

Apples to Apples: Private-Sector and Public-Sector Compensation in Iowa

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Executive Summary

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By Andrew Cannon, Research Associate

In recent months, public employees have become a political target. Lawmakers, candidates and pundits alike have claimed that the wages and benefits public employees earn exceed the norms of the private sector. These assertions neglect the significant differences between the two workforces — and neglect the differences in education, work experience and occupation between a public-school teacher and a teen-ager working for the minimum wage at a fast-food restaurant. They also avoid a significant public policy issue: Do we want to drive all employees' wages and benefits down? Is that best for economic opportunity in either the public or private sector, or the state economy?

An assessment of wages and compensation in the public sector requires that we differentiate between levels of education, experience and occupation. More than half of the public-sector workers in Iowa have at least a four-year college degree or more; just a quarter of Iowa's private-sector workforce has the same. When average earnings are compared by education level, private-sector workers generally fare better than their public-sector peers.

When education, work experience, annual hours worked, race, sex, disability status, and firm size are accounted for, male public-sector workers earn nearly 12 percent less and female public-sector workers earn over 16 percent less than private-sector workers. Male state government workers earn 9 percent less than comparable workers in private industry, while for local government the public-sector wage penalty was 14 percent. Among women, the earnings penalty was over 13 percent for state workers and 19 percent for local government workers.

Many critics have argued that it is not public-sector pay that is so out-of-line, but rather public-sector benefits, such as health insurance and pension contributions. It is true that such benefits comprise a larger share of public employees' overall compensation than for most private-sector workers. However, even after adding these benefits into the mix, total compensation for Iowa's male and female public employees are 7.9 percent and 10.8 percent less, respectively, than for their private-sector counterparts. The gap between private and public compensation narrows to 6 percent and 8 percent among male and female state government workers, and 9 percent and nearly 13 percent for male and female local government employees.

Iowa faces a number of fiscal challenges in the months and years ahead. But none of these challenges result from excessive public employee compensation.

Iowa's state and local government employees work to ensure that Iowans receive quality schooling, have safe water to drink and air to breathe, have adequately maintained roads and highways and enjoy safe neighborhoods. Iowa has well-qualified individuals performing important tasks and their compensation is less than that for similarly qualified employees in the private sector.



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Introduction

Though the worst effects of the recession seem to be past us, many states are still struggling to close budget shortfalls.¹ Iowa's budget situation is improving and manageable,² despite claims to the contrary. Despite this fiscal improvement, some policymakers and others are using the shortfalls of the recent past along with the perception of a public gone sour on government to call for a reduction in state and local government employees and the reduction of these workers' compensation packages.³ Iowa lawmakers have recently echoed the call for reductions in public-sector pay and payroll.⁴

Such calls ought to prompt several questions: First, in an era in which private sector wages are stagnating,⁵ employees are contributing larger and larger shares of their pay to health insurance,⁶ and fewer employers are offering insurance,⁷ is calling for public-sector compensation trends to mirror those of the private sector really the wisest thing to do? Second, are reductions in pay and benefits for public-sector workers consistent with our goals for Iowa?

These calls ignore the crucial role that the public sector plays in Iowa's economic health. Just under one-sixth of all Iowa jobs are in either state or local governments.⁸ The 51,616 public school teachers in Iowa — tasked with preparing tomorrow's workforce — are almost as large a part of Iowa's economy as all of Iowa's state government employees (52,300).⁹

Further, Iowa's public-school teachers, among other critical providers of public services, would undoubtedly be endangered by public layoffs, simply because of the prominent role education plays in Iowa's state budget. State aid to local districts, community colleges, public universities, and tuition assistance for students at private and public colleges in Iowa and other education funding represents more than half of Iowa's budget.¹⁰ Cutting public employees would contradict the stated focus of policymakers across the political spectrum — job creation.¹¹

Iowa already lags behind neighboring states in its compensation of valuable public-sector workers, like public-school teachers. The median annual wage for an Iowa high school teacher in 2009 was \$40,600 — over \$14,000 and \$7,000 less than the median wages in Wisconsin and Minnesota, respectively.¹² Reducing the compensation of public employees would undoubtedly affect our teachers, as education, noted above, is such a prominent part of Iowa's state budget. It is difficult to imagine that reducing the wages of teachers will help Iowa maintain the quality of its education system, let alone “give our kids the best education in the world.”¹³

