CWED
Center on Wage and Employment Dynamics

POLICY BRIEF
October 2010

Institute for Research on Labor and Employment
University of California, Berkeley

The Truth about Public Employees in California: They are Neither Overpaid nor Overcompensated

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Introduction

Recently, there has been a great deal of debate and consternation over the compensation of public-sector employees across the U.S. It has been asserted that state and local government employees are overpaid compared to workers in the private sector. In California government workers have been vilified as scandals and anecdotes pass as confirming evidence of exorbitant pay. This research is especially important given the outrage over the pay of municipal officials in Bell, California. The outrage over what happened in Bell is reasonable and just. Many of the players immediately resigned and on September 21, 2010 eight city officials were arrested.[1] Those arrested include the former city manager of Bell, Robert Rizzo, who was making nearly $800,000 a year. Rizzo was charged with 53 counts. It is alleged that Rizzo, without approval from the City Council, actually wrote the conditions of his own contract—the case keeps growing in terms of scope and involved officials. It is clear by the arrests and scores of allegations that the situation in Bell was not in line with usual procedures.

While anecdotes that stem from public-sector corruption capture much attention, it is a data-driven analysis of public-sector pay and compensation that is needed to answer the question: How do the pay and benefits of public sector workers compare to those in the private sector? This is a legitimate question that should not be answered anecdotally. The research in this paper investigates empirically whether California public employees are overpaid at the expense of California taxpayers.

The results from this analysis indicate that California public employees, both state and local, are not overpaid. The wages received by California public employees are about 7% lower, on average, than wages

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We thank Adam Dunn and Laurel Lucia for helpful comments.

received by comparable private sector workers; however, public employees do receive more generous benefits. An apples-to-apples comparison, or one that controls for education, experience, and other factors that may influence pay, reveals no significant difference in the level of employee compensation costs on an annual or per hour basis between private and public sector workers.

Nonetheless, there are substantially different approaches to staffing and compensation between the private and public sector. Specifically, there are important workforce differences between the two sectors in terms of educational attainment. On average, California's public sector workers are more highly educated. Of full-time workers, 55% hold a four-year college degree in the public sector compared to 35% in the private sector. Educational attainment is the single most important predictor of earnings—thus it plays a vital role in this analysis. On average, California state and local governments pay college-educated labor less than private employers. The earnings differential is greatest for professional employees, lawyers and doctors. On the other hand, the public sector appears to set a floor on compensation. The earnings of those with a high school degree or less is higher in state and local government than it is for similar workers in the private sector.

There are other significant personnel differences between the public and private sector workforces. The age (median) of a typical worker in state and local government is 44 compared to 40 in the private sector. Furthermore, the state and local government workforce has more women (55%) compared to the private sector (40%).

In general, better educated and older, more experienced workers earn more than less educated and younger workers while women earn less than men. Thus, comparisons between the two sectors must take into account these and other differences such as race and experience when making pay comparisons. Simply comparing average pay between the two sectors, without taking into account workforce differences, would be highly misleading.

Benefits are also allocated differently between private and public sector full-time workers in California. 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. While some benefits may be more generous in the public sector, it is a serious error to imagine that comparability requires that each and every element of compensation be the same. When total compensation—both the cost of employer-provided benefits and direct pay—is taken into account state and local public sector workers in California are similarly compensated to workers in the private sector.

Public employers contribute on average 35.7% of employee compensation expenses to benefits, whereas private employers devote 30% of compensation to benefits. Public employers provide better health insurance and pension benefits. Public employers contribute 11.8% to insurance, mainly health insurance, compared to a 7.7% contribution by private employers. Retirement benefits also account for a substantially greater share of public employee compensation, 8.2% compared to 3.6% in the private sector. Most public employees also continue to participate in defined benefit plans managed by the state, while most private sector employers have switched to defined contribution plans, particularly 401(k) plans. On the other hand, public employees receive considerably less supplemental pay and vacation time, and public employers contribute significantly less to legally-mandated benefits.

Thus, the difference in workforce characteristics and benefit allocations between the public and private sectors is why a regression-adjusted analysis is employed in this research. The regression framework allows a comparison of similar workers controlling for factors which influence compensation levels. A standard wage equation produced a surprising result: full-time state and local employees are under-paid by about 7% compared to their private sector counterparts. However, a re-estimated regression equation of total compensation (which includes wages and benefits) demonstrates that there is ***no*** significant difference in total compensation between full-time state and local employees and private-sector employees.

