

**Toward a New Generation of  
Empirical Evidence and Policy Research on  
Public Sector Unionism and Collective Bargaining**

*David Lewin, Thomas Kochan, and Jeffrey Keefe<sup>1</sup>*

April 2012

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<sup>1</sup> We thank Sylvia Allegreto, Ariel Avgar, Monica Bielski, Barry Bluestone, Bob Bruno, Andrea Campbell, Joel Cutcher-Gershenfeld, Peter Feuille, Teresa Ghilarducci, Rebecca Givan, Richard Hurd, Matt Finkin, Harry Katz, Richard Locke, Robert McKersie, Lawrence Mishel, Daniel J. B. Mitchell, Craig Olson, Saul Rubinstein, and Christian Weller. Portions of this paper were posted on the Employment Policy Research Network at <http://www.employmentpolicy.org/sites/www.employmentpolicy.org/files/EPRN%20PS%20draft%203%2016%201%20PM%20FINALtk-ml4%20edits.pdf>.

## **Abstract**

*Public sector unionism and collective bargaining are being widely debated in U.S. state and local governments, some of which have sharply reduced or eliminated public employee unionism and bargaining rights. These actions have occurred based on a belief that fiscal adversity facing state and local governments stems mainly from the over-compensation of public employees that has ostensibly resulted from unionism, bargaining and supportive state-level legislation that was enacted decades earlier. These contemporary policy changes, however, are being made with little or no consideration of empirical evidence about public-private sector pay and benefit relationships, the effects of unions on public employee pay, the effectiveness of employment dispute resolution procedures, including arbitration, and the ability of public sector labor and management to effectively combat fiscal adversity and enhance organizational performance. In this paper, we provide new evidence showing that, on balance, public employees are under-compensated relative to their public sector counterparts and that the effects of unions on compensation are considerably smaller in the public than in the private sector. We also review and summarize empirical evidence pertaining to the uses and effectiveness of public sector dispute resolution procedures and to public and private sector joint labor-management initiatives to reform work practices and enhance organizational performance. This evidence indicates that dispute resolution procedures work reasonably well based on process and outcome assessments, and that public sector labor and management can use mutual gains negotiations to benefit not just themselves but citizens and communities more broadly. In addition, we propose a research agenda for a new generation of scholars so that they, like their predecessors, can influence policy makers in making high stakes decisions about public employee unionism and collective bargaining.*

## **Introduction**

The United States is in the throes of the most intense, widespread public policy debates about public sector unionism and collective bargaining to occur since the enactment more than a half century ago of the initial state laws authorizing public sector collective bargaining. Like then, much of the current political debate has occurred in the absence of empirical evidence about how collective bargaining actually functions or the results it generates. That was understandable in the 1960s because there was little if any record to draw on from public sector bargaining. Hence, much theoretical speculation occurred about how private sector collective bargaining practices would work if transferred to the public sector. It is less defensible now, given the half century of experience and empirical evidence about how both public sector and private sector collective bargaining affect outcomes at the core of these policy debates. In this paper we summarize the critical arguments in debate then and now and review what the evidence from public and private sector collective bargaining tells us about these debates. We then call for a new generation of empirical policy research that can evaluate the policy options now in play, similar to what followed the passage of the first generation of public sector bargaining laws.

## **Conceptual and Policy Debates: Then and Now**

The debates that emerged in the 1960s were spurred by calls for and federal and state level actions to provide public sector employees with legal rights to engage in collective bargaining. Wisconsin passed the first state level public sector collective bargaining statute in 1959, President Kennedy signed Executive Order 10988 in 1962 providing bargaining rights on a limited scope of issues for federal employees, and between 1960 and 1975 more than two-thirds

of the states enacted similar laws covering various occupational groups in local and state government. Union membership among public sector employees nationwide expanded in tandem (partly as a result and partly as a cause of these legislative actions), from less than ten percent then to approximately 34 percent today.

Three theoretical arguments accompanied this early legislative activity and growth of public sector unions and collective bargaining. The first argument was that the demand for public sector workers was inelastic because public employers could not shut down or move operations. Therefore, public sector unions would exploit this source of power and wages would inevitably be pushed up beyond those available to private sector workers (Marshall, 1920). The second argument was based on a political theory that collective bargaining was incompatible with democratic government because it gave unions special access to influence decisions of elected leaders, some of whom unions helped put in office through their electoral support (Wellington and Winter, 1971; Downs, 1957). This too would result in excessively higher wages and other outcomes than would harm the public interest. The third argument reflected concerns specific to how bargaining worked in the private sector, with the threat of a strike regarded as the primary force for motivating collective bargaining agreements in that sector. Strikes by public sector employees, however, would not only inappropriately challenge democratic government, they could disrupt the flow of essential services and thereby threaten public health and safety (Taylor, 1967). Yet the alternatives to strikes—arbitration or bargaining without some final resolution mechanism— would risk overdependence on third parties in shaping the process and outcomes of bargaining (Wirtz, 1963; Northrup, 1966).

Given that there was little if any empirical evidence to assess these arguments and issues, they were debated largely on theoretical, ideological, and partisan grounds (Lewin, 1973). The

result was a pattern of political outcomes in which states with relatively high levels of private sector union density, traditions of enacting progressive reforms in other areas of public policy, and high and rising per capita incomes were especially likely to enact public sector bargaining legislation (Kochan, 1973). The more specific, technical debates over the right to strike were largely resolved through recommendations of a number of expert commissions composed of scholars and professionals with considerable experience in private sector bargaining. While several states allowed strikes for non-essential services, the dominant initial pattern was to outlaw strikes and provide various substitute dispute resolution processes, such as mediation and fact finding. In subsequent years, a number of these statutes were amended to provide for the arbitration of public sector bargaining disputes, mainly in essential services such as police and fire. Several states also adopted or extended arbitration to cover teachers and other local government employees.

These legal and institutional innovations spurred a generation of new empirical research evaluating the effects of collective bargaining and dispute resolution on the process and outcomes of public sector bargaining. We will review the results of this work in the empirical section of this paper.

The proximate triggers of the current debates once again reflect a mixture of economic and political forces. The economic trigger was the fiscal crisis that state and local governments have been experiencing since 2008 as the effects of the Great Recession began to impact local and state government budgets. The debate largely centers on the extent to which public employee unions have contributed to this crisis through excessive pay and benefits they may have negotiated for their members. The proximate political trigger was the election of a new group of Republican governors who pressed for legislative reforms that would either eliminate or

dramatically limit collective bargaining for public employees in their states and thereby significantly reduce the power of public employee unions. Just as it served as an early adopter of public sector bargaining, the state of Wisconsin became the early new era battleground for taking away public employee bargaining rights that had been granted and sustained for more than a half-century. Unfortunately, once again the political battles that led to scaling back public employee bargaining rights were largely driven by ideology and the outcomes were driven by the balance of political power, even though a significant body of empirical research on both public sector and private sector collective bargaining from prior decades was available to inform these debates.

Hence, the primary objectives of this paper are to bring evidence to bear on contemporary public sector collective bargaining debates by summarizing what is known from past and current research and to encourage a new wave of empirical research that can support future policy choices. In particular, the paper summarizes what is known about the following questions:

- 1. How does public employee compensation compare to the private sector? Have public employees benefited from unions and collective bargaining in ways that now make them over-compensated relative to comparable private sector employees?*
- 2. How have the dispute resolution processes enacted in lieu of the right to strike performed in achieving agreements, avoiding work stoppages, and affecting bargaining outcomes?*
- 3. How have the parties to public sector labor-management relations responded to periodic financial crises that have arisen in their settings? That is, are these parties unable to adjust practices when conditions require or, alternatively, are they capable of negotiating adjustments that are responsive to problems or challenges affecting vital public interests?*
- 4. What lessons can be learned from the results of innovations in private-and public sector labor-management relations in the years since public sector statutes were first enacted that should be considered in shaping the future of public sector labor-management relations?*

## **How Does Public Employee Compensation Compare to the Private Sector?**

Proponents of scaling back or eliminating public sector collective bargaining have argued that public sector employees are overpaid relative to their private sector counterparts. We evaluate this claim by drawing on multiple data sets and our own research as well as other recent studies. We use three data series and alternative wage equation specifications to explore the robustness of the overpayment argument based on comparisons of public and private employee compensation: (1) the U.S. Bureau of the Census: Integrated Public Use Microdata Series (IPUMS) of the March Current Population Survey (CPS)<sup>2</sup>, (2) the Current Population Survey Merged Outgoing Rotation Groups (CPS-MORG)<sup>3</sup>, and (3) the American Community Survey Public Use Microdata Area (ACS-PUMA).<sup>4</sup>

To compare total compensation in the public and private sectors, fringe benefit data are also required. There is only one reliable source of benefit information in the United States: the Employer Costs for Employee Compensation (ECEC)<sup>5</sup> survey, which is administered by the U.S. Department of Labor, Bureau of Labor Statistics (BLS). The ECEC includes data from private industry and state and local governments, but provides information on size of organization only for private employers. Larger employers, i.e., those with more than 100 employees, are significantly more likely to provide employees with benefits, in part, because they can spread

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<sup>2</sup> M. King, S. Ruggles, T. Alexander, D. Leicach & M. Sobek. 2009. Integrated Public Use Microdata Series, Current Population Survey: (IPUMS CPS) Version 2.0. (Machine-readable database).Minneapolis, Minn: Minnesota Population Center (producer and distributor).