Additionally, calls for the reduction of state and local government employees' compensation often rely on faulty statistics and incorrect assumptions. Significantly, these calls ignore the fundamental differences between the private-sector labor force and the public-sector labor force. Numerous studies

have found that, on average, public-sector workers have higher educational attainment than their private-sector peers.¹⁴ Further, the average job tenure is twice as long in the public sector as in the private sector.¹⁵ The occupational mix of the two sectors is also substantially different: about two-thirds of jobs in the public sector are “professional and administrative,” compared to just 51 percent of jobs in the private sector. Similarly, retail sales, food service jobs and other often low-paid and part-time jobs represent a full 20 percent of private-sector jobs, compared to merely 2 percent in the public sector.¹⁶

A simple comparison of wages and benefits between the two sectors is not informative. The differences in occupation, educational attainment, and work experience between a public-school teacher and a teenage fast-food employee are overlooked. It is, as the cliché goes, comparing apples to oranges. Determining whether public employees are overpaid requires comparisons that make sense — comparing workers with similar levels of education and ages across the sectors, for instance. How, in other words, do public vs. private jobs compare in the actual labor marketplace? We might well ask whether one sector is holding back the other, and thus stalling progress for all similarly skilled workers.

It should go without stating, but must be stated as it is being ignored in the current political discussion, that an economic sector that comprises one-sixth of jobs has an important economic role in the prosperity of all workers, whether publicly or privately employed, and of business owners large and small. The activities of public-sector workers also contribute to that prosperity, and efforts to drive down compensation in important sectors of the economy can undermine it. This is important economic context for this paper, but is not the focus of this paper.

Rather, this paper uses data from the Census Bureau and Bureau of Labor Statistics to make an “apples-to-apples” comparison of wages and benefits — that is, overall compensation — between private-sector employees and public-sector employees in Iowa, to put current discussions about that issue to a factual test.

Previous Research

Though the tenor of the public-sector compensation discussion has taken a strong turn against public employees in recent months, the debate is not new. An 1862 law required that the wages of U.S. government blue-collar workers “conform with those of private establishments in the immediate vicinity.”¹⁷ The 1962 Federal Salary Reform Act pegged the earnings of most federal workers to wages in the private sector.¹⁸ Both laws specified that federal employee pay match that of private-sector workers in similar jobs.

Contrary to recent concerns about public-sector compensation, historically the worry has been that public-sector employees were *undercompensated* in comparison to their private-sector peers.¹⁹

In a 1996 study that matched private- and public-sector employees by their job types and responsibilities, Michael A. Miller found that while at the low end of the pay scale state and local governments paid better than private industry, state and local government pay for professional and administrative occupations lagged far behind the pay levels in the private sector.²⁰ Further, the differences in pay for professional and administrative jobs between the sectors were the most pronounced among all the wage differences Miller found.

Matching public-sector jobs with private-sector jobs for the sake of comparing compensation is a tricky endeavor. In many cases, such as firefighters, police, and a number of other public-sector occupations, there are no clear private-sector analogies. The Census Bureau codes occupations for ease in recording data. Of its 509 occupational codes, about 150 are unique to either the private or public sector.²¹

Comparing by education level and age is a useful way to compare public-sector compensation with that in the private sector that avoids the pitfalls of matching occupations across the sectors. Further, education is the most powerful predictor of earnings.

A 2009 study of Michigan's state employees revealed the importance of controlling for education in private-public sector wage comparisons. Michigan state employees earned an average salary of \$54,246 in 2009, compared to an average earning of \$51,588 for private-sector workers overall.²² But when education was controlled for, the seeming advantage of Michigan state workers over private-sector workers disappeared. Michigan state employees earned less than their private-sector peers in every educational category.²³

Other recent studies have also attempted to measure the difference between private- and public-sector compensation. A May 2010 study that looked strictly at wages found that local and state government workers do indeed earn more than private-sector workers, but they are also better educated and older.²⁴ When workers' age and educational attainment are controlled for, however, a 12.9 percent wage advantage turns into a 3.7 percent wage penalty.²⁵

