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ARE MINNESOTA PUBLIC EMPLOYEES OVERCOMPENSATED?

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Executive summary

This paper investigates whether Minnesota public employees are overpaid at the expense of the state's taxpayers. The research is timely. Legislative battles are under way in several state capitals in the Midwest, as governors seeking to close state budget gaps propose restricting not only government workers' wages and benefits but their collective bargaining rights. Proponents of such measures argue that public employees are overpaid compared with workers in the private sector. Indeed, former Minnesota Gov. Tim Pawlenty, who has been vocally supporting such measures, boasted in the *Wall Street Journal* (December 13, 2010) that he fought public employee unions in the state and prevailed in a 44-day transit strike in 2005, reducing benefits for incumbent workers and all new hires. He touted as a success of his government frozen wages and new requirements that all public employees contribute more to their pensions. According to Pawlenty, public employees are overcompensated and pampered compared with private sector workers and "unionized public employees are making more money, receiving more generous benefits, and enjoying greater job security than the working families forced to pay for it." Now, with newly sworn-in Gov. Mark Dayton facing a $6.7 billion deficit, some newly elected state legislators believe that Minnesota should continue to reduce public employee compensation as the key to reducing the state's budget deficit.

The data, however, indicate that state and local government employees in Minnesota are not overpaid. Comparisons controlling for education, experience, organizational size, gender, race, ethnicity, citizenship, and disability reveal that employees of both state and local governments in Minnesota earn less than comparable private sector employees. On an annual basis, full-time state and local government employees in Minnesota are undercompensated by 11% compared with otherwise similar private sector workers. This compensation disadvantage is smaller but still significant when hours worked are

TABLE OF CONTENTS

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factored in. Full-time public employees work fewer annual hours, particularly employees with bachelor's, master's, and professional degrees (because many are teachers or university professors). When comparisons are made controlling for the difference in annual hours worked, full-time state and local government employees are undercompensated by 7.9%, compared with otherwise similar private sector workers. To summarize, our study shows that Minnesota public employees earn 7.9% less in total compensation per hour than comparable full-time employees in Minnesota's private sector.

These compensation comparisons account for important factors that affect earnings, the most important of which is the educational levels of public employees. When comparing public and private sector pay, it is essential to consider the much higher levels of education required by occupations in the public sector. As a consequence of these requirements, Minnesota public sector workers are, on average, more highly educated than private sector workers; 60% of full-time Minnesota public sector workers hold at least a four-year college degree, compared with 37% of full-time private sector workers. Minnesota state and local governments pay college-educated employees 25% less in annual compensation, on average, than private employers. The compensation differential is greatest for professional employees such as lawyers and doctors. On the other hand, the public sector appears to set a floor on compensation, which benefits less-educated workers. The 14% of state and local government workers with only high school diplomas earn more than comparably educated workers in the private sector.

State and local government employees also receive a higher portion of their compensation in the form of employer-provided nonwage benefits, and the mix of those benefits is different from those provided in the private sector. Public employers devote, on average, 24.5% of employee compensation expenses to nonwage benefits, whereas private employers devote between 19.2% and 22.1% to those benefits. Public employers devote a larger share of their compensation packages to health insurance and pension benefits than do private employers. Health insurance accounts for 11.1% of state and local government compensation compared with 6.5% to 9.4% of private sector compensation. Retirement benefits account for 6.4% of state and local government compensation costs compared with 3.2% to 5% in the private sector. Social Security costs are relatively lower for public employers than private employers because some public employees are not in the Social Security system. 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 less vacation time, and public employers contribute significantly less to legally mandated benefits financed through payroll taxes.

Although some nonwage benefits are more generous in the public sector, it is a serious error to imagine that comparability requires that each and every element of compensation is the same. What is important is that considering the combined cost of employer-provided benefits and direct wages, public sector workers in Minnesota earn less in both annual and hourly compensation than they would in the private sector.