<sup>3</sup> U.S. Department of Commerce. Census Bureau. *A Compass for Understanding and Using American Community Survey Data*. Various Years.

<sup>4</sup> U.S. Department of Labor , *Current Population Survey: Merged Outgoing Rotation Group File*. CPS Labor Extracts NBER. D. Feenberg & J. Roth. <http://www.nber.org/data/morg.html>.

<sup>5</sup> U.S. Department of Labor, U.S. Bureau of Labor Statistics (U.S. DOL). 2010. Employer Costs for Employee Compensation, December 2009, with unpublished detailed compensation data.

administrative costs over a larger group and, for insurance purposes, can more readily diversify risk and self insure. State and local governments resemble larger size private employers. Therefore, benefit costs will be used to mark-up CPS-IPUMS wage data by sector, occupation and private employer size. Because the CPS-MORG and ACS-PUMA data do not contain a measure of employer size, the benefit costs will be used to mark-up wages in these data sets by sector and occupation.

The CPS-PUMS data reveal substantially different approaches to staffing and compensation as between the private and public sectors. For example, on average, state and local public-sector workers are more highly educated than the private-sector workforce; 54 percent of full-time state and local public sector workers hold at least a four year college degree compared to 35 percent of full-time private-sector workers.

Further, wages and benefits are allocated differently between private- and public-sector full-time workers in the United States (See **Table 1**). State and local government employees receive a higher portion of their compensation in the form of employer-provided benefits, and the mix of benefits is different from the private sector. The key question when considering both employer-provided benefits and direct pay, however, is whether state and local government employees have a total compensation package that costs about the same as what they would receive if they were employed in the private sector. In other words, it is the total cost of the compensation package rather than the mix of pay and benefits that is important in making public sector-private sector comparisons. In our analysis, the ECEC data are used to mark-up wages for benefit costs.



Table 1  
Employee Compensation Compared Between the Private and Public Sector.  
Employer Costs of Total Compensation by Category, Sector and Organization Size

Employer Costs December-09	Private Employers				Government State and Local Employees All
	National Employees All Sizes	Employees 1 to 99	Employees 100 to 499	Employees 500+	
<b>Total Compensation</b>	<b>100.0%</b>	100.0%	100.0%	100.0%	100.0%
<b>Wages and Salaries</b>	<b>69.6%</b>	<b>73.7%</b>	<b>70.2%</b>	<b>66.9%</b>	<b>65.9%</b>
<b>Total Benefits</b>	<b>30.4%</b>	<b>26.3%</b>	<b>29.8%</b>	<b>33.1%</b>	<b>34.1%</b>
<b>Paid Leave</b>	<b>6.9%</b>	<b>5.5%</b>	<b>6.9%</b>	<b>8.6%</b>	<b>7.6%</b>
Vacation	3.3%	2.8%	3.5%	4.5%	2.9%
Holiday	2.2%	1.9%	2.2%	2.5%	2.3%
Sick	1.1%	0.6%	0.8%	1.1%	1.9%
Personal	0.4%	0.2%	0.3%	0.4%	0.5%
<b>Supplemental Pay</b>	<b>2.5%</b>	<b>2.8%</b>	<b>2.7%</b>	<b>3.6%</b>	<b>0.8%</b>
Overtime	0.8%	0.8%	1.1%	1.0%	0.4%
Shift Differential	0.2%	0.1%	0.3%	0.5%	0.1%
Nonproduction Bonuses	1.4%	1.9%	1.4%	2.1%	0.3%
<b>Insurance</b>	<b>8.8%</b>	<b>6.7%</b>	<b>8.6%</b>	<b>9.0%</b>	<b>11.6%</b>
Life	0.2%	0.1%	0.2%	0.2%	0.2%
Health	8.3%	6.3%	8.0%	8.3%	11.2%
Short-term disability	0.2%	0.1%	0.2%	0.3%	0.1%
Long-term disability	0.1%	0.1%	0.1%	0.2%	0.1%
<b>Retirement and Savings</b>	<b>4.5%</b>	<b>2.5%</b>	<b>3.4%</b>	<b>4.8%</b>	<b>8.1%</b>
Defined Benefit	2.7%	0.9%	1.4%	2.2%	7.2%
Defined Contribution	1.7%	1.6%	2.0%	2.6%	0.8%
<b>Legally Required</b>	<b>7.7%</b>	<b>8.9%</b>	<b>8.2%</b>	<b>7.2%</b>	<b>6.0%</b>
Social Security	4.5%	4.9%	4.7%	4.6%	3.6%
Medicare	1.1%	1.2%	1.2%	1.2%	1.0%
Federal Unemployment Insurance	0.1%	0.2%	0.1%	0.1%	0.0%
State Unemployment Insurance	0.5%	0.7%	0.6%	0.3%	0.2%
Workers' Compensation	1.5%	1.9%	1.6%	1.7%	1.1%

Source: U.S. Department of Labor, U.S. Bureau of Labor Statistics, (U.S. DOL). 2010.  
*Employer Costs for Employee Compensation, December 2009*, unpublished detailed compensation data.

On average, public employers contribute 34.1 percent of employee compensation expenses to benefits whereas private employers contribute between 26.1 percent and 33.1 percent of compensation to benefits, depending on organization size. Public employers provide relatively better health insurance and pension benefits. Health insurance accounts for between 6.3 and 8.3 percent of private sector employee compensation compared to 11.2 percent of state and local government employee compensation. Retirement benefits also account for a substantially greater

share of public employee compensation, 8.1 percent compared to between 2.8 and 4.8 percent in the private sector.<sup>6</sup> Most public employees also continue to participate in defined-benefit retirement plans managed by the state, while most large private sector employers have switched to defined-contribution plans, especially 401(k) plans.<sup>7</sup> By contrast, public employees receive considerably less supplemental pay and vacation time than private employees, and public employers contribute significantly less than private employers to legally mandated benefits.

*Specification of Compensation Equations: A Human Capital Approach*

Ideally, compensation research would compare employees performing similar work across the labor market controlling for variations in their performance. There are, however, numerous public sector occupations, such as police, fire, and corrections, which lack appropriate private sector counterparts. Even apparently similar jobs may differ significantly as between the public and private sectors. Teaching is one example in this regard; public schools accept all students whereas private schools are sometimes highly selective and may exclude or remove poor performers, special needs students, and/or disruptive students. Therefore, comparing workers of similar “human capital” or personal characteristics and labor market skills is most suitable to making public-private total compensation comparisons. We will follow this approach, but also compare it to one study that has attempted to introduce occupational controls into this type of comparison.

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<sup>6</sup> The Employer Costs for Employee Compensation reports the costs incurred by employers for employing active employees in the period under study. It does not capture the failure of employers to make payments, that is, missed contributions, during the period under study.

<sup>7</sup> The most recent data indicate that less than half of private sector workers participate in any employer provided pension plan (IPUMS CPS).

Prior research shows that education level is the single most important earnings predictor (Card 1999). Most occupations reward experience because experience is associated with (or a proxy for) competency development and performance enhancement arising from on-the-job learning. Other factors widely found to affect compensation include gender, race, ethnicity, and disability, although productivity-related human capital differences arising in these respects are intermingled with labor market disadvantages stemming from historical patterns of discrimination (Katz and Autor 1998).<sup>8</sup>

Table 2 presents estimates of standard earnings and total compensation equations for 2007-2010 using the three aforementioned data sets. Panel A of the table shows that, on average, state and local government employees earn approximately between nine and 10 percent lower (annual or weekly) wages than private employees. Also on average, public employees work fewer (weekly and annual) hours than their private sector counterparts. Panel B of Table 2 adjusts the equations for this difference, which results in estimated public employee wages that are between 5.8 and 8.5 percent lower than those of comparable private employees.