Another study compared the wages and benefits of local and state government workers with that of their private-sector peers over 20 years. Relative to comparable private-sector workers, the earnings of state and local government employees have declined.²⁶ The decline was most dramatic for state employees: In the late 1980s state employees had reached, on average, near parity in wages with their private-sector peers. By 2008, however, state employees were earning 11 percent less.²⁷

Recently, Rutgers professor Jeffrey Keefe has undertaken a series of studies — both at the national level and for individual states — comparing the wages and benefits of state and local government employees with private-sector employees using data from the Census Bureau and the Bureau of Labor Statistics. The studies have reconfirmed the finding of far higher education levels in the public sector. Nationally, 54 percent of all state and local government workers had earned at least a four-year college degree compared to 35 percent of private-sector workers.²⁸ Again, when age and educational attainment are controlled for, any advantage that public-sector workers may have had disappears. Compared to private-sector workers with comparable education levels, state and local government workers are undercompensated by about 3.7 percent.²⁹

Keefe's state level analyses have produced similar results for state and local government workers in California and New Jersey³⁰ — both states in which state and local government employee compensation have recently come under fire.

This paper adopts Keefe's methodology to compare the wages and overall compensation of state and local government workers with their private sector peers in Iowa and makes use of 2000-10 data for the state of Iowa from the Integrated Public Use Microdata Series – Current Population Survey.³¹ The Current Population Survey includes the Iowa-specific information — education level, gender, occupation, experience and wages used for the education and wage comparisons. Unpublished data from the Bureau of Labor Statistics' Employer Costs for Employee Compensation survey provides estimates for the benefits paid by private sector firms and state and local governments. While state level data for benefit costs is not available, the Employer Costs for Employee Compensation for the West North Central region is. This data set includes Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota and South Dakota.

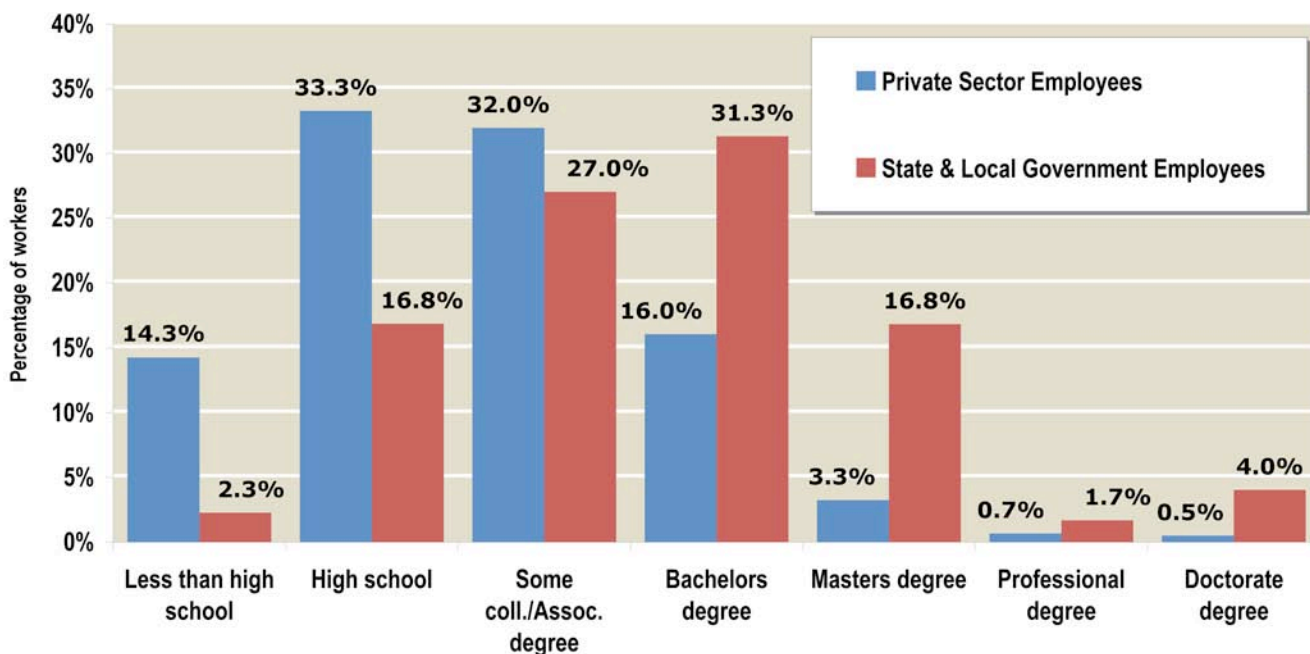
Education and Pay in Iowa

Assessing the education levels of Iowa's public and private-sector workers is critical to a wage and compensation comparison. Research has demonstrated time and time again that educational attainment