Introduction: The challenge to public employee compensation

Newly sworn-in Minnesota Gov. Mark Dayton confronts a budget deficit. Former Governor Pawlenty believes that public-employee compensation must be cut to make it comparable to private sector pay at the state, local, and school levels. Some members of the legislature promote layoffs, public employee pay freezes and major benefits reductions as the antidote to the alleged overpayment of public employees in Minnesota and the key to reducing the state's budget deficit. Are they right? Does a balanced, systematic evaluation show that state and local government employees are overpaid to the detriment of Minnesota taxpayers? This research seeks to methodically and deliberately answer that question.

Making a comparison: Are Minnesota public employees overpaid?

To assess whether Minnesota public employees are overpaid, we need to ask two simple and related questions: compared with whom and by what criteria?

When determining the groups to be compared, the standard of comparison for public employees is usually private sector workers with similar levels of education, experience, and hours of work. While we ideally would compare public sector workers with private sector workers performing similar work, it is not possible to find private sector matches for the entire spectrum of public employees. Too many critical occupations in the public sector—for example, police, fire, and corrections—lack private sector analogues. Even public and private teaching differs significantly. Public schools accept all students, while private schools are sometimes highly selective and may exclude or remove poor performing, special needs, or disruptive students.

Consequently, comparing workers of similar "human capital" (fundamental personal characteristics and labor market skills) is considered the best approach. Analyses based on comparisons of personal characteristics and labor market skills capture what comparable work studies have shown to be the most important and salient attributes affecting compensation.

Prior research reveals that education level is the single most important earnings predictor. Education helps foster work-relevant skills. People invest heavily in their own and their children's education, by paying for housing in communities with good schools and funding attendance at schools, colleges, and universities.

Empirically, experience follows education in advancing earnings. People learn by doing and by handling a variety of job tasks as they advance within occupations. Most occupations reward experience, since on-the-job learning delivers more competent and complex performance.

Gender, race, ethnicity, and disability are also widely found to affect compensation. Here, an intermingling of productivity-related human capital differences and labor market disadvantages stemming from historical patterns of discrimination affect compensation. We control for all of these factors in our study.

When analyzing hours of work, most studies exclude part-time workers; because their hours vary, they earn considerably less than comparable full-time workers, are more weakly attached to the labor force, and often lack benefit coverage. This study follows standard practice by focusing on full-time employees, who represent more than 80% of Minnesota's labor force (King et al. 2009), and by controlling for hours worked per year. The study includes only year-round workers who have worked a minimum of 1,100 hours, which is often the minimum threshold to qualify for full employer-provided benefits.

We are fortunate to be able to include a control for the organizational size of each sampled full-time worker's employer by pulling compensation data from the Integrated Public Use Microdata Series of the Current Population Survey (IPUMS-CPS), a monthly U.S. household survey conducted jointly by the U.S. Census Bureau and the Bureau of Labor Statistics (a more detailed description of the IPUM-CPS is provided in the data appendix). An employer's organizational size greatly influences employee earnings; it produces a basic wage gap of 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 Idson 1999; U.S. Bureau of Labor Statistics 2005). While large organizations employ more educated, experienced, and full-time workers, they nonetheless pay a premium even after accounting for these factors (Troske 1999). And the compensation premium grows when benefits are included in the comparison. The private sector has a relatively small number of large organizations, whereas the public sector has relatively few small organizations. More than 66% of all employees in the state work in organizations with more than 100 employees, whereas 86% of public employees in Minnesota work in organizations with more than 100 employees (U.S. Census Bureau 2006).

In summary, our study compares workers with similar "human capital" and controls for personal characteristics found to affect compensation as well as for hours worked and size of employer.

In addition to defining who will be compared, we must also define what should be compared. This is a more complex issue than it initially appears. Comparing wages is insufficient because employee compensation increasingly includes employer-provided nonwage benefits. Regardless of how employees are paid—whether in wages or benefits—the essential issue in making a comparison is what it costs a private or public sector entity to employ an individual. Employer costs may include not only wages but paid time off for holidays, vacations, and personal and sick days; supplemental pay including overtime and bonuses; insurances, particularly health but also life and disability; retirement plan contributions, defined benefits or defined contributions, including 401(k) plans; and legally mandated benefit contributions such as unemployment insurance, Social Security, Medicare, disability insurance, and workers' compensation. These costs, rather than just wages, must be considered when computing the costs of employing an individual worker.

However, the complexities don't end there. The more difficult issue is finding the appropriate data to make the comparison.