Do these findings change when total compensation rather than wages is considered? The answer is “no” in terms of sign (or direction) and “yes” in terms of magnitude. To illustrate, panel A of Table 2 shows that state and local public employees earn 8.7 percent less than comparable private sector employees based on analysis of the CPS-IPUMS data set (which incorporates adjustments for employer-provided benefits by organization size, occupation, and sector), and approximately between three and four percent less based on analyses of the CPS-

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<sup>8</sup> Most studies of work and pay exclude part-time workers because their work hours vary considerably, they earn substantially less than full-time workers, they are weakly attached to the labor force, and they typically lack benefit coverage.

Table 2				
Summary Regression Results for Public vs. Private Sector Wages and Total Compensation				
Panel A		WAGES		
	Annual	Weekly	Annual	
	PUMS CPS	MORG CPS	ACS PUMA	
All State & Local Public Employees	-8.99%***	-8.97%***	-9.91%***	
State Public Employees	-12.06%***	-10.82%***	-11.70%***	
Local Public Employees	-7.27%***	-7.98%***	-8.85%***	
TOTAL COMPENSATION				
	Annual	Weekly	Annual	
	PUMS CPS	MORG CPS	ACS PUMA	
All State & Local Public Employees	-8.73%***	-3.03%***	-4.07%***	
State Public Employees	-11.76%***	-5.04%***	-5.94%***	
Local Public Employees	-7.03%***	-1.96%***	-2.97%***	
Sample Observations no	210,136	333,725	3,359,739	
Panel B		WAGES		
Adjusted for Hours Worked		Hourly	Hourly	Hourly
U.S. Bureau of the Census		PUMS CPS	MORG CPS	ACS PUMA
All State & Local Public Employees		-5.81%***	-8.50%***	-6.71%***
State Public Employees		-8.53%***	-10.36%***	-8.62%***
Local Public Employees		-4.29%***	-7.50%***	-5.59%***
U.S. Bureau of the Census				
TOTAL COMPENSATION				
	Hourly	Hourly	Hourly	
	PUMS CPS	MORG CPS	ACS PUMA	
All State & Local Public Employees	-5.60%***	-2.56%**	-0.89%	
State Public Employees	-8.27%***	-4.58%***	-1.65%	
Local Public Employees	-4.11%***	-1.48%	-0.21%	
Years 2007-2010	210,136	333,725	3,359,739	
* p< .05 ** p<.01 *** p< .0001				
<b>Data Sources:</b>				
U.S. Bureau of the Census: Integrated Public Use Microdata Series (IPUMS) of the March Current Population Survey (CPS),				
U.S. Bureau of the Census Current Population Survey Merged Outgoing Rotation Groups (CPS-MORG), and				
U.S. Bureau of the Census: American Community Survey Public Use Microdata Area (ACS-PUMA).				
U.S. Bureau of Labor Statistics, (U.S. DOL). 2010 Employer Costs for Employee Compensation, December 2009				

MORG and ACS-PUMS data sets. When inter-sector differences in work hours are taken into account, as shown in panel B of Table 2, state and local public employees are estimated to earn 5.6 percent less than comparable private sector employees based on analysis of the CPS-IPUMS

data, and between approximately one percent and 2.5 percent less based on analysis using the two other data sets (which are not adjusted for private sector employer size). In all of these estimates, the relative underpayment is considerably greater for state government employees than for local government employees.

These pay and total compensation estimates indicate that state and local government employees are not overpaid, and, in fact, are somewhat under-compensated relative to their private sector counterparts. Controlling for education, experience, hours of work, gender, race, ethnicity, and disability in these inter-sector comparisons, the overall public employment compensation underpayment or “penalty” is a relatively small five percent (though with considerable variation by level of government and data set). This finding is closely consistent with, indeed replicates, the main finding from more than 50 recent studies of public sector-private sector pay and total compensation differentials which also use human capital models that control for education, experience, work hours, and other demographic variables (Keefe, forthcoming).

While there is a broad scholarly consensus about public employee under-compensation, there is disagreement about the appropriate wage (or total compensation) equation specification. One question at issue is whether or not to include union membership, employer size, and/or occupation (which will be discussed further below) in human capital type wage equations. Bender and Heywood (2010) include unionization in their specification, but they appear to be alone among researchers in this regard. Gittleman and Pierce (2012) reflect the dominant view about this matter, arguing that unionization does not account for unobserved labor quality in a human capital type wage equation. Nonetheless, higher union wages should allow employers to

recruit higher quality employees and union voice might make them more productive. Moreover, any spillover effects of unions on wages of non-union workers further complicates measurement of union effects. To test these competing views, we estimated wage equations that include private and public sector union membership. The results show that while unions have positive effects on wages in both sectors, the public sector union wage effect (3.7%) is smaller than the private sector union wage effect (14.1%).<sup>9</sup> This finding appears directly to contradict those who predicted that public sector unions would have a major bargaining power advantage due to the inelasticity of demand for public services and/or public employee access to or block voting for elected officials.

Unlike the apparent consensus among researchers to omit unionization in human capital-based studies of public sector versus private sector compensation, there is much disagreement about employer size. Allegretto and Keefe (2010), Keefe (2010; 2011), Biggs and Richwine (2010), Richwine and Biggs (2011), and Munnell, et al. (2011) include employer size in their estimating equations, while Schmitt (2010), Bender and Heywood (2010), and Gittleman and Pierce (2012) exclude employer size.<sup>10</sup> Once again to test competing views, we estimated the

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<sup>9</sup> The estimates are derived from a wage equation using CPS-IPUMS data controlling for organization size. Without this control, the public sector wage effect is 6.3% and the private sector effect is 16%.

<sup>10</sup> The main argument for including employer size in wage equations is that it compensates for unobserved productive characteristics of labor. In the United States, large public and private organizations spend considerable resources recruiting and selecting employees. Through their human resources departments, large firms and government agencies recruit applicants and follow elaborate assessment procedures that may include aptitude and capability tests, physical evaluations, drug testing, medical screening, background and reference checks, reviews of licenses and certifications, decision-making simulations, and other practices. In the public sector, large organizations sometimes undertake not only these assessments but also additional reviews required by civil service regulations and security clearances. According to the Bureau of Labor Statistics' 2009 Occupational and Employment data, there were 198,190 employment, recruitment, and placement specialists working either on the demand or supply side of the labor market. This is in addition to 61,000 human resource managers that have some demand side responsibility for staffing their organizations, and 815,000 human resource professionals employed either directly or indirectly by large organizations. This investment in employee selection and human resource management demonstrates the importance that large organizations in the United States place on hiring employees with the appropriate specific knowledge, skills, and abilities. According to this research perspective, organizational size variables are proxies for

wage and total compensation equations using the IPUMS-CPS data set that includes employer size as well as the CPS-MORG and ACS-PUMS data sets that do not include employer size. These estimates show a public employee hourly pay (i.e., wage) underpayment of 5.8 percent when employer size is taken into account compared to a 4.7 percent underpayment when it is not taken into account. More telling is the finding that the public employee hourly total compensation underpayment is 5.6 percent when employer size is taken into account compared to 1.2 percent when it is not taken into account. We therefore conclude that employer size should be included in studies of public versus private sector compensation.

This study, like most others, finds that on a total compensation basis public employees are undercompensated relative to their private sector counterparts. This overall finding is comprised of under-compensation with respect to pay that is larger than over-compensation with respect to benefits. There are critics of this majority view, however, most notably Biggs and Richwine (2010, 2011a, and 2011b), who argue that the ECEC does not adequately account for the costs of state and local government retiree health benefits, the guaranteed nature of public-sector pensions, and the value of public sector job security. When adjusting for these alleged omissions, they report that public employees are over-compensated by 30% in California and 43% in Ohio when compared to similar private sector employees.

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labor quality not captured by standard human capital variables. Further, large organizations can realize substantial savings in the provision of benefits, especially health insurance, because these firms self-insure and thereby escape the higher market costs of private insurance. By contrast, those who oppose the inclusion of employer size in these wage equations favor the traditional explanation that larger employers have relatively greater product market power and that workers capture some of these rents or, in the public sector, these rents emanate from taxpayers in return for employee and union political support. There is no overriding empirical resolution of this issue.

