Comparing Workplace Organization Design Based on Form of Ownership:
Nonprofit, For-Profit, and Local Government
Avner Ben-Ner and Ting Ren
Nonprofit and Voluntary Sector Quarterly published online 6 December 2013
DOI: 10.1177/0899764013512422

The online version of this article can be found at:
http://nvs.sagepub.com/content/early/2013/12/03/0899764013512422

Published by:
SAGE
http://www.sagepublications.com

On behalf of:
ARNOVA
Association for Research on Nonprofit Organizations and Voluntary Action

Additional services and information for Nonprofit and Voluntary Sector Quarterly can be found at:
Email Alerts: http://nvs.sagepub.com/cgi/alerts
Subscriptions: http://nvs.sagepub.com/subscriptions
Reprints: http://www.sagepub.com/journalsReprints.nav
Permissions: http://www.sagepub.com/journalsPermissions.nav

>> OnlineFirst Version of Record - Dec 6, 2013

What is This?
Comparing Workplace Organization Design Based on Form of Ownership: Nonprofit, For-Profit, and Local Government

Avner Ben-Ner¹ and Ting Ren²

Abstract
This study offers hypotheses concerning differences in organization design among for-profit (FP), nonprofit (NP), and local government (LG) organizations. We empirically examine design in a sample of 105 Minnesota nursing homes, using data from an original survey. The findings generally support our hypotheses: (a) NP and LG nursing homes delegate more decision-making authority to their nurses than their FP counterparts, (b) NP and LG nurses enjoy greater efficiency wages than their FP counterparts, (c) NP homes rely more on the social networks of their employees to recruit new employees than FP and LG homes, (d) FP tend to use more performance-based incentives than NP and LG, and (e) there is little difference in the extent to which FP, NP, and LG homes monitor their nurses. The differences that we do detect are significant but are probably tempered by regulation, market competition, and institutional pressures for similarity.

Keywords
organization design, nonprofit and for-profit comparison, local government, nursing homes, organization structure, decision-making

Introduction
Do nonprofit (NP) and government employees have more or less discretion in making decisions than their for-profit (FP) counterparts? Are they monitored more, or less?

¹University of Minnesota, Minneapolis, USA
²Peking University, Shenzhen, China

Corresponding Author:
Avner Ben-Ner, Carlson School of Management, University of Minnesota, Minneapolis, 3-300, MN 55455, USA.
Email: benne001@umn.edu
Does workplace design vary systematically with ownership? Many studies compare performance across organizations with different forms of ownership (Amirkhanyan, Kim, & Lambright, 2008; Estrin, Hanousek, Kocenda, & Svejnar, 2009; Malani, Philipson, & David, 2003; Schlesinger & Gray, 2006), but little attention has been paid comparing organization design. Understanding differences in organization design is helpful for understanding differences in organizational behavior and performance across types of organizations (e.g., Miles & Snow, 1978). The present article seeks to fill this gap through a comparative theoretical and empirical examination of organization design in FP, NP, and local government (LG) nursing homes in Minnesota.

Organization design encompasses the structural configuration—the location of formal power and authority, departmentalization of organization functions, specialization and relationships among work units, chain of command and span of control, and so on. Elements can be depicted by an organizational chart—as well as organizational process elements, including specification of metrics and rewards, matching talents and roles, and aligning decisions, responsibilities and collaborations (Foss, Pedersen, Pyndt, & Schultz, 2012; Kates & Galbraith, 2007). The economic approach to organization design focuses on process elements, viewing organizations as collections of individuals who have diverse goals, preferences and expectations, and identifies practices that motivate and align individual efforts (Foss et al., 2012). These practices—elements of organization design—encompass the practices that are central to human resource management: allocation of decision-making, incentives, performance evaluation, selection, monitoring and supervision, and so on. The economic approach to organization design has been detailed in influential texts by Milgrom and Roberts (1992), and Brickley, Smith, and Zimmerman (2008). This framework is particularly useful for comparing workplace organization in relatively simple and flat organizations such as nursing homes, and we follow it in this article.

Fama and Jensen (1983a, 1983b) argue that organizations with different ownership face different principal-agent problems and therefore adopt different organization design solutions. Ouchi (1979, 1980) suggests that selecting employees with shared norms and values help organizations to gain control over hard-to-measure behaviors and outputs, in other words, substituting clan control for formal design. Schneider (1987), in the attraction-selection-attrition (ASA) cycle, claims that organization design is determined by employees’ behavior, which arises from the pursuit of organizational goals. These perspectives imply that organization design will be influenced by ownership differences in agency problems, employee preferences, organization objectives, and organizational value systems.

Certain elements of organization design have been studied, including in nursing homes (Anderson, Issel, & McDaniel, 2003; Dellefield, 2008; Mitchell & Shortell, 1997; Temkin-Greener, Zheng, Katz, Zhao, & Mukamel, 2009). Most empirical studies compare compensation and incentives across sectors (see reviews by Ben-Ner, Ren, & Paulson, 2011; Speckbacher, 2013); few have included additional elements (DeVaro & Brookshire, 2007). A comprehensive comparative examination of multiple elements of organization design is entirely lacking.
The present article contributes to the theoretical and empirical literature in two principal ways. First, it compares organization design in NP, FP, and LG organizations. Second, it focuses on multiple elements of workplace organization design, including allocation of decision-making, incentives, monitoring and selection of new employees. The empirical study is based on an original dataset drawn from an employer survey of nursing homes in Minnesota. The nursing home industry is populated by FP, NP, and government-owned organizations that produce similar services under the same legal and regulatory framework. Because the tasks carried out by the nursing staff are also similar across organizations, the differences in design will be associated with ownership (after controlling for other influences). We evaluate the association between ownership and design and account for possible tradeoffs among various elements of organization design.