To obtain wage and demographic data, this study uses the IPUMS-CPS. The March Annual Demographic File and Income Supplement of the CPS is the source of earnings data most widely used by social scientists (King et al. 2009). For the purpose of comparability, the Minnesota data excludes self-employed, part-time, agricultural, and domestic workers. We enhance the reliability of the sample by expanding the number of observations by six years of data, covering 2004 through 2009.

There is only one reliable source of benefit information in the United States: Employer Costs for Employee Compensation (ECEC) survey, which is collected by the Bureau of Labor Statistics. The ECEC includes data from both private industry and state and local government, and provides data for private employers by firm size. Larger employers—those with 500 or more employees—are significantly more likely to provide employees with benefits, in part because they can spread administrative costs over a larger group and more readily diversify insurance risks over a larger group. State and local governments resemble larger private employers. The compensation cost comparison that follows controls for employer size.

Education level: the most important factor in earnings

Public employees in Minnesota are substantially more educated than their private sector counterparts. Approximately 60% of full-time Minnesota public employees hold at least a bachelor's degree compared with 37% in the private sector. Higher educational levels are strongly associated with higher earnings in the labor market. **Table 1**, column 1 shows how education level affects earnings in comparison with workers who have not completed high school.[1] A high school graduate, all

TABLE 1

Composition of private and public employment by education in Minnesota

Highest degree earned	Earnings return to education compared *	Percent of total employment				
		All private employers	*Private 1 to 99 employees*	*Private 100 to 499 employees*	*Private 500 and more employees*	*State and local government*
Less than high school	0%	4%	8%	3%	3%	<1%
High school	28	24	28	27	22	14
Some college	45	17	18	18	17	12
Associate's degree	54	17	18	18	16	14
Bachelor's degree	81	28	21	26	30	33
Professional degree	141	2	1	1	2	2
Master's degree	95	7	5	5	8	21
Doctorate	125	1	1	1	1	3
*Total ** *		100	100	100	100	100
College and more		37%	29%	33%	41%	60%

* For all Minnesota full-time workers, adjusted for gender, race, and other variables in a conventional earnings model. Comparison to 'less than high school'.
** Rows may not add up to 100% due to rounding.

SOURCE: Author's analysis of March Current Population Survey (U.S. Census Bureau) and Employer Costs for Employee Compensation Survey (Bureau of Labor Statistics). See data appendix for more information.

TABLE 2

Public and private pay comparison by education in Minnesota, unadjusted for other variables

Full-time*	Annual wage earnings: Private	Annual wage earnings: Public	Difference (public over private)**: Dollars	Difference (public over private)**: Percent
Less than high school	$26,315	$31,673	$5,359	20%
High school	36,133	39,020	2,888	8
Some college	44,265	40,692	-3,573	-8
Associate's degree	45,377	46,156	780	2
Bachelor's degree	64,888	46,457	-18,431	-28
Professional degree	145,712	85,435	-60,277	-41
Master's degree	83,936	55,597	-28,339	-34
Doctorate	105,913	74,962	-30,952	-29
All	$52,339	$48,361	-$3,979	-8%

Full-time*	Total compensation: Private	Total compensation: Public	Difference (public over private)**: Dollars	Difference (public over private)**: Percent
Less than high school	$36,128	$45,681	$9,553	26%
High school	49,236	54,284	5,048	10
Some college	59,854	56,950	-2,905	-5
Associate's degree	60,625	65,201	4,576	8
Bachelor's degree	85,300	63,889	-21,411	-25
Professional degree	188,485	116,704	-71,781	-38
Master's degree	109,688	75,853	-33,835	-31
Doctorate	137,518	103,828	-33,691	-24
All	$69,636	$66,844	-$2,791	-4%

* For full-time workers with 1,100 or more annual hours.
** For a more comprehensive measure of the public sector premium/penalty, see Table 4.

SOURCE: Author's analysis of March Current Population Survey (U.S. Census Bureau) and Employer Costs for Employee Compensation Survey (Bureau of Labor Statistics). See data appendix for more information.

else equal, earns on average 28% more than someone without a high school diploma. The education premium jumps to 45%, on average, if the worker attended some college, and increases to 54% if the worker holds an associate's degree. Completing college with a bachelor's degree yields an 81% premium. Obtaining a master's degree yields an average 95% pay premium, a doctorate produces a 125% return, and a professional degree in law or medicine increases average earnings by 141% over failing to complete high school.

