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Committee on Oversight and Government Reform
Subcommittee on Federal Workforce, U.S. Postal Service
and Labor Policy

"Are Federal Workers Underpaid"

Andrew G. Biggs

Resident Scholar

American Enterprise Institute

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The views expressed in this testimony are those of the author alone and do not necessarily represent those of the American Enterprise Institute.

Chairman Ross, Ranking Member Lynch and Members of the Committee. Thank you for offering me the opportunity to testify with regard to federal employee compensation.

My name is Andrew Biggs and I am a resident scholar at the American Enterprise Institute. However, the views I express today are my own and do not represent those of AEI or any other institution.

My testimony today is based upon joint research with Jason Richwine of the Heritage Foundation. A copy of our working paper has been enclosed with my testimony.[1]

We limit our analysis to one question: Do federal employees on average receive greater compensation than these individuals could receive in the private sector? Our answer, which is consistent with several decades of economic research, is yes. We will briefly outline federal pay with regard to salaries, benefits, and job security.

Before beginning, however, it is important to note what this analysis does *not* say: it does comment on the productivity of federal employees or whether the jobs they perform are worthwhile, nor does it comment on whether the number of federal employees is larger or smaller than is needed to perform the assigned tasks. It does not comment on the work or dedication of federal government employees.

It merely asks an empirical question: whether federal employees receive higher or lower pay than those employees could themselves garner in alternate employment in the private sector.

Salaries

Some have argued that federal employees receive total compensation that is twice the level of the average private worker. This is true but misleading, as it ignores crucial differences between the federal and private workforces. Federal employees on average are more educated and experienced than private sector workers and so in a competitive market *should* receive higher pay. The question is, how *much* higher?

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[1] Biggs, A. and Richwine J. "Comparing Federal and Private Sector Compensation." AEI Economic Policy Working Paper 2011-02. March 4, 2011. http://www.aei.org/paper/100203

Labor economists' standard method for making apples-to-apples wage comparisons is regression analysis, which allows economists to control for the "human capital" – that is, the earnings-related skills and personal characteristics – of workers in each sector. The Congressional Budget Office has termed the human capital approach "the dominant theory of wage determination in the field of economics,"[2] and for good reason. Similar methods have been utilized for studies of the union pay premium and pay discrimination by race or gender. This basic approach is familiar to and accepted by nearly every trained economist.

By controlling for experience, education, geographic location and other factors, economists can isolate the effects of federal employment on salaries. In the past, many studies have been conducted on federal pay. These studies, which are summarized in the 1999 Handbook of Labor Economics, generally find a federal salary premium of 10 to 20 percent over otherwise similar private sector employees.

We updated this work using data from the 2006 through 2010 editions of the Census Bureau's Current Population Survey. We compare federal employees only to workers at large private sector firms, which offer the best salaries and benefits. We find a federal pay premium of 14 percent over similar private sector employees.

The federal pay premium is largest for workers with less education and those with long job tenure. For instance, federal employees with only a high school degree receive a salary premium of over 22 percent while those with graduate degrees receive a salary premium of only 3 percent.

However, it is possible that this standard human capital method ignores certain relevant differences between workers. For instance, CPS educational data tell us only if an individual has a certain degree, not the quality of the college he or she attended. Similarly, perhaps federal workers are more highly motivated than private employees, an attribute that survey data cannot capture.

As an alternative, we used data from the Survey of Income and Program Participation (SIPP) which allowed us to follow individual workers' salaries over time, tracking how their own pay changed as they changed jobs. This method does not require us to control for individual

[2] Congressional Budget Office. "Comparing the Pay of Federal and Nonfederal Law Enforcement Officers." August, 2005.

differences between workers; rather it compares pay for the *same* worker when that worker held federal and private sector jobs. Workers who found a new job in the federal government received salaries 8 percent higher in their first year than those who found new jobs in the private sector. This finding confirms our prior results, which show a small pay premium for new federal employees, rising as job tenure increases.

Estimates from the President's Pay Agent

You may be aware of reports from the President's Pay Agent – not an actual person, but a function headed by the Secretary of Labor and directors of the Office of Management and Budget and Office of Personnel Management – which indicate that federal jobs pay roughly 25 percent *less* than similar private jobs. The Pay Agent's method assigns a General Schedule level to a variety of private sector jobs within a broad set of occupational categories. The salaries of these private sector positions are then compared to similar federal jobs. The Pay Agent's method tends to find that private sector jobs pay more than federal jobs with the same assigned GS level.

