

The public-private pay debate: what do the data show?

Although the average wage is higher for workers in State and local governments, professional and administrative workers typically earn more in the private sector

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From the 50 State capitols to the 80,000 local government entities, the level of public employees' pay is a much-discussed issue. Payroll costs are a big-ticket item in State and local governments, amounting to more than 60 percent of all expenditures. Citing average pay rates and quit rates, critics such as Wendell Cox and Samuel A. Brunelli argue that public employees are overpaid compared with private sector employees and that public agencies are overstaffed.¹ Others, such as Dale Belman and John Heywood, argue that State and local governments provide services requiring a better educated and higher skilled work force than exists, on the whole, in the private sector.² In addition, citizens expect government to lead by example, and studies indicate that State and local governments have outpaced the private sector in remedying wage discrimination against women and minorities.³

This article examines the current literature and then uses occupational pay data from the BLS Occupational Compensation Survey Program (OCS) to compare wages and salaries in State and local governments with pay in nonfarm private industry. For the occupations studied, the major findings include the following:

- At the low end of the pay scale, State and local governments generally paid better than private industry did.
- Among white-collar jobs, private industry usually paid better than State and local governments did.
- Among white-collar jobs, within occupations, as pay rose with the level of duties and respon-

sibilities, the private sector paid increasingly better wages.

- State and local government pay lagged far behind that of private industry for professional and administrative occupations.
- Patterns were mixed for technical, clerical, and blue-collar workers.
- Comparisons across occupations revealed that workers in lower paying jobs were more likely to be paid better in the public sector. Workers in higher paying jobs were more likely to be paid better in private industry.

Recent studies of pay

A survey of the recent literature on public and private sector pay (wages and salaries) reveals that conclusions may be more closely linked to methodology and ideology than is desirable. Generally, researchers employ one of two methodologies: human capital studies or comparability analyses. Human capital studies typically calculate an overall average wage rate for all workers and then examine the rate in terms of demographic characteristics such as age, education, race, and sex. Comparability analyses weigh differences in the average pay of workers in the same occupation performing essentially the same level of work in the different sectors. Some studies report that State and local governments pay better than private industry does, others report that private industry pays better, and still others report that the results are mixed. This disparity arises for two reasons:

- The data that were used came from sources

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(pay surveys) designed to collect data in different ways, often for different purposes.

- Average wage rates used in the studies were calculated in different ways; that is, the researchers did not average the same factors.

The differences in the results of the various studies have fostered a serious debate over the appropriateness of pay levels in State and local governments. This article summarizes the debate and then examines whether data collected by the OCS help to clarify the issue.

Human capital studies, which typically compare all-employee average wage rates, often provide valuable insight into differences in data that stem from demographic characteristics. Data used in these studies frequently come from readily available wage and salary surveys collected on a nationwide basis by various Federal agencies. Two examples of data banks used in human capital studies are the Current Population Survey (CPS)⁴ and the National Income and Product Accounts.⁵ Typical human capital studies were written by Sharmila Choudhury, as well as the aforementioned Cox and Brunelli, and Belman and Heywood.

The Choudhury study. Choudhury's scholarly examination of the relation between wage differentials and various demographic characteristics used data from the March 1991 CPS and found that "on an average, both male and female public sector employees earn a significant wage premium."⁶ Building on the work of other academicians, such as Sharon Smith, R. M. Blank, Steven Venti, William Moore, and John Raissian, Choudhury made the following conclusions with regard to race, union membership, work schedule, marital status, and education and experience:

- White men earned higher wages than nonwhites in both the private and the public sector.
- White women earned significantly higher wages in the public sector than nonwhite women, and the gap was considerably greater than in the private sector.
- Men who belonged to unions earned more than nonunion men, but the premium was greater in the private sector.
- Women who belonged to unions earned more than their nonunion counterparts in the private sector, but in the public sector, union women earned less than nonunion women.
- Part-time workers received higher pay in the private sector.
- Marital status was an important influence in pay rates in the private sector, but not the public sector, and was more important for men than for women.
- Pay rose with the workers' levels of education and experience, but it reached higher levels for men than for women.

Choudhury's data refer to all government workers; State and local workers were not broken out separately from Federal workers. Choudhury relied upon an overall average wage for all workers, regardless of occupation, in the categories observed.⁷ That the workers in the overall categories were not all performing the same type of work at the same level of difficulty was not considered.

The Cox-Brunelli study. Prior to Choudhury's scholarly analysis, Cox and Brunelli, writing for the American Legislative Exchange Council in 1991, published the first in a series of reports asserting that State and local government workers were overpaid and urging State legislators to slash public payrolls and employment, and contract work out to private industry.⁸ The most recent report in the series used data from the 1991 National Income and Product Accounts and provided separate figures for State and local government workers. Cox and Brunelli found that State and local government workers were paid an average of \$28,160 per year in wages and salaries. This figure was 5.4 percent higher than the average annual earnings for all private sector workers (\$26,716). When benefits were included, the gap widened to 10.3 percent. When the shorter workweek for State and local government workers was taken into account, the public sector pay premium rose to 25 percent.

Cox and Brunelli contended that much of the public sector pay advantage observed in 1991 was the result of substantial wage gains in that sector in the 1980's. The authors estimated that, during that decade, State and local government pay rose almost 5 times faster than private sector pay. They estimated further that the 1991 public sector pay premium amounted to \$51.4 billion in "excess" State and local government expenditures. Citing these numbers, they contended that State and local government employment was too high and could be cut. Reducing per capita public sector employment to the rate of Pennsylvania, the State with the lowest such employment, would save an estimated \$78 billion and could be accomplished in 34 other States in just 4 years, relying on attrition alone. In addition, Cox and Brunelli used their findings to promote the competitive contracting (privatization) of selected government services as a cost-saving measure.

