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ARE OHIO PUBLIC EMPLOYEES OVER-COMPENSATED?

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Executive summary

This paper investigates whether Ohio public employees are overpaid at the expense of Ohio taxpayers. The research is timely. Newly sworn-in Gov. John Kasich believes that public employees are overcompensated relative to private sector workers. He is promoting public employee pay cuts, changes in collective bargaining laws, major benefits reductions, and the elimination of interest arbitration for police and fire unions as key to reducing the Ohio’s budget deficit.

The research shows, however, that state and local government employees in Ohio are not overpaid. (When we refer to public employees, we are referring to state and local employees, not federal workers.) Comparisons controlling for education, experience, organizational size, gender, race, ethnicity, citizenship, and disability reveal that employees of state and local governments earn lower wages than comparable private sector employees. Average annual wages and salaries of full-time state and local public employees in Ohio are 5.9% lower than those of comparable private sector employees. However, some full-time public employees work fewer hours on average, particularly college-educated employees. When annual hours worked are factored in, full-time state and local employees earn 3.3% less in wages and salaries than similar private sector workers. Looking at total compensation (wages and nonwage benefits) Ohio public employees annually earn 6% less than comparable private sector employees and 3.5% less on an hourly basis than comparable private sector employees.

These comparisons account for important factors that affect earnings, the most important of which is level of education. Because occupations in the public sector require much higher levels of education, Ohio public

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sector workers, on average, are more highly educated than private sector workers; 49% of full-time public sector workers in the state hold at least a bachelor's degree, compared with 26% of full-time private sector workers. Ohio state and local governments pay college-educated employees 25% less in annual total compensation, on average, than private employers.

The comparisons also reflect a big difference between the mix of wages and nonwage benefits in public and private sector compensation packages in Ohio. State and local government employees receive a higher portion of their compensation in the form of employer-provided benefits, and the composition of benefits is different from that provided in the private sector. For example, 26.7% of state and local government employee compensation expenses are devoted to nonwage benefits, compared with 18.9% to 22.8% of private sector employee compensation costs. Public employers devote a larger share of their compensation packages to health insurance and pension benefits. Health insurance accounts for 12.9% of state and local government compensation but only 7% to 9.5% of private sector compensation. Retirement benefits also account for a substantially greater share of public employee compensation—11% compared with 2.5% to 4.9% 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, and many private sector employees do not provide any contribution toward their employees' retirement compensation beyond Social Security. On the other hand, public employees receive considerably less supplemental pay and somewhat less vacation time, and public employers contribute significantly less to legally mandated benefits financed through payroll taxes. For example, Ohio state government employees do not participate in Social Security, nor do most municipal workers.

To summarize, while some benefits are more generous in the public sector, it would be wrong to surmise that comparability of compensation between the public and private sectors requires that every element of compensation is the same. What is important is this: Considering both the cost of employer-provided benefits and direct

wages, public-sector workers in Ohio receive compensation that is slightly less than what they would receive in the private sector.

Introduction: The challenge to public employee compensation

Ohio Gov. John Kasich is promoting public employee pay freezes and cuts, major benefits reductions, restricting public employee collective bargaining rights, and eliminating interest arbitration for police and firefighters as a key to reducing the Ohio's budget deficit. He argues that public employees are overcompensated when compared to private sector employees. Is he right? Does a balanced, systematic evaluation show that Ohio employees are overpaid? This paper presents a methodical and deliberate answer to that question.

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

Usually, public employees are compared with private sector workers with similar education, experience, and hours of work. However, while we ideally would use this standard of comparison, it is impossible 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 appropriate private sector counterparts. Even public and private teaching are significantly different in character. 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 alternative. These analyses capture the attributes shown by comparable work studies to have the most impact on earnings. Education level is the single most important earnings predictor. Education helps develop 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.

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 also affect compensation through an intermingling of productivity-related human capital differences and labor market disadvantages stemming from historical patterns of discrimination. We control for all these factors in our study.