The ECEC does not account for retiree health care expenditures because they are not reflected in current employee costs. The GAO (2007) estimates that retiree health benefits costs incurred by state governments constitute approximately two percent of salary and 1.5 percent of total compensation. The basic premise of the Biggs and Richwine (2011a) criticism is that retiree health insurance is an irrevocable, un-alterable right that is mandated to be funded by a state irrespective of any changes in the labor force or the state's finances. This premise, however, is incorrect. In most states, public employee retiree health care is not a guaranteed benefit. Instead, an accurate assessment of public (and private) employee health care benefits requires an upward cost adjustment where a government jurisdiction (or private employer) provides retiree health benefits on a pay-as-you-go-retiree health insurance basis. Further, numerous states have recently altered public employee health care benefits and costs by cutting benefits for retirees and eliminating benefits for some current and prospective employees, increasing co-payments, reducing the scope of illnesses covered by health insurance plans, and placing more stringent limits on catastrophic illness payments (Lewin, 2012).<sup>11</sup>

Another criticism offered by Biggs and Richwine involves the overstatement of public pension funding ratios. In this regard, Munnell, et al. (2011) observe the following:

*Comparing ECEC pension data across the public and private sectors involves two problems. First, the ECEC contributions to defined benefit pension plans do not separate the normal cost and the amortization payment to reduce unfunded liabilities. As the employee only earns the normal cost, including the amortization payment overstates public sector*

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<sup>11</sup>Health care cost increases are equally problematic and challenging in the private and public sectors. Retiree health care costs are a more serious problem in the public sector because many private sector firms have already cut back on these benefits or shifted a higher portion of the costs of retiree health care to employees/retirees. The specific levels of costs and the options for addressing them require state specific fact gathering and offer an opportunity for public employers and public employee unions to pursue state-wide and/or coalition bargaining as others have done in response to past state and municipal level financial crises. (Some of these responses are reviewed later in this paper).



*compensation. Second, contributions to private sector 401(k) plans and public sector defined benefit plans are not comparable. The public sector contribution guarantees a return of about 8 percent, whereas no such guarantee exists for 401(k)s. Thus, the public sector contribution understates public sector compensation (page 5).*<sup>12</sup>

After making the appropriate adjustments to the ECEC for the proper valuation of pensions and retiree health insurance, Munnell, et al. (2011) report that the two roughly balance out. Their estimated difference nationwide for total compensation is a four percent premium in favor of private sector employees.

Finally, regarding job stability, Munnell, et al. (2011) and Keefe (2011) conclude that there is not a compensating job stability differential in the public sector compared to the private sector, as alleged by Biggs and Richwine (2010, 2011). Rather the observed greater job stability in the public sector is largely due to and consistent with the higher levels of education of the public relative to the private sector workforce. Stated differently, higher levels of education are associated with significantly lower unemployment rates in U.S. labor markets as a whole.<sup>13</sup>

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<sup>12</sup> Public sector pension funding shortfalls vary considerably across states. The principal cause of such pension underfunding is the investment loss that occurred during the Great Recession. A secondary cause is the failure of some governments to make annual payments to cover the “normal costs” of pensions. This secondary cause can be addressed by requiring governments to make promised annual pension fund payments. Public employers and employee unions also need to address and, where appropriate, reform certain pension design and administrative features, such as those that increase pension benefits based on an employee’s final years or year of service. We caution, however, that putative short term savings in pension costs achieved by shifting to 401K and other defined contribution plans covering public employees risk imposing additional, hidden costs on the public, and are based on faulty assessment of the reasons for the public sector pension shortfall.

<sup>13</sup> The alternative to the human capital method for assessing compensation is the job evaluation method, which scores jobs based on a variety of compensable factors and then uses a labor market survey of jobs to determine compensation. The Bureau of Labor Statistics collects this type of data in the National Compensation Survey (NCS), which is used to assess federal civilian compensation in comparison with private sector pay. The NCS collects information using the employer’s most narrow occupational classification or job title and the incumbent individuals’ earnings, work schedules, and job levels. NCS interviewers assign a level of work to all jobs in the survey within a 1-15 scale that corresponds to pay levels in the General Schedule pay structure for federal government employees. In the job evaluation comparison method, work levels and occupations serve as substitutes for education level and experience. Using NCS micro-data, Gittleman and Pierce (2012) estimate a model that includes detailed occupational and work level variables. They find that state government employees earn wages 2.3% below private sector employees and total compensation 8.7% above private sector employees whereas local

## *Relative Wage Compression in the Public Sector*

Since 1970, there has been a significant relative compression of the wage distribution in the public sector (Borjas 2002). It has also long been known that public-sector earnings show less dispersion than private sector earnings (Fogel and Lewin 1974). Therefore, individual earnings differentials apparently favor public employees at the bottom of the earnings distribution and private employees at the top of the distribution (Belman and Heywood 2005).

To more fully examine this matter, we estimate quantile regression equations (Angrist and Pishke 2009) using the CPS-IPUMS data on the distribution of public versus private employee hourly wages and total compensation. These equations include human capital variables and a control for employer size; the results are reported in Table 3. At the lowest decile, wages for local government employees are slightly higher (1.7 percent) and wages for state government employees are lower (3.1 percent) than for private sector employees. At the median, public employees earn wages 9.4% less than private sector employees and at the 90th percentile the public wage underpayment rises to 18.5%. Next, we examine the distribution of

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government employees earn both higher wages (9.2%) and total compensation (17.6%) than private sector employees. These researchers also estimate a human capital model with occupational controls that finds state government employees earning 4.9% lower wages than private sector employees and local government employees earning 3.5% higher wages than private sector employees. Gittleman and Pierce (2012) refer to this model as a hybrid that controls for both human capital and occupation characteristics, though the NCS data exclude uniquely public sector occupations. These authors also report, however, that when examining occupations at the two-digit Standard Occupation Classification (SIC) level within the education occupational group, employment is relatively concentrated in kindergarten and preschool for the private sector, in primary and secondary teaching for local government, and in postsecondary teaching for state government. Because education accounts for 54% of state and local public employment in the United States, these within-occupational differences significantly bias the authors' occupational control estimates. Further, in protective service occupations, professional police, detectives, and firefighters are employed in the public sector whereas relatively low wage security guards are employed in the private sector. This difference is also masked by the authors' occupation variable, resulting in forced equality where there is none and therefore likely biasing their regression estimates. A similar "ignoring of difference" problem exists with Gittleman and Pierce's (2012) treatment of social service occupations. In addition, the NCS micro-data are not publicly available, which precludes assessment of its embedded job evaluation model and the results derived therefrom. Still another criticism of including an occupation variable in a human capital model is that education and experience already control for occupational selection, hence a separate occupation control is redundant. For these reasons, we chose not to include occupational controls in our regression analyses.

total compensation of public versus private sector employees. The quantile regression results show a total compensation premium (3.3%) for public employees at the first decile, which persists for local government employees (3.4%) at the 20th percentile but turns to a slight

Table 3

Quantile Regression Results:  
Public Employee Wages and Total Compensation Compared with Private Sector Employees

CPS-IPUMS	Percentiles				
Hourly Wages	10%	20%	Median	80%	90%
Public Employees	-0.1%	-3.6%	-9.4%	-15.9%	-18.5%
Local Employees	1.7%	-1.4%	-7.0%	-13.4%	-16.4%
State Employees	-3.1%	-6.9%	-14.2%	-20.5%	-22.5%
	Percentiles				
Hourly Compensation	10%	20%	Median	80%	90%
Public Employees	3.3%	1.4%	-2.1%	-6.8%	-8.4%
Local Employees	4.5%	3.4%	0.4%	-4.0%	-6.2%
State Employees	1.0%	-1.6%	-6.9%	-12.0%	-13.0%

All estimates statistically significant at  $p < .01$  except median total compensation for local government employees, which is statistically insignificant.

