

Report | Public-sector workers

Eliminating fair share fees and making public employment “right-to-work” would increase the pay penalty for working in state and local government

By Jeffrey Keefe | October 13, 2015

The U.S. Supreme Court will soon consider a case that may require all states to have public-sector open-shop laws. The case, *Friedrichs v. California Teachers Association*, involves whether *Abood v. Detroit Board of Education* should be overruled. The court in *Abood* found that union-shop clauses, which require employees as a condition of employment to become union members, were unenforceable in the public sector. But the ruling upheld public-sector agency-shop clauses, which require that employees who are not union members but are represented by a union pay the union a service charge or fair share, as a percent of union dues, to help finance collective bargaining, contract administration, and grievance processes, but not for political or ideological purposes. Agency shop clauses are a form of “union security” because they require that all workers who receive the benefits of a collective-bargaining agreement (wages, benefits, protections against unjust firings, etc.) pay their share of the costs of negotiating and protecting those benefits.

After *Abood*, union security clauses in the public sector were therefore limited to agency shop provisions in state and local government. Some states enacted laws prohibiting the enforcement of agency shop provisions as they had in the private sector. These laws, called “right-to-work” (RTW) laws by their backers, create “open shops,” where all workers, union and nonunion alike, have the right to union representation but are not required to pay the union fees for that representation; in an open shop, nonunion members get a “free ride,” benefiting from the services funded by union-dues-paying members. Twenty-five states now have RTW laws that are applied to public-sector workers.

If the Supreme Court overturns *Abood* and eliminates agency fees, it would essentially make all states right-to-work states (also known as “no-fair-share” states) in the public sector. Such a decision would weaken public employee unions and undermine their effectiveness in collective negotiations, and may push public-employee compensation below market levels in that minority of states where public employees actually make as much as their private-sector counterparts. In the long run, it will reduce public-employee union representation. (In this paper, “public employees” refers to state and local government employees and excludes federal government workers and members of the armed services.)

This report focuses on the effects of collective bargaining and union security on public employees’ wages and compensation and consequently the ability of public-employee unions to close the gap between private-sector and state- and local-government pay.

Following are the main findings of the report:

- State and local government employees earn less than similar private-sector workers, even though their education level (the most important predictor of earnings) is higher; however, they receive better health benefits and

pensions. Previous research has found a public-sector compensation “penalty” of 2 percent to 11 percent, with state employees at the higher end of the penalty spectrum. (The penalty is how much less they earn in wages and benefits than private-sector workers with the same education, experience, etc.). Studies alleging that public employees are overcompensated do not control for skill levels and education.

- Public-sector unions raise wages of public employees compared with similar nonunion public employees, which helps to narrow the private-public wage gap in those unionized sectors. The current public-employee union wage boost of 5 percent to 8 percent (Keefe 2013) is rather modest and considerably less than the boost that private-sector unions provide. Thus public employee unions, on average, do not raise wages to meet the wages paid to similar private-sector employees.
- However, public-employee unions in full collective-bargaining states that permit union security (i.e., agency shop clauses) do raise total compensation to competitive market standards set by the private sector. In other words, only public employees in states with full collective bargaining make as much as their private-sector peers. In partial collective bargaining states, right-to-work states, and states that prohibit collective bargaining, public employees earn lower wages and compensation than comparable private sector employees, and this low compensation may impede state and local governments from recruiting and retaining highly skilled employees for their many professional and public safety occupations.
- If the Supreme Court renders agency shop clauses unenforceable for public employees, it will shrink union membership because more people will try to gain services without paying for them (the “free-rider” problem). In RTW states in between 2000 and 2014, free-riders represented 20.3 percent of public-employee bargaining units (i.e., the public-sector unions were certified to represent them but they had decided not to join their workplace’s union nor to pay dues), while public-sector union density (the share of public-sector workers in a union) was only 17.4 percent. In states permitting agency-shop agreements (i.e., non-RTW states) only 6.8 percent of the bargaining units were nonunion members (but in this case not free-riders but agency-fee-payers paying fees equivalent to about 85 percent of dues) and union density was 49.6 percent. This near threefold gap in union density between RTW and non-RTW states underscores the importance of agency fees to the functioning of public employee unions and their ability to provide representation to their members.
- If the court renders agency-shop clauses unenforceable for public employees, it will reduce public-employee compensation by increasing the pay penalty for working in state and local government. Using American Community Survey data, this report finds that the public-sector pay penalty is 1 percent in non-RTW states and 10 percent in RTW states, a net RTW compensation penalty of 9 percentage points.