When analyzing hours of work most studies exclude part-time workers because 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 public and private sector employees (who represent over 80% of the state's labor force), and controls 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 survey of U.S. households conducted by the U.S. Census Bureau and Bureau of Labor Statistics. An employer's organizational size greatly influences employee earnings: It produces a 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 employees (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 nonwage benefits are included. The private sector has relatively few 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 90% of public employees in Ohio work in organization with more than 100 employees (U.S. Census Bureau 2006).

To summarize, our study compared workers of 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 task than it initially appears. Comparing wages is insufficient because employee compensation increasingly includes employer-provided nonwage benefits. Regardless of the mix of wages or benefits, the essential feature for comparison is what it costs to employ someone. Employer costs may include not only wages but also paid time off for holidays, vacations, and personal and sick days; supplemental pay including overtime and bonuses; insurance, 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. These costs, rather than just wages, must be included in the cost of employing an individual worker. However, the complexities don't end there: More difficult is finding the appropriate data to make the comparison.

This study uses wage and demographic data from the IPUMS-CPS March Annual Demographic File and Income Supplement, which is the source for earnings data most widely used by social scientists (King et al. 2009). To ensure comparability, the Ohio data excludes self-employed, part-time, agricultural, and domestic workers. We enhance the reliability of the sample by expanding the number of observations by four additional years of data covering 2006 through 2009.

There is only one reliable source of non-wage benefit information in the United States: the 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 more than 500 employees, are significantly more likely to provide employee benefits, in part because they can distribute administrative costs and risks over a larger group. State and local governments resemble larger private employers. The compensation cost comparison that follows controls for employer size.

TABLE 1

Composition of private and public employment by education in Ohio

Highest degree earned	Earnings return to education *	Percent of total employment				
		All private employers	Private 1 to 99 employees	Private 100 to 499 employees	Private 500 or more employees	State and local government
<i>Less than high school</i>	0%	4%	7%	4%	4%	1%
<i>High school</i>	22	39	45	42	36	26
<i>Some college</i>	34	19	19	18	20	15
<i>Associate's degree</i>	49	11	10	12	11	9
<i>Bachelor's degree</i>	75	19	14	17	21	23
<i>Professional degree</i>	123	1	1	1	1	1
<i>Master's degree</i>	91	5	4	6	6	22
<i>Doctorate</i>	113	1	0	0	1	3
Total **		100	100	100	100	100
College and more		26%	19%	23%	29%	49%

* For all Ohio 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.

The most important factor in earnings: Education level

Public employees in the state of Ohio are substantially more educated than their private sector counterparts. Approximately 49% of full-time Ohio public employees have at least a bachelor's degree, compared with 26% in the private sector. Higher levels of education are strongly associated with higher earnings in the labor market. **Table 1**, column 1 reports the returns to education in comparison with workers who have not completed high school.¹ A high school graduate, all else equal, earns on average 22% more than someone without a high school diploma. The education premium jumps to 34% on average if the worker attended some college, and increases to 49% if the worker has an associate's degree. Completing college with a bachelor's degree yields a 75% earnings premium, obtaining a master's degree yields a 91% premium, and earning a doctorate produces a 113% return. Earning a professional degree in law or medicine increases average earnings by 123% compared with 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 get larger, smaller private sector organizations employ more workers who lack more than a high school education than do larger private employers or state and local government. Only 1% of state and local government workers lack a high school education, compared with 7% of employees of private firms with less than 100 employees and 4% of employees of private firms with 100 or more employees.

Additionally, the returns to education are not equally distributed between the public and private sectors in Ohio. **Table 2** provides computations of the annual earnings of full-time workers in Ohio by educational attainment, comparing the wages and compensation of state and local government employees with private sector employees. 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.). Across most levels of education, public sector employees earn less than similarly educated private sector employees.