**Data Sources:**  
 U.S. Bureau of the Census: Integrated Public Use Microdata Series (IPUMS) of the March Current Population Survey (CPS),  
 U.S. Bureau of Labor Statistics, (U.S. DOL). 2010 Employer Costs for Employee Compensation, December 2009

underpayment for state government employees (-1.6%). At the median, local government employee total compensation is not statistically different from similar private sector employee total compensation, however, state government employees are 6.9% under-compensated relative to similar private sector employees. At the 80th percentile, the public employee compensation under-payment is 6.8% (4% local and 12% state) and at the top decile the under-payment is 8.4% (6.2% local and 13% state). Hence, lower skilled, less educated public sector employees are compensated slightly higher than their private sector counterparts, whereas more skilled, better-

educated employees are significantly more highly compensated in the private than in the public sector.<sup>14</sup>

To summarize, the preponderance of evidence from our analysis (and that of other researchers) of employee compensation costs on a per hour basis shows that when controlling for education, experience, work hours, gender, race, ethnicity and disability, public employees are undercompensated when compared to similar private employees. We estimate that, on average, full-time state and local government employees are relatively under-compensated by 5.6 percent, with the underpayment being substantially smaller for local government employees (4.1 percent) than for state government employees (8.3 percent). We also find significant differences in the distribution of wages between public and private sector employee groups. Lower skilled, less educated public sector employees have significant wage and total compensation advantages over their private sector counterparts, while higher skilled, more educated public sector employees have significant wage and total compensation disadvantages relative to their private sector counterparts.

### **How have Public Sector Dispute Resolution Procedures Performed?**

The public sector bargaining laws enacted during the 1960s and 1970s were closely patterned after the private sector National Labor Relations Act (the Wagner Act), with the exception that public employee strikes were partially or totally banned and substitute procedures were often allowed or required. These procedures include mediation, fact-finding with

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<sup>14</sup> In their quantile regression analyses using CPS data with occupational controls, Gittleman and Pierce (2012) report that below the median wage there is a pay premium for state and local government employees. At the 75th and 90th percentiles, however, their analyses show private sector pay premiums of 7.9 and 11.7 percent, respectively, relative to state government, and 3.4 percent and 9.0 percent, respectively, relative to local government. We estimate quantile regression equations without occupation controls but with employer size as a control variable.

recommendations, arbitration, or a mix thereof. Because there was little prior experience with these procedures, much debate and considerable research ensued aimed at documenting and evaluating their effects. The key findings from this research are summarized below.

*Strikes:* Most of the research on public sector strikes was carried out in the 1970s and early 1980s as public sector collective bargaining and the statutes governing bargaining were still in their formative years. Strike rates in both the private and public sectors have declined considerably since that time. The evidence we draw on here comes mainly from those earlier decades.

Olson's (1988) review of the accumulated evidence on public sector strikes reached the following conclusions:

1. Interest arbitration provides the most effective deterrence of strikes. The most systematic analysis of this issue was carried out by Ichniowski (1982). He compared the rate of police strikes under no bargaining law, a law providing meet and confer rights only, laws providing bargaining without arbitration, and laws providing bargaining with arbitration. He found that strikes were most likely to occur in states without a bargaining law and least likely to occur in states with a bargaining law that provided for binding arbitration. He also looked at the effects of changes in these statutes in selected jurisdictions and found that changing from a bargaining law without arbitration to one with arbitration reduced the probability of a strike from 0.084 to 0.005. These results were consistent with Olson's findings from an earlier six state (Wisconsin, Illinois, Indiana, New York, Ohio and Pennsylvania) study.
2. Strike penalties, when enforced, deter strikes. This finding comes from studies comparing the low strike rates of teachers in New York, where employees lose two days pay for every day on strike, to strike rates in Pennsylvania, Ohio, Illinois, and Indiana, where strikes were either legal (Pennsylvania) or illegal but penalties were weak or not enforced.
3. Policies outside of collective bargaining can affect strikes, such as whether days lost to strikes are made up at the end of the previously scheduled school year.

*Ability to reach agreements:* Early on there was considerable concern that the lack of the discipline of a strike deadline and/or the existence of a third-party process, such as fact-finding

or arbitration, would reduce the parties' incentive to reach negotiated agreements. A specific aspect of this concern was that there would be what some called a "narcotic effect" such that once arbitration (or fact-finding) was invoked in a particular negotiation, the parties would continue to rely on it in future negotiations. The evidence suggests, however, that over the long haul of public sector bargaining these worries were overstated (see Kochan, Lipsky, Newhart, and Benson, 2010).

1. The rate of reliance on arbitration (where it exists) has declined from between 10 and 30 percent in the early years of public sector bargaining to below 10 percent in most states today. In New York State, for example, 31 percent of police units went to arbitration in 1974-76, the initial years of the arbitration statute, compared to 9 percent between 1995 and 2007. Similar declines occurred for firefighter bargaining units during this time. In most cases, the parties appear to have learned how to predict what an arbitrator will award and, with this understanding in mind, have been able to negotiate agreements on their own (or with the help of mediators) without having to go through the formal arbitration process. There are notable exceptions to this, however. Some jurisdictions, particularly large, politically complex jurisdictions, are heavier users of arbitration than smaller jurisdictions.
2. Mediation has proved to be remarkably effective in assisting the parties in reaching negotiated agreements. Although evidence on this is limited, over 70 percent of the cases referred to mediation in New York State police and firefighter negotiations were resolved voluntarily during this process.

*Effects on outcomes:* One of the most hotly debated yet least understood aspects of public employee bargaining concerns the effects of arbitration on pay outcomes. A recent nation-wide study examined the effects of arbitration on police and firefighter wages using Census data from 1990 and 2000 (Kochan, Lipsky, Newhart, and Benson, 2010). The findings comport closely with the results of studies conducted during earlier decades:

1. Wages of police and firefighters covered by arbitration statutes are not significantly different from wages for police and firefighters in states in which collective bargaining does not include arbitration (but that typically includes mediation and/or fact-finding).

2. Wage growth for police and firefighters in arbitration states with bargaining laws that include arbitration did not differ from wage growth in states with bargaining laws that do not include arbitration.
3. There were no significant differences between wage increases awarded to police and firefighters in arbitration and wage increases resulting from negotiations without the use of arbitration.

These results are not surprising because most arbitration statutes require arbitrators to compare wages and other terms of employment among comparable jurisdictions, together with cost of living, ability to pay, and other objective factors, in shaping their awards.<sup>15</sup> Nevertheless, arbitration is not a panacea for all public sector labor problems. Two specific limitations of arbitration include:

1. Arbitrators tend to be very conservative. There is a strong norm in the labor relations profession (shared by arbitrators as well as management and labor representatives) that arbitrators should not break new ground or award new benefits (or take away benefits) that they believe might be warranted but that the parties were unable to negotiate on their own. The norm is grounded in the belief that the parties to negotiations know their unique needs better than arbitrators. If the parties want to introduce a new concept into negotiations or bring about a major restructuring of pay, benefits or other terms of employment, they should negotiate over them directly rather than leave such potentially complicated changes to an outside arbitrator. Consequently, arbitration tends toward a *status quo* bias. It is therefore not a tool for introducing major changes in employment practices and outcomes in times of fiscal adversity, let alone deep crisis, when the environment has changed or when new employment practices are being developed for other reasons.
2. The time required to complete negotiations when arbitration is invoked appears to have risen significantly over the years. While systematic data are not available across all states that provide for the arbitration of public sector labor disputes, in New York State the median length of time from contract expiration to an arbitration award increased from 300 days during 1974-76 to 790 days during 2001-2006. Delays of this magnitude pose three serious problems: (1) economic conditions may have changed considerably such

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<sup>15</sup> In an earlier study that covered the period from 1983 to 2004, Farber (2005) initially found a statistically positive relationship between unionized public employee wages across a range of occupations and state public sector bargaining laws that combined a duty to bargain requirement with arbitration. A subsequent fixed-effects test of this regression model, however, yielded a statistically negative relationship between these two variables. Farber reports similar pairs of relationships between unionized public employee earnings and state bargaining laws that combine a duty to bargain with mediation and fact-finding and, separately, with the right to strike.

that what may have appeared to be a fair, affordable pay and/or benefit increase at the time of contract expiration looks out of line with prevailing economic conditions when an arbitration award is issued, (2) employees may suffer economic hardship and become dissatisfied with the arbitration process, and (3) negotiations on a successor agreement may have begun before an arbitration award is issued and thus the parties find themselves engaged in perpetual negotiations.

### **How Have Public Sector Labor and Management Responded to Financial Crises and Other Pressures for Change?**

*Coalition Bargaining.* Although the structure of public sector bargaining is typically based on specific occupations (police, firefighters, teachers, etc.) or other relatively narrow criteria, in times of financial or other crises various unions and state and local government jurisdictions have had to respond in more coordinated fashion.