is the critical predictor of income. Further, there is a wide divergence in educational attainment between Iowa’s public-sector workers and its private-sector workers. The Census sample cuts across a wide swath of occupations in both the private and public sector. Public university employees — groundskeepers, professors, lawyers, nurses, doctors, secretaries — are all counted, along with employees of Iowa’s Department of Human Services and other executive agencies, as state employees. Police officers, firefighters, snow removal crews and Iowa’s 51,616 public-school teachers are counted among the local government employees.³² Among private-sector workers, the sample includes executives in the financial and insurance industry, entrepreneurs, attorneys and doctors in private practice, engineers, machinists, facilities maintenance workers, but many also in the fast food and services categories.

Figure 1 illustrates the differences. The contrast in educational attainment between the two sectors is stark. While a third of private-sector workers have just a high school degree, for example, only 16.8 percent of public-sector workers have this level of education. Over half of Iowa’s state and local government employees have a four-year degree or higher; just a quarter of private-sector workers in Iowa have a four-year degree.

Figure 1. Iowa’s public-sector workers more likely to have college degree or higher



Source: U.S. Census Bureau, Current Population Survey, 2000-2010.

Given the vastly different functions of the sectors, the pronounced difference in educational attainment between the two sectors is not entirely surprising. Iowa’s largest private-sector industries by employment are trade and transportation, educational and health services, and manufacturing.³³ While there are certainly occupations within those industries that demand a high level of education, a large number of occupations within those industries require less in the way of education and more in the way of technical know-how and experience. By contrast, state and local government occupations often require higher levels of education and often professional certification.

Nevertheless, accusations of “overpaid” public employees often neglect this reality and lump all public and all private-sector employees together without regard for educational attainment differences. However, when the earnings between the two sectors are compared across education levels, it is apparent that there is no public sector advantage.

Table 1 illustrates the differences in earnings between the two sectors by three different educational levels. The differences in average earnings between the sectors for other educational levels — those with less than a high-school degree, a high-school degree, a professional degree or a doctoral degree — were

Table 1. Iowa public-sector workers earn less on average than similarly educated private-sector peers

Education Level	Private Sector	Public Sector	Public to Private Difference	Public sector premium/penalty
Some coll./assoc. degree	\$38,934.96	\$38,119.19	-\$815.77	-2.1%
Bachelors degree	\$54,819.34	\$44,502.25	-\$10,317.09	-18.8%
Masters degree	\$68,259.39	\$56,537.85	-\$11,721.54	-17.2%

Full-time workers only. Source: U.S. Census Bureau, Current Population Survey, 2000-2010, adjusted for inflation to 2010 dollars.

statistically insignificant, due to the size of the sample. Even though it does not paint a complete picture, comparing those with some college education, bachelor’s degrees or master’s degrees is useful, as three-quarters of public-sector workers in Iowa fall into one of these categories. In all three cases, public-sector employees actually earn less than their similarly educated peers in the private sector, with the effect most pronounced for those with bachelor’s degrees. Public-sector workers with a four-year degree earn, on average, nearly 19 percent less than private-sector workers with four-year college degrees.

Keefe’s California study, conducted with labor economist Sylvia Allegretto of the University of California at Berkeley’s Institute for Research on Labor and Employment, found that public-sector employees with less than a high-school education had higher average earnings than their peers in the private sector.³⁴ His New Jersey study found that public-sector employees with less than a high-school degree and a high-school degree had higher earnings, on average, than similarly educated private-sector workers.³⁵ Our sample size was insufficient to make comparisons of these workers, though a similar public-sector “premium” at this education level in Iowa would not be surprising. The least-educated public-sector workers likely benefit from the higher labor union penetration in the public sector,³⁶ which helps maintain a wage floor that workers with low education in the private sector do not enjoy.³⁷