How do these results match up with the economic approach that finds federal workers to receive higher pay? The Pay Agent approach differs from the economic method in that the Pay Agent compares pay for jobs while economists compare pay for people. As the Congressional Budget Office has pointed out, [3] the jobs-based approach suffers from three significant weaknesses:

First, the inherently subjective nature of determining the precise GS level that should be assigned to a given private sector job. How do we truly know, for instance, that a given private position is equivalent to a GS-8 and not a GS-9?

Second, the omission of fringe benefits and other relevant employment characteristics such as job security and flexibility, which can significantly affect the market wage demanded for a given job; and

Third, the failure to account for differences in the experience and education of federal and private sector employees occupying the same job positions. A number of studies dating back to

[3] Congressional Budget Office. "Comparing the Pay of Federal and Nonfederal Law Enforcement Officers." August, 2005.

1984 have found that the federal government places workers in positions higher than these workers could hold in the private sector. A 2002 study of BLS occupational data found that "Federal workers have significantly fewer years of education and experience than private sector workers in the same level of responsibility in an occupation."[4] For instance, a senior accountant in the federal government might qualify only as a junior accountant in the private sector. As a result, lower salaries for federal jobs do *not* necessarily imply lower salaries for federal workers. This is why most economists reject the government's method in favor of person-to-person analysis.

Benefits

Fringe benefits are an important aspect of total compensation. We cannot make accurate public-private pay comparisons without accurately measuring the benefits that employees receive today and can expect to receive in the future.

The Office of Personnel Management reports that federal employees receive benefits equal to 36 percent of salaries, while the Bureau of Labor Statistics finds that benefits to private employees in large firms equal 49 percent of pay. This would seem to make federal benefits appear less generous.

But two issues stand out. First, OPM's benefit figures exclude the value of paid time off, overtime, and several other benefits. Paid time off alone is a large factor. According OPM data, federal employees on average use around 41 days of paid leave per year, 9 days more than in the private sector. Correcting for these omissions, federal benefits equal about 61 percent of salaries.

And second, OPM's pension figures are based on what employers contribute today, not what employees will receive in retirement. Due to different accounting conventions, employers with defined benefit pension contribute significantly less per dollar of future retirement benefits than do employers with defined contribution 401(k) plans. Without controlling for these different funding conventions we will understate defined benefit pension compensation, which is particularly important in the public sector.

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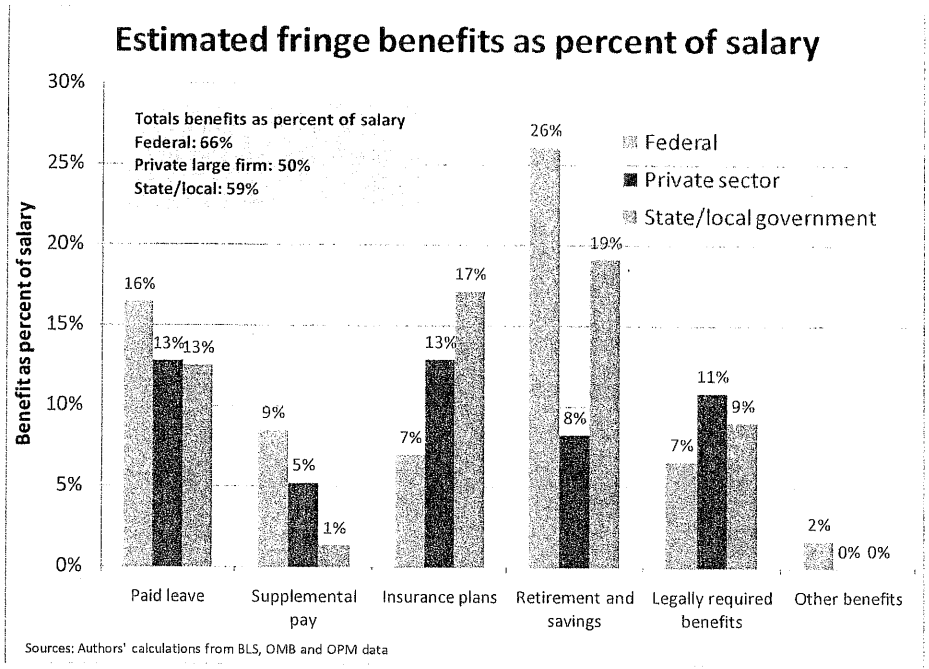
[4] Famulari, M. "What's in a Name? Title Inflation in the US Federal Government." Working paper. 2002. Revision requested by *Industrial and Labor Relations Review*.