A compelling example is provided by the mid-1970s fiscal crisis in New York City municipal government, which was able to avoid bankruptcy through negotiation with a coalition consisting of several major and some smaller municipal employees unions that collectively enrolled about 80 separate bargaining units representing more than a quarter-million city employees (Lewin and McCormick, 1981). Those negotiations, which occurred over a series of bargaining rounds, resulted in new agreements that included multi-year wage freezes, deferrals and cuts, fringe benefit givebacks, and productivity enhancements. Most important and notable, these negotiations also resulted in substantial new investments and a multi-year rollover of prior investments of municipal employees' pension funds in New York City paper (that is, bonds and notes). It's no exaggeration to say that New York City was "saved" by these agreements, though it's also fair to say that certain prior collective bargaining agreements between the city and municipal employee unions contributed to the fiscal crisis.

More recently, in 2009, the Massachusetts legislature merged the state's multiple transportation agencies, workforces, and unions into a single integrated department of



transportation. To address the myriad of issues involved in merging disparate wage structures, contracts, and work systems, a new union coalition was formed and sought to bargain as a single entity. Management agreed to negotiate with the coalition in return for full freedom to integrate the workforce without regard to traditional jurisdictional boundaries and work rules. This multi-party negotiation process produced an agreement that “red circled” (i.e., froze in place) the wages of the higher paid employees in return for the right to hire new employees on the lower state salary schedule. The agreement also created an operations improvement program in which 10 percent of the workforce savings achieved will be placed in an equity fund to help close wage gaps between employees doing similar work. Joint labor-management committees were created and chartered to address the myriad of issues that will inevitably arise as the integration process moves forward and to further rationalize and modernize the job structures inherited from the state system. In short, this coalition negotiation process established the structures, processes, and alignment of interests needed to build a model public transportation system and organization (Kochan, 2011).

Similar public employee coalitions have come together in San Francisco to negotiate major pension reforms, in Boston to negotiate major health care reforms, in Los Angeles to negotiate increased employee contributions to health care and pension plans, and in the state of Connecticut to negotiate benefit reforms and reductions in return for employment security guarantees. These examples indicate that during times of fiscal crisis, strong public sector management and union leadership can come together to make significant, necessary adjustments to existing agreements. Other examples similarly illustrate how municipal governments and public employee unions have been able to negotiate productivity improvements through adaptation to technological changes.

*Education Reform.* It is now widely recognized that the U.S. public education system is in need of improvement and reform. The Obama Administration has taken steps to achieve reform by providing “Race to the Top” and other school improvement grants, each of which requires active plans to improve the quality of teaching by holding districts and teachers accountable for improving student achievement. These programs, which build upon the “No Child Left Behind” initiative of the G.W. Bush Administration, call for significant changes in teacher contract provisions regarding performance evaluation, seniority, pay for performance, continuing education and professional development.

A key question in this regard is whether teacher unions and public school officials and managers will be partners or impediments to reform. Examples of both resistance and partnership can be found around the country. For example, when faced with the difficult choice of whether to accept pay and benefit cuts or layoffs, teachers in some New Jersey school districts and in the Los Angeles Unified School District chose layoffs. These decisions resulted in larger class sizes, which angered parents in the respective communities.

By contrast, reform-minded union-management partnerships have been fostered in other public school districts, which in some cases occurred well before recent national education policy initiatives were adopted. To illustrate, in a recent study of six school districts – Cerritos, California; Toledo, Ohio; Hillsborough, Florida; Plattsburgh, New York; Norfolk, Virginia; and St. Francis, Minnesota – in which teachers are represented by the American Federation of Teachers (AFT), Rubinstein and McCarthy (2012) analyzed long-term collaborative partnerships between school administrators and local teachers’ unions that focused on school improvement, student achievement, and teacher quality. They found that in these school districts, a culture of collaboration has been established that promotes trust and individual integrity, values union

leadership, and respects teacher professionalism. Each district has established a district-level joint planning and decision-making forum in which union officials and school administrators work together to develop joint understanding and alignment of the strategic priorities of the district. The forums are complemented with school-specific building-level teams, improvement committees, steering committees, and/or advisory councils that meet regularly. Improving teacher quality is a core goal of collaborative reform and improvement in these school districts, as manifested in new initiatives involving professional development, teacher evaluation, teaching academies, peer-to-peer assistance and mentoring programs, and provisions for dismissal of ineffective teachers.

Most of these districts have also negotiated contract language, or memorandums of understanding, that support their collaborative efforts. In this way, real change is integrated into collective bargaining and institutionalized in concrete language. In some cases, the contracts call for collaboration in district-level decision making by requiring union representation on key committees. In other cases, contractual provisions have resulted in expanded opportunities for union involvement in decision-making through school board policy.

Beyond these local school district examples are numerous national and state-level efforts to support collaborative approaches to education innovation. For example, the U.S. Department of Education in partnership with the Federal Mediation and Conciliation Service, national teacher unions, and school superintendents' groups have held several conferences to discuss how labor-management relationships can improve student achievement and school performance.<sup>16</sup> In Massachusetts, a new statewide Academy for Public Sector Labor Management Relations has been created to facilitate collaborative approaches to educational innovation (Bluestone and

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<sup>16</sup> For a school district write up of the event, see: <http://www.sanjuan.edu/news.cfm?story=9597&school=75>.

Kochan, 2011). These and related efforts throughout the U.S. will provide useful data for assessing whether collective bargaining is a positive or negative force in education reform and improvement.

### **Lessons from Innovations in Private-Sector Labor-Management Relations?**

Just as the first generation of public sector collective bargaining statutes was heavily influenced by prior private sector bargaining practices and experiences, so too should the next generation of public sector labor management relations take into account innovations in private sector practices that have demonstrated their value in the intervening years. Indeed, the last thirty years has witnessed considerable innovation and in some cases transformation in the nature, quality, and performance of private sector labor-management relations. We review the evidence from research on these innovations and then draw several implications therefrom for the future of public sector labor-management relations.

We start with lessons learned from private sector collective bargaining experiences during the 1980s because of that period's similarity to the current crisis facing public employers, employees, and unions. During the early 1980s, the U.S. economy went through a deep recession that hit unionized manufacturing industries especially hard. International competitors gained market share in such key manufacturing industries as automobiles and steel, and deregulation resulted in new domestic competitors entering such industries as airlines and trucking. The political environment became more conservative, as reflected in the election of President Reagan who's firing of striking air traffic controllers (in 1981) was widely considered a watershed event.

The confluence of these factors produced two significant changes in private sector collective bargaining: (1) wage and benefit concessions that spread to nearly half of the

workforce covered under bargaining agreements,<sup>17</sup> and (2) joint union-management innovations. The wage concessions provided temporary cost relief but were not a sufficient solution to the competitive pressures facing unionized firms from growing international and domestic competition. In airlines, for example, the wage concessions (mostly two tiered wage arrangements) negotiated in the early 1980s were negotiated out of most airline contracts by 2000, and there was no evidence that the lowered wage structures during the interim generated higher productivity or profits for the carriers that implemented them.<sup>18</sup>

Most of the research on labor-management innovations was carried out within specific industries. Studies ranging from automobile, steel, and apparel manufacturing to airlines, health care, and telecommunications found positive performance effects for work systems innovations that bundle investments in workforce training and development with workplace processes that engage worker ideas and skills, encourage teamwork, and coordinate efforts across occupations (Appelbaum, Gittell, and Leona, 2011). The broadest study of the effects of these initiatives in manufacturing industries found, for example, that transformed nonunion work systems were 10% more productive than traditional nonunion workplaces, transformed unionized work systems were 15% more productive than traditional nonunion workplaces, and traditional unionized workplaces were 10% less productive than traditional non-union workplaces (Black and Lynch,

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<sup>17</sup> Similar concessions were made in the public sector during this period. See Lewin (1983).

<sup>18</sup> A notable precursor to two-tier wage structures in the airline industry was the 1981 two-tier collective bargaining agreement between Kroger's supermarkets and the United Food and Commercial Workers Union (UFCWU). Like other two-tier arrangements, this one specified a lower tier for newly hired employees in contrast to the higher tier for continuing employees. But this agreement was accompanied by other non-bargained initiatives that included "sweetened" benefits for employees who retired early. When experienced employees did so on a large scale, the effect was to eliminate the older higher wage tier and leave Kroger with a lower paid, one tier work force. A new two-tier wage agreement was also negotiated by General Motors and the UAW in 2010, specifying that new employees would receive hourly wages about half as large as those paid to continuing experienced employees. This agreement also specified lower retirement and health care benefits for new employees relative to continuing employees.