The Belman-Heywood study. Cox and Brunelli's findings, however, were immediately challenged in academic circles and by public employee unions. Typical of these responses was Belman and Heywood's paper, in which the authors asserted that reliance upon an overall average wage rate is inappropriate:

Although the body of research on public sector wages provides little evidence of universal overpayment at the State and local levels, the belief that state and local governments overpay their employees does get support from studies that ignore the issue of [occupational]

comparability. One must compare like with like: accountants with accountants and not store clerks, college graduates with college graduates and not high-school dropouts.¹⁰

Belman and Heywood examined the 1989 CPS Annual Earnings File, breaking it down by several different demographic characteristics. They found that more than 2 in 5 State and local government employees had college degrees, twice as many as in the private sector. The private sector was younger and had more workers just beginning their careers. Highly paid professional employees represent more than 30 percent of State and about 40 percent of local government workers, but less than 10 percent of private workers. In contrast, low-paid workers such as craftworkers, salesworkers, and laborers represented almost one-third of the private sector labor force, a proportion 5 times greater than in State and local governments. The public sector employed more women and more minorities, two groups of workers who, according to Belman and Heywood, have benefited from antidiscrimination practices that were more prevalent in the public than the private sector.

After controlling for demographic and occupational characteristics, Belman and Heywood concluded that State pay was largely comparable to that of private industry, and local governmental pay was 4 to 5 percent below private industry's. Adjusting for occupational and educational differences, they found no evidence that the pay differences between comparable public and private jobs changed between 1973 and 1989.

The Braden-Hyland study. In 1993, Bradley R. Braden and Stephanie L. Hyland, using data from the BLS Employment Cost Index, reported that the overall average wage in State and local governments was 41 percent higher than the average wage in private industry in March 1992.¹¹ Total compensation costs (wages plus benefits) in governments were 46 percent above those in private industry. The following tabulation presents these authors' figures:

	<i>Private industry</i>	<i>State and local governments</i>
Total compensation	\$16.14	\$23.49
Average straight-time hourly wage:		
Dollars	11.58	16.39
Percent of total compensation	71.8	69.8
Average cost of benefits:		
Dollars	4.55	7.09
Percent of total compensation	28.2	30.2

But Braden and Hyland also reported that the occupational mix for State and local governments differed substantially

from that for private industry, as shown in the following tabulation, also for March 1992:

<i>Occupation</i>	<i>Private industry</i>	<i>State and local governments</i>
Wages and salaries:		
Total	\$11.58	\$16.39
White collar	13.90	18.99
Professional, specialty, and technical	18.45	23.10
Executive, administrative, and managerial	21.62	20.84
Sales	10.24	*
Administrative support, including clerical	9.74	9.90
Blue collar	10.74	11.69
Service	6.38	10.54
Percent of workers:		
Total	100	100
White collar	51	68
Professional, specialty, and technical	12	38
Executive, administrative, and managerial	9	10
Sales	11	*
Administrative support, including clerical	19	19
Blue collar	32	12
Service	17	20

*Data did not meet publication criteria.

High-paying white-collar jobs were disproportionately represented in State and local governments, while low-paying sales and blue-collar jobs were disproportionately represented in private industry. This occupational disparity was largely responsible for the average wage being much higher in the public sector.

Two-thirds of all State and local government workers were in white-collar jobs, which typically paid more than blue-collar and service sector jobs. Among white-collar jobs, professional and technical jobs accounted for 56 percent of all State and local government jobs, a percentage more than 2 times greater than that for private industry. On the other hand, the one white-collar job dominated by private industry, sales, paid on average less than half of what professional and technical jobs paid in the public sector.

Lower private industry compensation in the service sector also tilted the pay advantage toward the public sector. The private service industry includes a large portion of low-paying jobs such as waiters, waitresses, and food preparation workers. For these workers, pay is often at or below the Federal minimum wage.¹² Conversely, some high-paying service jobs, such as police officer and firefighter, that are common to governments are virtually nonexistent in the private sector. As a result, average wages in the State and local

government service sector are nearly double those of private industry.

Other occupational comparisons in Braden and Hyland's study had less impact on overall averages. Private industry paid about the same as governments did for executive, administrative, and managerial jobs, and for administrative support and clerical jobs. Private industry had almost 3 times as many blue-collar workers than did State and local governments, but paid them about 10 percent less.

In the current literature, comparisons of overall average wage data indicate that State and local government workers are better paid than their private sector counterparts, but after controlling for a number of variables, some authors reported that this conclusion was not reliable. Accordingly, we are still left with the question posed by several earlier studies: "Are State and local government workers paid more than their private sector counterparts?"

To answer this question, we need to rephrase it. Looking at the average pay for all workers, or even wide occupational categories, fails to give an accurate answer. We need to control for differences in occupational employment by examining individual occupations, holding job duties and requirements constant. In this context, the question becomes:

If two persons are doing the same job, at the same level of duties and responsibilities, with one person performing that job in State or local government service and the other in private industry, are they also paid alike?

The data from the OCSF go a long way toward answering this question. (See box in next column.)

About the survey

The Bureau of Labor Statistics designed the OCSF to permit one-to-one comparisons of workers performing essentially the same job throughout a wide portion the economy.¹³ To make this possible, the Bureau carefully matches workers in surveyed occupations, using detailed job descriptions written specifically for compensation surveys. In 1993, the latest year for which data were available, the Bureau found about 63 million workers within the scope of the OCSF, 49.6 million of whom were employed in private industry and 13.5 million in State and local governments. Employment in the 22 white-collar occupations discussed subsequently in this article accounted for about 5 percent of all workers found in State and local governments and 4 percent of all workers found in private industry. Employment in the 12 blue-collar occupations studied contained an additional 3 percent of State and local government employment and 4 percent of private industry employment. Thus, the OCSF occupations covered about 8 per-

cent of the workers in the scope of the survey. Because the survey occupations were not selected by probability sampling means, the data are valid only for the occupations discussed and only for those workers within the scope of the survey. Thus, the conclusions drawn in this study are limited to the specific occupations studied; one cannot contend that the data presented are representative of occupations not studied or the labor market in general.