Adjusting for these factors, federal employees receive total benefits equal to 66 percent of salaries while private sector benefits equal 50 percent of salaries. (For context, state and local government employees receive benefits equal to an average of 59 percent of salaries, though BLS figures do not include often-generous retiree health benefits paid at the state/local level.) When a federal salary premium of 14 percent is combined with a benefit premium of 33 percent, total federal salaries and benefits are roughly 25 percent above those similar private sector employees would receive.

Job security

Economists since Adam Smith have noted that positions with greater job security *should* pay lower salaries, just as safe investments like bonds pay lower returns than stocks. The BLS Job Openings and Labor Turnover Survey (JOLTS) reports that in any given year, federal workers are less than one-third as likely as private sector employees to be fired or laid off.

We estimate the value of job security, using the tools of financial economics to calculate the pay reduction a private sector worker would willingly accept to have the low discharge rates of federal employees. These calculations involve assumptions regarding the duration of unemployment, the level of unemployment benefits collected while unemployed, and the compensation of the new job the individual may find. We find that federal workers' job security is equivalent to an extra 29 percent of pay if we assume that federal employees, were they to work in the private sector, would be similar to other private sector workers in the probability and duration

of unemployment. Assuming, more conservatively, that federal employees, perhaps due to their greater education, would be half as likely as other private workers to be discharged from private employment, the job security pay premium equals 11 percent of compensation.

When salaries, benefits, and job security are properly valued, the total federal compensation package is worth upwards of 39 percent more than is paid to similar private sector workers. The total federal pay premium approaches $60 billion per year.

What to do?

Identifying the pay premium is far easier than fixing it. Simple pay freezes or furloughs are blunt instruments that will not get to the heart of the issue, as they do not address the often significant differences in the generosity of pay among different federal employees. Increased flexibility to raise salaries when demand for a given job is low and reduce salaries when demand for a position is high is one way to allow market information to flow into federal salary decisions. Likewise, it makes sense for certain federal benefits – in particular, retirement contributions and paid time off – to be brought more in line with private sector standards. But more broadly, federal pay must be made to reflect market conditions, not with a one-time adjustment but with fundamental reforms that work consistently into the future.

American Enterprise Institute for Public Policy Research

Comparing Federal and Private Sector Compensation

Andrew Biggs

American Enterprise Institute

Jason Richwine

Heritage Foundation

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Introduction

The seemingly excessive compensation of public sector employees was a major political issue during the 2010 election campaign, and the new Congress is now considering reforming the federal pay system. It is essential that lawmakers, political commentators, and voters know whether and to what extent federal workers are paid more than what they could earn in the private sector. Partisans on both sides of this issue have been given to extreme and unsupported claims. Politicians and journalists have exaggerated the federal-private pay disparity by comparing raw salary figures without taking into account the above-average skills of federal workers. Defenders of federal pay, particularly public sector unions, have claimed in turn that federal workers are *underpaid* and described evidence to the contrary as "lies" and "scapegoating."[1]

In response to both sides, we offer this careful analysis of federal compensation. Drawing on three decades of academic research, the latest Census Bureau micro data, official government reports, and standard economic tools, we document the extent to which federal workers are "overpaid" by private sector standards. We conclude that the total federal pay premium—combining cash wages, fringe benefits, and job security—is approximately 39 percent, or nearly $60 billion annually.

Cash Wages

Federal salaries are significantly higher on average than private sector salaries, but this kind of comparison is simplistic and misleading. Since federal workers have more skills and experience on average than private workers, we would expect federal salaries to be higher. The relevant question is whether federal workers earn more than *comparable* private sector workers.

The standard method in the academic literature for making apples-to-apples wage comparisons is regression analysis, which allows economists to control for the "human capital" – that is, the earnings-related skills and personal characteristics – of workers in each sector. The Congressional Budget Office has termed the human capital approach "the dominant theory of wage determination in the field of economics,"[2] and for good reason. Similar methods have been utilized for studies of the union pay premium and discrimination by race or gender. This basic approach is familiar to and accepted by nearly every trained economist. If federal salaries are still higher after controlling for a large set of earnings-related differences, then federal workers earn a wage premium—that is, they are overpaid relative to what they could earn in the private sector.

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[1] See comments from union leaders in Davidson, Joe. "Dissatisfaction in federal employee pay sign of disconnect." *Washington Post*, October 18, 2010, at *http://www.washingtonpost.com/wp-dyn/content/article/2010/10/18/AR2010101805719.html* (January 19, 2011).