1997). A survey of a nationally representative sample of private sector union-management relationships conducted for the Federal Mediation and Conciliation Service in 2003 found that negotiation processes that used interest-based problem-solving techniques achieved more flexible work rules, more employee involvement in decision-making, and higher satisfaction with their labor-management relationships by both employer and union representatives. Yet, these innovations and transformations occurred in less than ten percent of this national sample of private sector union-management relationships (Cutcher-Gershenfeld and Kochan, 2004).

While the pace of private sector innovations slowed considerably in the past two decades, some visible examples of labor-management partnerships continue to demonstrate their value and potential as models for others. Ford and the UAW made extensive use of interest based bargaining and problem solving in their 2003 and 2007 negotiations (Cutcher-Gershenfeld, 2011). Southwest Airlines and the unions representing about 90 percent of its workforce have consistently achieved bargaining agreements in half the time required by other airlines and unions. This labor-management partnership has sustained a workplace culture of trust and coordination that has helped Southwest achieve industry leading productivity, profitability and customer satisfaction ratings and a reputation as of one of the hundred best places to work (Gittell, 2003). Kaiser Permanente and its coalition of unions have sustained the nation's largest and most comprehensive labor-management partnership for 15 years. During this time period, Kaiser Permanente reversed its financial decline while maintaining industry-high wages and benefits, became a leader in introducing electronic medical records technology, made extensive use of front line teams that focused on improving patient care, and increased its employees' satisfaction with their unions, their work, and with Kaiser Permanente as a place to get health care (Kochan, Eaton, McKersie, and Adler, 2009).

Nevertheless, while some private sector employers and unions have sustained their mutual gains negotiations and workplace innovations, they represent “islands of success” in a sea of union decline and increasingly polarized labor-management relations. The main conclusions we draw from this private sector record for the future of public sector labor-management relations are:

1. Crisis conditions often produce significant innovations in workplace practices, negotiations, and overall labor-management relationships. These innovations have resulted in significant improvements in economic performance, measured by productivity and quality improvements and labor cost control and reduction.
2. Innovations in workplace practices have not been widely diffused within industries or across the range of private sector unionized and nonunion workplaces.
3. In the absence of national institutions and labor policies that specifically support employees’ ability to join a union and gain access to collective bargaining *and* that endorse innovative forms of labor management relations, unions continued to decline, the momentum for innovation in both union and non-union firms weakened, and the adversarial side of labor-management relations intensified (Kochan, Katz, and McKersie, 1986).

### **Research Needs and Opportunities**

The decades of relative stability in public sector bargaining policy and practice have now given way to demands for transformational changes. The fiscal pressures on state and local government budgets and the nationally recognized need for improving elementary and secondary education outcomes will continue to challenge public sector labor and management leaders to find ways to improve the performance and control the costs of public services. Moreover, calls for change will likely continue to take two different directions: Some will argue for further rolling back wages, benefits, and collective bargaining rights, while others will press unions and public employers to work together in new ways to address fiscal and performance challenges. These different approaches are now once again creating a laboratory for experimentation,

research, and learning akin to the variation in policies and practices that accompanied passage of the first generation of collective bargaining legislation.

In this section we offer several suggestions for how researchers can contribute to the learning process and help move toward more evidence-based public policy making and collective bargaining practice. It is especially important that the next generation of public sector research build on the theoretical and empirical evidence accumulated over the past several decades of research on both public and private sector labor management relations. Based on this evidence we offer the following propositions:

1. The largest improvements in the processes and outcomes of public sector labor - management relations will occur in settings where labor and management work together to engage employees in problem solving and continuous improvement efforts, use problem solving practices when negotiating changes in labor-management contracts, and support and oversee their change efforts through higher level engagement and partnerships among executives, elected officials, union leaders, and representatives of other important community stakeholders.
2. Innovations in labor-management relationships will diffuse more broadly and more likely be sustained in states that adopt policies and institutions that actively support and facilitate innovation.
3. Governments that seek to improve performance through lower wages and benefits and/or rollbacks of collective bargaining will realize short term cost reductions but few, if any, long term improvements in the cost or quality of public services.
4. Governments in which traditional approaches to negotiations and labor management relations continue to dominate will experience public dissatisfaction with the cost and quality of public services, declining support for unions, declining union membership, and persistent pressures for change.

The policy research that followed passage of the initial wave of public sector bargaining statutes employed a wide variety of research methods, including intensive case studies, survey research, laboratory experiments (of dispute resolution methods), quasi-experimental field studies of changes in policies, and quantitative analyses of secondary data bases and sources.



We encourage the same diverse mix of research designs and methods now. One other feature of some of the public and private sector studies of changing policies and practices is also worth replicating—the direct involvement of the key stakeholders responsible for shaping such policies and practices. Involvement of these parties right from the start, especially by getting agreement on key performance metrics, increases the likelihood that the research, if done in a timely fashion, will help to shape changes in public sector bargaining policy and practice.

### **Conclusions**

After a considerable hiatus, public sector unionism and collective bargaining are once again in the spotlight. At center stage is an ideological battle in which short and long-term outcomes are highly uncertain. Less visible, but no less important, is direct empirical evidence on public sector labor-management relations. In sorting through the accumulated evidence, we find that when compared to private sector employees matched by education, organization size and other relevant variables, public employees on the whole are under-compensated rather than over-compensated. This overall conclusion is comprised of (or masks) relatively modest overpayment at lower occupational and skill levels and relatively substantial underpayment at higher occupational and skill levels.

Regarding dispute resolution procedures (i.e., mediation, fact-finding, and arbitration) variously included in public sector collective bargaining laws, we conclude that they have worked well in terms of reducing the incidence of public employee strikes and achieving equitable outcomes. In certain instances, however, the time required to reach arbitrated settlements of public sector labor disputes has increased to the point where it imposes hardships on employees and excessive uncertainty on public employers and citizens. Consideration should

therefore be given to setting time limits on arbitration decisions or otherwise reforming the arbitration process.

When it comes to the ability of public sector labor and management to respond to fiscal crisis, the available evidence provides substantial historical and several contemporary examples of interest based, mutual gains negotiations and workplace innovations variously featuring coalition bargaining, joint partnerships, and multi-party arrangements that have been effective in enhancing performance outcomes and reducing the costs of public services. Some municipal governments and school districts have been especially prominent in this regard. The private sector offers similar historical and contemporary experiences, especially in certain industries and firms. The key challenge in this regard is to sustain and diffuse mutual gains negotiations and innovative workplace practices, which in turn requires supportive public policies. In the absence of such policies or in the presence of opposite policies, public sector labor and management will likely regress to the mean of adversarial, win-lose type negotiations and relationships.

The research community has an important role to play in helping to shape changing public sector labor-management policy and practice, in particular by providing a new wave of theoretical and empirical studies of direct relevance to the key issues in debate. By doing so, this generation of researchers will follow in the footsteps of their predecessors, whose studies have influenced the evolution of public sector bargaining policy and practice over the last half-century (Lewin, et. al, 1988).

In sum, we are at a moment of challenge and opportunity in which the future of the public sector is at stake. While the current crisis in public sector bargaining is in some ways equivalent to the crisis that faced private sector collective bargaining during the 1980s, state and local governments have fewer degrees of freedom than private sector firms in dealing with the present

crisis. These governments cannot shut down operations or move production abroad or, except in rare circumstances, engage in mergers and acquisitions. Therefore, unless elected officials, management and union leaders step up to the challenge and accelerate the process of reform and improvement by working together, learning from experiences of the type reviewed herein, and building on successful examples of jointly led innovation, we will likely encounter a period of protracted labor-management conflict that will further erode employee voice and precipitate a decline in the quality of public services. Education reform in particular will suffer at the hands of public conflict and the public school environment will be characterized by high levels of stress and pent up tensions, splitting local communities and setting back hopes for collaboration and innovation. Beyond education, however, all state and local public services, agencies and functions are at a similar crossroad, with challenges to collective bargaining potentially resulting in prolonged conflict or, alternatively, new workplace, organizational and labor-management innovations. It is therefore time for the research community to do its work—new work—in helping policy makers determine the key choices they will make in dealing with these high stakes issues.