Public employee collective bargaining and compensation

This section reviews the literature on public-employee unions in the state- and local government–sector and their effects on wages and benefits. The research reports a range of outcomes depending on time period and employee group and on legal frameworks for collective bargaining. In this paper, full collective-bargaining states are states that provide an overall legal framework for union recognition; collective bargaining over wages, hours, and working conditions; and create frameworks for dispute resolution for major groups of state and local employees. Partial collective bargaining states do not provide an overall framework for public employees, but permit bargaining for a specific group of employees, or require government authorities to meet and confer with labor organizations, or delegate labor relations responsibility to local authorities.

We will begin this review with a focus on wages followed by benefits.

Unions and wages

First we will examine the union wage effect in public employment; how much more unionized workers earn in wages compared with nonunion public employees. In a comprehensive literature review, H. Gregg Lewis (1990) found that the typical wage premium in the public sector was between 8 percent and 12 percent from 1960 into the 1980s. Higher public-union wage premiums have been reported; for example, Blanchflower and Bryson (2004) found a public-sector wage premium of 13 percent in the 1980s and 14 percent between 1996 and 2001. Substantially lower union wage premiums were found by Freeman and Valetta (1988), of 6 to 8 percent in the public sector; and by Belman, Heywood, and Lund (1997), who reported a union wage effect of 10 percent for local government employees and 7 percent for state employees in the early 1990s. According to more recent research, in states that allow full collective-bargaining union membership, the wage premium is 10 percent, while in states that allow partial or mixed collective bargaining, the wage premium is 6 percent (Freeman and Han 2012). Consistently, regardless of the data, methods, or period, the public-sector union wage premium is half of what is reported for private-sector union employees and appears to be declining over time. Our analysis of a pooled cross section of Current Population Survey data from 2009 to 2014 reveals a public-sector union wage premium of 8 percent and a compensation premium of 9 percent (Keefe forthcoming).

Union wage effects differ in the various functions of state and local government, such as education and public safety. Education accounts for 54 percent of state and local government employment (Keefe 2013), and teachers make up the largest occupational group in education. Frandsen (2014) reported, in his panel data analysis, that collective-bargaining laws have had a minimal effect on public school teachers’ hourly wages. Similarly, an early study of collective bargaining among school teachers found little evidence for an increase in teacher salaries (Smith 1972). An analysis using data from the 1980s (Zwerling and Thomason 1995) found a 5 percent union wage premium for teachers. In a more recent study, Lovenheim (2009) reported that teacher union certifications had very little effect on teacher wages.

Allegretto and Tojerow (2014) used Current Population Survey data to compare teacher pay with wages of non-teacher professionals with similar characteristics and found that the overall teacher wage penalty for unionized public-sector teachers grew from 10 percent in 1996 to 15 percent in 2010. Their research also shows that the wage gap between private-sector teachers and non-teachers with similar education and experience is smaller among unionized teachers than among nonunion teachers. To summarize, unions have had a minimal impact on public-sector teacher wages; however, the teacher wage penalty has grown to 15 percent for unionized public-sector teachers, to 19 percent for nonunion public-sector teachers, and to 30 percent for nonunion private-sector teachers (Allegretto and Tojerow 2014, 20).

Most research has shown firefighters have benefited from collective bargaining particularly because it reduced their weekly hours. Early studies of firefighters found significantly higher wages when a union is present, due primarily to a shorter work week and higher benefit levels (Ashenfelter 1971; Ichniowski and Zax 1991. Valletta 1993) estimated the effect of union contracts on firefighters from 1977 to 1980 and found a 3 percent union wage premium. In his panel data analysis, Frandsen (2014) reported a 14 percent hourly union wage premium for firefighters, arising mainly from the reduction of hours since the 1960s.

Early studies of police unions found they were associated with higher earnings (Freeman and Valletta 1988; Trejo 1991). Longitudinal evidence found relatively small differences between the wages of unionized and nonunionized police within a state, but that the level of earnings for both union and nonunion police was determined by the favorability of state laws toward public-sector collective bargaining (Ichniowski, Freeman, and Lauer 1989). What that analysis revealed is the fundamental difficulty in isolating a union wage effect, because of what is referred to as a “spillover effect,” whereby nonunion employers set wages (and likely benefits) to be comparable to those in surrounding communities, possibly mitigating a union wage effect within a county or a state. Recent panel data analysis

Unions and public employee benefits

In an analysis of retirement plans, we immediately notice several unique features of public-sector retirement systems. First, approximately 30 percent of public-sector workers are not covered by Social Security (Munnell et al. 2011b). Twelve states do not participate at all in Social Security while another three partially participate.¹ Second, pensions are most often legislated by state and local governments and not collectively bargained. Third, state and local government employers contribute twice as much to retirement plans as do private-sector employers, but these government employers contribute 36 percent less to legally mandated benefits such as Social Security, unemployment insurance, and workers compensation (author’s analysis of BLS 2014). Fourth and most important to this paper, unions do not exert any positive or negative influence on public-employee pensions (Munnell et al. 2011a). The extent of public-sector union membership has no measurable impact on the generosity of the benefit formula or the trend in benefits over time. Public-sector unions do not bargain over pensions and apparently are unable to politically shape pensions; rather other political and economic forces determine pension laws that control public-sector pensions.