The public sector employs more highly educated workers. While private sector organizations rely substantially more on educated labor as they become larger, smaller private sector organizations employ more workers who have no college education than larger private employers or state and local government. Less than 1% of state and local government workers lack a high school education, compared with 4% of employees of private firms and 8% of employees of private firms with fewer than 100 employees.

The returns to education, however, are not equally distributed between the public and private sectors in Minnesota. **Table 2** provides computations of the annual earnings of full-time workers in Minnesota by educational attainment, comparing private sector and state/local-sector employee wages and compensation. These comparisons do not adjust for the many factors accounted for in more refined analyses presented later (such as experience, annual hours worked, race, gender, etc.). These comparisons do reflect the floor on earnings established in the public sector, which allows individuals with a high school education (14% of state/local workers) to earn more than their private sector counterparts (Asher and DeFina 1999).

On average, annual wages of the very few full-time workers without a high school education are 20% higher in state and local government ($31,673) than in the private sector ($26,315). Furthermore, average annual total compensation for a full-time worker without a high school education is 26% greater in state and local government ($45,681) than in the private sector ($36,128). Although the premium diminishes somewhat, high school graduates also earn more in wages and compensation in the public versus the private sector. Average annual wages for high school graduates working for state and local government are 8% higher ($39,020) than for those working for private employers ($36,133), while total compensation for employees with a high school degree is 10% higher in state and local government ($54,284) than in the private sector ($49,236).

Notwithstanding the comparative benefits of public sector employment for those without or with just a high school diploma, college-educated public sector employees earn considerably less than their private sector peers. The premium in the private sector starts to appear with some college schooling (although it reverts for just those with an associate's degree). Public sector workers with some college have average annual wages that are 8% lower, and total compensation that is 5% lower than those workers in the private sector. And although public sector workers with an associate's degree make 2% higher wages and receive 8% more in total compensation than similar private sector workers, the earnings gap reverses and grows as workers gain more education. On average, the private sector pays workers with four-year college degrees and advanced degrees substantially more in the form of higher wages and compensation than does the public sector. State and local workers with a bachelor's degree make 28% less in salary and 25% less in total compensation, while those with a professional degree make 41% less in salary and 38% less in total compensation. In state and local government, workers with a master's degree earn, on average, 34% less in salary and 31% less in total compensation, while those with a doctorate earn 29% less in salary and 24% less in total compensation. (As noted later, fewer average work hours in the public sector than the private sector reduce these large private-sector wage premiums for college-educated labor.)

The growing role of nonwage benefits in employee compensation costs

Nonwage benefits, once referred to as fringe benefits, account for an increasing portion of employee compensation costs. Nonwage benefit growth is partially fueled by the tax deductibility of health insurance payments and pension contributions, allowing 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 nonwage benefit participation and compensation. For example, employee participation in retirement plans varies considerably by organization size. Organizations with fewer than 100 employees have employee pension participation rates of 38%, while organizations with 100 to 499 employees have participation rates of 64%. In organizations with 500 or more employees, 81% of employees participate in retirement plans. The pattern is similar for health insurance benefits. Organizations with fewer than 100 employees have employee participation rates in medical insurance of 43%, while organizations with 100 to 499 employees have participation rates

TABLE 3

Percent of employer costs per hour worked for employee compensation: West North Central Census Division