[2] Congressional Budget Office. "Comparing the Pay of Federal and Nonfederal Law Enforcement Officers." August, 2005.

pay higher wages because they are more successful, that the federal government cannot be "successful" in any market sense, and therefore a firm size control is inappropriate. However, working at a large firm reflects to some extent an employee's preferences for whatever characteristics large firms tend to exhibit. If federal workers quit in favor of private sector jobs, they would likely choose a private firm that is above-average in size. For that reason, we believe controlling for firm size is the better choice for both wages and benefits. Excluding the firm size control would make the observed federal premium substantially *higher* than what we are reporting here.[7]

Some economists also control for union status, but we do not feel that is appropriate. Since union representation tends to increase pay but government's have direction regarding whether to allow unions or collective bargaining, Congress's decision to allow federal workers to unionize is in effect a policy decision that leads to increased compensation. One could argue that union membership, like firm size, is also a federal worker's revealed preference that he would continue to seek in the private sector. Unlike firm size, however, this preference could be driven mainly by the higher wages and benefits of unionized labor, which should be included in the federal premium. Controlling for union status would slightly lower our premium estimates but would not change any of our conclusions.

Table 1: Wage Regression Results, 2006-2010.

Independent Variable	Coefficient (%)
hours worked (per week)	1.4
experience (in years)	1.8
education (in years)	8.8
foreign-born	-7.4
married	20.1
Black	-14.1
Hispanic	-10.6
woman	-14.7
federal worker	**14.1**
state worker	-13.7
local worker	-6.4
Observations	285,874
Adjusted r-squared	0.471

Source: Authors' calculations from Current Population Survey.

Results and Conclusion. We regressed the log of annual earnings on the control variables listed above. The first column of Table 1 lists key independent variables, while the second column shows the percentage increase in wages associated with a one unit increase relative to the population average in each variable.[8] For example, an additional year of education for the average worker leads to an 8.8 percent increase in wages, all else equal.

The most important variable in the list for our purposes is federal government status. Even after controlling for observable skills and a detailed list of personal characteristics, federal workers earn about 14 percent more in wages than private sector workers. This conclusion is consistent with thirty years of academic research on the subject.

[7] Without a firm size control, the federal premium would be 21.9 percent. This is one of the few individual control variables that makes a substantial difference in our estimate. Removing controls for state of residence, for example, would change the premium by less than one percentage point.

[8] The displayed percentages are calculated by exponentiating the regression coefficient and subtracting one: EXP(coefficient) -1.

There are several reasons that this method has been, in the words of one study, "severely criticized" by economists.[11] The Congressional Budget Office has pointed to three main ones: First, the process involves "subjective choices regarding which grades and steps and which experience profiles to use for the comparisons." That is, different analysts may come to different conclusions regarding where to place a given private sector job on the federal GS scale. Second, the job-matching procedure measures only salaries, omitting any measurement of benefits, job security, and work conditions that determine the overall desirability of federal or private employment.

Third, and most importantly, the Pay Agent's approach fails to account for different skill levels that private and public workers may possess in seemingly similar jobs. More specifically, there is evidence that the federal government hires workers at higher positions than they could hold in the private sector and then promotes them more quickly as well. This means, for example, that a senior accountant in government might qualify only as a junior accountant in the private sector. This senior accountant would be "underpaid" compared to private sector employees only because he is under-qualified by private sector standards.

A study of BLS occupational data by Famulari (2002) finds that, "Federal workers have significantly fewer years of education and experience than private sector workers in the same level of responsibility in an occupation."[12] Famulari finds that these differences play out through federal hiring and promotion practices:

> The Federal government, particularly in Washington, DC, hires workers at initially higher levels of work. These differentials are so large that, even after a number of years on the job, private sector workers are employed at substantially lower levels of responsibility than the starting levels of responsibility for DC Federal government workers. In addition, the Federal government, particularly in DC, promotes workers more quickly than in the private sector, conditional on observed worker characteristics.

Famulari concludes that, "The large private sector premium paid to workers in an occupation and level is largely explained by the more valuable skills of private sector workers within an occupation and level."

A 1984 Congressional Budget Office study concluded that the average federal worker resides two-thirds of one pay grade above a similar private sector employee.[13] A 1997 academic study by Famulari found a larger gap of three-quarters of a grade.[14] The

[11] Krueger, Alan. "The Determinants of Queues for Federal Jobs." National Bureau of Economic Research. Working Paper 2499. January 1988.
[12] Famulari, M. "What's in a Name? Title Inflation in the US Federal Government." Working paper. 2002. Revision requested by *Industrial and Labor Relations Review*.
[13] Congressional Budget Office. "Reducing Grades of the General Schedule Workforce." September, 1984.