The OCSF survey comprises 44 occupations broken into seven categories. Jobs in five categories—*professional, administrative, technical, clerical, and protective service*—were classified as white-collar occupations. Jobs in the other two categories—*maintenance and tool room, and material movement and custodial*—were classified as blue-collar jobs. (See exhibit 1.) Only the 35 occupations that provided publication-quality data on pay for both State and local governments and private industry were studied in this article.¹⁴ Further, the article concentrates on the white-collar occupations because the data for those occupations are richer than the data for blue-collar occupations. The reason for this is that, in a technique called *job leveling*, the OCSF ranked workers in white-collar occupations according to the level of duties and responsibilities their individual jobs demanded.

Occupational Compensation Survey Program (OCSF) methodology

Occupational Compensation Survey Program data are collected using a consistent methodological approach. Firms and governmental units are statistically selected from State Unemployment Insurance lists to represent industry and establishment size. The Bureau of Labor Statistics employs professional field economists who collect data by personal visit or telephone call. These economists match workers to the OCSF occupations, using job descriptions specifically written for compensation studies.

After extensive verification, compilation, and analysis, data are published describing the distribution of pay for selected levels of duty and responsibility for white-collar and blue-collar occupations. Tabulations include mean, median, and quartile earnings, the distribution of employees by earnings intervals, and average weekly hours (the last only for white-collar jobs). OCSF publishes a national summary and separate reports for more than 150 metropolitan areas. Respondents receive copies of the survey results. The public may purchase these results in either a printed or an electronic version. In addition, OCSF data are available on the Internet (<http://stats.bls.gov>). Call OCSF at (202) 606-6219 for more information.

Job leveling

Within many of the occupations studied—particularly the white-collar occupations—the OCSF controlled for differences in job duties and responsibilities by stratifying the workers into two or more job levels. Job leveling is done by BLS field economists at the time the pay data are collected from respondents. The procedure is at the heart of the OCSF survey design. The field economists use detailed job descriptions specifically written for compensation surveys. These descriptions include the leveling criteria when necessary. Collecting pay data by occupational job level allows comparisons to be made that are impossible in the CPS and the National Income and Product Accounts.

The number of job levels varies by occupation. (See exhibit 1.) Each white-collar occupation begins at level 1 (which is often an entry level) and progresses through multiple levels, calling for progressively more complex duties and responsibilities. For instance, there are six levels of attorneys and five of secretaries, while other occupations, such as key entry operators and police officers, have two levels.

Most blue-collar jobs in the OCSF have a single level. The exceptions are maintenance electronic technicians, with three

levels, guards (two levels), and truck drivers (four levels). Levels are assigned to truck drivers according to the types of truck they drive.

White-collar occupations

The OCSF job-level data show that, contrary to comparisons based on overall averages or broad occupational groups, private industry paid better for virtually all professional and administrative occupational job levels and for the majority of technical and clerical job levels. For blue-collar workers, the situation was mixed.

Twenty-two white-collar occupations from the professional, administrative, technical, and clerical categories provided pay data for both State and local governments and private industry. (See table 1.) Of the 80 comparisons that were possible among the various white-collar job levels, private industry paid better than State and local governments in 4 out of every 5 instances.

The following tabulation summarizes, by occupational category, the number of white-collar job levels for which private industry, on the one hand, or State and local governments, on the other, had the pay advantage:

Exhibit 1. Occupations and number of job levels, Occupational Compensation Survey Program					
Occupation	Number of levels	Occupation	Number of levels	Occupation	Number of levels
Professional		Clerical		Protective services	
Accountant ¹	6	Accounting clerk ¹	4	Corrections officer	1
Public accountant	4	General clerk ¹	4	Firefighter	1
Attorney ¹	6	Order clerk	2	Police officer, uniformed	2
Engineer ¹	8	Key entry operator ¹	2		
Administrative		Maintenance and tool room		Material movement and custodial	
Budget analyst ¹	4	Personnel assistant ¹	4	Forklift operator	1
Budget analyst/supervisor ¹	2	Secretary ¹	5	Guard ¹	2
Buyer/contracting specialist ¹ ..	5	Word processor ¹	3	Janitor ¹	1
Computer programmer ¹	5	Switchboard operator	1	Material-handling laborer ¹	1
Computer systems analyst ¹	5	Receptionist		Order filler	1
Computer systems analyst supervisor/manager ¹	4	General maintenance worker ¹ ...	1	Shipping/receiving clerk ¹	1
Personnel specialist ¹	6	Maintenance electrician ¹	1	Truck driver: ¹	
Personnel supervisor/manager ¹	4	Maintenance electronic technician ¹	3	Light-duty trucks	
Tax collector	3	Maintenance electronic technician ¹	1	Medium-duty trucks	1
		Maintenance machinist ¹	1	Heavy-duty trucks	1
Technical		Maintenance mechanic/machinery ¹	1	Tractor trailer trucks	1
Computer operator ¹	5	Maintenance mechanic/motor vehicle ¹	1	Warehouse specialist ¹	1
Drafter ¹	4	Maintenance pipefitter ¹	1		
Engineering technician ¹	6	Tool and die maker	1		
Civil engineering technician ¹ ..	6				

¹ Occupation providing publication-quality data for both State and local governments and private industry, for some or all levels.

	Total	Profes- sional	Admini- strative	Tech- nical	Clerical
Private industry advantage:					
Total number of occupations	63	15	26	10	12
Number with advantage of 10 percent or greater	25	8	13	2	2
State and local government advantage:					
Total number of occupations	16	0	1	4	11
Number with advantage of 10 percent or greater	0	0	0	0	0

The differences in pay between the two sectors were most pronounced in the higher paid professional and administrative jobs, where the private sector paid better for 41 of the 43 job levels reported.