Public-employee unions do have some ability to negotiate health benefits. Public employees receive similar health benefits as private-sector workers, but public employees are much more likely to participate in employer-provided benefits. Munnell et al. (2011b) found that the normal cost of health insurance to private-sector employers is roughly equal to that of public-sector employers. However there are several notable distinctions between the private and public sectors. First, in 2013, 55 percent of all private-sector workers participated in employer-provided health benefits compared with 79 percent of public-sector workers. However, when we compare professionals, who make up the largest group of public employees, the participation gap narrows. Approximately 71 percent of professional private-sector employees participate in employer-provided health benefits compared with 80 percent of professional public-sector employees (BLS 2013). This higher participation rate increases the total costs of state and local government health plans.

In state and local government, 11.9 percent of total compensation is the employer’s contribution to health and other insurances, whereas private-sector employers contribute 8.7 percent of total compensation to health and other insurances for full-time employees (BLS 2014). However, adding retiree health insurance increases public-sector compensation much more than private compensation due to the higher cost and more extensive coverage in the public sector, particularly because police and firefighters tend to retire before they become eligible for Medicare. In the private sector, according to Kaiser Family Foundation, 28 percent of large firms (those with 200 or more workers) that offered health benefits in 2013 provided retiree health benefits. Among large firms that offered retiree health benefits, 90 percent offered health benefits to early retirees (workers retiring before age 65) and 67 percent offered health benefits to Medicare-age retirees (Kaiser Family Foundation 2013). Only 18 of all private employers provided health insurance for their early retirees in 2010 (Fronstin and Adams 2012).

In the public sector, retiree health benefits are often legislated. While the retiree coverage has been significantly reduced in the private sector over the last 30 years, state and local governments—to address rising health costs—have increased both retirement ages and years of service before public employees become eligible for retiree health insurance. Once the plan holders become Medicare eligible at age 65, public employee retiree health plans have been increasingly become Medigap insurance programs with significant premium contributions, deductibles, and copays, which have and will continue to substantially reduce the employer cost of retiree health insurance. Prior estimates

suggest that retiree health insurance increases the compensation costs of state and local government employees in the range of 2 to 4 percent (Keefe 2012 and Munnell et al. 2011b). This discussion of benefit comparisons and their complexity are a necessary prelude to examining compensation comparisons between private and public employees.

Public status and compensation

Relatively few studies have compared public- and private-sector employee compensation. In part, this is attributable to the difficulty of obtaining accurate information about benefit costs. Four studies using different methods and data sources have made these comparisons. Bender and Heywood (2010), when controlling for union status, found that public employees are compensated 11 percent less than similar private-sector employees. Munnell et al. (2011b) concluded that public employees are compensated 4 percent less than similar private-sector employees. Keefe (2012) found that on average, full-time state and local government employees are undercompensated by 5.6 percent compared with otherwise similar private-sector workers. The public-employee compensation penalty is smaller for local government employees (4.6 percent) than for state government workers (8.7 percent). Lewin, Keefe, and Kochan (2012) found that the median public-employee compensation penalty is 2 percent. Gittelman and Pierce (2011) using the National Compensation Survey, found a slight public-employee compensation premium.² The research thus generally shows a modest compensation penalty for working in the state and local government sector rather than in the private sector. The next topic shifts to the role of collective bargaining and economic security arrangements (agency shop provisions) on the compensation gap between private- and public-sector workers.

“Right to Work,” collective bargaining representation, and compensation

As stated earlier, open-shop laws, referred to as right-to-work laws, let public employees opt out of paying unions that represent them fees to cover the costs of bargaining for wages and benefits and other terms of employment. RTW laws have been identified by a number of scholars as an important cause for the decline in private-sector national union membership (see Moore 1998 for a summary). RTW laws slow the growth of unions in the states that adopt them. Ellwood and Fine (1987) reported that in the first five years after the passage of an RTW law, organizing successes decline by 46 percent, and in the next five years they decline another 30 percent. They calculated that the reduced organizing efforts that are attributable to RTW laws account for an 8 percent decline in union density. Another study showed that RTW legislation lowers union density by 8.8 percentage points (Hogler, Shulman, Weiler 2004). Using CPS data from 1983 to 2004, (Farber 2005), reported that union density is almost double where unions are allowed to negotiate agency-shop provisions.