*value of past unfunded liabilities, the latter of which should n*ot be counted as employee compensation. On the other hand, NIPA data do not include the value of fringe benefits such as paid time off

We can do better. Our principal sources are data from the Office of Management and Budget (OMB) and the Office of Personnel Management (OPM), which we combine to provide a measure of total average federal fringe benefits that nearly matches the level provided in BLS data. For simplicity, benefits are expressed as a fraction of workers' wages. This makes total compensation equal to *salaries x (1 + benefits).*

Table 3. Non-wage benefits as a percentage of salaries, for private sector employees (all firms and large firms only) and state/local government employees, 2008.

	Percent of salaries		
	Private 500+	***State/ Local***	***Private (all)***
Total benefits	***49.3%***	***51.9%***	***41.8%***
Paid leave	***12.8%***	***12.5%***	***9.5%***
Vacation	*6.7%*	*4.4%*	*4.9%*
Holiday	*3.9%*	*4.1%*	*3.1%*
Sick leave	*1.6%*	*3.1%*	*1.2%*
Other paid leave	*0.4%*	*0.9%*	*0.3%*
Supplemental pay	***5.3%***	***1.4%***	***4.3%***
Overtime and premium	*1.6%*	*0.7%*	*1.5%*
Shift differentials	*0.7%*	*0.2%*	*0.4%*
Nonproduction bonuses	*3.0%*	*0.5%*	*2.5%*
Insurance plans	***12.9%***	***17.2%***	***10.8%***
Life insurance	*0.3%*	*0.4%*	*0.2%*
Health insurance	*12%*	*16%*	*10.1%*
Short-term disability insurance	*0.4%*	*0.1%*	*0.3%*
Long-term disability insurance	*0.3%*	*0.2%*	*0.2%*
Retirement and savings	***8.3%***	***19.1%***	***6.1%***
Defined benefit	*3.7%*	*10.5%*	*2.7%*
Defined contribution	*3.7%*	*1.3%*	*2.8%*
Legally required benefits	***10.9%***	***9.0%***	***11.8%***
Social Security and Medicare	*8.5%*	*7.1%*	*8.4%*
Social Security	*6.9%*	*5.5%*	*6.7%*
Medicare	*1.8%*	*1.6%*	*1.7%*
Federal unemployment	*0.1%*	*0.0%*	*0.2%*
State unemployment	*0.6%*	*0.2%*	*0.8%*
Workers' compensation	*1.6%*	*1.7%*	*2.4%*

Source: BLS, Employer Costs for Employee Compensation survey.

We begin with the principal benefit categories reported by BLS for private sector and state/local government workers in 2008. These include a number of principal benefit categories:

- Paid Leave;
- Supplemental Pay;
- Insurance Plans;
- Retirement and Savings;
- Legally Required Benefits; and
- Other Benefits

Each principal category then has several more detailed sub-categories. For instance, Paid Leave includes vacation, holiday, sick leave, and other paid leave.

Benefits for private sector employees in larger firms, state and local government employees, and all private sector workers are shown in Table 3. In total, private sector employees in large firms receive benefits equal to an average of 49 percent of wages, while state/local government employees receive benefits equal to 52 percent of pay. For context, private employees overall receive benefits equal to 42 percent of salaries, reflecting the less generous benefits from smaller private employers.

Calculating Federal Benefits. We now attempt to populate the BLS benefit categories with benefits for federal employees. Our first source of information is cost factors published by OMB in 2008

Force Statistics: Work Years and Personnel Costs, Fiscal Year 2005."[18] It provides useful data regarding paid time off, supplemental pay, and other areas. It does not appear to have been published subsequent to 2005, but it is unlikely that federal benefit costs have shifted significantly over the course of a few years. The figures reported below are for non-postal federal employees, although data for postal employees is also available.

Vacation: OPM reports that non-postal federal employees used an average of 20.1 days of annual leave in 2005, equal to 7.7 percent of base pay assuming a 260 day work year. However, this figure excludes lump sum payments for unused annual leave, which totaled 0.7 percent of direct pay in 2005. Total compensation via annual leave in 2005 therefore equaled 8.5 percent of direct pay. For private sector and state and local government employees the corresponding figures are 4.9 percent and 4.4 percent, respectively.[19] Thus, federal employees receive approximately three-quarters more vacation time than private workers with large firms.