The Challenge of Analyzing Public Employee Compensation

To answer whether California public employees are overpaid two simple but related questions need to be asked: compared to whom? And compared to what? The standard of comparison for public employees is usually similar private sector workers, with respect to education, experience, and hours of work.

Ideally, we would compare workers performing similar work in the public sector with the private sector, but this is not always possible. There are too many critical occupations in the public sector, for example, police, fire, and corrections, without appropriate private sector analogs. Even private and public teaching is significantly different. Public schools accept all students, while private schools are sometimes highly selective and may exclude or remove poor performers and special needs or disruptive students. Consequently, comparing workers of similar "human capital" or fundamental personal characteristics and labor market skills is considered the best alternative. Analyses based on comparisons of personal characteristics capture most of the important and salient attributes in comparable work studies.

Prior research reveals that education level is the single most important earnings predictor for all workers. Education helps create work-relevant skills. People invest heavily in their own and their children's education by buying homes in communities with good schools and by paying or taking on debt to attend schools, colleges, and universities. Empirically, education is followed by experience in advancing earnings. People learn by doing and by working in a variety of job tasks as they advance through occupational levels. Most occupations reward experience and on-the-job learning as they are associated with more competent and productive performance.

Other factors widely found to affect compensation include gender, race, ethnicity and disability. However, productivity-related human capital differences (e.g., training and education) are inter-mingled with labor market disadvantages stemming from historical patterns of discrimination. We account for all of these factors in our study. When analyzing hours of work most studies exclude part-time workers for a number of reasons: their hours of work vary, they earn considerably less than comparable full-time workers, they are more weakly attached to the labor force, and they often lack benefit coverage. This study follows standard practice by focusing on full-time public and private sector employees, who represent over 80% of the state's labor force, and by controlling for hours worked per year.

It is well known that an employer's organizational size greatly influences employee earnings. We are fortunate to be able to account for the size of the firm where each sampled full-time worker was employed. This control variable is made possible by the Integrated Public Use Microdata Series of the March Current

Population Survey data (IPUMS-CPS). The basic wage gap due to organizational size is 35%. Large firms with more than 500 employees comprise less than one third of 1% of all firms but provide jobs for nearly half of all private sector workers (Oi and Idson1999; U.S. BLS 2005). Large organizations employ more educated, experienced, and full-time workers, nonetheless even after accounting for these factors; large organizations pay a premium (Troske 1999). When benefits are included in the comparison, the compensation premium for workers at large firms grows. Whereas the private sector has a relatively small number of large organizations, the public sector has relatively few small organizations. Over 79% of California public employees work in organizations employing more than 100 employees.

What should be compared? Comparing wages is insufficient, since employee compensation increasingly includes employer-provided benefits. Regardless of whether employees are compensated with wages or benefits, the essential issue in making a comparison is the cost to private or public sector employers of employing a worker. Employer costs may include not only wages, but paid time off for holidays, vacations, personal and sick days; supplemental pay including over time and bonuses; insurances, particularly health insurance but also life and disability insurance; retirement plan contributions whether defined benefit or defined contribution including 401(k) plans; and legally-mandated benefit contributions such as unemployment insurance, Social Security, Medicare, disability insurance, and workers compensation. Thus, we conclude that the cost of employing a worker, which includes wages and other benefits, is the reasonable comparison. The next, and more difficult, issue is finding the appropriate data to make the comparison.