Free-riding is a considerable problem for unions since they provide collective goods to workers in unionized workplaces in terms of rules governing wages, benefits, hours of employment, and working conditions. A multivariate analysis of free-riding behavior found that RTW laws significantly increase the level of free riding (Davis and Huston 1993). The impact of a federal prohibition on RTW laws would reduce free-riding in RTW states (i.e., no-fair-share states) from 15.5 to 7.2 percent. Free-riding is 6 percent to 10 percent higher in RTW states than in non-RTW states (Moore 1998). RTW legislation also makes unions more vulnerable to decertification as free-riding drives membership below it necessary majority status (Hunt and White 1983).

Money is the lifeblood of most social institutions in American society, including labor organizations. Unions need a steady flow of revenue to support staff and to provide representation services. Given the complex legal environment of public employee labor organizations, they tend to be highly dependent on expert legal services. Dues checkoff, whereby union dues and fees are deducted automatically from workers’ paychecks, has enabled most unions to shift their

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resources away from basic revenue collection and, instead, rely on the employer’s payroll services to deduct and transfer funds—with, of course, each member’s consent. Even in states such as North Carolina and Virginia, which prohibit collective bargaining, legislatures have permitted dues checkoff (although in 2012 North Carolina repealed the checkoff rights for public employees, joined by Wisconsin in 2010, and Michigan in 2012 for school employees). More than four out of five public employees (83.4 percent) work for a government employer that allowed dues checkoff in 2010 (Keefe 2013).

RTW legislation is often championed by organized business lobbies within a state. Their motivation is clear. Using an event analysis, Abraham and Voos (2000) provided an empirical examination of whether stockholder wealth rises in response to passage of a right-to-work law. Stockholder wealth rose when Louisiana passed such a law in 1976 and when Idaho did so in 1985–1986. Presumably this occurred because investors anticipated higher future profits with weaker labor unions or a lower probability of future organization. This evidence indicates that such laws are more than symbolic, but they hamper labor unions and thereby reduce labor’s share of income.

The weakening of unions through encouraging free-riding follows from the logic of collective action, which states that an economically rational individual will seek to enjoy the collective benefits of the group without paying for them. This behavior becomes more likely as the group grows in size and peer pressure becomes a less-effective method of enforcement, meaning that large groups often fail without some other compliance methods. The logic of free-riding takes over and the group then lacks the resources to provide the collective goods to its members (Olson 1965). What the private-sector research shows is that right-to-work legislation encourages free-riding and therefore reduces the ability of unions to organize, to negotiate contracts, to maintain majority status, and to represent all members. Consequently, RTW not only has a negative impact on the unions that we observe, but also means that other unions do not exist—even where the majority of employees want representation.

However, while research investigating the effect of RTW in the private sector is instructive, it may not immediately transfer to the public sector with its varied and different legal frameworks (Sanes and Schmidt 2014). In fact, the research on the effects of RTW legislation in the public sector indicates that RTW laws may be even more detrimental to public-sector unions and their ability to provide collective goods to their members. In one unique study of the public sector, Ichniowski and Zax (1991) estimated that if RTW laws were reversed in states where they exist, the frequency of bargaining units would increase by 111 percent among police departments, 78 percent among fire departments, and 287 percent among public welfare departments. If states without RTW labor laws, however, adopted RTW laws, the frequency of bargaining unions in these three departments would fall by 39 percent, 37 percent, and 66 percent, respectively. Using a different methodology, another study estimated that the influence of RTW laws on whether public employees belong to a union. The study found that RTW laws significantly reduce the likelihood of union representation of public employees as a whole and of state, fire, and police employees in particular (Hundley 1988; Moore 1998).

These results for public employee union representation should not be surprising. Without the ability to obtain payment from nonmembers for the collective services provided by collective bargaining and daily representation, union membership erodes as more people try to gain services without paying for them, and the union becomes less effective and may cease to be a viable representative. The “free-rider” problem can ultimately undermine the collective goods provided by unions and the unions themselves (Olson 1965, chapter 3).

It is therefore unsurprising that states with RTW legislation have one-third the rate of public-union membership as non-RTW states. In RTW states between 2000 and 2014, free-riders represented 20.3 percent of public employee bargaining units (i.e., the public-sector unions were certified to represent them, but they had decided not to join their workplace’s union nor to pay dues), while public union density was only 17.4 percent. In states permitting agency shop agreements (i.e., “fair share” or non-RTW states) only 6.8 percent of the bargaining units were nonunion members (but

in this case not free-riders but agency-fee-payers paying fees equivalent to about 85 percent of dues) and union density was 49.6 percent. This gap in union density between RTW and non-RTW states underscores the importance of agency fees to the functioning of public employee unions.