Among *professional and administrative occupations*, for almost every job level compared, private industry paid workers more than State and local governments did. Indeed, for every occupation except budget analyst, the private industry pay advantage was at least 10 percent¹⁵ for at least one job level. Private industry paid a premium of 10 percent to 19 percent for entry-level workers in 6 of the 11 professional and administrative occupations. Often, the private industry pay advantage in an occupation rose as duties and responsibilities increased. The advantage was highest for attorneys and personnel supervisors/managers, exceeding 26 percent at the highest job levels. Among the professional and administrative occupations, State and local government pay approached private industry pay only for budget analysts and personnel specialists.

Among *technical and clerical occupations*, private industry held the pay advantage for three-fifths of job levels reported, paying as high as 19 percent more than the public sector in two instances. State and local government employees enjoyed pay advantages for the remaining two-fifths of the levels. Instances of public sector pay advantage were wide ranging, occurring in at least one job level for 8 of the 10 technical and clerical occupations, but the advantages were modest, never exceeding 8 percent.

For the white-collar occupations in general, as the level of each job's duties and responsibilities increased, private sector pay increased faster than public sector pay. As a result, private industry pay advantages usually topped out at the highest job level compared. The increases in the private sector pay advantage reported for accountants and personnel supervisors/managers were typical. Even in occupations in which State and local governments paid better for at least one

job level, this pattern was sometimes evident. For example, pay for general clerks was better in State and local governments at the entry level, but the advantage decreased through the next two job levels, until private industry paid better at the highest job level for general clerks.

Clearly, these comparisons of occupational pay data show that if two persons are performing the same *white-collar* occupation, with one person working in State or local government service and the other in private industry, it is likely that the person working in private industry would be paid more, on average—particularly, the job level data show, in the higher job levels.

Comparisons in white-collar occupations

Within each occupation surveyed, job leveling allowed the OCSF to link the pay data for each worker to the worker's duties and responsibilities and then to aggregate workers with similar duties and responsibilities into the same job level. Job leveling also allowed the Bureau to compare the pay of workers in different occupations when the workers were performing work with similar duties and responsibilities.

Although table 1 allows comparisons between job levels within each occupation, it cannot be used to compare pay rates from one occupation to another. This is because job levels with the same numerical designation do not necessarily correlate with one another. For example, one cannot compare engineers at level V with civil engineering technicians at level V: the engineer V position requires much more education, skill, and experience. To compare pay rates between two occupations, one must be able to control for differences in duties and responsibilities by holding the job requirements of each occupation the same. The design of the OCSF allows one to do just that.

Because the OCSF data are used to compare Federal pay with non-Federal pay for like occupations, most of the white-collar jobs studied were designed to equate with specific jobs found on the Federal General Schedule (GS). Using this feature allows one to organize specific occupations in a way that facilitates comparisons of private pay with pay in State and local governments.¹⁶ The Federal Government devised the *Factor Evaluation System* to classify nonsupervisory positions into 15 salary grades, designated as GS-1 through GS-15. Nine factors are used in the evaluation:

- Knowledge required by the position
- Supervisory controls
- Guidelines
- Complexity
- Scope and effect
- Personal contacts
- Purpose of contacts

Table 1. Private industry pay advantage over State and local governments, selected professional, administrative, technical, and clerical occupations, by job level, 1993

(In percent)

Occupation	Job level					
	I	II	III	IV	V	VI
Professional and administrative						
Accountant	2	6	5	11	13	—
Attorney	19	18	21	26	—	—
Engineer	8	2	5	8	10	18
Budget analyst	—	1	1	2	....	....
Budget analyst supervisor	13	11	....	....	....	....
Buyer/contracting specialist	6	6	17	9	—	—
Computer programmer	17	10	7	5	—	....
Computer systems analyst	10	2	10	6	—	....
Computer systems analyst supervisor/manager	14	11	8	—	....	....
Personnel specialist	0	-2	1	8	12	—
Personnel supervisor/manager	15	18	32	—	....	....
Technical and clerical						
Computer operator	-4	2	5	3	—	....
Drafter	13	-2	1	—	....	....
Engineering technician	—	2	7	0	—	—
Engineering technician, civil	-6	-3	9	8	21	—
Accounting clerk	1	-4	-3	9	....	....
General clerk	-8	-7	-3	5	....	....
Key entry operator	-3	2	....	....	....	....
Personnel assistant	-1	1	-2	1	....	....
Secretary	9	7	7	9	11	....
Switchboard operator/receptionist	-4	....	....	....	....	....
Word processor	-1	-2	19	....	....	....

NOTE: Negative value indicates State and local government pay exceeded private industry pay. Dash indicates data not available simultaneously for both State and local governments and private industry. Comparisons were not possible for any ocsp occupations at job levels VII and VIII.

- Physical demands
- Work environment

A gs grade includes all Federal positions (in different occupations) that require equivalent qualifications and that share the same level of difficulty and responsibility.

To find where the various job levels of a certain occupation fall along the Federal gs, one first matches the duties and responsibilities of the occupation's first level with the gs grade requiring the same level of duties and responsibilities. Once that point is established, the rest of the occupation's job levels will match gs grades in sequence.¹⁷ Jobs that require little specific education or experience (for example, general clerk or accounting clerk) match ocsp level I with the lowest two gs grades. But when an entry-level position requires some experience or technical training (as, for instance, drafter and engineering technician do), level I will correlate with the gs-3 or gs-4 level.

Typically, occupations requiring a baccalaureate degree (such as accountant and engineer) match their level I positions at gs-5, and occupations requiring advanced degrees (for example, attorney) match their level I at gs-9. Finally, some occupations (budget analyst supervisor, personnel su-

ervisor/manager, and computer systems analyst supervisor/manager) advance out of other occupations and begin matching the gs at levels gs-11 and gs-12.