Despite the large differences between public- and private-sector earnings, they are not the whole story. Indeed, for many critics of public-sector compensation it is the level of benefits that public-sector employees receive that provokes the largest criticism. Because the public sector enjoys a far higher level of labor union penetration,³⁸ public employees have been able to bargain collectively for better benefits. Conversely, over the past decade, the average private-sector employee’s contribution to a health insurance premium has increased,³⁹ coinciding with a decline in private-sector labor union participation relative to the economy.⁴⁰

Benefits include retirement packages, health and other insurance packages and paid time off. The combination of benefits, bonuses and regular wages and salaries is an employee’s total compensation. Critics of public employees and public employee unions have suggested that these benefits tip the scale, making overall public employee compensation excessive and unfair in comparison with their private-sector peers.⁴¹

However, as Table 2 illustrates, even when retirement plans, health plans and other insurance benefits are considered, the public-sector penalty remains. Public employees with a four-year college degree or a master’s degree are still compensated considerably less than their private-sector peers. The generous

benefit packages many public-sector employees enjoy reduce their public-sector wage penalty by 3.6 percentage points for workers with bachelor’s degrees, and 4.1 percentage points for those with masters degrees. As with Table 1, we were unable to reliably measure the differences in the average wages between public- and private-sector workers for other educational groups because of the small sample size.

Table 2. Iowa’s private-sector employees enjoy higher levels of compensation, even after including fringe benefits

Education Level	Private Sector	Public Sector	Difference: public:private	Public sector premium/penalty
Bachelors degree	\$70,520.83	\$59,786.35	-\$10,734.48	-15.2%
Masters degree	\$86,979.53	\$75,585.70	-\$11,393.83	-13.1%

Full-time workers only. Source: U.S. Census Bureau, Current Population Survey, 2000-2010, adjusted for inflation to 2010 dollars; Bureau of Labor Statistics, Employer Costs for Employee Compensation, September 2010 unpublished data..

Public-sector employees receive a larger share of their compensation in the form of benefits than private-sector workers overall. However, when public-sector workers are compared to employees of large private firms (500 or more employees), the reverse is true. For state employees, and for local government workers in Iowa’s largest cities and counties, clearly the appropriate comparison is with large private firms. Table 3 provides a breakdown of pay and benefits as a percentage of total compensation for public employees and private employees at small, medium and large firms.

Table 3. Breakdown of compensation components for private-sector and state and local workforce — West North Central Census Division* (September 2010)

Employer costs	Private Employers			Government
	Employees 1 to 99	Employees 100 to 499	Employees 500 +	State and local workers, all
Total compensation	100%	100%	100%	100%
Wages and salaries	73.5%	71.5%	66.3%	67.9%
Total benefits	26.5%	28.5%	33.7%	32.1%
Paid leave (vacation, sick, holiday, personal)	5.1%	6.2%	8.7%	6.9%
Supplemental pay (overtime, bonuses)	1.9%	2.7%	2.9%	0.7%
Insurance (life, health, disability)	7.2%	8.4%	10.0%	11.6%
Retirement and savings	3.3%	3.6%	5.0%	6.4%
Legally Required (social security and Medicare, fed. And state unemployment, workers' comp.)	9.1%	7.6%	7.1%	6.5%

**West North Central Census Division (Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota.)
Source: Bureau of Labor Statistics, Employer Costs for Employee Compensation, September 2010 unpublished detailed compensation data by employer size.*

Public employees do receive a greater percentage of their compensation in the form of health and other insurance benefits than their private-sector counterparts (11.6 percent of compensation vs. 7.2, 8.4 and 10 percent at small, medium and large private firms). Similarly, they receive a larger share of their compensation in the form of retirement benefits than private-sector workers (6.4 percent compared to 3.3, 3.6 and 5.0 at small, medium and large private firms).

However, both retirement and health and other insurance benefits are but components of an overall compensation package. Private-sector employees at the largest firms receive a larger share of their compensation in the form of paid time off (either vacation, holiday, sick, or personal days) than public-sector employees. Similarly, private-sector employees at all levels are more likely to receive bonuses or overtime pay or some other form of supplemental pay.