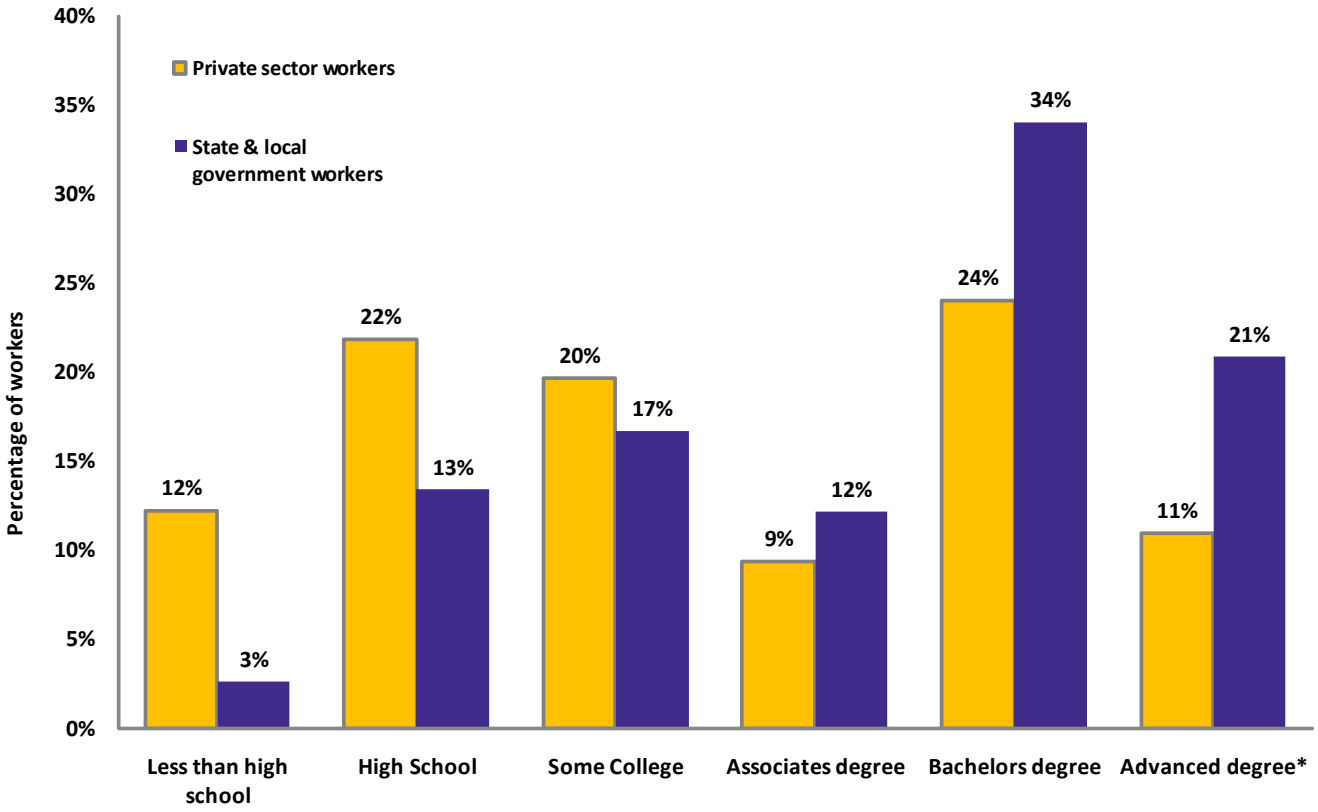
In this study we use the Integrated Public Use Microdata Series (IPUMS) of the March Current Population Survey (CPS) to obtain wage and demographic data. The CPS is a monthly U.S. household survey conducted jointly by the U.S. Census Bureau and the Bureau of Labor Statistics. The March Annual Demographic File and Income Supplement is the most widely used source of earnings data used by social scientists (King, et al. 2009). For the purpose of comparability, self-employed, part-time, agricultural, and domestic workers are excluded.

The most reliable source of benefit information in the United States is the Employer Costs for Employee Compensation (ECEC) survey, which is collected by the U.S. Department of Labor, Bureau of Labor Statistics (BLS). The ECEC includes data from both private industry and state and local government employees and provides data for private employers by firm size. Larger employers, those with over 100 employees, are significantly more likely to provide employees with benefits. This is due, in part, to their ability to spread administrative costs over a larger group. For insurance purposes, larger firms can more readily diversify risks by dint of their size. Because state and local governments resemble large private-sector firms, the compensation cost analysis will control for employer size in making comparisons.

Education Is the Most Important Factor in Determining Earnings

Educational attainment is the single most important predictor of earnings. The strong positive association between higher levels of education and higher earnings in the labor market is a crucial factor in this analysis. There are two important issues here: 1.) California public employees are substantially more educated than their private sector counterparts, and 2.) the returns to education are not the same across the two sectors.

Chart 1 Educational attainment of California workers in the private sector versus those in state and local government



Source: Current Population Survey, IPUMS 2009. *Includes Professional, Masters and Doctorate degrees.

