first two columns of Table 3 show that for-profit organizations are much more likely than public and nonprofit establishments to use both gain sharing and profit sharing or bonuses, which supports hypothesis 2. The correlates of gain sharing and profit sharing or bonuses are relatively similar. Apart from sectoral differences, gain sharing and profit sharing or bonuses are more common in larger establishments and those with greater foreign competition. Although coefficients for unions have negative signs, they are not statistically significant. However, we found no significant sectoral differences in the use of pay for skills. The only between-organization factor that predicts the presence of this incentive practice is establishment size: It increases the probability of adoption of this incentive practice.

Using SUR estimation we can reject the null hypothesis that the coefficient estimate on public sectors is equal to zero jointly across all the incentive practice provision outcomes at a 99 percent confidence level (*p*-values = 0.0000). But for the nonprofit sector, we cannot

Table 4. Regression Analyses for Employees' Eligibility for Performance-Based Pay, Bonuses, or Profit Sharing Based on Different Three-Level Performance

	Overall Organizational	*Work Group or Departmental*	*Individual Performance*
Constant	42.80***	25.15***	51.45***
	(6.33)	(5.09)	(6.36)
Public sector	−34.20***	−15.49**	−19.84***
	(6.71)	(5.35)	(6.74)
Nonprofit sector	−13.27!	−12.46!	−11.78
	(8.26)	(6.63)	(8.34)
Establishment size (log)	1.71!	0.39	0.98
	(0.89)	(0.71)	(0.89)
Independent establishment	−3.97	−3.46	−3.63
	(4.96)	(3.97)	(4.97)
Extent of foreign competition	1.99	0.64	−1.36
	(2.20)	(1.78)	(2.21)
Unionized	−1.79	−3.16	−17.54**
	(6.61)	(5.20)	(6.60)
Establishment age	−0.09	−0.07	−0.05
	(0.07)	(0.06)	(0.07)
F	6.29	3.13	4.41
p-value	0.00	0.00	0.00
Adj. R^2	0.08	0.03	0.05
N	420	417	428

Note: Standard errors are in parentheses.
$^{**}p < 0.01$, $^{***}p < 0.001$, $!p < 0.10$ (all two-tailed tests).

reject the null hypotheses at conventional significant levels. Overall, hypothesis 2 is partially supported in that for-profit organizations are more likely than public organizations to use performance-based incentives; however, for-profit organizations are not more likely to utilize performance-based incentives than nonprofit organizations.

Adoption of Performance-Based Incentives

Table 4 reports regression analyses of the sectoral differences in the adoption of performance-based pay, bonuses, or profit sharing based on different three-level performances. For each model, SUR estimated a system of three equations, one for each of the three incentive practices outcomes listed across the top of the table. In each model, each practice was regressed on the same sectoral measure and the same array of controls. Consistent with hypothesis 2, for-profit organizations are more likely than the other two types of organization to use performance incentives, especially in comparison with public sector organizations.

The first two columns of Table 4 show that for-profit organizations are much more likely than public and nonprofit establishments to use performance-based pay, bonuses, or profit sharing based on all

Table 5. Trade-Offs between Health Benefits, Incentive Practices, and Performance-Based Incentives

	Trade-Off		
	Health Benefits	*Incentive Practices*	*Performance-Based Incentives*
Health benefits		−0.62***	−0.41
		(0.03)	(0.49)
Incentive practices	−1.25***		1.12!
	(0.04)		(0.66)
Performance-based incentives	−0.01	0.01	
	(0.01)	(0.00)	
Control variables	Yes	Yes	Yes
F	604.55	469.46	8.66
Prob > *F*	0.00	0.00	0.00
Adj. R^2	0.94	0.92	0.16
N	281	281	281

Note: Standard errors are in parentheses. For all estimations we controlled for establishment size (log), independent establishment, foreign competition, unionization, and establishment age.
***$p < 0.001$, !$p < 0.10$ (all two-tailed tests).

three levels of performance, which is in general consistent with hypothesis 2 (only nonprofit sector for individual performance level is statistically insignificant, but the trend is negative and the level of uncertainty is quite low).

Except for establishment size for overall organizational level, and union for the individual performance level, no between-organization factors explain significant differences in the use of performance-based incentives in three levels, even with the control variables. The only between-organization factor that predicts the presence of this incentive at individual performance level is union: It decreases by 17.5 percent the employees who are eligible for this incentive practice at the individual-performance level.