Holidays: OPM reports that non-postal federal employees used an average of 8.9 holidays per year, which equals approximately 3.4 percent of federal salaries.[20] For private sector and state and local government employees the corresponding figures are 3.1 percent and 4.1 percent, respectively. Federal employees receive almost three times as many paid holidays as the typical private sector employee in a large firm.

Sick leave: OPM reports that federal employees used an average of 9.4 sick days per year. Assuming a standard work year of 52 five-day weeks, sick time would account for 3.6 percent of federal salaries.[21] This figure may understate effective compensation through sick days to the degree that unused sick days may be converted to pay at retirement.[22] For private sector and state and local government employees the corresponding figures are 1.2 percent and 3.1 percent, respectively. Sick leave used by federal workers is only slightly higher than state and local government employees, but three times higher than comparable private sector workers.

Overall, federal employees receive paid leave equal to approximately 16.5 percent of pay, versus 9.5 percent for the private sector and 12.5 percent for state/local government employees.

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[18] Available at http://www.opm.gov/feddata/html/wypc/2005/2005wypc.pdf; 2005 is the most recent year for which this publication is available online.
[19] OPM (2005), p. 66.
[20] OPM (2005), p. 66.
[21] OPM (2005), p. 66.
[22] Older federal employees under the CSRS retirement system have a greater ability to cash out unused sick days than younger employees covered by FERS, although recent steps have been taken to grant allow FERS employees

costs of the FERS and CSRS programs, equaling 14.6 percent of pay.[28] This disaggregation becomes important when the relative values of defined benefit and defined contribution pensions are adjusted for below. The defined contribution pension category includes the remaining 6.4 percent. This figure overstates true federal contributions to the Thrift Savings Plan, as it also includes the costs of accruing retiree health benefits. Again, however, these estimated disaggregations do not alter overall levels of non-wage compensation.

Given the differences in benefit categorizations between BLS and OMB/OPM, it is likely that small errors have entered these calculations, but it is unlikely that they alter the final benefits figure by more than a percent or two in either direction.

In sum, federal employees appear to receive non-wage benefits equal to approximately 61.2 percent of salaries, making benefits a significantly greater component of total compensation than for state and local government employees (51.9 percent) or average private sector employees (41.4 percent). However, these figures are not properly adjusted for the relative generosities of defined benefit and defined contribution pension plans. Failure to account for important differences in pension funding practices will lead to errors in comparing total pension compensation.

Making DB and DC pensions comparable. An important difference between public and private sector compensation is the predominance of traditional defined benefit (DB) pensions in the public sector versus 401(k)-type defined contribution (DC) plans in the private sector. All pay comparisons to date have failed to accurately capture certain distinctions between the two.

We cannot directly measure individuals' fringe benefits. Rather, we infer benefit levels by analyzing what employers pay to fund these benefits. For benefits consumed in the here and now – say, paid time off – this distinction is unimportant. But for pensions, which are funded today but received years or decades in the future, differences in employer funding practices can have large effects on the benefit levels we infer from those contributions.

Put simply, DB pensions use more aggressive assumptions for funding future benefits than do DC plans. This means that for any given dollar value of future retirement income, an employer with a DB plan will contribute less money today. If we fail to account for that fact, we will underestimate true benefits from DB plans. This is important, given that DB plans are predominant in the public sector but dying out in the private sector.

[28] See "Annual Report of the Board of Actuaries, Civil Service Retirement and Disability Fund Fiscal Year Ended September 30, 2009. September 30, 2009. The normal cost of the FERS program is measured at 12.3 percent of payroll while the normal cost of CSRS is 25.8 percent of payroll. As FERS constitutes 83.1 percent of total payroll, the weighted average is 14.6 percent of pay.

The adjustment factor, which is greater than 1 so long as the expected return exceeds the riskless return, is multiplied by each sector's employer contribution to DB pensions (Table 5). The resulting value equals the equivalent employer contribution were all workers to hold DC pensions.

The effect on overall benefits depends not only on the adjustment factor, but also on the size of the employer's contribution to DB pensions. State and local government employees have the largest adjustment factor at 1.70, which multiplied by the employer contribution of 10.5 percent of wages toward DB pensions generates an increase in implicit benefits equal to 7.3 percent of wages. Private sector employees have both the lowest adjustment factor (1.22) and the lowest contribution going to DB pensions (2.2 percent of salary), producing an implicit increase in compensation of only 0.4 percent of salary. Federal workers have an adjustment factor of 1.35 multiplied by the largest contribution toward DB pensions (14.6 percent of salary), producing an implicit increase in benefits of 5.1 percent of salary.