Ownership-Related Differences in Organization Design—Theoretical Background and Hypotheses

Managers cannot make all decisions for their subordinates because they do not have the necessary information and knowledge that employees have. Furthermore, they cannot expect their employees would always faithfully enact their orders. Employees have information and knowledge that managers do not have. Consequently, managers delegate some decision-making and invest in the reduction of asymmetric information through monitoring and other measures that help align the efforts of employees with organization objectives (Brickley, Smith, Willett, & Zimmerman, 2009; Hart & Moore, 1990; Prendergast, 2002). These measures—key elements of organization design in addition to delegation of decision-making—including provision of incentives, monitoring, evaluation, selection of new workers and more. The role of organization design is to induce staff to exercise appropriate effort on the organization’s behalf, that is, to align their personal goals with organizational objectives (Galbraith, 1977). The elements of organization design generally complement or substitute for each other (Ennen & Richter, 2010; Ichniowski & Shaw, 2003; Milgrom & Roberts, 1995).

Many objectives depend on the type of organization ownership. The principal types of ownership are FP, NP, and government (of multiple jurisdictions). Because our empirical work focuses on LG organizations, we will confine the discussion to this level. We examine conceptually key differences in the organization design of FP, NP, and LG types of organization, describing prototypes of each and differences among them, thus abstracting from heterogeneity within types. We focus on workplace design that concerns the core employees, such as nurses in a nursing home.

In FP firms, the principals are equity owners who generally seek to generate and maximize profit. In NP organizations, the formal principals are members of boards of directors who have fiduciary duties toward the organization but are not legally required to pursue specific goals and do not have ownership stakes. NP boards typically advocate goals related to the quality of the product and its beneficiaries (Weisbrod, 1998). The principals of LG organizations are the constituents, who exercise their rights...
through elected officials, with goals similar to those of NPs (Warner & Hebdon, 2001). The pursuit of different goals may require different ways to allocate decision-making and different types of incentives and other elements of organization design to support these allocations.

Whereas profit is a simple and quantifiable goal, the multiple goals of NP and LG organizations are hard to specify, often impossible to quantify, weights assigned to multiple dimensions of performance that are of interest to principals are difficult to articulate, and the tradeoffs among various goals are hard to establish. This implies that the accomplishment of goals is more difficult to ascertain in NP and LG than in FP and therefore organization design will differ to accommodate these differences.2

Owners of FP firms are likely to be in a better position than NP board members to act as demanding principals toward top managers (their immediate agents) to ensure that they run their organizations effectively. FP owners’ financial interest constitutes a stronger inducement than NP board members’ dedication to NP’s mission to be informed about their respective organizations and to know how to evaluate managers’ positions and guide their actions. Furthermore, NP board members may feel that there is not sufficient gain for them from taking an emotionally costly aggressive stance toward managers, particularly when some of them may owe their position to the top manager. The diversity of views among NP board members may further weaken them vis-a-vis top management.3 Hence in FP firms, particularly closely held ones, there will likely be greater control over top management than in NP organizations. In LG organizations the ultimate owners are all the citizens in the jurisdiction. They have no enforceable legal rights and have extremely limited mechanisms to enforce their individual views through multiple elected officials who act as principals to their immediate agents, the heads of the LG organizations. Members of the bodies that are in charge of specific LG organizations, such as a nursing home, have no direct public accountability and serve as appointees. They are less likely to act as hard-driving principals over top management than their FP counterparts. These considerations suggest that agency problems are likely to be more severe in NP and especially LG than in FP. Differences in the nature and severity of agency problems require different remedies in terms of allocation of decision-making, monitoring, incentives, recruiting and other elements of organization design (Ben-Ner, Montias, & Neuberger, 1993).

Managers and employees may elect to work in organizations whose goals fit their social preferences (beyond the choice of occupation and industry). In particular, some managers and employees may be attracted by the public-good pursuit of NP and LG organizations. Many NP and LG managers and employees may care less about monetary rewards and more about public service and may be more intrinsically motivated than their FP counterparts, although the extent of this difference appears to be very limited (Ben-Ner et al., 2011; De Cooman, De Gieter, Pepermans, & Jegers, 2011; DeVavo & Brookshire, 2007; Francois, 2000; Prendergast, 2007; Rainey & Steinbauer, 1999; Steinberg, 2010). This may lead to self-selection by employees into different types of organization and in turn will be accommodated by differences in organization design. Employee self-selection may have an adverse effect if NP and LG have a reputation for tolerating lower effort than FP as a result of their more severe agency
problems, such that less ambitious and more effort-averse individuals will be attracted to them. This will also have implications for organization design differences.

Differences associated with ownership will thus affect the design that principals choose for their respective organizations and the implementation of that design by top management. NP and LG organizations are more likely than FP firms to delegate decisions to employees for three very different reasons. First, as a consequence of their emphasis on quality, particularly in personal services such as nursing homes, NP and LG will grant their employees greater autonomy of decision-making than FP because they need to deliver personalized services such as affect; this cannot be directed effectively by supervisors but requires decision-making discretion on the part of those engaged in service delivery (Gui, 2000; Laville & Nyssens, 2000; Mosca, Musella, & Pastore, 2007). Second, if employees are attracted by NP and LG objectives they will be more trusted by management than their FP counterparts, and will consequently be permitted a greater degree of decision-making autonomy (Francois, 2000; Lipsky, 1980; Prendergast, 2007; Rainey & Steinbauer, 1999; Speckbacher, 2013). Third, the more severe agency problem in NP and LG organizations implies that top management may enforce discipline among their subordinates less than in FP firms. This form of managerial shirking (possibly taking the form of relatively benign conflict avoidance) implies that some decision-making and responsibility will be shifted to lower levels in the organizational hierarchy, especially to key employees (Glaser, 2003; Pauly & Redisch, 1973).