		Private industry							
		1-99 workers			100 workers or more			
Compensation component	All private	1-99 workers	1-49 workers	50-99 workers	100 workers or more	100-499 workers	500 workers or more	State and local government
Total compensation	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
W-2 wages and salaries	78.6%	80.5%	80.8%	79.4%	79.3%	80.4%	77.9%	75.5%
Base wages and salaries	68.7%	73.5%	73.9%	71.9%	69.2%	71.5%	66.3%	67.9%
Paid leave	7.2%	5.1%	5.0%	5.6%	7.3%	6.2%	8.7%	6.9%
Vacation		2.7	2.7	2.9	4.1	3.6	4.8	2.6
Holiday		1.7	1.6	1.8	2.1	1.8	2.6	2.2
Sick		0.6	0.6	0.7	0.8	0.7	1.0	1.8
Personal		0.1	0.1	0.2	0.2	0.1	0.3	0.3
Supplemental pay	2.7%	1.9%	1.9%	1.9%	2.8%	2.7%	2.9%	0.7%
Overtime and premium		0.9	0.9	1.1	1.0	1.0	0.9	0.4
Shift differentials		0.1	0.0	0.1	0.4	0.3	0.4	0.1
Nonproduction bonus		0.9	0.9	0.6	1.4	1.4	1.5	0.2
Nonwage benefits*	21.4%	19.5%	19.2%	20.6%	20.7%	19.6%	22.1%	24.5%
Insurance	9.2%	7.2%	6.9%	8.0%	9.1%	8.4%	10.0%	11.6%
Life		0.1	0.1	0.1	0.2	0.2	0.2	0.2
Health		6.8	6.5	7.6	8.5	7.8	9.4	11.1
Short-term disability		0.1	0.1	0.2	0.2	0.1	0.3	0.0
Long-term disability		0.1	0.1	0.1	0.3	0.3	0.2	0.3
Retirement and savings	4.3%	3.3%	3.2%	3.5%	4.2%	3.6%	5.0%	6.4%
Defined benefit		1.4	1.5	1.3	1.7	1.2	2.3	5.0
Defined contribution		1.9	1.8	2.2	2.5	2.4	2.6	1.4
Legally required benefits	7.9%	9.1%	9.1%	9.2%	7.4%	7.6%	7.1%	6.5%
Social Security		4.9	4.9	4.9	4.5	4.4	4.5	4.1
Medicare		1.2	1.2	1.2	1.1	1.2	1.1	1.1
Social Security and Medicare		6.1	6.1	6.1	5.6	5.6	5.7	5.2
Federal unemployment insurance		0.2	0.2	0.2	0.1	0.1	0.1	0.0
State unemployment insurance		0.9	0.9	0.9	0.6	0.6	0.5	0.1
Workers' compensation		1.9	1.9	2.0	1.2	1.3	0.9	1.1
Benefits**		26.5%	26.1%	28.1%	30.8%	28.5%	33.7%	32.1%

* CPS definition of benefits, which only includes benefits that are not included in W-2 wages, or workers' regular paychecks. Specifically, insurance, retirement, and legally required benefits are included. BLS categorizes paid leave and supplemental pay as part of benefits, but since those items are paid out in regular paychecks they are incorporated in the CPS measure of wages. That is why adjustments to the CPS to capture total compensation are made using nonwage benefits.

** BLS definition of benefits, which includes both nonwage benefits such as insurance, retirement, and legally required benefits, but also paid leave and supplemental pay, which BLS categorizes as benefits but CPS does not.

SOURCE: Author's analysis of March Current Population Survey (Census) and Employer Costs for Employee Compensation Survey (BLS). See appendix for more information.

of 61%. In organizations with 500 or more employees, 71% of employees participate in medical insurance plans. This pattern is replicated for prescription drug and dental care plans (Bureau of Labor Statistics 2009a).

Public sector employees received more of their compensation in the form of nonwage benefits than private sector workers. **Table 3** provides the distribution of employer compensation costs in June 2010. The ECEC survey provides the only valid and reliable estimate in the United States of non wage benefit costs incurred by employers. It is conducted quarterly by the Bureau of Labor Statistics. The ECEC includes data from both private industry and state and local government, and provides data for private employers by firm size. Our study uses these ECEC sample estimates to calculate relative nonwage benefit costs for private and public employees in Minnesota. (A more detailed description is provided in the data appendix.) Nonwage benefits costs range from 19.2% of total compensation for employees of small private companies (fewer than 50 employees) to 22.1% for employees of private companies with 500 or more employees, compared with 24.5% for state and local government employees. The compensation data reveal considerable variation within the private sector by organization size and between the private sector and state and local government. However, large private sector employers most closely resemble public employers in the proportion of compensation devoted to benefits.