TABLE 2

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

Full-time*	Annual wage earnings		Difference (public over private)**	
	Private	Public	Dollars	Percent
<i>Less than high school</i>	\$28,948	\$23,901	-\$5,047	-17%
<i>High school</i>	35,579	34,491	-1,088	-3
<i>Some college</i>	39,780	39,065	-714	-2
<i>Associate's degree</i>	43,086	47,400	4,314	10
<i>Bachelor's degree</i>	62,042	46,178	-15,864	-26
<i>Professional degree</i>	146,183	138,510	-7,673	-5
<i>Master's degree</i>	75,561	57,074	-18,487	-24
<i>Doctorate</i>	112,315	85,679	-26,636	-24
All	\$45,732	\$47,472	\$1,739	4%

Full-time*	Total compensation		Difference (public over private)**	
	Private	Public	Dollars	Percent
<i>Less than high school</i>	\$38,254	\$30,737	-\$7,518	-20%
<i>High school</i>	46,250	44,445	-1,805	-4
<i>Some college</i>	51,186	50,292	-894	-2
<i>Associate's degree</i>	54,855	60,285	5,430	10
<i>Bachelor's degree</i>	77,530	57,903	-19,627	-25
<i>Professional degree</i>	181,027	178,341	-2,687	-1
<i>Master's degree</i>	93,326	71,245	-22,081	-24
<i>Doctorate</i>	141,237	105,816	-35,421	-25
All	\$58,213	\$59,001	\$787	1%

* For full-time workers with 1,100 or more annual hours.

** For a more comprehensive measure of 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.

Average annual wages of full-time workers without a high school education are 17% lower in state and local government (\$23,901) than in the private sector (\$28,948). Even when we compare total compensation, a full-time worker without a high school education earns on average 20% less when employed by state and local government (\$30,737) than when employed in the private sector (\$38,254).

High school graduates approach earnings equivalency between public and private sectors, earning on average

3% less in total compensation (\$44,445) working for state and local government than for private employers (\$46,250). For those with some college and associate's degrees, public employment pays 2% less and 10% more in wages, respectively; and provides 2% less and 10% more in total compensation.

However, Ohio state and local governments pay substantially less in wages and compensation to their college-educated employees. State and local workers with a bachelor's degree make, on average, 26% less in salary

and receive 25% less in total compensation than those in the private sector, while public workers with a master's degree earn 24% less in salary and receive 24% less in total compensation than in the private sector. Public workers with a professional degree earn 5% less in salary and receive 1% less in total compensation, but the gap for those with a doctorate, who earn 24% less in salary and 25% less in total compensation than private sector workers. As noted below, better nonwage benefits and fewer average work hours in the public sector reduce these large public-private sector wage gaps for college-educated labor. Nevertheless, the wage gaps are an important factor in accurate comparisons of public and private sector compensation: Without controls for education, Ohio appears to pay 4% more in annual wages and 1% more in total compensation, a misleading statistic.

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, a practice 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, organizations with 1 to 99 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 1 to 99 employees have employee participation rates of 43%, while organizations with 100 to 499

employees have participation rates 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 receive more of their compensation in the form of nonwage benefits than private sector workers. **Table 3** provides the distribution of employer costs of compensation in June 2010. 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 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 Ohio. (A more detailed description is provided in the Data Appendix). Nonwage benefits costs range from 18.9% of total compensation for employees of small private companies (fewer than 50 employees) to 22.6% for employees of private companies with 100 or more employees, compared with 26.7% 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 nonwage benefits.

Compared with private sector employees, public employees not only receive more of their compensation in nonwage benefits, but also a different proportion of wages and benefits spread among paid leave, supplemental pay, insurances, retirement security, and legally mandated benefits. Although overall paid leave costs are similar, public employees receive greater sick leave compensation, while most private sector employees (those in companies with 50 or more workers) receive more vacation pay. And although holiday and personal time compensation is similar, public employees receive less than 1% of compensation in supplemental pay, whereas private sector employees in large organizations (500 or more workers) gain 3.3% of their earnings from supplemental pay, particularly bonuses.