As the logic of collective action predicts, there cannot be collective action without some mechanism of collective compliance. Historically, two illegal methods of compliance were employed. The first was coercion of free-riders in workplaces to encourage union membership and the second was violence against strikebreakers, those who crossed union picket lines. The architects of modern labor relations, seeking methods of nonviolent conflict resolution, encouraged the enforcement of union security clauses to stabilize labor-management relations and to eliminate the logic for violence and coercion to solve the free-rider problem. (Olsen, 1965, chapter 3)

In 2010, approximately, 46 percent of public employees were in states with enforceable agency-fee provisions in their public-employee collective-bargaining agreements (Keefe 2013). Historically, the shift from open shop to agency shop in the public sector increased public employee wages by 4 percent in the state making the change (Keefe 2013). From a cost-benefit perspective, paying dues or agency fees is economically rational since benefits exceed costs, provided that everyone else is contributing to the collective benefit. Farber (2005) found that union coverage is significantly higher where unions are allowed to negotiate union security provisions (e.g., agency-shop clauses) and that there is a 3.8 percent earnings premium from being able to negotiate and enforce agency-shop provisions, which is consistent with other findings on agency provisions.

In this session the Supreme Court will consider the future of agency-shop provisions in state laws in the case of *Friedrichs v. California Teachers Association*. The Supreme Court can exercise either deference to the states or it may overturn an earlier Supreme Court decision in *Abood v. Detroit Board of Education*, 431 U.S. 209 (1977) that rendered union-shop clauses unenforceable, but permitted agency-shop agreements in state and local government labor agreements, when authorized by state law. As prior research suggests, if the court renders agency-shop clauses unenforceable for public employees, it will eventually reduce public-employee wages, union membership, and the extent of collective bargaining. As we show below, this will increase the pay penalty for working for state and local governments.

New data and results: Public-employee unions and compensation

This section presents new estimates of public-employee wages and compensation by a state’s legal framework for labor-management relations. Some states provide public employees full collective-bargaining rights, others partial collective rights, and five states prohibit employee collective bargaining. We also compare outcomes for non-RTW and RTW states.

The research data for this analysis comes from three main sources. First, the research draws on four years of data, 2010 to 2013, from the American Community Survey (IPUM-USA), which produces an annual sample collected by the Census Bureau and posted on the University of Minnesota Population Center website (Ruggles et al. 2010). For employer payments of employee insurances, retirement, and mandated benefits, the research uses census division data from the U.S. Bureau of Labor Statistics’ Employer Costs of Employee Compensation program from June 2013; data are marked up by the occupation’s public and private employer wages, which are then adjusted for specific state-related benefits, such as nonparticipation in Social Security that is often offset by higher pension contributions, and retiree health insurance. The sample is limited to full-time and full-year employees providing a total of 3,004,761 observations, with 2,459,204 observations for private-sector employees and 545,557 observations for public-sector employees, which are then analyzed by each state. Third, for confirmation of the analysis, we check the results against estimates using the Current Population Survey, Annual Social and Economic Supplement.

The sample characteristics of the American Community Survey data used for this analysis are provided in **Table 1**.

Several characteristics of the means stand out. In terms of earnings, public employees receive lower wages per year, but their total compensation from work is similar to that received by private-sector workers. However, this does not mean their compensation is comparable. Public employees are significantly more educated. Approximately 54 percent of public employees have at least a college degree and 28 percent have advanced degrees compared with 32 percent and 10 percent respectively for private-sector employees. Since education is the single most important predictor of earnings, we should expect public-employee compensation to be greater than compensation of private-sector workers, even though public employees work on average one hour per week less than their private-sector counterparts.