Table 5. Adjustment factors for defined benefit pensions

Pension adjustment	Implicit return	Factor
Private sector	5.50%	1.22
State and local	8.00%	1.70
Federal	6.25%	1.35
Author's calculations		

Total benefits relative to salaries. Incomplete and at times inconsistent data make it difficult to compare the relative generosity of non-wage compensation for federal employees to those of private sector and state and local government workers. By combining data from the Office of Management and Budget and the Office of Personnel Management, we are able to fill most of the gaps to make for better comparisons. While not a substitute for official calculations, our measures do show that benefits play a larger role for federal workers than for private sector workers and state and local government employees. Adjusting pension compensation to account for the higher implicit rates of return paid by defined benefit pensions increases the role of benefits for both federal government and state and local government employees, where DB plans remain the predominant providers of retirement income.

Detailed results are shown in Table 6. Federal employees on average receive non-wage benefits equal to approximately 66 percent of salaries. Private sector employees of large firms (500 or more employees) receive benefits equal to about 50 percent of salaries, while state and local government employees receive average benefits equal to about 59 percent of salaries. Private sector workers overall receive total benefits equal to around 42 percent of salaries. Federal workers receive around 33 percent

> Employment is much more constant in some trades than in others. In the greater part of manufactures, a journeyman may be pretty sure of employment almost every day in the year that he is able to work. A mason or a bricklayer, on the contrary, can work neither in hard frost nor in foul weather, and his employment at all other times depends on the occasional calls of his customers. He is liable, in consequence, to be frequently without any. What he earns, therefore, while he is employed must not only maintain him while he is idle, but make him some compensation for those anxious and desponding moments which the thought of so precarious a situation must sometimes occasion.... *The high wages of those workmen, therefore, are not so much the recompense of their skill as the compensation for the inconsistency of their employment.*[31]

Just as positions with a high incidence and duration of unemployment should pay a compensation premium, positions with greater job security – such as public sector employment – should pay *less* than otherwise similar jobs.

Theory. To estimate the value of job security on effective compensation, we calculate what in financial economics is termed a "certainty equivalent." This represents a guaranteed payment that individuals would find equally attractive compared to a higher but uncertain payment. For example, an individual might be willing to accept a guaranteed payment of $45,000 in lieu of a 50 percent chance of winning $100,000. The more risk averse individuals are, the lower the certainty equivalent is relative to the probability-weighed expected value of the risky payment.

In this case, we effectively ask how much lower salary a private sector worker would accept to have the greater job security of a public sector employee. The difference represents the job security-related pay premium received by federal employees. To calculate this value, we begin with an isoelastic/CRRA utility function of the form:

$$u(c) = \frac{c^{1-\rho}}{1-\rho}$$

where u is the utility derived from consumption c, and ρ is the coefficient of constant relative risk aversion (CRRA). The CRRA value represents the degree to which an individual desires security and dislikes uncertainty. Utility generated by income will rise as income rises, but at a decreasing rate as income rises. Moreover, the rate at which the marginal utility of consumption declines increases with the risk aversion of the individual. A more risk-averse individual will be willing to accept a lower guaranteed income, because the increase in expected utility by accepting employment risk is lower.

[31] Smith, Adam. *The Wealth of Nations*. 1776.

between the two (14 percent). Expected utility is equal to the weighted utilities of consumption assuming the individual is discharged (14 percent probability) or remains employed throughout the year (86 percent probability).

To calculate the utility of consumption we require a value for the risk aversion of public sector employees. Based on data from the Panel Study of Income Dynamics, we assumed a CRRA for public employees is 5.4, which is significantly higher than the estimate for private sector workers of 2.8.[32] Other studies have also found that public employees are more risk averse than private sector workers.[33]

We derive the certainty equivalent compensation by calculating the riskless compensation whose utility would equal the expected utility of compensation under the risk of unemployment. This value is $95,390. The base compensation of $123,000 exceeds this value by approximately 29 percent, thereby generating a baseline estimate of the job security compensation premium. Using a more conservative assumption that federal workers, were they to work in the private sector, would have half the probability of becoming unemployed (perhaps due to their higher average education) the job security pay premium is around 11 percent.[34]

Summary. In previous sections we calculated a federal salary premium of 14 percent, a benefits premium of 32 percent, and now a job security premium worth another 11 percent of pay, conservatively estimated. Together, these generate an overall federal compensation premium of approximately 39 percent.