**Hypothesis 1:** NP and LG delegate more decision-making to their employees than FP.

Delegated decision-making authority must be supported by appropriate motivation to ensure that it is exercised in support of the organization’s objectives. In most environments, delegation calls for supporting incentives (Prendergast, 2002). In FP firms, executives, managers and lower level employees can be compensated relative to firm objectives through various incentives linked to profits. Top executives may share in profits or own stock, and in turn, they may proffer lower level employees incentives that promote profit-enhancing behavior. In contrast, because of their multiple objectives, NP cannot offer executives simple financial incentive schemes to pursue these objectives (Roomkin & Weisbord, 1999), akin to the problem of incentives in multi-tasking situations (Holmstrom & Milgrom, 1991). A similar issue arises in LG (Burgess & Ratto, 2003; Dixit, 2002); it may be more severe because of the need to comply with civil service rules that do not permit strong pay-for-performance incentive schemes. In turn, NP and LG executives cannot proffer lower level employees the same degree of performance and profit-oriented financial incentives as their FP counterparts can.

**Hypothesis 2:** NP and LG provide employees with less direct performance-based incentives than FP.

To substitute for performance incentives (or complement weak incentives) NP and LG may offer efficiency wages, which entail pay above the market rate. Efficiency
wages may induce employees to work harder for the fear of being caught shirking through (random) monitoring (Shapiro & Stiglitz, 1984), may motivate them to return the gift of above-market wage by working harder (Akerlof, 1980), or may attract better workers (Weiss, 1991). However, above-market compensation may also be a consequence of more severe agency problems, reflecting a less assiduous attempt to pay just-competitive compensation. Above-market compensation may take the form of higher wages or more generous fringe benefits (Moretti & Perloff, 2002). Fringe benefits may be preferred by management because they are less visible to outsiders, who may be critical of higher than competitive compensation.

**Hypothesis 3:** NP and LG provide employees with higher efficiency wages than FP.

Monitoring can substitute for financial incentives. Monitoring in NP and LG enhances compliance with multiple objectives, particularly if supervisors work side-by-side with their subordinates. Monitoring can aid compliance with organizational goals and support the disciplinary aspect of efficiency wages. However, if there is stronger employee work motivation and a higher degree of trust in NP and LG than in FP, the required level of monitoring may be lower than otherwise, possibly lower in NP and LG than in FP. Because we have conflicting predictions concerning the comparative level of monitoring in FP, NP, and LG, we do not offer a concrete hypothesis but expect to shed empirical light on the relative strength of the two competing forces.

The issues associated with agency problems and the benefits arising from employee dedication to a job, occupation or organizational goals could be resolved by hiring selfless and dedicated employees. However, such employees are not abundant and cannot be simply screened (identified separately) from those who are not such but would like to be hired as such. NP and LG may seek to select employees who are more responsive to the gift-exchange and reciprocity aspects of efficiency wages, and who are supportive of these organizations’ social mission. Reliance on employee self-selection is thus insufficient because of adverse selection; in labor markets where the quality of information about job applicants is “subtle, nuanced and difficult to verify,” social networks may be better sources of information about prospective employees than common recruiting mechanisms (Granovetter, 2005, p. 33). Therefore, to screen applicants for their belief in their mission organizations may rely on their current employees to tap into their social networks to identify new key employees (Campbell, 2012; Fernandez, Castilla, & Moore, 2000). Current employees may know their acquaintances’ values in ways that screening by human resources staff cannot replicate, and their referrals may be of great value to NP and LG who are limited in their ability to proffer financial incentives. However, LG organizations may be expected and legally required to use formal and open recruiting methods that limit or even preclude recruiting new employees through friendship or family ties.

**Hypothesis 4a:** NP and LG rely more than FP on recruiting new employees through social networks of current employees.
Hypothesis 4b: LG rely less than NP on recruiting new employees through social networks of current employees.

In sum, the key elements of organization design in FP, NP, and LG organizations are predicted to differ. The differences arise from agency problems between principals and managers, and between managers and employees. The two types of problems work in the same direction for delegation of decision-making and efficiency wages, enhancing in NP and LG relative to FP, and for performance-based incentives, limiting them in NP and LG relative to FP, but in opposite directions for monitoring. For selection of new employees in NP the dominant factor appears to be the desire to mitigate agency problems by hiring employees dedicated to the NP organizational goals.

However, the forces for differentiation are countered by institutional forces for similarity. These include state and federal government regulation that seeks to enforce uniform practices and minimum standards of care, and professional employees’ influence on the adoption of similar organization design (DiMaggio & Powell, 1983).

Data and Variables

A nursing home is a residence for individuals with physical or mental problems that prevent them from living on their own. Residents receive meals and assistance with daily activities as well as medical care but not of the intense kind provided by a hospital. Most nursing homes operate separately from hospitals. The majority of homes have residents with diverse medical conditions and ages. A little more than half of all U.S. nursing homes are part of a chain, and the rest are independent facilities. They are generally small operations, with fewer than a 100 residents on average.