TABLE 1

Comparison of private-sector and public-sector employees

Characteristics of sample	Private	Public*	Difference (public–private)
Income and work hours			
<i>Individual total income</i>	\$60,478	\$55,521	-\$4,957
<i>Family total income</i>	\$109,852	\$107,610	-\$2,242
<i>Real wage earnings</i>	\$60,172	\$54,898	-\$5,273
<i>Total compensation</i>	\$75,215	\$74,782	-\$432
<i>Usual hours of work</i>	43.9	42.7	-1.2
Demographics			
<i>Age</i>	43.3	46.2	2.9
<i>Female</i>	40.8%	56.7%	15.9 ppt.
<i>Married</i>	61.5%	67.0%	5.5 ppt.
<i>Disabled</i>	4.5%	5.0%	0.5 ppt.
<i>White</i>	85.1%	83.8%	-1.3 ppt.
<i>Black</i>	8.7%	12.2%	3.5 ppt.
<i>Asian</i>	6.2%	4.0%	-2.2 ppt.
<i>Hispanic</i>	13.2%	9.1%	-4.1 ppt.
Most advanced education			
<i>Less than high school</i>	3.8%	1.2%	-2.6 ppt.
<i>High school or GED</i>	27.9%	16.6%	-11.3 ppt.
<i>Some college</i>	15.9%	12.6%	-3.2 ppt.
<i>Associate’s degree</i>	9.7%	8.8%	-0.8 ppt.
<i>College and advanced</i>	31.5%	54.1%	22.5 ppt.
<i>College</i>	21.9%	25.9%	3.9 ppt.
<i>Master’s</i>	6.8%	21.8%	15.0 ppt.
<i>Professional</i>	1.9%	3.1%	1.2 ppt.
<i>Doctorate</i>	1.0%	3.4%	2.4 ppt.
Occupations			
<i>Managers</i>	17.2%	12.5%	-4.7 ppt.
<i>Professionals and related</i>	17.7%	44.4%	26.7 ppt.
<i>Sales</i>	11.8%	0.8%	-11.0 ppt.
<i>Administrative and clerical</i>	15.1%	13.8%	-1.3 ppt.
<i>Service</i>	9.9%	18.9%	9.0 ppt.
<i>Installation and repair</i>	4.6%	1.8%	-2.8 ppt.
<i>Construction</i>	3.8%	1.4%	-2.4 ppt.
<i>Production</i>	8.5%	1.3%	-7.2 ppt.
<i>Transportation and moving</i>	8.3%	4.0%	-4.3 ppt.

Characteristics of sample	Private	Public*	Difference (public–private)
Observations			
3,004,761	2,459,204	545,557	

Note: Data are for employees in state and local government.

Source: Author's analysis of data pooled for 2010–2013 from the American Community Survey (Ruggles et al.)

Demographically, public employees are more likely to be women (57 percent compared with 41 percent), more likely to be married (67 percent compared with 62 percent), more likely to be black (12 percent compared with 9 percent), less likely to be Hispanic (9 percent compared with 13 percent), less likely to be Asian (4 percent compared with 6 percent), and less likely to be white (84 percent compared with 85 percent). Private and public occupational distributions are also remarkably different. Public employees are more likely to be professionals (44 percent compared with 18 percent) and more likely to be service providers (19 percent compared with 10 percent) and less likely to be managers, sales workers, administrative and clerical workers, installation and repair workers, construction workers, production workers, and transportation and moving workers. This occupational distribution, because of the high proportion of professionals, would also suggest that public employees should have higher average earnings and compensation.

Impact of collective bargaining

Following Freeman and Han (2012), we aggregate the reporting of results into groups of states as to whether they provide public employees with full collective-bargaining rights, partial collective-bargaining rights, or prohibit employee collective bargaining.³ Our classification of states departs from Freeman's and Han's since we exclude Florida and Louisiana from full collective-bargaining states and place them in partial collective-bargaining states, since they are right-to-work states. We also compare outcomes for non-RTW and RTW states. Legal frameworks have been found to be critical in determining the extent of public-employee unionization. Farber (2005) reported that union coverage strongly increases with the favorableness of the labor law for all types of public workers. Only 17 percent of state and local government employees are unionized when collective bargaining is prohibited, while half to three-quarters are unionized when there is a duty to bargain (full collective bargaining). His analysis found that unionization is 20 to 40 percentage points more likely where union security is either negotiable or compulsory (Farber 2005).

The wage and compensation regression analyses control for education, experience, gender, race and ethnicity, hours of work, presence of a disability, marital status, citizenship status, and work status (whether full or part time). The dependent variables are the employees' average annual real wage income and the employer-provided total average annual compensation. We conducted 50 state regressions with dependent variables of 1) the natural log of wages, 2) the natural log of compensation, 3) annual wages, and 4) annual compensation. The state-level data allow us to adjust for state variations from the regional Employer Cost of Employee Compensation for health insurance, retirement plans, and contributions to legally mandated benefits plans. The results are then aggregated by the three public-sector labor law frameworks with the results weighted by the relative employments levels of state and local public employees. The regressions were conducted in semilog and standard form. The semilog reported results were transformed by taking the antilog thus converting them into percent differences between public-employee wages and compensation when compared with similar private-sector workers, and they are reported in Panel A of **Table 2**.