Table 2 shows occupations for which the ocsp job levels match the gs levels. For some job levels, data on pay were not available because the data either did not provide statistically reliable results or, possibly, disclosed individual establishment data.¹⁸ Eighteen of 97 job levels, spread across 14 ocsp occupations, did not yield publishable wage rates for State and local government workers. (See table 3.) Accordingly, no comparison could be made between the public and private sectors for these job levels. In addition, this article does not examine pay for 4 occupations (tax collector, corrections officer, firefighter, and police officer) found almost exclusively in the public sector; 4 occupations (public accountant, tool and die maker, forklift operator, and order filler) found almost exclusively in the private sector; and 1 occupation (switchboard operator/receptionist) that provided data for both

sectors, but that has no corresponding gs grade.

Table 3 shows the private industry pay advantage for ocsp job levels, arranged by gs grade. (For example, accountant I equates to gs grade 5, and private industry pay rates averaged 2 percent higher than those of State and local governments for accountant I.) Consider the ocsp occupations that equate to the first seven gs grades. Below the gs-4 equivalent, State and local governments often paid better than private industry. At gs-4, half the jobs paid a little better in private industry, and half paid a little better in State and local governments. Above gs-4, the private sector begins to pay a little better for more than half the jobs. At gs-7, only 1 in 10 jobs paid better in State and local governments. At gs-8 and above, the private sector paid better for every ocsp job—indeed, more than 10 percent better for 18 of 34 jobs. And the advantage was better than 15 percent for 11 of these jobs, rising to 32 percent for personnel managers matching the gs-13 level. Clearly, the data show that the better paid the job, the greater is the private sector pay advantage.

Government pay compression

As seen in table 3, at the lowest paying jobs, State and local governments often paid the same as or better than private in-

dustry. But as pay rose, the private sector paid increasingly better. This is characteristic of a phenomenon known as *pay scale compression*. According to the theory behind this phenomenon, when public sector pay scales are created, the gaps in pay between State and local governments on the one hand and private industry on the other, if they exist, are about the same throughout the scale. But over time, pay rates in private industry rise faster than those in State and local governments, especially at the equivalents of the upper levels of the GS pay scale.¹⁹

To bring State and local government pay back in line with that of private industry, public officials periodically raise the pay of their workers. But, according to Walter Fogel and David Lewin,²⁰ officials who set pay rates in the public sector are subject to political pressures exerted by public employees at the ballot box. Fearing a backlash at the polls, these officials agree to support higher pay for public employees, but pragmatically target pay raises at the lower paid jobs, for two reasons. First, because there are more public employees in the lower grades than in the higher grades (see the following tabulation, which shows the cumulative percent of employment in State and local governments for selected jobs studied in the OCSF, by GS grade level), targeting the response at the lower job levels covers a high percentage of public sector voters.

GS grade level	Cumulative percent of workers	GS grade level	Cumulative percent of workers
1	1	7	80
2	7	8	80
3	30	9	89
4	52	11	96
5	66	12	99
6	72	15	100

Second, many voters do not hold highly paid managerial and professional workers in high regard, and granting them pay raises would alienate this block of voters. Over time, the lower graded workers are given pay raises, while the higher graded workers are given smaller raises or not given raises at all. Thus, pay at the lower job levels rises more quickly than pay at the higher job levels.

Once a compressed pay scale is in place, even a uniform partial pay adjustment applied equally at all job levels exacerbates the compression. This is because such an adjustment has a large impact on the pay gap for a job for which the private-public sector gap is small, but a small impact on the pay gap for a job for which the gap is large. For instance, if the pay for all the State and local government jobs surveyed by the OCSF were increased by 2 percent, an engineer II would

Table 2. Occupational Compensation Survey Program job levels matched to Federal General Schedule (GS) grade levels

Occupation	GS level														
	1	2	3	4	5	6	7	8	9	11	12	13	14	15	
Professional and administrative															
Accountant	I	....	II	....	III	IV	V	VI	....	....
Attorney	I	II	III	IV	V	VI	
Engineer	I	....	II	....	III	IV	V	VI	VII	VIII	
Budget analyst	I	....	II	....	III	IV	....	....	....	....
Budget analyst supervisor	I	II	....	....	....
Buyer/contracting specialist	I	....	II	....	III	IV	V	....	....	....
Computer programmer	I	....	II	....	III	IV	V	....	....	....
Computer systems analyst	I	II	III	IV	V	....
Computer systems analyst supervisor/manager	I	II	III	IV	
Personnel specialist	I	....	II	....	III	IV	V	VI	....	....
Personnel supervisor/manager	I	II	III	IV	....
Technical and clerical															
Computer operator	I	II	III	IV	V	....	....	....	....	....	....
Drafter	I	II	III	....	IV	....	....	....	....	....	....	....
Engineering technician	I	II	III	....	IV	....	V	VI	....	....	....	....
Engineering technician, civil	I	II	III	....	IV	....	V	VI	....	....	....	....
Accounting clerk	I	II	III	IV	....	....	....	....	....	....	....	....	....
General clerk	I	II	III	IV	....	....	....	....	....	....	....	....	....	....
Key entry operator	I	II	....	....	....	....	....	....	....	....	....	....	....
Personnel assistant	I	II	III	IV	....	....	....	....	....	....	....	....
Secretary	I	II	III	IV	V	....	....	....	....	....	....
Word processor	I	II	III	....	....	....	....	....	....	....	....	....

almost reach comparability with his or her private industry counterpart, but the State and local government engineer VI would still be 16 percent behind.