Chart 1 illustrates the dissimilar distributions of education for workers in the private and public sectors. Approximately 55% of California public employees hold a Bachelors or advanced degree compared to 35% of private-sector workers. Table 1 shows the educational distribution for the total private sector and by firm size in the first four columns and for the public sector in column 5. The *returns to education*, which is the average increase in earnings associated with incremental increases in educational attainment, are reported in the last column of Table 1. The percentages for each level of education are in comparison to workers who have not completed high school.[2] For example, a high school graduate, all else being equal, earns on average 39% more than a worker without a high school diploma. The education premium jumps to 57% on average if the worker attended some college or 70% if the worker holds an Associates degree. Completing college with a Bachelors degree yields a 98% premium and a professional degree (law or medicine) increases average earnings by 178% compared to an individual without a high school diploma. A Masters degree yields an average 128% pay premium and a Doctorate produces a 159% return.

Table 1 The distribution of educational attainment and average returns to education for workers in California

Highest degree earned	Private sector employers				State and local government	*Earnings return to education compared**
	All	1 to 99 employees	100 to 499 employees	500 or more employees		
Less than high school	12%	19%	15%	8%	3%	*base*
High school	22%	24%	21%	21%	13%	*39%*
Some college	20%	18%	18%	21%	17%	*57%*
Associates degree	9%	7%	9%	10%	12%	*70%*
Bachelors degree	24%	21%	25%	25%	34%	*98%*
Professional degree	2%	2%	1%	2%	2%	*178%*
Masters degree	8%	4%	8%	9%	16%	*128%*
Doctorate degree	1%	1%	1%	1%	3%	*159%*
Bachelors degree plus	35%	29%	35%	37%	55%	--

*Comparisons are in reference to the base group of less than high school. Thus, the earning of those with a high school degree is, on average, 39% higher than those without a high school degree. Columns may not add to 100% due to rounding.

Source: Current Population Survey: IPUMS 2009.

The public sector and larger private sector organizations employ more highly educated workers. Smaller private sector organizations utilize more workers with a high school degree or less compared to either larger private sector firms or state and local government. Only 3% of state and local government workers lack a high school education compared to 12% of private sector employees. The number of private-sector employees without a diploma falls to 8% within firms of 500 or more employees.

As mentioned earlier, the returns to education are not the same across the two sectors. As a result of the relatively high level of unionization, the public sector has established a floor on earnings, allowing those with a high school education or less to earn considerably more than their private sector counterparts (Asher and DeFina 1999). On the other hand, college educated private sector employees earn considerably more than similarly educated public sector workers. These dynamics are reported in Table 2.

For the most part, a comparison of average earnings shows that less educated public sector workers earn more than their private sector counterparts—this differential increases when benefits are taken into account (benefit calculations are described in detail in the next section and in the Appendix). However, just 16% of public sector workers have a high school degree or less compared to 34% in the private sector. The majority of public sector workers (55%) have a Bachelors degree or more compared to the private sector (35%). Public sector pay for these educated workers is considerably less than that of equivalent private sector workers. When benefits are included in the comparison public sector workers with at least a Bachelors degree are less compensated than those in the private sector.

Table 2 Annual earnings and total compensation comparisons by level of education for workers in California

Education level	Private sector	Public sector	Difference: public-private	Public sector premium/penalty
Annual wage earnings				
Less than high school	$25,964	$29,640	$3,677	14%
High school	$39,642	$38,903	-$739	-2%
Some college	$45,609	$47,717	$2,107	5%
Associates degree	$53,376	$53,617	$241	0%
Bachelors degree	$72,313	$62,337	-$9,976	-14%
Professional degree	$185,465	$163,949	-$21,515	-12%
Masters degree	$107,017	$71,527	-$35,490	-33%
Doctorate degree	$124,851	$108,897	-$15,954	-13%
Total compensation				
Less than high school	$33,607	$41,725	$8,118	24%
High school	$50,563	$54,269	$3,706	7%
Some college	$57,229	$66,094	$8,865	15%
Associates degree	$66,695	$73,622	$6,927	10%
Bachelors degree	$88,852	$84,040	-$4,812	-5%
Professional degree	$228,913	$217,343	-$11,570	-5%
Masters degree	$131,040	$94,753	-$36,288	-28%
Doctorate degree	$153,980	$144,470	-$9,511	-6%

Source: Current Population Survey: IPUMS 2009.

For example, a full-time worker without a high school education earns on average 14% more when employed by state and local government ($29,640) compared to the private sector ($25,964). When the comparison is total compensation (including benefits), the public sector premium jumps to 24% for workers without a high school diploma ($41,725) compared to similarly educated private sector employees ($33,607).