TABLE 2

Public pay compared with private pay using American Community Survey data, by public-sector legal framework

Legal framework	Wages	Compensation
Panel A	Log of	Log of
<i>Full collective bargaining states</i>	-4.6%	-0.5%
<i>Partial collective bargaining states</i>	-13.7%	-8.5%
<i>States prohibiting collective bargaining</i>	-17.9%	-15.4%
<i>Agency states (non-RTW)</i>	-5.2%	-0.8%
<i>Right-to-work states (RTW)</i>	-14.1%	-10.4%
Panel B	Annual	Annual
<i>Full collective bargaining states</i>	-\$11,667	-\$8,444
<i>Partial collective bargaining states</i>	-\$12,391	-\$9,266
<i>States prohibiting collective bargaining</i>	-\$18,512	-\$17,937
<i>Agency states (non-RTW)</i>	-\$12,851	-\$8,385
<i>Right-to-work states (RTW)</i>	-\$13,227	-\$9,413

Note: Data are for state and local government workers. The regressions are adjusted by state and control for educational attainment, experience, experience square, race and ethnicity (black, Hispanic, Asian), gender (women), disabled status, location (in a metro area), marital status, citizenship (non-citizen), and work status (part-time).

Source: Author's analysis of pooled 2010–2013 data from the American Community Survey (Ruggles et al.) and, for the compensation markup, regional Employer Costs for Employee Compensation data for June 2013 from the Bureau of Labor Statistics.

The results consistently indicate that unions even in full collective-bargaining states have not closed the wage gap between public- and private-sector workers. In full collective-bargaining states, the public-employee wage penalty is 5 percent rising to 14 percent in partial collective bargaining states and increasing to 18 percent in states where collective bargaining is prohibited. The wage penalty in RTW states is 14 percent and in non-RTW states falls to 5 percent. Given that benefits are more generous for state and local government employees, public-sector compensation penalties are smaller than wage penalties. In full collective-bargaining states, the compensation difference with the private-sector employers is 0.5 percent, whereas in partial collective-bargaining states the penalty is 9 percent and in states prohibiting collective bargaining the penalty rises to 15 percent. In non-RTW states the penalty is 1 percent and in RTW states it is 10 percent, a net RTW compensation penalty of 9 percentage points.

As the analysis shifts from semilog equations to standard wage regressions using dollar values in Panel B, the public-sector compensation penalties are large, rising from \$8,444 in full collective-bargaining states to \$17,937 in states that prohibit collective bargaining (when making comparisons with a comparable private-sector man who is white, has a high school degree, is a citizen, and works full time). The RTW compensation penalty is \$9,413 rather than \$8,385 in non-RTW states, a net RTW penalty of \$1,028. The disparate results for the semilog and standard regressions can be explained in part by the fact that the distribution of public-employee compensation is more likely to resemble a normal distribution, whereas the distribution of private-employee compensation more closely conforms to a log normal distribution. This means that semilog results may understate differences, while the estimates with dollar values probably overstate the differences in between the wages and compensation of comparable private- and public-sector employees.

To confirm the analysis performed using the ACS estimates by state, we estimated regressions using the CPS-ASEC data from 2009 to 2013. The results are reported in **Table 3**.

TABLE 3

Public pay compared with private pay using Current Population Survey data, by public-sector legal frameworks

Legal framework	Wages	Compensation
Panel A	Log of	Log of
<i>Full collective bargaining states</i>	-5.9%	0.6%
	-0.004	0.04
<i>Partial or mixed collective bargaining states</i>	-12.2%	-3.9%
	0.006	0.004
<i>States prohibiting collective bargaining</i>	-15.6%	-7.8%
	0.007	0.006
<i>Non right-to-work states</i>	-7.2%	2.7%
	0.005	0.004
<i>Right-to-work states</i>	-12.9%	-6.4%
	0.004	0.004
Panel B	Annual	Annual
<i>Full collective bargaining states</i>	-\$11,566.43	-\$7,345.00
<i>Partial or mixed collective bargaining states</i>	-\$12,680.72	-\$11,214.61
<i>States prohibiting collective bargaining</i>	-\$17,140.62	-\$18,106.18
<i>Non right-to-work states</i>	-\$11,353.56	-\$6,894.36
<i>Right-to-work states</i>	-\$13,270.62	-\$12,707.16

Note: Data are for state and local government workers. The regressions are adjusted by state and control for educational attainment, experience, experience square, race and ethnicity (black, Hispanic, Asian), gender (women), disabled status, location (in a metro area), marital status, citizenship (noncitizen), and work status (part-time).

Source: Author's analysis of pooled 2009–2013 data from the Current Population Survey Annual Social and Economic Supplement and, for the compensation markup, regional Employer Costs for Employee Compensation data for June 2013 from the Bureau of Labor Statistics

The CPS data estimates are largely consistent with the ACS estimates. The CPS data cover the period 2009 to 2013. The ECEC markups are done by region, which prevents individual state adjustments, particularly for those states not participating in Social Security. Nonetheless, full collective-bargaining rights provide a statistically insignificant compensation advantage of 0.6 percent. All other specifications are negative, except for the non-RTW estimate, which yields a small premium of 2.7 percent. The non-RTW status changes the compensation penalty for working in state and local government by 9.1 percentage points (the difference between 2.7 percent and -6.4 percent). When we estimate equations with dollar values as dependent variables we see the annual costs to public employees under each legal framework of labor law. We can clearly see that RTW significantly increases the public-employment penalty by \$1,917.06 in average annual wages (-\$13,270.62 versus -\$11,353.56) and \$5,812.80 in average annual compensation (-\$12,707.16 versus -\$6,894.36). Regardless of specification used, there is a substantial pay and compensation impact of not being able to have an agency shop.