Comparing the differences in pay among job levels matched to the GS, one sees that the OCS&P data generally support the theory of pay compression for State and local government workers: the private industry pay advantage is less for the lower GS grades than the higher ones. When the private industry pay advantages for all the OCS&P jobs matching each GS grade are averaged²¹ (see chart 1), the numbers show that the pay advantage rose increasingly in favor of private industry: below GS-4, State and local government workers enjoyed the advantage; above GS-4, private industry paid better than State and local governments.

On an occupational basis, however, the argument for pay compression is less well substantiated. For some occupations, such as accountant, attorney, engineer, and personnel supervisor/manager, the data appear to support pay compression: the private sector pay advantage indeed rises with grade level. But for other occupations, such as computer programmer, computer systems analyst, and computer systems analyst supervisor/manager, comparisons do not show any wage compression.

Average pay by occupation

Up to now, this article has compared the relative difference in pay between the public and private sector for each job level, without regard to the actual dollar amount of the average pay upon which all the relative pay differences are based. But when the average dollar amounts are compared for white-collar occupations, the following additional insights are gained (see table 4):

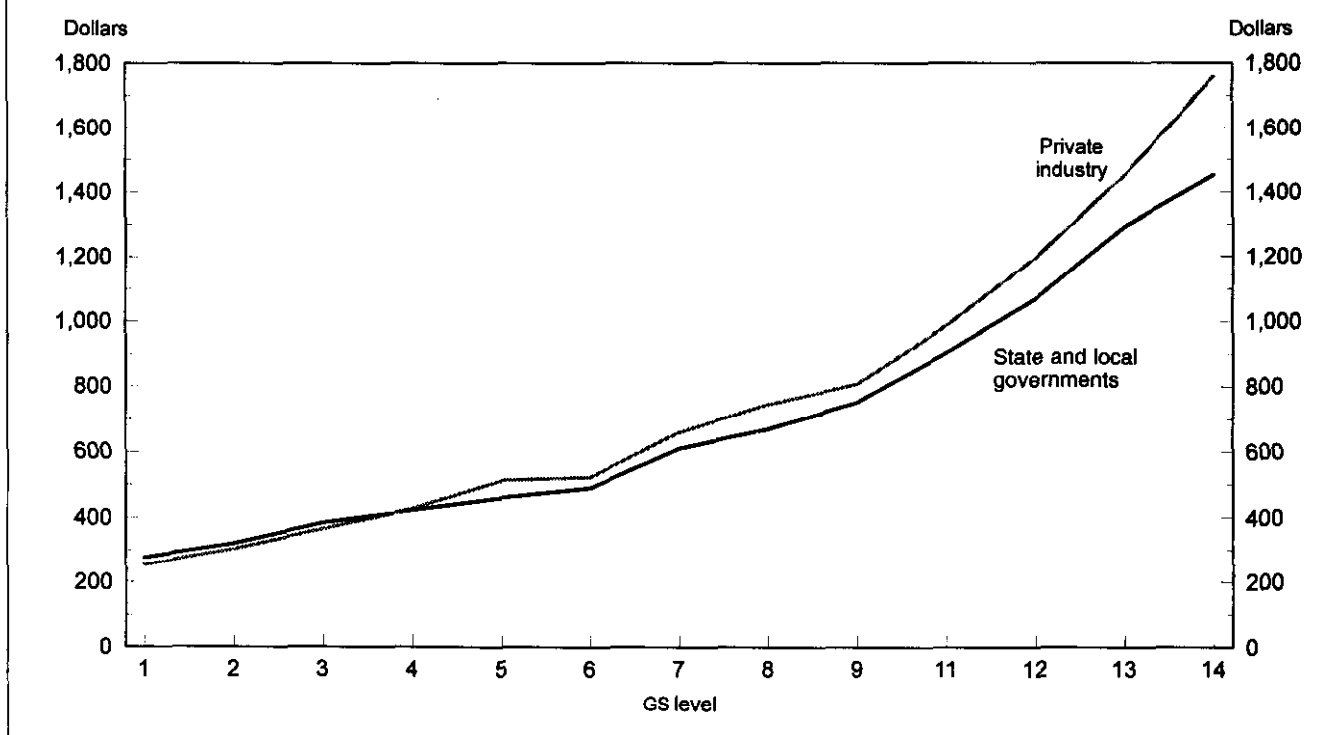
- Among all occupational job levels corresponding to any given GS grade, pay varied by occupation.
- Among GS grades with four or more matching jobs, the best paying occupations in the public sector paid an average of 22 percent more than the lowest paying jobs; in the private sector, the average was 33 percent better.
- Some occupations tended to pay better than others across a range of GS grades. Engineers, for example, were paid better than accountants for every grade from GS-5 through GS-11 in both the public and private sectors.
- Typically, the best paid occupation at a given GS grade was paid more than the lowest paid occupation in the next higher GS grade.

Table 3. Private Industry pay advantage over State and local governments, 1993
[In percent]

Occupation	Federal General Schedule (GS) grade level													
	1	2	3	4	5	6	7	8	9	11	12	13	14	15
Professional and administrative														
Accountant	2	....	6	....	5	11	13	—	....	....
Attorney	19	18	21	26	—	—
Engineer	8	....	2	....	5	8	10	18	—	—
Budget analyst	—	1	....	1	2	....	....	....	....
Budget analyst supervisor	13	11	....	....	....
Buyer/contracting specialist	6	....	6	....	17	9	—	....	....	....
Computer programmer	15	....	10	....	7	5	—	....	....	....
Computer systems analyst	10	2	10	6	—	....
Computer systems analyst supervisor/manager	14	11	8	—
Personnel specialist	0	....	-2	....	1	8	12	—	....	....
Personnel supervisor/manager	15	18	32	—	....
Technical and clerical														
Computer operator	-4	2	5	3	—	....	....	....	....	....	....
Drafter	13	-2	1	....	—	....	....	....	....	....	....	....
Engineering technician	—	2	7	....	0	....	—	—	....	....	....	....
Engineering technician, civil	-6	-3	9	....	8	....	21	—	....	....	....	....
Accounting clerk	1	-4	-3	9	....	....	....	....	....	....	....	....	....
General clerk	-8	-7	-3	5	....	....	....	....	....	....	....	....	....	....
Key entry operator	-3	2	....	....	....	....	....	....	....	....	....	....	....
Personnel assistant	-1	1	-2	1	....	....	....	....	....	....	....	....
Secretary	9	7	7	9	11	....	....	....	....	....	....
Word processor	-1	-2	19	....	....	....	....	....	....	....	....	....