Compared with private sector employees, public employees not only receive somewhat more of their compensation in benefits, but also a different proportion of benefits spread among paid leave, supplemental pay, insurances, retirement security, and legally mandated benefits. Employees in private organizations with 100 or more employees receive more paid leave than similar state and local government employees, particularly more vacation pay. Public employees also receive less supplement pay, less than 1% of compensation whereas private sector employees in large organizations (500 or more employees) gain 2.9% of their earnings from supplemental pay, particularly bonuses.

On the other hand, public employees receive considerably more of their compensation from employer provided health insurance. Health insurance accounts for 11.1% of state and local government employee compensation costs but only 8.5% of private sector compensation costs in organizations with 100 or more employees. Retirement benefits also account for a substantially greater share of public employee compensation costs: 6.4% compared with 4.2% in private sector organizations with 100 or more employees. This difference is partially offset by savings in the public sector because not all public employees are in the Social Security system (therefore employer payroll taxes are lower), as discussed next.

As with all benefits, the differences between private and public employees' compensation costs shrink as the organization size increases. Legally required benefits account for a greater share of small employers' compensation costs; as organizational size increases, these benefit costs decrease in relative degree. In local and government employment, legally required benefits represent a substantially smaller share of benefit costs for several reasons. First, some public employees do not participate in Social Security, which partially explains their higher pension costs.[2] These employees are not eligible for Social Security benefit payments at retirement unless they chose to work in another job that is covered by Social Security. Second, state and local governments do not participate in the federal unemployment system. Third, since state and local governments offer more stable employment than the private sector, they contribute proportionally less to the state unemployment insurance trust fund (an employer's unemployment insurance contribution rate is partially based on the extent to which the employer taps the fund).

In summary, state and local government workers receive more of their compensation in employer-provided benefits. Specifically, public employers provide a greater share of employee compensation in the form of health insurance and retirement benefits. Public employees receive a lesser share of their wages in the form of supplemental pay and consume less in costs for legally required benefits (financed through payroll taxes, such as worker compensation, unemployment insurance) than private sector employees. Thus, to determine whether public employees are overpaid, this analysis asks whether higher benefit costs more than offset the lower wages paid to employees in Minnesota. That is the question we turn to next.

TABLE 4

Wage and compensation differentials in Minnesota

2010 CPS	Employees' annual wages		Employees' hourly wages		Employees' annual total compensation		Employees' hourly total compensation	
Minnesota public employee	-15.4%	***	-12.3%	***	-11.0%	***	-7.9%	***
State government employee	-20.3	***	-17.1	***	-16.5	***	-13.3	***
Local government employee	-12.6	***	-9.5	***	-7.7	***	-4.7	***
prob 0<.0001 *** <.01 ** <.05 *								

Observations = 7,734.

Note: Differential between all state or local public employees after controlling for demographic characteristics (full-time, education, years of experience, gender, race, citizenship, and organizational size). See data appendix for details.

SOURCE: Author's analysis of March Current Population Survey (U.S. Census Bureau) and Employer Costs for Employee Compensation Survey (Bureau of Labor Statistics). See data appendix for more information.

Assessing private and public relative pay and benefits

To assess relative public and private employment costs, we will use the microdata from the IPUMS-CPS, which provides a sample of Minnesota employees broken down by demographic characteristics, such as full-time status, education level, years of experience, age, gender, race, disability, citizenship, employer organizational size, and industry. Compared with Minnesota private sector employees, Minnesota state and local government employees, on average, are more experienced (23.4 years compared with 20.1 years), more likely to be female (56% versus 43%), and work slightly fewer weekly hours (43.0 versus 43.4). Compared with the private sector, state and local government employees are also less likely to be black (2.6% versus 3.9%), Hispanic (2.3% versus 4.0%), or Asian (1% versus 4.5%); are more likely to be citizens (98.3% versus 94.4%); and are slightly more likely to be disabled (1.4% versus 1.2%) (King et al. 2009).