The final category of Table 3, legally required benefits, includes payments into Social Security and Medicare, federal and state unemployment insurance trust funds, and the workers' compensation insurance. Keefe explains why legally required benefits comprise far less of public employees' overall compensation. "First, a nontrivial number of public employees do not participate in Social Security, which partially explains their higher pension costs. These employees are not eligible for Social Security benefit payments at retirement unless they choose to work in another job elsewhere that is covered by Social Security. Second, many state and local governments do not participate in the federal unemployment system. Third, since the state and local governments offer more stable employment they pay lower rates into the state unemployment insurance trust fund, because unemployment insurance contributions rates are partially experience rated."⁴²

Assessing relative pay and benefits

Though controlling earnings and compensation by educational level provides a more accurate comparison of earnings and compensation across the two sectors, it is not the complete story. Earnings and compensation are influenced by a number of other factors, including the size of the employing firm, annual hours of work, work experience (a function of age minus years of education),⁴³ race, gender, education and whether the worker has a disability.

The Census Bureau's annual Current Population Survey asks respondents detailed questions about their work, including usual hours worked each week, their pay, the size of their firm, if they receive insurance benefits and retirement benefits, their health level and their education level, as well as basic demographic information such as age, sex and gender. However, though the survey asks about fringe benefits, it does not provide an estimate of their value for each employee.

The Bureau of Labor Statistics' Employer Cost of Employee Compensation survey generates average hourly benefit costs for private- and public-sector employers. Using unpublished BLS data, this analysis uses a "markup" statistic to account for the share of benefits that contributed to an employee's total compensation. The markup was calculated based on an employee's firm size and his occupation. The Appendix provides a methodology and the markup figures used for each occupational group.

Statistical methods make it possible to compare earnings and compensation of public- and private-sector employees while controlling for education, firm size, hours of work, race, gender and disability status. The methodology is more fully explained in the Appendix. Table 4 presents the expected earnings for a white male with no disability.

When all of these factors are controlled, we find that overall, white males at work in state and local government earn nearly 12 percent less than their private-sector peers. Local government employees bear the brunt of that disparity, earning 14 percent less than their private-sector peers, while state government employees face a 9.3 percent penalty.

Table 4. State and local government employees earn less than private-sector peers after controlling for a number of factors

		Earnings	Total Compensation
Men	State & local government	-11.8% **	-7.9% **
	State government	-9.3% **	-6.1% *
	Local government	-14.0% **	-9.3% **
Women	State & local government	-16.2% **	-10.8% **
	State government	-13.3% **	-8.4% *
	Local government	-19.3% **	-12.8% **

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

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

Source: Author's analysis of U.S. Census Bureau and unpublished BLS data.

The difference is even more pronounced for women working in state and local government. Overall, white women working in the public sector earn 16 percent less than white women in the private sector. We would also have liked to compare the expected earnings and compensation for African-American public-sector workers with the African-American private-sector workers. However, not enough African-Americans were included in the sample to generate a statistically significant result for race.

When fringe benefits are factored, the gap between state and local government employees and private-sector workers narrows, but is not erased. Male public-sector workers in Iowa overall are compensated nearly 8 percent less than male private-sector workers, and female public-sector workers nearly 11 percent less than female private-sector workers. Again, local government employees bear the brunt of the discrepancy, earning 9 percent less for men and nearly 13 percent less for women in overall compensation than private-sector workers. State government employees enjoy compensation levels nearer their private-sector peers, but still lagging behind: male state government workers receive 6 percent less total compensation than their private-sector workers, while female state government workers are compensated over 8 percent less than private-sector workers.

Conclusion

Despite repeated claims by many opponents of a strong public sector, Iowa's public employees are not over-compensated compared to their private-sector peers. Even if the public employee benefit packages are accounted for, Iowa's public-sector workers still earn less than those in the private sector. Indeed, contrary to such claims, Iowa's public-sector workers are undercompensated relative to their private-sector peers.