The approximately 400 nursing homes in Minnesota have broadly the same characteristics as the national ones (82 residents on average, 51% belong to chains), except that the ownership distribution is skewed in favor of NP organizations. In Minnesota, only 27% of homes are FP and 60% are NP (approximately the reverse of the rest of the United States), and about 12% are LG owned. The LG homes are run by LGs, which are constituted and controlled at the level of towns, cities or counties and are independent of higher levels of government. A handful of nursing homes are state-owned.

To obtain information about elements of organization design we administered an original survey—Minnesota Nursing Homes Employer Survey, MNHES—to all 409 nursing homes identified in the federal government’s Center for Medical Services OSCAR (Online Survey, Certification and Reporting data of nursing facilities) database (see Note of Table 1 for details) in late 2005, with follow-up surveys mailed to nonrespondents twice in the spring of 2006. Nonparametric Mann–Whitney tests indicate that the 121 respondents are similar to nonrespondents in home characteristics (total number of residents, chain status, hospital affiliation, proportion of Medicare residents and resident case mix). The ownership status of the respondents was as follows: 61% NP, 22% FP, and 17% LG (thus FP are slightly under-represented in the sample and LG slightly over-represented). Because of missing information for different variables the usable sample size is 105, of which 69 are NP, 18 are FP, and 18 are LG.
## Table 1. Variable Definitions, Sources, and Descriptive Statistics.

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Variable definition</th>
<th>Sample M (SD)</th>
<th>Sample range</th>
<th>NP M (SD)</th>
<th>LG M (SD)</th>
<th>FP M (SD)</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sample distribution of nursing homes by ownership</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Organization design</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delegation of decision-making</td>
<td>Nurses’ (RNs, LPNs, and CNAs) participation in decision-making in (5-point scale, 1 = not at all to 5 = extreme): (1) Hiring of executive director or similar position; (2) Hiring of RNs, LPNs, and CNAs; (3) Expansion of facilities; (4) Change in the services offered; (5) Menu planning; (6) Choosing activities for residents; (7) Determination of standards for care of residents</td>
<td>1.99 (0.53)</td>
<td>1-3.57</td>
<td>2.01***</td>
<td>2.21***</td>
<td>1.69</td>
<td>MNHES</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social network recruiting of new employees</td>
<td>I if referral by current employees was the main way through which the most recently hired nursing employee was first identified; 0 otherwise</td>
<td>0.32</td>
<td>0/1</td>
<td>0.37**</td>
<td>0.25</td>
<td>0.17</td>
<td>MNHES</td>
</tr>
<tr>
<td>Fringe benefits</td>
<td>Number of fringe benefits (pension plan, health insurance, paid vacation leave and paid sick leave) received by most nursing employees (0-4)</td>
<td>3.64 (0.63)</td>
<td>2-4</td>
<td>3.69***</td>
<td>3.94***</td>
<td>3.12</td>
<td>MNHES</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitoring of nursing staff</td>
<td>The extent to which nursing employees have their work monitored and supervised by supervisors and managers? (1-not at all to 5-extreme)</td>
<td>3.79 (0.79)</td>
<td>2-5</td>
<td>3.86*</td>
<td>3.79</td>
<td>3.51</td>
<td>MNHES</td>
</tr>
<tr>
<td>Merit as basis for pay raise</td>
<td>I if merit ranks as one of the top two criteria for determining individual nurse’s pay raise; 0 otherwise</td>
<td>0.26</td>
<td>0/1</td>
<td>0.23</td>
<td>0.31</td>
<td>0.34</td>
<td>MNHES</td>
</tr>
<tr>
<td><strong>Control variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home size</td>
<td>Total number of residents currently reside in the nursing home</td>
<td>79.84 (40.88)</td>
<td>19-207</td>
<td>82.64</td>
<td>67.89</td>
<td>81.06</td>
<td>MNHES &amp; OSCAR</td>
</tr>
<tr>
<td>Chain status</td>
<td>I if the nursing home belongs to a chain operation; 0 if independent.</td>
<td>0.48</td>
<td>0/1</td>
<td>0.55</td>
<td>0.06***</td>
<td>0.61</td>
<td>OSCAR</td>
</tr>
<tr>
<td>Hospital affiliation</td>
<td>I if the facility is affiliated with a hospital; 0 otherwise</td>
<td>0.15</td>
<td>0/1</td>
<td>0.12***</td>
<td>0.44***</td>
<td>0</td>
<td>OSCAR</td>
</tr>
<tr>
<td>Herfindahl–Hirschman Index</td>
<td>$HHI_i = (100 \times \frac{NH_i # \text{residents}}{\text{county # \text{NResidents}}})^2$</td>
<td>2474.74 (1709.64)</td>
<td>276.50-10000</td>
<td>2462.20 (1588.44)</td>
<td>2955.39* (2266.11)</td>
<td>2042.13 (1486.58)</td>
<td>OSCAR &amp; ZIP code</td>
</tr>
</tbody>
</table>