Using SUR we can reject the null hypothesis that the coefficient estimate on public sectors is equal to zero jointly across all the incentive practice provision outcomes at a 99.9 percent confidence level (p-values = 0.0000). But for the nonprofit sector, we cannot reject the null hypothesis at conventional significant levels. Overall, our research hypothesis is supported that for-profit organizations are more likely than public sector organizations (but not more likely than nonprofits) to use performance-based pay, bonuses, or profit-sharing incentives based on different three-level performances.

Trade-Off between Non-Performance-Based and Performance-Based Incentives

We explored trade-offs in four separate SUR estimations, one in a three-way trade-off possibility that considers health benefits, incentive

Table 6. Trade-Offs between Health Benefits and Incentive Practices

	Trade-Off	
	Health Benefits	*Incentive Practices*
Health benefits		−0.63*** (0.03)
Incentive practices	−1.26*** (0.04)	
Control variables	Yes	Yes
F	748.15	575.57
Prob > *F*	0.00	0.00
Adj. R^2	0.94	0.92
N	301	301

Note: Standard errors are in parentheses. For all estimations we controlled for establishment size (log), independent establishment, foreign competition, unionization, and establishment age.
***$p < 0.001$ (all two-tailed tests).

Table 7. Trade-Offs between Health Benefits and Performance-Based Incentives

	Trade-Off	
	Health Benefits	*Performance-Based Incentives*
Health benefits		−1.12*** (0.24)
Performance-based Incentives	−0.06*** (0.01)	
Control variables	Yes	Yes
F	121.03	10.24
Prob > *F*	0.00	0.00
Adj. R^2	0.72	0.16
N	284	284

Note: Standard errors are in parentheses. For all estimations we controlled for establishment size (log), independent establishment, foreign competition, unionization, and establishment age.
***$p < 0.001$ (all two-tailed tests).

practices (that is, performance-based incentives [1]), and performance-based incentives (that is, performance-based incentives [2]) together (Table 5), and then two-way trade-offs (Tables 6, 7, and 8) that are open to a more direct interpretation.

Using Pearson correlations, we found that the correlations are health benefits versus incentive practices, −0.372; health benefits versus performance-based incentives; −0.375; and incentive practices

Table 8. Trade-Offs between Incentive Practices and Performance-Based Incentives

	Trade-Off	
	Incentive Practices	*Performance-Based Incentives*
Incentive practices		1.65*** (0.28)
Performance-based incentives	0.03*** (0.01)	
Control variables	Yes	Yes
F	125.09	7.40
Prob > *F*	0.00	0.00
Adj. R^2	0.65	0.09
N	401	401

Note: Standard errors are in parentheses. For all estimations we controlled for establishment size (log), independent establishment, foreign competition, unionization, and establishment age.
***$p < 0.001$ (all two-tailed tests).

versus performance-based incentives, 0.315, all significant at $p < 0.001$. These relationships are further confirmed by using a formal model test. Table 5 shows an inverse relationship between health benefits (non-performance-based incentives) and incentive practices (performance-based incentives [1]) and statistically significant at $p < 0.001$. An inverse relationship also occurs between health benefits and performance-based incentives (2), but it is statistically insignificant at conventional probability levels. But, Tables 6 and 7 show that the two inverse relationships are statistically significant at $p < 0.001$. These results suggest trade-offs between non-performance-based incentives and performance-based incentives in organizations. To avoid the issue of the endogeneity of incentives, we do not control for ownership. However, we are still confident about the "trade-off" hypothesis because we tested the relationships between non-performance-based incentives and performance-based incentives. Intuitively, given the financial resource constraints in an organization, a trade-off is necessary to meet their needs and reach their goals. To further explore possible trade-offs between two sets of performance-based incentives, we examined the relationship between them. Table 8 reveals a positive and statistically significant relationship between two sets of performance-based incentives ($p < 0.001$). These results suggest that the trade-offs happen only between non-performance-based and performance-based incentives, but not within performance-based incentives. We also checked for trade-offs among performance-based incentives, but we did not find any inverse relationship, only positive correlations (results not shown).

Discussion and Conclusion

We examined simultaneously the sectoral differences in the adoption of health benefits and performance-based incentives in nonprofit, public, and for-profit sectors, and their trade-offs between non-performance-based and performance-based incentives. Our analyses show that the use of health benefits and performance-based incentives among for-profit, public, and nonprofit organizations varies, and there are trade-offs between both kinds of incentives, as predicted by our hypotheses.