Just considering wages, high school graduates approach earnings equivalency between private and public sector with public sector workers earning wages 2% less than their private sector counterparts. Nonetheless, when we examine total compensation, high school graduates earn $3,706 (7%) more annually in the public sector.

However, the wages and total compensation received by public sector workers at higher levels of education are less than comparable workers in the private sector. The relatively better benefits received by educated public sector workers are not enough to compensate for the pay difference. For example, government workers with a Bachelors degree earn on average 14% less than similarly educated workers in the private sector. When considering total compensation, these public-sector workers still receive 5% less.

The Growing Role of Benefits in Employee Compensation Costs

Benefits, once referred to as fringe benefits, account for an ever-increasing portion of employee compensation costs. Benefit growth is partially fueled by the tax deductibility of health insurance payments and pension contributions which allows employers to compensate employees without either the employer or employee paying income tax at the time of compensation. Sometimes referred to as tax "efficient" compensation, the Federal government foregoes $300 billion annually in income tax revenue to subsidize these benefits (U.S. Congress, Joint Committee on Taxation 2006). Health insurance and pension benefits are particularly attractive to middle and upper income employees who face higher marginal income tax rates.

Organizational size is the single strongest predictor of employee benefit participation and compensation. For example, employee participation in retirement plans varies considerably by organization size. Organizations with 1 to 99 employees have employee pension participation rates of 38%, organizations with 100 to 499 employees have participation rates of 64% and organizations with 500 or more employees, 81% of employees participation in retirement plans. The pattern is similar for health insurance benefits. Organizations with 1 to 99 employees have employee participation rates in medical insurance of 43%, organizations with 100 to 499 employees have participation rates of 61% and organizations with at least 500 employees have a 71% participate rate in medical insurance plans. This pattern is replicated for prescription drug and dental care plans (U.S. DOL BLS September 2009, Bulletin 2731).

The Employer Costs for Employee Compensation (ECEC) survey provides the only valid and reliable estimate in the United States of benefit costs incurred by employers. It is conducted quarterly by the U.S. Bureau of Labor Statistics. The ECEC includes data from both private industry and state and local government employees and provides data for private employers by firm size. This study uses these ECEC sample estimates to calculate relative benefit costs for private and public employees in California. (Please see data Appendix for more a detailed description).

Public sector employees received more of their compensation in the form of benefits than private sector workers. The distribution of employer costs of compensation for all private firms and by size along with those of state and local government is listed in Table 3. In the table the positive correlation between firm size and the benefit share of total compensation is evident.

On average, benefits costs are 30% of total compensation for private firms as compared to 35.7% for state and local governments. Private sector benefits costs range from 27.2% for small private employers with less than 100 employees to 33.5% for private employers with 500 or more employees. The compensation data reveal considerable variation within the private sector and between the private sector and state and local government compensation. Public employees not only receive more of their compensation in benefits, but the mix of benefits is different among paid leave, supplemental pay, insurances, retirement security and legally mandated benefits. While overall paid leave costs are similar, private sector employees receive more vacation pay while public employees receive greater sick leave compensation (not shown). Holiday and personal time compensation is similar. Supplemental pay accounts for just 1.1% of compensation for public employees (mostly from overtime pay) but accounts for 3.5% of large firm private sector worker compensation (generally due to bonuses given by large firms).

Table 3 The distribution of employer costs of compensation for private employers by firm size and for state and local government

Employer Costs	Private sector employers				State and local government
	All	1 to 99 employees	100 to 499 employees	500 or more employees	
Total compensation	**100%**	**100%**	**100%**	**100%**	**100%**
Wages and salaries	**70.0%**	**72.8%**	**69.6%**	**66.5%**	**64.3%**
Total benefits (itemized below)	**30.0%**	**27.2%**	**30.4%**	**33.5%**	**35.7%**
Paid leave (Vacation, holiday, sick)	*7.4%*	*6.2%*	*7.3%*	*9.2%*	*8.6%*
Supplemental pay (bonus, overtime)	*2.8%*	*2.3%*	*2.9%*	*3.5%*	*1.1%*
Insurance (health, life, disability)	*7.7%*	*7.0%*	*8.2%*	*8.2%*	*11.8%*
Retirement benefits	*3.6%*	*2.5%*	*3.4%*	*5.6%*	*8.2%*
Legally required	*8.5%*	*9.3%*	*8.7%*	*7.0%*	*6.0%*

Source: BLS ECEC December 2009 data. Unpublished compensation data for the Pacific Census division.