Note. RN = registered nurses; LPN = licensed practical nurses; CAN = certified nursing assistants; NP = nonprofit; LG = local government; FP = for-profit; OSCAR = Online Survey. Certification and Reporting data of nursing facilities (Centers for Medicare and Medicaid Services), http://www.cms.hhs.gov/NursingHomeQualityInitits/; MNHES = Minnesota Nursing Homes Employer Survey; available at https://netfiles.umn.edu/users/benne001/www/papers/work-surv/Nursing-homes-survey.pdf; *, **, and *** indicate significance of the one-tailed t test at the .10, .05, and .01 levels, respectively, for the comparison between NP and FP, and LG and FP nursing homes.
The survey was addressed to nursing home administrators and requested information, among other things, concerning practices aimed at core employees, the nursing staff: registered nurses (RNs), licensed practical nurses (LPNs), and certified nursing assistants (CNAs). On the basis of responses to these questions we constructed five variables that represent organization design that affects the work of the nursing staff. The variables, with the exception of delegation of decision-making, represent weighted averages of survey responses concerning each nursing group separately; the weights reflect the relative number of the three groups of nurses in each home. Table 1 presents definition of variables, sample statistics by ownership type and data sources for the organization design and control variables. Test statistics comparing each variable in NP and LG to FP are reported by stars, if any, on the NP and LG means signifying the level of statistical significance.

**Delegation of Decision-Making**

The variable was calculated from information about the degree of influence core nursing employees have in seven areas: hiring of nursing staff, hiring of the executive director, expansion of facilities, change in services, menu planning, choosing of activities for residents, and determination of standards of care (this is the only design element that was asked about the nursing staff collectively without distinguishing among the three groups). The variable was constructed by taking the average of the seven items ranging from 1 (not at all) to 5 (extreme). The sample mean of the 105 nursing homes is 1.99 with a standard deviation of 0.53, with statistically significant higher values for NP and LG relative to FP.

**Social Network Selection**

We asked about the main way of recruiting nursing staff, including “cold call” by candidates, newspaper ads, online job services, referral by current employees, employment agencies and so on. We concentrate on referrals by current employees as an indicator of selection of employees through social networks. In our sample, 32% of nursing homes rely mainly on referrals (several homes indicated more than one main recruiting method, so if they included employee referral we classified them as selection through referral by current employees). NP rely significantly more on social network selection than FP.

**Fringe Benefits—Efficiency Wages**

We compare the hourly wage of each group of nursing staff between NP, LG, and FP nursing homes. Except for the registered nurses’ wage, where LG homes pay 8% more than FP homes at a 0.10 significance level, we found no significant differences. However, total compensation also includes fringe benefits: pension plans, health insurance, paid vacation leave, and paid sick leave. The fringe benefits variable is the count of items implemented in a home with a possible range of 0 to 4 (we do not have
information about the monetary value of these benefits). The fringe benefits variable constitutes our measure of the extent of efficiency wages. NP and LG have significantly more benefits than FP.

**Monitoring**

This variable is based on the extent to which the work of nursing employees is monitored and supervised by supervisors and managers, ranging from 1 (not at all) to 5 (extreme). NP use monitoring slightly more than FP.

**Merit-Based Pay Raise**

In nursing homes, standard pay-for-performance incentives are not used because individual contribution or its effects cannot be observed. Nursing homes that seek to use individual incentives tend to rely on merit-based pay raises, which are based on broad assessments of performance. In our sample, the incidence of merit pay in FP is substantially greater than in NP and somewhat greater than in LG.

**Control Variables**

Certain home characteristics may be associated with organization design: size (total number of residents), whether a home belongs to a chain (more than half of FP and NP homes are part of a chain), and whether the nursing home is affiliated with a hospital (none of FP, 12% of NP and 44% of LG homes). We also include the county-level Herfindahl–Hirschman market concentration index to account for possible pressures or opportunities for learning that may drive nursing homes to adopt similar organization design.

The differences in means provide initial support for our four hypotheses. We now turn to a more detailed comparative analysis of organization design.

**Empirical Strategy and Results**

To investigate differences in organization design among FP, NP, and LG homes, we first estimate the individual elements of organization design as a function of home ownership (FP is the reference group) and control variables. We estimate one equation for each design element, using seemingly unrelated regression (SUR) to account for the possibility that the errors in different equations in the system are correlated (Miguel, 2004; Tsai, 2007), because they arise from the same decision process. This estimation provides a benchmark for evaluating differences in organization design across FP, NP, and LG homes.

The choice of organization design elements reflects possible complementarities and substitution among various elements. To capture these possibilities, we develop a system of equations that reflects the logic of organization design presented earlier. The first concern of organization design is delegation of decision-making, which is affected
by ownership and other (control) variables. New employees are selected so as to meet the needs of decision-making delegation; thus the “selection” equation includes delegation, ownership, and control variables. Other elements of organization design are similarly chosen in relation to each other as well as ownership and control variables. This system of equations is estimated simultaneously, with all design elements being endogenous, that is, representing dependent variables as well as explanatory variables. The estimation method is a three-stage least squares (3SLS) method, which requires instrumental variables for the identification of the endogenous variables. The five equations below represent our theoretical logic, but the results do not change substantially if the order of the elements in this incremental system is changed. We follow Ben-Ner, Kong, and Lluis (2012), who estimate a similar system for a sample of FP firms relative to the task environment of their key employees and provide details about the estimation method.