Calls to reduce Iowa's public sector not only neglect the different factors, such as education, that affect a worker's compensation, but they also overlook the importance of the public sector to our state's economic health. Almost one-sixth of all Iowa jobs — 234,400 of Iowa's 1.47 million total nonfarm jobs — are in either state or local governments.⁴⁴ Moreover, most of those public-sector workers — over 169,000 — work in local governments. They teach our children, staff our public hospitals and medical clinics, maintain our roads and maintain the safety of our neighborhoods.⁴⁵

The reasons an individual may choose to work in the public sector are as varied as the individuals who inhabit jobs at the Statehouse, the local courthouse or the local school. For some, a sense of purpose and contributing to the public good draws them to such work. Others may desire strong health insurance or retirement packages, particularly when such packages are being dropped or losing value in the private sector. Greater job security may also be a factor. But whatever their reasons, they're not getting rich. Discussions about the compensation for these public servants should be based on reality, not rhetoric.

Data Appendix

This study uses the integrated Public Use Microdata Sample (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.⁴⁶ This sample provides organizational size, a critical variable for our analysis of benefits. The sample is restricted to 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 (age minus years of education plus five), gender, race, employers' 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 North West Central Census Division (Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota) data were used to

Table A-1. Markup adjustments for benefits to calculate total compensation

	Private Employers			State and local government
	1 to 99	100-499	500+	
All workers	1.266	1.274	1.334	1.361
Occupational markups				
<i>Management, business, & financial</i>	1.244	1.223	1.287	1.334
<i>professional and related</i>	1.244	1.223	1.287	1.334
<i>sales and related</i>	1.250	1.292	1.365	1.426
<i>Office and administrative support</i>	1.250	1.292	1.365	1.426
<i>Service</i>	1.197	1.264	1.399	1.417
<i>Construction</i>	1.326	1.447	1.408	1.409
<i>Installation, maintenance, and repair</i>	1.326	1.447	1.408	1.409
<i>Production</i>	1.350	1.389	1.435	1.378
<i>Transportation and material moving</i>	1.350	1.389	1.435	1.378

Source: BLS, *Employer Cost of Employee Compensation, September 2010, unpublished data*

calculate total compensation costs. Because the survey's method of data collection is expensive, the sample is not sufficiently large to provide reliable state-level benefit-cost estimates. We would have preferred to analyze compensation costs for Iowa alone. The BLS did share its unpublished sample estimates for major occupations by organizational sizes for private employers in the North West Central Region. This study uses these ECEC sample estimates to calculate relative benefit costs for each private and public employee in the sample. Table A-1 displays those calculations. The calculation was done by calculating the relative benefit mark-up for each private-sector employee based on the size of organization that employs the individual and the employee's occupation. 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.

Wage data from the Current Population Survey was then multiplied by the benefit mark-up. I then performed an Ordinary Least Squares (OLS) Regression to predict the earnings differential between

private and public sector workers. OLS regression makes it possible to make predictions for an outcome (such as compensation) while controlling for certain factors (such as hours worked, education level, experience, race, gender, disability status, firm size and sector) that are known or thought to affect that outcome. The significance and impact of each variable in determining the outcome is determined by OLS. Table 4 presents the differences in predicted compensation when all of the factors listed above have been controlled in OLS regression.

The IPUMS CPS samples for 2000 to 2010 were used for the estimates. The sample was composed of 37,781 total observations and 2,703 public employee observations.

¹ Elizabeth McNichol, Phil Oliff, and Nicholas Johnson, “States Continue to Feel Recession’s Impact,” Center on Budget and Policy Priorities, December 16, 2010. <<http://www.cbpp.org/cms/index.cfm?fa=view&id=711>>.

² “Iowa Budget Update: What’s in Store for the 2011 General Assembly,” Iowa Fiscal Partnership, January 18, 2011. <<http://www.iowafiscal.org/2011docs/110118-IFP-budgetbrief.pdf>>.

³ See for example, Tim Pawlenty, “Government Unions vs. Taxpayers,” *Wall Street Journal*, December 13, 2010. <<http://online.wsj.com/article/SB10001424052748703766704576009350303578410.html>>.

⁴ See for example, Jason Clayworth, “Branstad Aide: State workers need to make budget sacrifices,” *Des Moines Register*, December 11, 2010. <<http://www.desmoinesregister.com/apps/pbcs.dll/article?AID=/201012110405/NEWS10/12110318>>; Jennifer Jacobs, “Iowans give Branstad a to-do list,” *Des Moines Register*, December 21, 2010.

<<http://www.desmoinesregister.com/article/20101221/NEWS10/12210356/Iowans-give-Terry-Branstad-a-to-do-list>>.

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