TABLE 3

**Percent of employer costs per hour worked for employee compensation:
East North Central Census Division (applied to Ohio)**

Compensation component	Private industry						State and local government
	1-99 workers			100 workers or more			
	1-99 workers	1-49 workers	50-99 workers	100 workers or more	100-499 workers	500 workers or more	
Total compensation	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
W-2 wages and salaries	80.6%	81.1%	79.4%	77.4%	77.2%	77.6%	73.3%
Base wages and salaries	73.2%	74.1%	70.9%	66.7%	67.6%	66.0%	65.4%
Paid leave	5.3%	5.1%	5.6%	7.6%	6.9%	8.2%	7.0%
<i>Vacation</i>	2.7	2.6	2.9	4.0	3.6	4.3	2.6
<i>Holiday</i>	1.8	1.8	1.9	2.4	2.3	2.5	2.0
<i>Sick</i>	0.5	0.5	0.5	0.8	0.7	1.0	1.8
<i>Personal</i>	0.2	0.2	0.3	0.4	0.4	0.4	0.6
Supplemental pay	2.1%	1.9%	2.9%	3.1%	2.7%	3.3%	0.9%
<i>Overtime and premium</i>	1.0	0.9	1.3	1.1	1.2	1.0	0.5
<i>Shift differentials</i>	0.1	0.0	0.1	0.5	0.4	0.6	0.1
<i>Nonproduction bonus</i>	1.1	0.9	1.5	1.4	1.1	1.8	0.3
Nonwage benefits*	19.4%	18.9%	20.6%	22.6%	22.8%	22.4%	26.7%
Insurance	7.7%	7.3%	8.6%	10.2%	10.3%	10.1%	13.3%
<i>Life</i>	0.1	0.1	0.1	0.2	0.2	0.2	0.1
<i>Health</i>	7.3	7.0	8.2	9.5	9.7	9.3	12.9
<i>Short-term disability</i>	0.1	0.1	0.2	0.3	0.3	0.3	0.1
<i>Long-term disability</i>	0.1	0.1	0.1	0.2	0.1	0.2	0.2
Retirement and savings	2.7%	2.5%	3.0%	4.6%	4.2%	4.9%	11.0%
<i>Defined benefit</i>	1.1	1.1	1.3	2.6	2.2	2.8	11.4
<i>Defined contribution</i>	1.5	1.5	1.6	2.0	1.9	2.1	0.6
Legally required benefits	9.0%	9.1%	9.0%	7.8%	8.3%	7.4%	2.4%
<i>Social Security</i>	4.9	5.0	4.9	4.6	4.6	4.6	0.0
<i>Medicare</i>	1.2	1.2	1.2	1.1	1.1	1.1	1.0
<i>Federal unemployment insurance</i>	0.2	0.2	0.2	0.1	0.1	0.1	0.0
<i>State unemployment insurance</i>	0.9	0.9	0.9	0.6	0.7	0.5	0.2
<i>Workers' compensation</i>	1.1	1.8	1.8	1.9	1.4	1.8	1.1
Benefits**	26.8%	25.9%	29.1%	33.3%	32.4%	34.0%	34.6%

* 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.

On the other hand, public employees receive considerably more of their compensation from employer-provided health insurance. Health insurance accounts for 12.9% of state and local government employee costs but only 9.5% of employee costs in private companies with 100 or more employees. Retirement benefits also account for a substantially greater share of public employee compensation costs: 11%, compared with 4.6% in private sector organizations with 100 or more employees. Of course this difference is thus partially offset by lower payroll taxes in the public sector because employers are not paying into the Social Security system, as discussed further below.

As with all nonwage benefits, the differences between private and public employees' compensation costs shrink as the private organization in comparison increases in size. 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 nonwage benefit costs for several reasons. First, Ohio 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 because an employer's unemployment insurance contribution rate is partially based on the extent to which the employer has tapped the fund.

In summary, state and local government workers receive more of their compensation in employer-provided nonwage benefits. Specifically, public employers provide a greater share of their 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 workers' compensation and unemployment insurance) than do private sector employees. Thus, to determine whether public employees are overpaid, this analysis asks

whether higher nonwage benefit costs more than offset the lower wages paid to public employees in Ohio. That is the question we turn to next.