Note: Negative value indicates State and local government pay exceeded private industry pay. Dash indicates data did not meet publication criteria.

Chart 1. Average weekly pay in State and local governments and in private industry, by Federal General Schedule (GS) grade level, 1993



One could conclude from these data that a person's choice of occupation affects his or her earnings throughout the person's career.

Blue-collar occupations

Thirteen blue-collar occupations spanning 17 levels of duty and responsibility provided data on pay for both private industry and State and local governments. The prevalence of the private sector pay advantage seen in white-collar jobs did not hold for the blue-collar jobs: private industry paid better for slightly more than half of the job levels reported, State and local governments for slightly less than half. (See table 5.) Because most blue-collar occupations studied have a single level, no interoccupational job level comparisons are possible. In conclusion, blue-collar workers in private industry are just as likely to be paid less than State and local government workers as they are to be paid more.

Future research

This article has focused on national averages, but the ocsb data base is particularly rich with detail on localities. Examining data characteristics below the national level is the next

logical step. Comparing rates locality by locality, for example, may answer the following questions:

- Do the geographic distributions of private industry and government employment differ?
- Do pay rate comparisons vary by local labor markets, and are geographic pay patterns different for blue-collar workers than for white-collar workers? and
- Are the highly graded jobs in private industry concentrated in high-paying metropolitan areas, skewing national comparisons with State and local governments?

A cursory look at the data suggests that, on an area-by-area basis, the results can vary dramatically from the national averages. For example, nationwide, private industry pays a little better (5 percent) than State and local governments do for the engineer III job. However, in the Richmond-Petersburg, Virginia, area, the private industry advantage is 36 percent, and in Indianapolis, it is 26 percent, while in Oakland, California, and the Nassau-Suffolk Counties, New York, area, the public sector has the advantage by 15 percent and 14 percent, respectively.

Occupational pay data for the jobs studied in this article are available for private industry and State and local govern-

Table 4. Average weekly pay in State and local governments and in private industry, selected occupations, 1993

Occupation	Federal General Schedule (GS) grade level														
	1	2	3	4	5	6	7	8	9	11	12	13	14	15	
State and local governments															
Professional and administrative:															
Accountant	491	....	560	....	709	873	1,097	—	....	....
Attorney	677	857	1,087	1,336	....	....
Engineer	612	....	734	....	841	989	1,157	1,292	....	....
Budget analyst	—	602	....	782	899	....	....	....	....
Budget analyst supervisor	943	1,102	....	....	....
Buyer/contracting specialist	468	....	593	....	717	914	—	....	....	....
Computer programmer	461	....	559	....	668	813	—	....	....	....
Computer systems analyst	668	844	933	1,157	....	....
Computer systems analyst supervisor/manager	981	1,165	1,452	—	
Personnel specialist	498	....	581	....	737	902	1,107	—	....	....
Personnel supervisor/manager	906	1,132	1,269	—	....
Technical and clerical:															
Computer operator	348	413	513	626	—	....	....	....	....	....	....
Drafter	343	481	592	....	767	....	....	....	....	....	....	....
Engineering technician	—	475	558	....	713	....	—	—	....	....	....	....
Engineering technician, civil	336	429	519	....	657	....	743	—	....	....	....	....
Accounting clerk	288	363	439	482	....	....	....	....	....	....	....	....	....
General clerk	277	324	394	454	....	....	....	....	....	....	....	....	....	....
Key entry operator	317	387	....	....	....	....	....	....	....	....	....	....	....
Personnel assistant	318	388	481	534	....	....	....	....	....	....	....	....
Secretary	347	418	486	562	671	....	....	....	....	....	....
Word processor	363	446	472	....	....	....	....	....	....	....	....	....
Average pay per grade	277	321	385	424	461	491	611	671	752	903	1,069	1,293	1,452	—	
Private Industry															
Professional and administrative:															
Accountant	499	....	594	....	747	966	1,245	1,545	....	....
Attorney	807	1,007	1,319	1,684	2,084	2,602	
Engineer	659	....	750	....	879	1,064	1,277	1,521	1,766	2,081	
Budget analyst	513	....	607	....	792	913	....	....	....	....
Budget analyst supervisor	1,064	1,219	....	....	....
Buyer/contracting specialist	497	....	628	....	836	996	1,211	....	....	....
Computer programmer	531	....	615	....	718	855	993	....	....	....
Computer systems analyst	732	861	1,025	1,226	1,487	....
Computer systems analyst supervisor/manager	1,116	1,288	1,575	—	
Personnel specialist	497	....	572	....	741	973	1,235	1,533	—	....
Personnel supervisor/manager	1,045	1,331	1,674	2,082	....
Technical and clerical:															
Computer operator	333	423	539	647	762	....	....	....	....	....	....
Drafter	386	470	600	....	759	....	....	....	....	....	....	....
Engineering technician	—	486	596	....	716	....	833	974	....	....	....	....
Engineering technician, civil	315	415	568	....	710	....	899	1,029	....	....	....	....
Accounting clerk	291	350	426	526	....	....	....	....	....	....	....	....	....
General clerk	254	302	384	476	....	....	....	....	....	....	....	....	....	....
Key entry operator	307	394	....	....	....	....	....	....	....	....	....	....	....
Personnel assistant	314	390	473	542	....	....	....	....	....	....	....	....
Secretary	379	447	520	611	745	....	....	....	....	....	....
Word processor	360	435	564	....	....	....	....	....	....	....	....	....
Average pay per grade	254	303	366	428	513	523	660	746	807	985	1,196	1,451	1,758	2,182	

Note: Dash indicates data did not meet publication criteria.