The ECEC data allow us to use the statistics on the benefit share of compensation by employer size to calculate total employer compensation costs for each employee in the sample. **Table 4** reports the results of 12 equations estimating Minnesota state and local government employee earnings compared with similar Minnesota private sector employees. Columns one and two provide estimates for employee wages. Column one shows that annual wage earnings of Minnesota public employees (state and local government employees) are a statistically significant 15.4% lower than those of comparable private sector employees. Another estimate, separating state from local employees, reveals that annual wage earnings for state government employees are 20.3% lower and for *local* government employees are 12.6% lower than for private sector employees. Column two shows that hourly wages of Minnesota public employees are 12.3% lower than those of comparable private sector employees (reflecting wages that are 17.1% lower for state government employees and 9.5% lower for local government employees).

When we compare total compensation of Minnesota public and private employees, the earnings gap narrows but does not disappear. Columns three and four report the estimates for total compensation costs. Reported in column three, Minnesota public employees' annual total compensation costs are 11% lower than those of comparable private sector employees (reflecting total compensation costs that are 16.5% lower for state employees and 7.7% lower for local government employees). When we compare hourly estimates, the total compensation gap narrows further but remains both economically and statistically significant. Minnesota public employees' hourly compensation costs are 7.9% lower than those of comparable private sector workers (reflecting total hourly compensation costs that are 13.3% lower for state government employees and 4.7% lower for local government employees).

In summary, these estimates show that Minnesota state and local government employees earn significantly less in total hourly compensation than comparable private sector workers. Given the relatively large sample size and the statistical power it permits, this analysis concludes that Minnesota public employees are undercompensated in relation to comparable private sector employees.

Conclusion: Minnesota public employees are *not* overpaid

The earnings equation estimates indicate that state and local government employees in Minnesota are not overpaid, and in fact are *undercompensated*. When we make comparisons controlling for education, experience, hours of work, organizational size, gender, race, ethnicity, citizenship, and disability, both state and local public employees earn lower wages and receive less in compensation (including all benefits) than comparable private sector employees.

The data analysis also reveals substantially different approaches to staffing and compensation between the private and public sectors, reflecting the different occupational categories within each sector. On average, Minnesota public sector workers are more highly educated than private sector workers: 60% of full-time Minnesota public sector workers hold at least four-year college degrees compared with 37% of full-time private sector workers. For college-educated labor, Minnesota state and local governments pay significantly less than private employers. The earnings differential is greatest for professional employees such as lawyers and doctors. These earnings differences may create opportunities for cutting costs by reviewing professional outsourcing contracts to determine what work might be performed by lower-cost public employees. On the other hand, the public sector appears to pay more for less educated workers by setting a floor on compensation, which particularly improves the earnings of workers without high school educations when compared with similarly educated workers in the private sector, where the earnings floor has collapsed (Lee 1999).

Benefits are allocated differently in the public and private sectors in Minnesota. 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. Public employers allot 24.5% of employee compensation costs to benefits, whereas private employers devote 19.2% to 22.1% of compensation to benefits. Public employers provide more of their compensation in health insurance and pension benefits. Health insurance accounts for 11.1% of state and local government compensation costs but only 6.5% to 9.4% of private sector compensation. Retirement benefits also account for a substantially greater share of public employee compensation costs—6.4% compared with 3.2% to 5% in the private sector, although public sector employers save on Social Security payroll taxes because some of their employees are not covered. Public employees also continue to participate in defined-benefit plans managed by the state, while 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 less vacation time, and public employers contribute significantly less to legally mandated benefits.

A standard earnings equation produces what some may consider a surprising result: full-time state and local employees are undercompensated by 11%. We observed, however, that public employees work fewer hours, particularly employees with bachelor's, master's, and professional degrees. An earnings equation controlling for work hours of full-time employees demonstrates that Minnesota public employees earn 7.9% less in total compenstion than comparable private sector workers with comparable annual hours.

Focusing on one or another component of compensation for comparison misses the essential point that different employee groups have different preferences and respond differently to various mixes of compensation. For example, young people have a greater preference for cash, while older workers prefer retirement benefits. What citizens need to focus on in this debate is the cost of comparable levels of total compensation, controlling for education, experience, hours of work, and other characteristics that influence employee productivity. When we look at overall compensation we learn that Minnesota public employees pay for their better benefits through lower wages and salaries than comparable private sector employees.