Assessing private and public relative pay and nonwage benefits

To assess relative public and private employee costs we will use the micro data from the IPUMS-CPS, which provides a sample of Ohio employees broken down by demographic characteristics including full-time status, education level, years of experience, age, gender, race, disability, citizenship, employer organizational size, and industry. Compared with Ohio private sector employees, Ohio state and local government employees on average are more experienced (23.2 years compared with 21.7 years), are more likely to be female (57% compared with 42%), and work fewer weekly hours (42.5 versus 43.2). Also they are more likely to be black (11.2% compared with 10.1%), are less likely to be Asian (0.9% compared with 1.3%) or Hispanic (1.3% compared with 2.4%), are more likely to be citizens (99.0% compared with 97.5%), and are more likely to be disabled (2.4% compared with 1.7%) than private sector employees (King et al. 2009).

The Employer Cost of Employee Compensation data allow us to use the statistics on the nonwage 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 earnings equations estimating Ohio state and local government employee earnings compared with similar Ohio private sector employees. Columns one and two provide estimates for employee wages. Column one shows that annual wage earnings of all Ohio state and local government employees are a statistically significant 5.9% lower than those of comparable private sector employees (reflecting annual wage earnings that are a statistically insignificant 5.6% lower for state government employees and a statistically significant 6% lower for local government employees). Column two shows that hourly wages of Ohio public employees are a statistically significant 3.3% lower than those of comparable private sector employees (2.5% lower for state government employees and 3.6% lower for local government employees).

TABLE 4

Wage and compensation differentials in Ohio

2010 CPS	Employees' annual wages	Employees' hourly wages	Employees' annual total compensation	Employees' hourly total compensation
<i>Ohio public employee</i>	-5.9% *	-3.3% *	-6.0% ***	-3.5% *
<i>State government employee</i>	-5.6	-2.5	-6.7 *	-3.4
<i>Local government employee</i>	-6.0 **	-3.6 *	-5.8 **	-3.6
prob 0<.0001 *** <.01 ** <.05 *				

Observations = 7,358.

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.

When we compare total compensation of Ohio public employees with private employees, that earnings gap persists. Columns three and four report the estimates for total compensation. Reported in column three, Ohio public employees' annual total compensation costs are a statistically significant 6% less than comparable private sector employees, with state employees earning 6.7% less and local government employees earning 5.8% less in annual compensation than comparable private sector employees. As shown in column four, Ohio public employees earn 3.5% less in hourly compensation. Hourly compensation is 3.4% less for state government employees and 3.6% less for local government employees, but neither of these results is statistically different from zero. In short, Ohio state and local public employees cost essentially the same as comparable private sector workers.

Conclusion: Ohio public employees are *not* overpaid

The earnings estimates indicate that state and local government employees in Ohio are not overpaid. Comparisons controlling for education, experience, hours of work, organizational size, gender, race, ethnicity, citizenship, and disability, show no significant difference between public and private employee compensation costs. These comparisons account for substantially different approaches to

staffing and compensation between the private and public sectors. Occupational categories in the public sector require more educated employees, while public compensation practices favor a relatively higher proportion of nonwage benefits.

On average, Ohio public sector workers are more highly educated than private sector workers; 49% of full-time Ohio public sector workers have at least a four-year college degree, compared with 26% of full-time private sector workers. Ohio state and local governments pay significantly less than private employers for college-educated labor. These earnings differences may indicate opportunities for cutting costs by shifting some work now performed under professional outsourcing contracts to lower-cost public employees.