Consistent with hypothesis 1, employees not in the for-profit sector have better health benefits, including medical or hospital insurance, eligibility when hired, full-time employee eligibility of insurance, and health clinic on site. Generally speaking, hypothesis 2 is also supported even though using SUR estimation we cannot reject null hypotheses at conventional significance levels. On performance-based incentives, our logistic regression analyses for prevalence of incentive practices show that pay for skills has few differences between the for-profit and other sectors. This result is consistent with Kalleberg et al.'s (2006) finding. Furthermore, pay for skills is not less likely to be adopted in the public and nonprofit sectors than in the for-profit sector. This similarity might mean that, with the development of technology, training for skills is as important within for-profit organizations as it is outside the for-profit sector. However, gaining sharing and profit sharing or bonuses were more likely used by for-profit organizations.

Public organizations are less likely to use performance-based pay, bonuses, or profit sharing.

Looking at performance-based pay, bonuses, or profit sharing based on different three-level performance, the results are generally consistent with hypothesis 2. Clearly public organizations are less likely to use performance-based pay, bonuses, or profit sharing based on different three-level performance than are for-profit organizations. Nonprofit organizations are also less likely to adopt this type of incentive, even though the SUR estimation does not allow us to reject the null hypotheses. Overall, in adopting performance-based incentives, no significant differences occur between nonprofit and for-profit organizations.

Sociologists, economists, and organizational researchers are currently engaged in heated debates about the differences in high-performance work practices, especially performance-based incentives, among for-profit, nonprofit, and public organizations, and their implications for organization studies and for policymakers and managers. Comparative studies like ours are few and will generate important implications for both academic research and practices. Our research therefore contributes to agency theory by providing evidence on the effects of different kinds of incentives used by organizations with different ownership types: for-profit, nonprofit, and public organizations. Its implication for practice is to inform managers and policymakers about the relationship between incentives

adopted by organizations and the different types of ownership status. In summary, our findings, consistent with others, such as Ellickson (2002), Fredericksen and Soden (1998), Jurkiewicz, Massey, and Brown (1998), Long and Marquis (1999), and Reddick (2009), suggested that nonprofit and public organizations may use fringe benefits, such as health benefits, to compensate employees for lower pay, partially stemming from pay-for-performance schemes that are more prevalent in the for-profit sector. However, nonprofits have been converging toward for-profits in performance-based incentives. Our results further clarify the picture of compensation differential across types of organizations.

We found trade-offs between non-performance-based and performance-based incentives, but we did not find any trade-offs within either kind of incentive. These results have implications for researchers, managers, and policymakers. Instead of looking for the sectoral differences in types of incentives, academic researchers need to pay more attention to trade-offs between different kinds of incentives and why these trade-offs occur. Managers should be aware of different trade-off outcomes in an organization and achieve an optimal balance between non-performance-based and performance-based incentives. Policymakers should identify different trade-offs in different kinds of organizations. A for-profit organization is more likely to use performance-based incentives, and general benefits would be unavailable for employees, thus reducing their employees' general well-being.

Managers should be aware of different trade-off outcomes in an organization and achieve an optimal balance between non-performance-based and performance-based incentives.

Our study has some limitations. First, because of the limitation of data and categories of incentives defined in our study, our conclusion is tentative. A next step should be to include all main incentives and examine their trade-off relationships. Second, our results are also limited by the NOS cross-sectional survey design, which allows inferences about the relative differences in health benefits and insurance and performance-based incentives across nonprofit, public, and for-profit sectors, but not their dynamics over time. Longitudinal data collection designs would facilitate future research into changing incentive trends.

Notes

1. Because property rights theory also refers to the agency problem, and it mostly bears on agency-principal theory, we present only the agency theory in this literature review.

2. One possible reason why nonprofit organizations are less likely to use performance-based incentives is that measuring outputs is more difficult in nonprofit organizations than in for-profit ones (Frumkin and Galaskiewicz 2004). Unfortunately, our data set lacks measures of organizational outputs.

3. We follow Kalleberg et al. (2006) in choosing these control variables. They did not directly study health benefits and performance-based incentives of organizations, but focused mostly on the adoption of the main components of high-performance work organizations such as gain-sharing plans and profit-sharing plans, which are very similar to our measurements of performance-based incentives in different organizations.

References

Appelbaum, E., T. Bailey, P. Berg, and A. L. Kalleberg. 2000. *Manufacturing Advantage: Why High-Performance Work Systems Pay Off.* Ithaca, NY: Cornell University Press.