## References

- Allegretto, Sylvia and Jeffrey H. Keefe. 2010. "The Truth about Public Employees in California: They are Neither Overpaid nor Overcompensated." Center on Wage and Employment Dynamics, Institute for Research on Labor and Employment, University of California, Berkeley. Policy Brief, October.
- Angrist, Josh and Stephen Pishke. 2008. *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton University Press.
- Appelbaum, Eileen, Jody H. Gittell, and Carrie. Leona. 2011. "High Performance Work Practices and Economic Recovery," [www.employmentpolicy.org](http://www.employmentpolicy.org).
- Bamber, Greg, Thomas A. Kochan, Jody Hoffer Gittell & Andrew von Nordenflycht. 2009. *Up in the Air*. Ithaca: Cornell University/ILR Press.
- Belman, Dale and John S. Heywood. 2004. "Public-Sector Wage Comparability: The Role of Earnings Dispersion." *Public Finance Review*, Vol. 32 (6): 567-587.
- Bender, Keith A. and John S. Heywood. 2010. "Out of Balance? Comparing Public and Private Sector Compensation over 20 Years." Center for State and Local Government Excellence and National Institute on Retirement Security. April.
- Biggs, Andrew and Jason Richwine. 2011. "Public vs. Private Sector Compensation in Ohio: Public Workers Make 43 Percent More in Total Compensation than their Private - Sector Colleagues." Columbus, Ohio: Ohio Business Roundtable.
- Black, Sandra E. and Lisa M. Lynch. 1997. "How to Compete: The Impact of Workplace Practices and Information Technology on Productivity." NBER Working Paper 6120, National Bureau of Economic Research, Inc.
- Bluestone, Barry and Thomas Kochan. 2011. *Toward a New Grand Bargain: Collaborative Approaches to Labor-Management Reform in Massachusetts*. Boston: The Boston Foundation.
- Borjas, George J. 2002. "The Wage Structure and the Sorting of Workers into the Public Sector." NBER Working Paper Series. Working Paper 9313, October.
- Card, David. 1999. "The Causal Effect of Education on Earnings, 1999." *Handbook of Labor Economics*, Volume 3, Chapter 30. Edited by O. Ashenfelter and D. Card. Elsevier Science.
- Cutcher-Gershenfeld, Joel. 2011. "Bargaining When the Future of an Industry is at Stake: Lessons from UAW-Ford Collective Bargaining Negotiations." *Negotiation Journal*, 27 (2): 115-145.
- Cutcher-Gershenfeld, Joel and Thomas A. Kochan. 2004. "Taking Stock: Collective Bargaining at the Turn of the Century." *Industrial and Labor Relations Review*, 58 (1): 3-26.

- Farber, Henry S. 2005. "Union Membership in the United States: The Divergence between the Public and Private Sectors." Princeton, NJ: Princeton University, Industrial Relations Section, Working Paper 503.
- Fogel, Walter and David Lewin. 1974. "Wage Determination in the Public Sector," *Industrial and Labor Relations Review* 27 (3): 410-431.
- Gittell, Jody Hoffer. 2003. *The Southwest Airlines Way*. New York: McGraw Hill.
- Gittell, Jody Hoffer, Andrew von Nordenflycht & Thomas A. Kochan. 2004. "Mutual Gains or Zero Sum?: Labor Relations and Firm Performance in the Airline Industry." *Industrial and Labor Relations Review*, 57 (2): 163-180.
- Gittleman, Maury and Brooks Pierce. 2011. "Compensation for State and Local Government Workers." *Journal of Economic Perspectives*, 26 (1): 217–242.
- Ichniowski, Casey. 1982. "Arbitration and Police Bargaining: Prescriptions for the Blue Flu," *Industrial Relations*, 21 (2): 149-166.
- Katz, Lawrence and David Autor. 1998. "Changes in the Wage Structure and Earnings Inequality Harvard University." *Handbook of Labor Economics*, Volume 3. Edited by O. Ashenfelter and D. Card. Elsevier Science.
- Keefe, Jeffrey H. 2010. "Debunking the Myth of the Over-compensated Public Employee." Briefing Paper 276. Economic Policy Institute. Washington, D.C. [http://www.epi.org/publication/debunking\\_the\\_myth\\_of\\_the\\_overcompensated\\_public\\_employee/](http://www.epi.org/publication/debunking_the_myth_of_the_overcompensated_public_employee/).
- Kochan, Thomas A. 1973. "Correlates of State Public Employee Bargaining Laws," *Industrial Relations*, 12 (3): 322-337.
- Kochan, Thomas A. (2011) "How Massachusetts can Stop the Public-Sector Virus," available at [www.employmentpolicy.org](http://www.employmentpolicy.org).
- Kochan, Thomas A., Adrienne Eaton, Robert B. McKersie, and Paul Adler. 2009. *Healing Together: The Kaiser Permanente Labor Management Partnership*. Ithaca: Cornell University/ILR Press.
- Kochan, Thomas A., Harry C. Katz, and Robert B. McKersie. 1986. *The Transformation of American Industrial Relations*. New York: Basic Books.
- Kochan, Thomas A., David B. Lipsky, Mary Newhart & Alan Benson. 2010. "The Long Haul Effects of Interest Arbitration: The Case of New York State's Taylor Law," *Industrial and Labor Relations Review*, 63 (4): 565-584.

- Lewin, David. 1973. "Public Employment Relations: Confronting the Issues." *Industrial Relations*, 12 (3): 309-321.
- Lewin, David. 1983. "Public Sector Concession Bargaining: Lessons for the Private Sector." *Proceedings of the 35<sup>th</sup> Annual Meeting*. Industrial Relations Research Association. Madison, WI: IRRRA, pp. 383-393.
- Lewin, David. 1987. "Technological Change in the Public Sector: The Case of Sanitation Service." In D. B. Cornfield Ed., *Workers, Managers, and Technological Change: Emerging Patterns of Labor Relations*. New York: Plenum, pp. 281-309.
- Lewin, David. 2012. "Effects of Deep Recession on Public Sector Pay, Benefits and Employment." In Daniel J.B. Mitchell, Ed., *Impact of the Great Recession on Public Sector Employment*. Champaign, IL: Labor and Employment Relations Association, forthcoming.
- Lewin, David, Peter Feuille, Thomas A. Kochan & John T. Delaney. 1988. *Public Sector Labor Relations: Analysis and Readings*, 3<sup>rd</sup> Ed. Glen Ridge, NJ: Horton & Daughters.
- Lewin David and M. McCormick. 1981. "Coalition Bargaining in Municipal Government: The New York City Experience," *Industrial and Labor Relations Review*, 34 (2): 175-190.
- Marshall, Alfred. 1920. *Principles of Economics*, 8<sup>th</sup> Ed. New York: Macmillan, 1920.
- Munnell, Alicia H., Jean-Pierre Aubry, Josh Hurwitz, and Laura Quinby. 2011. "Comparing Compensation: State-Local versus Private Sector Workers." Center for Retirement Research at Boston College. Issue Brief Number 20, September.
- Olson, Craig. 1988. "Dispute Resolution in the Public Sector." In Benjamin Aaron, Joyce M. Najita, and James L. Stern (Eds.), *Public Sector Bargaining*, 2<sup>nd</sup> Ed. Madison, WI: Industrial Relations Research Association, pp. 161-162.
- Northrup, Herbert, 1966. *Compulsory Arbitration and Government Intervention in Labor Disputes*. Washington, D.C.: The Labor Policy Institute.
- Rubinstein Saul and John McCarthy. 2012. "Public School Reform through Union-Management Collaboration." In D. Lewin & P.J. Gollan, Eds., *Advances in Industrial and Labor Relations*, 19, forthcoming.
- Schmitt, John. 2010. "The Wage Penalty for State and Local Government Employees." Washington, D.C.: Center for Economic and Policy Research. May.
- Taylor, George W. 1967. "Public Employment: Strikes or Procedures," *Industrial and Labor Relations Review*, 20 (4): 617-636.
- Wellington, Harry H. and Ralph K. Winter, Jr. 1971. *The Unions and the Cities*. Washington, D.C.: The Brookings Institution.

Wirtz, Willard, 1963. "Address before the National Academy of Arbitrators," *Daily Labor Report*, 23, F1-F4.