Union status was omitted from this study on earnings comparisons. 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 that public-employee unions and collective bargaining have produced an overcompensated workforce. Eligible public employees are highly unionized in Minnesota (approximately 55% of public employees are covered by a labor agreement). Former Governor Pawlenty and others have said that unions are the source of excessive compensation. It is an interesting and provocative hypothesis, but its main premise has been refuted by the research reported in this study—state and local government employees are not excessively compensated. This finding has been replicated nationally by two studies (Schmitt 2010; Bender and Heywood 2010). Alternatively, high unionization rates may be a response to monopsony power exercised by government over many critical occupations, where employees have no viable labor-market alternatives to government employment.

Rather than a cause of excessive compensation, unionization is a counterbalance to downward pressures on compensation. It is well known that taxpayers oppose higher taxes and thus exert considerable pressure on elected representatives to resist increases in compensation, creating a formidable incentive and opportunity to hold government pay below market rates. Unionization represents a viable legal response to employer labor market power.

Additionally, the pattern of Minnesota public-employee unionization is consistent with broader global patterns of unionization, as shown, for example, by a study of 27 developed countries (Blanchflower 2006). The study reports that union density is found to be negatively correlated with level of education in the private sector and positively correlated in the public sector, as we observe in Minnesota. Possibly, a more important question for policymakers, rather than why highly educated public employees are unionized, is why relatively less educated and low-paid workers in the private sector are inadequately represented by unions.

Public sector employees' compensation 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 state's own current budget balancing efforts may prolong the economic downturn by increasing unemployment and reducing demand for products and services. Thousands of Minnesota public employees have lost jobs, and more will follow, causing considerable pain and disruption for their families. Other public employees will have their wages frozen and benefits cut. Not because they did not do their jobs, or performed services no longer needed, or earned more than they are worth. They too will join the list of millions of hard-working innocent victims of a financial system run amok and an economy operating far below full employment. They do not deserve our anger or condemnation.

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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. We are using the CPS database created by the Minnesota Population Center (King et al. 2009). This sample provides organizational size, a critical variable for our analysis of benefits. The sample is restricted to private sector and public sector state and local employees and excludes federal employees, the self-employed, and part-time, agricultural, and domestic workers. The IPUMS-CPS identifies an employee's full-time status, education level, experience level as a function of age minus years of education plus five, gender, and race; and an employer's 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) data, part of the National Compensation Survey, was used to calculate total compensation costs as a markup on wages. While we would have preferred to analyze compensation costs by each state, because the survey's method of data collection is expensive, the sample is not sufficiently large enough to provide reliable estimates of state-level benefit costs. The Bureau of Labor Statistics did share its unpublished sample estimates for 10 major occupations by organizational sizes for private employers and state and local government in the West North Central Census division. This study uses these ECEC sample estimates to calculate relative benefit costs for each private and public employee in the sample; it calculates the relative benefit markup for each private sector employee based on the size of the employing organization and the employee's occupation. State and local government employees' wages were similarly marked up by an occupational 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 markup. CPS wages also include supplemental pay (**Table A1**). Specifically, this is a markup of total compensation relative to W-2 wages.

The IPUMS-CPS sample for March 2005 to 2010 was used for the estimates, covering pay for 2004 through 2009. The sample size was 7,734 total observations and 1,246 public employee observations.

TABLE A1

Wage-to-compensation ratio in Minnesota

	1 to 99	100-499	500+	Public
All workers	1.2698	1.2638	1.2877	1.3324
Management, business, and financial	1.2511	1.2170	1.2485	1.2806
Professional and related	1.2295	1.2172	1.2429	1.3123
Sales and related	1.2420	1.2728	1.3820	1.3911
Office and administrative support	1.2084	1.2305	1.2520	1.3439
Service	1.2827	1.3007	1.3194	1.3791
Construction	1.3418	1.4520	1.3830	1.4108
Installation, maintenance, and repair	1.2732	1.3544	1.3304	1.3466
Production	1.3064	1.3521	1.3868	1.3657
Transportation and material moving	1.3540	1.3308	1.3310	1.3324

SOURCE: Author's analysis of March Current Population Survey (Census) and Employer Costs for Employee Compensation Survey (BLS).

Endnotes

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

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