On the other hand, public employees receive considerably more of their compensation from employer-provided insurance. Insurance accounts for 7.7% of private sector compensation but 11.8% of state and local government employee costs. Retirement benefits also account for a substantially greater share of public employee compensation, 8.2% compared to 3.6% in the private sector. As with most benefits, the differences between private and public employees' compensation costs shrink for larger private-sector firms.

Legally required benefits account for a greater share of the small employers' compensation, as organizational size increases these benefits costs decrease in relative importance. In local and state government employment, legally required benefits represent a substantially smaller share of benefit costs for several reasons. First, a nontrivial number of public employees do not participate in social security, which partially explains their higher pension costs.[3] These employees are not eligible for Social Security benefit payments at retirement unless they chose to work in another job elsewhere which is covered by Social Security. Second, state and local governments do not participate in the federal unemployment system. Lastly, since state and local governments offer more stable employment they pay lower rates into the state unemployment insurance trust fund, because unemployment insurance contribution rates are partially experience rated.[4]

In summary, state and local government workers receive more of their compensation in employer-provided benefits. Specifically, public employers contribute relatively more toward employee health insurance and retirement benefits costs. Public employee benefit costs, however, are relatively lower for supple-

mental pay and legally required benefits than those of private sector employees. To determine whether public employees are overpaid, the specific question that should be addressed is whether higher benefit costs more than offset the lower wages paid to California public employees. That is the question we turn to next.

Assessing Private and Public Relative Pay and Benefits

The IPUMS-CPS data are used to assess the relative employment costs of private versus public sector workers in California. The CPS data on individuals provides information on an array of demographic characteristics including full-time status, education level, occupation, years of experience (as a function of age), gender, race, organizational size, and industry. In California, there are important differences between state and local government workers compared to those in the private sector. On average, government workers are: more experienced (22 years versus 20 years): more likely to be female (55% to 40%); work more hours (37 to 39); more likely to be Black (11% to 6%); less likely to be Asian (12% to 14%); and less likely to be Hispanic (25% to 35%).

California public employees work on average more hours per year than their private sector counterparts, making them unique among public sector workers throughout the country. However, the distribution of relative hours is uneven. Table 4 reports average annual hours of work for the two sectors and by educational attainment for full-time workers. On average public employees worked almost three days or 1.1% more than workers in the private sector. However, public employees with a professional or Masters degree worked fewer hours, 4.7% and 3.8% less, respectively. In California, differences in the number of work hours do not appear to sharply delineate private from public employment as it does elsewhere in the country (Keefe 2010a).

Table 4 Annual hours of work by education level for full-time private and public sector workers in California

	Private sector	State and local government	Public to private
Average for all full-time workers	2,110	2,133	1.1%
By education level			
Less than high school	1,968	2,031	3.2%
High school	2,057	2,046	-0.6%
Some college	2,096	2,057	-1.9%
Associates degree	2,088	2,109	1.0%
Bachelors degree	2,170	2,160	-0.5%
Professional degree	2,504	2,386	-4.7%
Masters degree	2,260	2,174	-3.8%
Doctorate degree	2,389	2,470	3.4%

Source: Current Population Survey: IPUMS 2009.

What is the relative pay and total compensation of public sector workers compared to those in the private sector? The CPS data on earning with the ECEC data on benefits allow us to answer these questions. The ECEC data are employed to calculate total employer compensation costs for each employee in the sample.[5] Each observation has an earnings and total compensation measure. Table 5 reports the results of a standard earnings equation on four measures: annual and hourly earnings; and annual and hourly total compensation.

Table 5 Regression adjusted wage and compensation premium for public sector workers in California

	Earnings		Total compensation	
	Annual	Hourly	Annual	Hourly
State & local government	-7.77% ***	-6.36% **	0.89%	2.29%
State government	-7.55% *	-8.92% *	1.07%	-0.28%
Local government	-7.86% ***	-5.38% *	0.01%	3.28%

Control variables: hours of work, education, experience, organizational size, gender, race, and disability.