Nonwage benefits are allocated differently in the public and private sectors in Ohio. State and local government employees receive a higher portion of their compensation in the form of employer-provided nonwage benefits, and the mix of benefits differs from the private sector. Public employers allot 26.7% of employee compensation costs to nonwage benefits, whereas private employers devote between 18.9% and 22.8% of compensation to nonwage benefits. Public employers provide more of employee compensation in the form of health insurance and pension benefits. Health insurance accounts for 12.9% of state

and local government compensation but only 7% to 9.7% of private sector compensation. Retirement benefits also account for a substantially greater share of public employee compensation costs, 11% compared with 2.5% to 4.9% in the private sector, although public sector employers save on Social Security payroll taxes when their employees are not covered. Public employees also continue to participate in defined-benefit plans managed by the state (and inadequately funded for more than a decade), while private sector employers have often switched to defined-contribution plans, particularly 401(k) plans, or stopped providing retirement compensation altogether. On the other hand, public employees receive considerably less supplemental pay and vacation time, and public employers contribute significantly less to legally mandated benefits.

In fact, a standard earnings equation that controlled for education, experience, and other variables produced what some may feel is a surprising result: full-time employees of public sector organizations are underpaid by 5.9% compared with similar private sector employees. We observed, however, that public employees work fewer hours, particularly college-educated employees. An earnings equation controlling for work hours of full-time employees found that full-time state and local employees are underpaid by 3.3% compared with employees of private organizations.

A standard earnings equation controlling for education, experience, and other variables and including wages and benefits also produced a surprising finding: full-time public employees are annually undercompensated by 6.0%. When work hours of full-time employees are factored in, public employees earn 3.5% less in hourly compensation than private employees (however there is no significant difference in total hourly compensation between either full-time Ohio state employees or local public employees and private sector employees when examined separately).

In summary, simply comparing private and public employee nonwage benefits leads to an obvious but incorrect conclusion that public employees are overpaid. Table 2 in this paper shows that public employee wages on average are 4% higher than private sector wages and that public employee total compensation is 1% higher than private sector compensation. But such a comparison

is misleading because it does not compare apples to apples: Specifically, it does not control for the substantially higher level of education in the public sector. When we do make the appropriate comparisons, any premium disappears. Simple comparisons of private and public sector average wages are ill-informed, because the average Ohio public employee is considerably more educated than the average private sector worker.

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 Ohio public employees pay for their better nonwage 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 nonwage 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 Ohio (approximately 48% of public employees are covered by a labor agreement). Governor Kasich and others have claimed 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 other 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 pressure 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. Unionization represents a viable legal response to employer labor market power.

Additionally, the pattern of Ohio 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 Ohio. 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.

Public sector workers' compensation is neither the cause of, 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 Ohio 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 because they performed services that are no longer needed, or because they are overpaid. 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 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 (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 that is 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. Because the survey's method of data collection

is expensive, the sample is not sufficiently large enough to provide reliable estimates of state-level benefits costs. We would have preferred to analyze compensation costs by each state. The Bureau of Labor Statistics did share their unpublished sample estimates for 10 major occupations by organizational sizes for private employers and state and local government in the East North Central Census division. This study uses the ECEC sample estimates to calculate relative nonwage 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 2007 to 2010 was used for the estimates, covering pay for 2006 through 2009. The sample size was 7,538 total observations and 1,165 public employee observations.

TABLE A1

Wage-to-compensation ratio in Ohio

	1 to 99	100-499	500+	Public
<i>All workers</i>	1.2310	1.2535	1.2624	1.3519
<i>Management, business, and financial</i>	1.1960	1.1967	1.2157	1.3084
<i>Professional and related</i>	1.2038	1.2064	1.2501	1.3251
<i>Sales and related</i>	1.1926	1.2433	1.2032	1.3699
<i>Office and administrative support</i>	1.2363	1.2776	1.3038	1.4531
<i>Service</i>	1.2150	1.2765	1.3494	1.4089
<i>Construction</i>	1.3151	1.4184	1.3476	1.4139
<i>Installation, maintenance, and repair</i>	1.2348	1.2967	1.3043	1.3756
<i>Production</i>	1.2714	1.2886	1.3006	1.3832
<i>Transportation and material moving</i>	1.3125	1.3370	1.3365	1.4199

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 Ohio 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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