These pay penalties may have consequences. Eliminating enforcement of agency-shop provisions and requiring all public employers to become open shops by making union security unenforceable may have costs not only to public employees and their unions, but to public employers who may have greater difficulty recruiting and retaining the appropriate workforce to provide public services, for example, qualified and effective teachers, police officers, and firefighters.

Conclusion: What does public-employee collective bargaining and agency-shop enforcement do to compensation?

In states that provide full collective-bargaining rights and permit the enforcement of agency-shop provisions, unions have apparently been able to lessen or even eliminate the gap between compensation of public- and private-sector workers. However, in states that prohibit collective bargaining or bar enforceable agency shop provisions, substantial public-private compensation gaps persist and may be growing as states seek to limit collective bargaining and shift a greater proportion of benefit costs onto employees. If the U.S. Supreme Court in *Friedrichs v. California Teachers Association* overturns the court’s earlier decision in *Abood* and requires all states to have public-sector open shop laws, the compensation gap will grow and unionization will probably decline as the result of the free-rider problem.

We need to ask, why are public employees undercompensated? First, many Americans do not like paying taxes, particularly when they do not understand the public services they receive in the form of public education, roads and highways, parks, and public order and safety. Second, politicians often promise lower taxes and improved services to be achieved simultaneously through cutting waste and inefficiency. Third, the public sector, particularly K-12 education, has historically taken advantage of being able to pay female employees considerably less than men. If the wage and compensation equations used in this analysis were to remove gender as a control variable, the wage and compensation gaps would be considerably greater than those reported. Fourth, state and local governments often rely on property taxes and increases in those taxes produce immediate resistance by homeowners. Fifth, historically, state and local government jobs have provided stable employment with explicit job ladders, which is now starting to break down, but these jobs are still more stable than many jobs in the private sector. Sixth, the defined-benefit pension plans in the public sector encourage employees to stay with their employers. Seventh, some of the most difficult jobs for public employees are in the former industrialized cities with high concentrations of poor people, high crime rates, and few jobs. These cities often lack an adequate tax base to address the challenges these cities confront.

Public-employee unions and collective bargaining have sought to rebalance the scales to make public-employee compensation more equitable and comparable to the private sector. The recent efforts by a number of states to eliminate agency-shop security through right-to-work laws—potentially to be supported by the Supreme Court—would shift the scales against public employees. While Americans express a considerable desire to improve education; transportation; and justice, policing, and protective services; they need to understand that these improvements require paying competitive compensation to recruit and retain skilled and dedicated employees. Public-employee unions and agency-shop security are necessary to achieving this goal.

Endnotes

1. Alaska, California, Colorado, Connecticut, Georgia (certain local governments), Illinois, Kentucky (certain local governments), Louisiana, Maine, Massachusetts, Missouri, Nevada, Ohio, Rhode Island (certain local governments), and Texas.

2. Unlike other analyses this study includes the National Compensation Survey’s scoring of work factors for each job in the NCS survey. These factor scores are then used to supplement the CPS survey’s measures of educational attainment and experience. It appears that it is the NCS factor scores that produced the different result from the other studies.

3. Full collective-bargaining states are Alaska, California, Connecticut, Delaware, Hawaii, Illinois, Maine, Maryland, Massachusetts, Michigan, Minnesota, Montana, Nebraska, New Hampshire, New Jersey, New Mexico, New York, Ohio, Oregon, Pennsylvania, Rhode Island, South Dakota, Vermont, Washington, and Wisconsin.

Partial collective-bargaining states are Alabama, Arizona, Arkansas, Colorado, Washington, D.C., Florida, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Mississippi, Missouri, Nevada, North Dakota, Oklahoma, Tennessee, Utah, West Virginia, and Wyoming.

States that prohibit collective bargaining are Georgia, North Carolina, South Carolina, Texas, and Virginia, but note exceptions exist. Texas allows firefighters the right to bargain collectively.

States permitting agency provisions are Alaska, California, Colorado, Connecticut, Delaware, Florida, Hawaii, Illinois, Maine, Maryland, Massachusetts, Minnesota, New Hampshire, New Jersey, New Mexico, Montana, Missouri, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Vermont, Washington, and West Virginia.

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