Significance levels: probability estimate 0 is * >.05, **>.01, and ***>.0001

The estimates represent the earnings and total compensation premium of California state and local government workers relative to private sector workers. Columns 1 and 2 provide estimates for employee wages. The annual wages of state and local California public employees are 7.77% less than comparable private sector workers (earning results are all statistically significant). The estimates in rows 2 and 3 separate out state and local workers. State workers earn 7.55% less than workers in the private sector and local government workers earn 7.86% less. The results in column 2 compare hourly wages. Overall, the hourly wages of California's state and local employees are 6.36% less than employees in the private sector. Separately, the hourly wage gap is 8.92% for state and 5.38% for local government workers in California.

Now that it has been established that public sector workers are ***not*** overpaid what happens when benefits are considered? Results on total compensation, annual and hourly, show that the more generous benefits received by public sector workers is just enough to make up for the significant negative wage gap—these results are reported in columns 3 and 4. Importantly, the point estimates are very small and none of the estimates are statistically different from zero. *There is no measurable difference in total compensation between public and private sector workers.*

The results presented here provide strong evidence that California public employees are not over-compensated when compared to similar private sector workers.

Conclusion: Are California Public Employees Overpaid? No.

The estimates from the wage analysis indicate that California public workers, both state and local, are not overpaid. An apples-to-apples comparison which accounts for education, experience, hours of work, organizational size, gender, race, ethnicity, and disability reveals no significant difference between private and public employee compensation costs.

The data analysis, however, reveals substantially different approaches to staffing and compensation between the private and public sectors. On average, California public sector workers are more highly educated than those in the private sector workforce (55% of full-time California public sector workers hold at least a four year college degree compared to 35% of full-time private sector employees).

The public sector appears to set a floor on compensation particularly improving the earnings of workers without a high school diploma compared to similarly educated workers in the private sector. This result is due in part because the earnings floor has collapsed in the private sector (Lee 1999).

Benefits are allocated differently between private and public sector full-time workers in California. 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 than the private sector. Public employers underwrite 35.7% of employee compensation in benefits, whereas private employers devote 30% of compensation to benefits. Public employers provide better health insurance and pension benefits. Insurance accounts for 7.7% of private sector compensation but 11.8% of state and local government employee costs. Retirement benefits also account for a substantially greater share of public employee compensation, 8.2% compared to 3.6% in the private sector. Public employees continue to participate in defined benefit plans managed by the state, while private sector employers have switch to defined contribution plans, particularly 401(k) plans. On the other hand, public employees receive considerably less supplemental pay and vacation time, and public employers contribute significantly less to legally mandated benefits.

Union status was omitted from this study of earnings and compensation comparisons, since it has been a focal point of the compensation controversy. This means that, in essence, we are statistically comparing unionized public sector workers with all private sector workers – both union and nonunion – rather than with their union counterparts. Unionized private sector workers have both better pay and higher benefits, of course, so our standard of comparison is very conservative.

It is alleged by many governors and others that public employee unions and collective bargaining have produced an over compensated work force.[6] While this is a provocative hypothesis, its main assertion has been falsified by this analysis. The average value in total compensation received by state and local government employees is similar to that of their private-sector counterparts. This finding has now been replicated nationally in several other studies (Keefe 2010; Schmitt 2010; Thompson and Schmitt 2010; Bender and Heywood 2010).

Alternately, high unionization rates may be a response to monopsony power (where one employer dominates) exercised by government over many critical occupations, where employees have no viable labor-

market alternatives to government employment. Additionally it is well known that taxpayers do not want to pay higher taxes. Taxpayers exert considerable pressure on elected representatives to resist increases in compensation, which creates a formidable incentive and opportunity to hold government pay below market rates. Unionization represents a viable legal response to employer labor market power. The pattern of California public employee unionization is consistent with broader global patterns of unionization. For example, a study of 27 developed countries found a pattern of public employee unionization consistent with that of California (Blanchflower 2006). The study reports that union density is negatively correlated with education in the private sector and positively correlated in the public sector—just as we observe in California. Possibly, a more important question for policy makers, rather than why highly educated public employees are unionized, is why relatively less educated and low-paid private sector employees are inadequately represented by unions.