1. Delegation = f(OT, X, IV, u₁)
2. Selection = g(OT, X, IV, Delegation, u₂)
3. Fringe benefits = h(OT, X, IV, Delegation, Selection, Monitoring, u₃)
4. Monitoring = i(OT, X, IV, Delegation, Selection, Fringe benefits, u₄)
5. Merit pay = j(OT, X, Delegation, Selection, Fringe benefits, Monitoring, u₅)

where (u₁, u₂, u₃, u₄, u₅) is quint-variate normal N(0, Σ'), Σ' is nondiagonal assuming correlation in the disturbance terms across equations, OT is a set of dummy variables representing ownership type (NP and LG dummies as the included groups, and FP the reference category), X contains all the control variables. To address the endogeneity of the elements of organization design, we use instrumental variables (IV) for each element included in the estimation of another element. The equation-specific instrumental variables are as follows. For the delegation of decision-making equation IV includes home age; older age is likely to indicate a more traditional management style and consequently less delegation of decision-making. For network selection of new employees IV is the population density in the county in which a home is located to measure the degree of tightness of family or friendship networks that can be relied on; selection of new employees is likely to be positively associated with physical proximity, which increases with population density. For fringe benefits, IV includes wages for each nursing group. For monitoring, IV is the degree to which supervisors are able to tell how well nurses are carrying out their tasks. All the instruments described above are significantly correlated with the variable for which they instrument but not with other dependent variables. The structural 3SLS estimation is more demanding than the SUR estimation in that it requires specification of the relationships among the five elements of organization design and the selection of instrumental variables for identification of the endogenous variables. However, estimation of alternative assignations of endogenous variables explaining each of the five elements does not produce substantially different results than those reported below in Table 3, and it turns out that we are not detecting much endogeneity.
Table 2 shows the results of the SUR estimation. NP and LG homes have significantly greater degrees of delegation of decision-making than FP homes \((p < .05\), respectively), supporting H1. NP and LG homes provide significantly greater fringe benefits than FP homes \((p < .01\), respectively), supporting H3. NP homes monitor more their employees than FP homes \((p < .10\), the difference between LG and FP is substantial, but statistically insignificant due to large variations in monitoring practices among LG homes. NP, but not LG, homes rely significantly more than FP homes on network selection of new employees \((p < .10\), partially supporting H4a, and fully supporting H4b. The differences in merit-based pay are statistically insignificant, although the sign is in the direction predicted in H2.

Similar differences are detected in the 3SLS estimation in Table 3. The size of the usable sample in Table 3 drops from 105 to 91 because of missing observations for some of the instruments. The differences for delegation of decision-making, selection, and efficiency wages are larger and statistical significance is maintained compared with SUR estimates, the differences are larger for financial incentives but the estimates are less precise. The differences in monitoring are reversed in sign but the estimated standard errors are very large. However, because none of the coefficients of the presumed endogenous variables is statistically significant, the interpretation of findings in Table 2 is satisfactory.

The differences between LG and FP homes are similar to those between NP and FP homes, with one exception (manifest in Tables 2 and 3): LG homes do not rely significantly more on network selection of new employees than do FP homes.

**Discussion and Conclusion**

We proposed a comparative theoretical perspective on organization design of FP, NP, and LG organizations grounded in differences among their principals and objectives. The three types of organization encounter different agency problems and choose and implement different variants of organization design. We predicted that NP and LG organizations delegate more decision-making to their core employees than do FP firms, and provide different types of rewards—more efficiency wages and less direct performance-based incentives. In addition, NP rely more on the social networks of their current employees to recruit new employees who are sympathetic to their goals.

These hypothesized differences arise from two related sources. The first is the need to address the specific agency problems that each organization faces at the employee–manager interface. The second is the dependence of the implementation of organization design on the nature of agency problems between an organization’s principals and managers. For example, the key element of organization design, allocation of decision-making, may be a consequence of the desire of NPs’ boards to provide higher quality services than do FPs, but also a result of more latitude allowed to managers by less involved boards—both generating comparatively more delegation of decision-making to key employees.

We investigated these predictions empirically focusing on a narrowly defined and homogeneous industry—nursing homes—in a single state, Minnesota, where homes
Table 2. Ownership and Organization Design: SUR Estimations.

<table>
<thead>
<tr>
<th></th>
<th>Delegation of decision-making</th>
<th>Selection (social network recruiting)</th>
<th>Efficiency wages (fringe benefits)</th>
<th>Monitoring</th>
<th>Financial incentives (merit-based pay)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NP</td>
<td>0.304*** (0.135)</td>
<td>0.209* (0.118)</td>
<td>0.389*** (0.137)</td>
<td>0.393* (0.206)</td>
<td>-0.156† (0.109)</td>
</tr>
<tr>
<td>LG</td>
<td>0.421*** (0.190)</td>
<td>0.137 (0.166)</td>
<td>0.579*** (0.193)</td>
<td>0.411† (0.291)</td>
<td>-0.228† (0.154)</td>
</tr>
<tr>
<td>Control variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home size</td>
<td>-0.001 (0.001)</td>
<td>0.001 (0.001)</td>
<td>0.003*** (0.001)</td>
<td>-0.002 (0.002)</td>
<td>-0.000 (0.001)</td>
</tr>
<tr>
<td>Chain status</td>
<td>-0.043 (0.107)</td>
<td>0.035 (0.093)</td>
<td>-0.164† (0.109)</td>
<td>0.101 (0.164)</td>
<td>-0.122† (0.087)</td>
</tr>
<tr>
<td>Hospital affiliation</td>
<td>0.132 (0.148)</td>
<td>-0.074 (0.130)</td>
<td>0.076 (0.151)</td>
<td>-0.138 (0.227)</td>
<td>0.257*** (0.120)</td>
</tr>
<tr>
<td>Herfindahl–Hirschman index (10k)</td>
<td>0.039 (0.298)</td>
<td>0.134 (0.260)</td>
<td>-0.001 (0.303)</td>
<td>-0.386 (0.456)</td>
<td>0.009 (0.242)</td>
</tr>
<tr>
<td>N</td>
<td>105</td>
<td>105</td>
<td>105</td>
<td>105</td>
<td>105</td>
</tr>
<tr>
<td>χ²</td>
<td>11.75</td>
<td>4.87</td>
<td>24.39</td>
<td>5.37</td>
<td>8.90</td>
</tr>
<tr>
<td>Prob &gt; χ²</td>
<td>0.07</td>
<td>0.56</td>
<td>0.00</td>
<td>0.50</td>
<td>0.18</td>
</tr>
<tr>
<td>R²</td>
<td>.10</td>
<td>.04</td>
<td>.19</td>
<td>.05</td>
<td>.08</td>
</tr>
</tbody>
</table>