Table 5. Private industry pay advantage over State and local governments in blue-collar jobs, 1993

[In percent]

Maintenance and toolroom occupations	Job level			Material movement and custodial occupations	Job level		
	I	II	III		I	II	III
General maintenance worker	-10	....	....	Guard	-32	0	....
Maintenance electrician	2	....	....	Janitor	-21	....	....
Maintenance electronic technician	—	8	-1	Material-handling laborer	2	....	....
Maintenance machinist	-16	....	....	Shipping/receiving clerk	4	....	....
Maintenance mechanic, machinery	13	....	....	Warehouse specialist	1	....	....
Maintenance mechanic, motor vehicle	4	....	....	Truck driver:	....	....	....
Maintenance pipefitter	8	....	....	Light-duty trucks	-4	....	....
				Medium-duty trucks	24	....	....
				Heavy-duty trucks	-6	....	....
				Tractor trailer trucks	-17	....	....

NOTE: Negative value indicates State and local government pay exceeded private industry pay. Dash indicates data did not meet publication criteria.

ments for more than 40 major metropolitan areas across the country. Comparative data for a subset of these jobs are available for other communities. Research into additional factors (or combinations of factors) that may affect these comparisons, such as the type of private industry or government and the size of the establishment, is also possible using the OCSF data base. □

Footnotes

¹ Wendell Cox and Samuel A. Brunelli, "America's Protected Class III, the Unfair Pay Advantage of Public Employees," *The State Factor*, April 1994, pp. 1-34.

² Dale Belman and John Heywood, "The Truth about Public Employees: Underpaid or Overpaid?" *Briefing Papers*, Economic Policy Institute, April 1993, pp. 1-23.

³ *Ibid.*

⁴ The CPS is conducted monthly by the Bureau of the Census for the Bureau of Labor Statistics. It is a sample survey of people 16 years and older and provides comprehensive data, including usual weekly earnings, on the labor force, classified by such characteristics as age, sex, race, family relationship, marital status, occupation, and industry attachment. The CPS is collected by trained interviewers from a sample of 60,000 households located in 729 sample areas chosen to represent all counties and independent cities in the 50 States and the District of Columbia.

⁵ The U.S. Department of Commerce tabulates the National Income and Product Accounts using data from the BLS Current Employment Statistics establishment survey. In cooperation with State agencies, the Bureau compiles data monthly, based upon establishment records from mail questionnaires (the BLS Form 790 series) and telephone interviews. Establishments reporting on Form 790 are classified into industries on the basis of their principal product or activity, as determined by annual sales volume. The survey provides industry data on nonfarm wage and salary employment, average weekly earnings, and average hourly earnings for the Nation, as well as for States and metropolitan areas.

⁶ Sharmila Choudhury, "New evidence on public sector wage differen-

tials," *Applied Economics*, March 1994, p. 259 ff.

⁷ The CPS broke the workers out into the large occupational categories of professional, manager, clerical, operatives, and sales, but comparisons are not possible because workers were classified into occupations differently in the two sectors.

⁸ Wendell Cox and Samuel A. Brunelli, "America's Protected Class: Why Excess Public Employee Compensation Is Bankrupting the States," *The State Factor*, February 1992, pp. 1-32.

⁹ See Cox and Brunelli, "Unfair Pay Advantage."

¹⁰ Belman and Heywood, "The Truth about Public Employees," p. 1.

¹¹ Bradley R. Braden and Stephanie L. Hyland, "Cost of employee compensation in public and private sectors," *Monthly Labor Review*, May 1993, pp. 14-21.

¹² In addition to wages, tips are frequently paid to workers in these industries; however, the Employment Cost Index excludes tips in calculating average hourly compensation because they are not part of the employer-paid compensation package. The OCSF collects only straight-time hourly wages, excluding tips and other nonwage compensation.

¹³ The OCSF excludes firms employing fewer than 50 workers, private households, agriculture, the Federal Government, and self-employed persons from its purview.

¹⁴ Data for surveyed occupations not pertinent to the article are available by calling the OCSF information line at (202) 606-6219.

¹⁵ The reader is cautioned not to rely upon relatively small differences between public and private sector pay rates, due to possible sampling error.

¹⁶ Although the data for switchboard operator/receptionist permitted a public-private sector comparison (see table 4), the occupation has no GS equivalent and is excluded from discussions that compare OCSF occupations with GS occupations. The Office of Personnel Management determines which GS grades each survey job level matches.

¹⁷ General Schedule grades 6 and 8 are skipped for many of the white-collar occupations studied. Also, no OCSF occupation job level matched GS grade 10.

¹⁸ To obtain sensitive economic data that otherwise might not be available, it is the policy of the Bureau of Labor Statistics to hold strictly confidential all data on compensation reported by establishments. Data will not be released in any form that will allow the individual establishment to be identified.

¹⁹ Anecdotal evidence suggests that public sector pay scales may be affected by ceilings which limit public sector pay to the amount paid the particular governmental branch's chief executive officer (for example, the mayor or Governor), but such data were not collected by OCSF, and no listings of pay ceilings were found in the literature.

²⁰ Walter Fogel and David Lewin, "Wage Determination in the Public Sector," *Industrial and Labor Relations Review*, April 1974, pp. 410-31.

²¹ The pay advantage average was computed by multiplying the average pay advantage for each job by the number of workers in that job, summing the weighted averages for each GS grade, and dividing the result by the total employment for each GS grade.