The Great Recession continues to leave a great deal of economic pain and scarring in its wake. But, the vilification of government workers is sorely misplaced and has left the real culprits of this devastating downturn off the hook. Compensation received by public sector employees is neither the cause—nor can it be the solution—to the state's financial problems. Only an economic recovery can begin to plug the hole in the state's budget. Unfortunately, the current budget balancing efforts in California are anti-simulative and further act to depress demand in an economy already operating way below capacity. Budget cuts have helped to keep California's unemployment rate well into the double-digits for over a year and a half—and there is no end in sight. Thousands of California public employees have lost their jobs and many more have forgone pay through forced furloughs and their families have experience considerable pain and disruption. All the workers who have lost their jobs or took cuts in pay or benefits were made to do so not because of their work performance, or because their services were no longer needed, nor because they were overpaid. They were simply causalities among a list of millions of hard working innocent victims of a financial system run amuck. Public sector workers help our communities to thrive and provide services that make it worthwhile to live in them—it is wrong to blame them for the fallout from the greatest economic downturn since the Great Depression.

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Data Appendix

This study uses the Integrated Public Use Microdata Series (IPUMS) of the March Current Population Survey (CPS). The CPS is a monthly U.S. household survey conducted jointly by the U.S. Census Bureau and the Bureau of Labor Statistics. The March Annual Demographic File and Income Supplement is the most widely used source for earnings used by social scientists (King et al. 2009). This sample provides organizational size which is a critical variable for our analysis of benefits. The sample is restricted to California employees and excludes self-employed, part-time, agricultural, and domestic workers. The IPUMS-CPS identifies an employee's full-time status, education level, and experience level as a function of age minus years of education plus five, gender, race, employer organizational size, and industry.
The IPUMS-CPS sample was selected for this analysis because the March CPS Annual File provides information on organizational size, not provided by the larger CPS sample in the Merged Outgoing Rotation Groups (MORG).

The Employer Cost of Employee Compensation (ECEC) for the Pacific Census Division (California, Washington, Oregon, Hawaii, and Alaska) data were used to calculate total compensation costs. The ECEC survey and method of data collection is expensive, thus the sample is not sufficiently large enough to provide reliable state level benefit cost estimates. The BLS did share their unpublished sample estimates for individual states with assurances that there is not significant differences in the relative distribution of benefits across them.

Table A1 Benefit mark-up adjustment to wages by occupation and firm size

Occupation	Private sector firm size			State and local government
	1 to 99 employees	100 to 499 employees	500 or more employees	
All workers	1.2310	1.2535	1.2624	1.3519
By occupation:				
Management, business, and financial	1.1960	1.1967	1.2157	1.3084
Professional and related	1.2038	1.2064	1.2501	1.3251
Sales and related	1.1926	1.2433	1.2032	1.3699
Office and administrative support	1.2363	1.2776	1.3038	1.4531
Service	1.2150	1.2765	1.3494	1.4089
Construction	1.3151	1.4184	1.3476	1.4139
Installation, maintenance, and repair	1.2348	1.2967	1.3043	1.3756
Production	1.2714	1.2886	1.3006	1.3832
Transportation and material moving	1.3125	1.3370	1.3365	1.4199

This study uses these ECEC sample estimates to calculate relative benefit costs for each private and public employee in the California sample. The calculation was done by calculating the relative benefit mark-up for each private sector employee based on the size of the organization that employed the worker and their occupation. The mark-ups are reported in Table A1. State and local government employees' wages were similarly marked up using a benefit weight calculated using the ECEC data. It is assumed that when employees share information about their earnings they do not distinguish paid time off from time worked in salary data. Therefore paid time off is not included in the mark-up. CPS wages also include supplemental pay.

The mark-up used in this study for benefits does not include paid leave or supplemental benefits. The average mark-up for state and local government employees was 0.3519. The average mark-up for workers in small, median and large private sector firms was 0.2310, 0.2535, and 0.2624, respectively. IPUMS CPS sample for California from 2009 was used for the estimates shown and the sample size was 4835.

Endnotes

[1] There have been eight arrests in Bell over the pay scandal: http://abcnews.go.com/US/bell-calif-city-leaders-arrested-salary-scandal/story?id=11691192.

[2] A standard earnings equation using CPS data for full-time workers in California was estimated to produce the estimates of the returns to education.

[3] The Social Security Act of 1935 excluded state and local workers from mandatory coverage. Legislation in the 1950s allowed states to elect voluntary coverage for their employees (Munnell and Soto 2007).

[4] The less an employer's former employees use unemployment the lower the rates and vice versa.

[5] The data appendix provides details on the merged data set and the methods used to create it.

[6] See Keefe 2010b page 3.

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