Note. Among the 105 nursing homes included in the analysis, 18 are FP, 69 NP, and 18 LG. Standard errors are in parentheses. SUR = seemingly unrelated regression; NP = nonprofit; LG = local government; FP = for-profit.

*, **, and *** indicate significance at the two-tailed .10, .05, and .01 levels, respectively.

†Indicates significance at the one-tailed .10 level.
### Table 3. Ownership and Organization Design: 3SLS Estimations.

<table>
<thead>
<tr>
<th></th>
<th>NP</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Delegation</td>
<td>Selection (social</td>
<td>Efficiency wages</td>
<td>Monitoring</td>
<td>Financial incentives</td>
</tr>
<tr>
<td></td>
<td>of decision-making</td>
<td>network recruiting)</td>
<td>(fringe benefits)</td>
<td></td>
<td>(merit-based pay)</td>
</tr>
<tr>
<td>NP</td>
<td>0.561***</td>
<td>0.345**</td>
<td>0.676*</td>
<td>−0.276 (1.281)</td>
<td>−0.541 (0.777)</td>
</tr>
<tr>
<td>LG</td>
<td>0.643***</td>
<td>0.208 (0.209)</td>
<td>0.896**</td>
<td>−0.401 (1.789)</td>
<td>−0.641 (1.086)</td>
</tr>
</tbody>
</table>

**Endogenous variables**

- **Delegation of decision-making**: −0.016 (0.275) −0.657 † (0.442) 0.737 (1.436) 0.508 (0.836)
- **Selection**: 0.454 (0.785) 0.462 (1.359) 0.014 (0.918)
- **Efficiency wages**: 0.465 (1.999) 0.296 (1.209)
- **Monitoring**: −0.062 (0.212) −0.005 (0.208)

**Control variables**

- **Home size**: −0.001 (0.001) −0.000 (0.001) 0.001 (0.002) −0.000 (0.003) −0.001 (0.002)
- **Chain status**: −0.086 (0.107) −0.013 (0.098) −0.282* (0.158) 0.412 (0.596) −0.024 (0.334)
- **Hospital affiliation**: 0.044 (0.150) 0.036 (0.137) (0.140) (0.197) −0.055 (0.397) 0.061 (0.248)
- **Herfindahl–Hirschman index (10k)**: −0.260 (0.287) 0.461 † (0.321) −0.151 (0.436) 0.132 (0.769) 0.265 (0.479)

**Instrumental variables**

- **Home age**: −0.005*** (0.002)
- **County population density (10k)**: 1.589** (0.741)
- **Wages of nurses (log)**: −0.462 (0.555)
- **Supervisor’s ability**: 0.470*** (0.144)

<table>
<thead>
<tr>
<th></th>
<th>91</th>
<th>91</th>
<th>91</th>
<th>91</th>
<th>91</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>91</td>
<td>91</td>
<td>91</td>
<td>91</td>
<td>91</td>
</tr>
<tr>
<td>$\chi^2$</td>
<td>27.01</td>
<td>14.31</td>
<td>31.31</td>
<td>28.31</td>
<td>6.17</td>
</tr>
<tr>
<td>Prob &gt; $\chi^2$</td>
<td>0.00</td>
<td>0.07</td>
<td>0.00</td>
<td>0.00</td>
<td>0.80</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.23</td>
<td>0.14</td>
<td>0.04</td>
<td>-0.01</td>
<td>-0.19</td>
</tr>
</tbody>
</table>

**Note.** Among the 91 nursing homes included in the analysis, 16 are FP, 58 NP and 17 LG. Standard errors are in parentheses. 3SLS = three-stage least squares; NP = nonprofit; LG = local government.

*, **, and *** indicate significance at the two-tailed .10, .05, and .01 levels, respectively.

† Indicates significance at the one-tailed .10 level.
are subject to the same legal and regulatory environment. We estimated simultaneously a system of five equations that determine five elements of organization design relative to ownership and other factors, using two different estimation approaches. One approach (SUR), less restrictive, considered separately each of the five elements as a function of ownership and control variables. Another approach (3SLS) allowed for interdependence among the five elements in a structural system. Both approaches yielded similar results, in broad support for our theoretical hypotheses. NP and LG organizations delegate more decision-making power to their employees, provide them with efficiency wages (greater total compensation through better fringe benefits), and NP tend to hire their employees through social networks, compared with FP homes. FP rely more on performance-based incentives, although the estimates were not statistically significant in all specifications. No statistically significant differences are detected in the degree of monitoring.