Becker, K., N. Antuar, and C. Everett. 2011. "Implementing an Employee Performance Management System in a Nonprofit Organization." *Nonprofit Management and Leadership* 21 (3): 255–71.

Ben-Ner, A. 2006. "For-Profit, State and Non-Profit: How to Cut the Pie among the Three Sectors." In *Advancing Public Goods,* edited by J. Touffut. Cheltenham, UK, and Northampton, MA: Edward Elgar.

Ben-Ner, A., T. Ren, and D. F. Paulson. 2011. "A Sectoral Comparison of Wage Levels and Wage Inequality in Human Services Industries." *Nonprofit and Voluntary Sector Quarterly* 40 (4): 608–33.

Bowman, J. S. 2010. "The Success of Failure: The Paradox of Performance Pay." *Review of Public Personnel Administration* 30 (1): 70–88.

Brody, E. 1996. "Agents without Principals: The Economic Convergence of the Nonprofit and For-Profit Organizational Forms." *New York Law School Law Review* 40 (3): 457–536.

Burgess, S., and M. Ratto. 2003. "The Role of Incentives in the Public Sector: Issues and Evidence." *Oxford Review of Economic Policy* 19 (2): 285–300.

Cappelli, P., and D. Neumark. 2001. "Do 'High-Performance' Work Practices Improve Establishment-Level Outcomes?" *Industrial and Labor Relations Review* 54 (4): 737–75.

Core, J. E., W. R. Guay, and R. S. Verdi. 2006. "Agency Problems of Excess Endowments in Not-for-Profit Firms." *Journal of Accounting and Economics* 41: 307–33.

Davis, J. A., T. W. Smith, and P. V. Marsden. 2002. General Social Survey (GSS) ICPSR version. Chicago: National Opinion Research Center [producer], 2003. Storrs, CT: Roper Center for Public Opinion Research, University of Connecticut/Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributors], 2003.

Delfgaauw, J., and R. Dur. 2007. "Incentives and Workers' Motivation in the Public Sector." *Economic Journal* 118:171–91.

Dixit, A. 1997. "Power of Incentives in Private vs Public Organizations." *American Economic Review Papers and Proceedings* 87:378–82.

———. 2002. "Incentives and Organizations in the Public Sector: An Interpretative Review." *Journal of Human Resources* 37 (4): 696–727.

Ellickson, M. C. 2002. "Determinates of Job Satisfaction of Municipal Government Employees." *Public Personnel Management* 31:343–58.

Flanigan, S. T. 2010. "Factors Influencing Nonprofit Career Choice in Faith-Based and Secular NGOs in Three Developing Countries." *Nonprofit Management and Leadership* 21 (1): 59–75

Frank, R. 1996. "What Price the High Moral Ground?" *Southern Economic Journal* 63:1–17.

Frank, S. A., and G. B. Lewis. 2004. "Government Employees: Working Hard or Hardly Working?" *American Review of Public Administration* 34 (1): 36–51.

Fredericksen, P. J., and D. L. Soden. 1998. "Employee Attitudes toward Benefit Packaging: The Job Sector Dilemma." *Review of Public Personnel Administration* 18:23–41.

Frumkin, P., and J. Galaskiewicz. 2004. "Institutional Isomorphism and Public Sector Organizations." *Journal of Public Administration Research and Theory* 14:283–307.

Gibbons, R. 1998. "Incentives in Organizations." *Journal of Economic Perspectives* 12 (4): 115–32.

Handy, F., and E. Katz. 1998. "The Wage Differential between Nonprofit Institutions and Corporations: Getting More by Paying Less?" *Journal of Comparative Economics* 26:246–61.

Hirth, R. A. 1999. "Consumer Information and Competition between Nonprofit and For-Profit Nursing Homes." *Journal of Health Economics* 18:219–40.

Jurkiewicz, C. L., T. K. Massey, and R. G. Brown. 1998. "Motivating in Public and Private Organizations: A Comparative Study." *Public Productivity and Management Review* 21:230–50.

Kalleberg, A. L., P. V. Marsden, J. Reynolds, and D. Knoke. 2006. "Beyond Profit? Sectoral Differences in High-Performance Work Practices." *Work and Occupations* 33(3): 271–302.

Long, S. H., and S. M. Marquis. 1999. "Comparing Employee Health Benefits in the Public and Private Sectors, 1997." *Health Affairs* 18 (6): 183–93.