There is little empirical research in nursing homes or in other industries against which we can compare our results, and three-way ownership comparisons are nonexistent. DeVaro and Brookshire (2007), in a cross-section of industries, find that NP organizations are less likely to offer promotions, and the promotions that they do offer are less likely to be based on job performance or merit, than FPs and, echoing the findings of Roomkin and Weisbrod (1999) and Bertrand, Hallock, and Arnould (2005) for hospital executives, they find that NP workers are less likely to receive commissions on sales, bonuses and profit sharing than their FP counterparts. Our findings that NP homes rely more on efficiency wages and hire new employees more on the basis of referrals through social networks echo Ito and Domian’s (1987) finding that NP orchestras pay musicians higher wages than their FP counterparts; these authors explain the difference as an efficiency wage due to less measurable outcomes in NP. These differences arise from NP organizations’ need and opportunity to delegate decision-making to employees in lower rungs of the hierarchy, and the need to motivate them in the absence of the overall profit motive for the organization.

To be sure, the differences found in the present study are statistically and substantively significant. On the key organization design variable, decision-making, NP and LG delegate more than FP by about 1 standard deviation. The source of this greater autonomy may be the need that NP and LG nursing homes see in allowing nurses to make decisions that advance the well-being of residents, but may also arise from greater agency problems between managers and boards of trustees these types of organization face relative to their FP counterparts. Be as it may, the principal organization design support for suitable use of delegated decision-making rights seems to come from efficiency wages and, in NP, from social network selection of new employees, which probably helps recruit nurses who support NPs’ organizational goals. It is impossible to state whether these measures suffice and whether the differences that we find are adequate relative to the needs of organizations with different ownership structures and therefore with different problems. Ben-Ner, Karaca-Mandic, and Ren (2012) find that NP nursing homes provide higher quality, particularly of service dimensions that are hard to observe by outsiders, than LG and especially FP nursing homes. This is consistent with the possibility that workplace organization design in NP nursing
homes is successful in inducing behavior on the part of nurses that produces outcomes that are desirable to residents in accord with NP goals; this is less so in LG homes.

Nursing home managers and boards need to consider the special features of their services and their implications for organization design that support their complex and hard-to-measure goals. The elements of organization design that help align the interests of employees who enjoy considerable decision-making autonomy with the goals of their organizations must be chosen carefully in view of their availability and costs. As performance-based incentives are not feasible in NP and LG because of the nature of their broad goals, emphasis needs to be placed on selection and development of nurses to ensure understanding of and support for organizational goals. In addition, it is important to consider forms of adequate monitoring of some aspects of delegated decision-making to enhance compliance with these goals: trust but verify. Government regulators may assist NP and LG homes in enforcing stricter accountability of managers to their boards, and ensuring independence and due-diligence of boards, all to reduce the severity of agency problems between boards and managers and managers and employees.

Future research may examine whether our findings apply to other industries such as health care, education and the arts, where different forms of ownership coexist. Furthermore, this study cannot pin down the source of differences in organization design to the two sources mentioned above: differences in agency problems or in objectives. More research is needed to evaluate the severity of different types of agency problems across sectors and the elements of organization design that can ameliorate them.

Acknowledgments

For helpful comments, we thank the editor, referees, and participants at the ARNOVA annual conference, Conference on Comparative Analysis of Enterprise Data (CAED), Sloan Foundation Industry Studies Conference, International CIRIEC Research Conference on the Social Economy and the Association for Health Economics Conference, and seminars at the Central European University, University of Minnesota, University of Haifa, Shandong University, Korea University, Universitat Autonoma de Barcelona, Universidad Publica de Navarra, University of Liege, and University of Split. Special thanks to Burton Weisbrod. The collaboration of administrators at nursing homes in responding to the survey and of Minnesota state officials who supplied data made this study possible.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This study was supported by the Aspen Institute Grant NSRF 2005-1, “A Comparative Study of Organizational Structure, Behavior and Performance.”
Notes
1. This approach may be contrasted with noneconomic approaches, such as that presented by Ridder and McCandless (2010).

2. Speckbacher (2013, p. 1014) offers a detailed discussion of these differences. He frames the issue with an example relevant to our study: “. . . offering nurses explicit incentives which reward the number of patients served or tasks completed in a given period of time, but not the nonvisible (noncontractible) quality of services, might motivate them to focus on the rewarded aspects of performance while cheating on quality . . . ”

3. The literature that evaluates the effectiveness of nonprofit (NP) boards reflects perspectives similar to those offered here. See Andrés-Alonso, Azofra-Palenzuela, and Romero-Merino (2009); Miller (2003); and O’Regan and Oster (2005) for empirical analyses and literature reviews, and Speckbacher (2008) for a theoretical analysis.

4. NP, and less so local government (LG), provide higher quality nursing home services than their for-profit (FP) counterparts (Amirkhanyan, Kim, & Lambright, 2008; Ben-Ner, Karaca-Mandic, & Ren, 2012).

5. Because employee performance evaluation in nursing homes tends to be subjective due to the absence of measurable individual performance metrics, the alternative incentive method is to include less measurable effort into the reward metrics (Bol, 2008)—merit evaluation and merit-based raises.

6. We had only one state-owned nursing home responded to our survey, and it was excluded from the final sample.

7. A detailed sectoral comparison of wages in nursing homes and other personal services industries is presented in Ben-Ner, Ren, and Paulson (2011).

8. We do not comment on the relationships among various elements of organization design, including possible substitution or complementarity among them. This issue is discussed at length in Ben-Ner, Kong, and Lluis (2012).

References


**Author Biographies**

**Avner Ben-Ner** is a professor at the Carlson School of Management at the University of Minnesota, United States.

**Ting Ren** is an associate professor at the HSBC Business School at Peking University, China.