Miguel, E. 2004. "Tribe or Nation? Nation Building and Public Goods in Kenya versus Tanzania." *World Politics* 56:327–62.

Millesen, J. L., J. G. Carman, and A. L. Bies. 2010. "Why Engage? Understanding the Incentive to Build Nonprofit Capacity." *Nonprofit Management and Leadership* 21 (1): 5–20.

Miller, J. L. 2003. "The Board as a Monitor of Organizational Activity: The Applicability of Agency Theory to Nonprofit Boards." *Nonprofit Management and Leadership* 12:429–50.

Mirvis, P. H., and E. J. Hackett. 1983. "Work and Work Force Characteristics in the Nonprofit Sector." *Monthly Labor Review* 106(4): 3–12.

Mosca, M., M. Musella, and F. Pastore. 2007. "Relational Goods, Monitoring and Non-Pecuniary Compensations in the Nonprofit Sector: The Case of the Italian Social Services." *Annals of Public and Cooperative Economics* 78:57–86.

Noguchi, H., and S. Shimizutani. 2007. "Non-Profit/for-Profit Status and Earning Differentials in the Japanese At-Home Elderly Care Industry: Evidence from Micro-Level Data on Home Helpers and Staff Nurses." *Journal of the Japanese and International Economies* 21:106–20.

O'Leary, B, S., M. L. Lindholm, R. A. Whitford, and S. E. Freeman. 2002. "Selecting the Best and Brightest: Leveraging Human Capital." *Human Resource Management* 41:325–40.

Prendergast, C. 1999. "The Provision of Incentives in Firms." *Journal of Economic Literature* 37:7–63.

Preston, A. E. 1989. "The Effects of Property Rights on Labor Costs on Nonprofit Firms: An Application to the Day Care Industry." *Journal of Industrial Economics* 36:337–50.

Puyvelde, S. V., R. Caers, C. D. Bois, and M. Jegers. 2012. "The Governance of Nonprofit Organizations: Integrating Agency Theory with Stakeholder and Stewardship Theories." *Nonprofit and Voluntary Sector Quarterly* 41 (3): 431–51.

Ramirez, A., and K. Janiga. 2009. "Nonprofit and for-Profit Convergence: Are Nonprofits Increasingly Adopting Private Sector Practices?" *International Journal of Society Systems Science* 1 (4): 307–24.

Reddick, C. G. 2009. "The Importance of Employee Health Benefits to Public and Private Sector Organizations." *Public Personnel Management* 38 (2): 99–118.

Rose-Ackerman, S. 1996. "Altruism, Nonprofits, and Economic Theory." *Journal of Economic Literature* 34 (2): 701–28.

Rothschild, J., and C. Milofsky. 2006. "The Centrality of Values, Passions, and Ethics in the Nonprofit Sector." *Nonprofit Management and Leadership* 17 (2): 137–43.

Smith, T. W., A. L. Kallberg, and P. V. Marsden. 2002 National Organizations Survey (NOS): [Computer file]. ICPSR version. Chicago: National Opinion Research Center (NORC) [producer], 2003. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2004.

Steinberg, R. 1990. "Labor Economics and the Nonprofit Sector: A Literature Review." *Nonprofit and Voluntary Sector Quarterly* 19:151–69.

Steinberg, R. 2010. "Principal–Agent Theory and Nonprofit Accountability." In *Comparative Corporate Governance of Non-Profit Organizations*, edited by K. J. Hopt and T. Von Hippel, 73–126. New York: Cambridge University Press.

Theuvsen, L. 2004. "Doing Better While Doing Good: Motivational Aspects of Pay-for-Performance Effectiveness in Nonprofit Organizations." *Voluntas* 15 (2): 117–36.

Tsai, L. L. 2007. "Solidary Groups, Informal Accountability, and Local Public Goods Provision in Rural China." *American Political Science Review* 101 (2): 355–72.

Weisbrod, B. A. 1983. "Nonprofit and Proprietary Sector Behavior: Wage Differentials among Lawyers." *Journal of Labor Economics* 1: 246–63.

Wooldridge, J. M. 2002. *Econometric Analysis of Cross-Section and Panel Data.* Cambridge, MA: MIT Press.

XINXIANG CHEN is a research associate at the National Strategic Planning and Analysis Research Center, Mississippi State University.

TING REN is an associate professor at HSBC Business School, Peking University, Shenzhen, China.

DAVID KNOKE is a professor in the Department of Sociology at the University of Minnesota.