Federal civilian, non-postal payroll as of 2011 is approximately $115 billion[35]; including benefits and the implicit value of job security it would equal approximately $210 billion. Assuming a total overpayment of 39 percent relative to market compensation, total federal overcompensation in 2011 would equal around $60 billion.

Quit Rates

Although not central to our estimate of the federal pay premium, federal employee quit rates are often discussed in the context of the generosity of overall federal pay and work conditions. Federal employees quit their jobs at around one-third the rate of employees in large private firms, directly implying to some people that federal employees are overpaid relative to what they

[32] Munnell, Alicia H., Kelly Haverstick, and Mauricio Soto. "Why Have Defined Benefit Plans Survived in the Public Sector?" State and Local Pension Plans Brief 2.Chestnut Hill, MA: Center for Retirement Research at Boston College, 2007.
[33] Bellante, Don and Albert N. Link, "Are Public Sector Workers More Risk Averse Than Private Sector Workers?" *Industrial and Labor Relations Review*. Vol. 34, No. 3 (Apr., 1981), pp. 408-412.
[34] It is difficult to estimate probabilities and durations of unemployment for public sector workers were these individuals to work in the private sector, though we are investigating potential methods of doing so.
[35] Source: United States Census Bureau, as of 12/15/2010. http://www.census.gov/compendia/statab/2011/tables/11s0495.xls

Table 7. Federal quit rates by years of service, 1984 and 2008.			
Years of service	**1984**	**Years of service**	**2008**
Under 5	15.1%	Under 5	12.6%
6 to 15	6.6%	6 to 14	3.2%
16 to 20	2.7%	15 to 19	1.2%
21 to 25	1.6%	20 to 24	0.7%
Sources: Congressional Budget Office and Office of Personnel Management			

2008 should be higher than in 1984 even without the change in pension structures. However, federal quit rates in all relevant age categories were *lower* in 2008 than in 1984, despite lower unemployment and changes to federal pension structures.

Thus, while it is likely that even the reduced FERS DB pension tends to lower federal quit rates relative to private sector levels, it does not seem that pensions alone can fully explain why federal employees are so much less likely to quit their jobs than workers employed by large private sector firms. The parsimonious explanation is that few federal employees believe there are better options in the private sector.

Conclusions

Given rising federal budget deficits and persistently high unemployment in the private sector, it is perhaps understandable that federal employee compensation would come under increased scrutiny. Many claims made regarding federal compensation – either that it is obscenely generous or that it leaves federal workers substantially underpaid – do not stand up well to scrutiny. Using standard econometric methods, we find that federal workers receive salaries about 14 percent above those paid to similar private sector employees, and benefits around 32 percent more generous than those paid in large private sector firms. The greater job security enjoyed by federal government employees is equivalent to a significant improvement in pay of at least 11 percent. Together, these generate an overall federal compensation premium of approximately 39 percent. If federal employees were paid at market rates, taxpayer savings could total $60 billion per year.

ANDREW GEORGE BIGGS
Resident Scholar
American Enterprise Institute
1150 17th Street Northwest
Washington, D.C. 20036
(202) 862-5841
andrew.biggs@aei.org

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Education

2004-2008 M.Sc. financial economics, University of London

1992-1995 Ph.D. government, London School of Economics and Political Science

1991-1992 M.Phil. social and political theory, Cambridge University

1988-1990 B.A. philosophy (honors), Queen's University of Belfast

1986-1988 Middlebury College

Professional background

2008-present	Resident Scholar, American Enterprise Institute
2007-2008	Principal Deputy Commissioner, Social Security Administration
2007	Deputy Commissioner for Policy, Social Security Administration
2005	Associate Director, White House National Economic Council
2003-2007	Associate Commissioner for Retirement Policy, Social Security Administration
1999-2003	Social Security Analyst, Cato Institute
2001	Staff analyst, President's Commission to Strengthen Social Security
1998-1999	Director of Research, Congressional Institute
1996-1998	Assistant communications director, House Committee on Banking and Financial Services

Miscellaneous

Research associate, Center for Retirement Research, Boston College

Affiliated researcher, RAND/Wharton/Dartmouth Financial Literacy Research Center

Member, National Academy of Social Insurance

Recent Publications

Biggs, Andrew G. "An Options Pricing Method for Calculating the Market Price of Public Sector Pension Liabilities." *Public Budgeting & Finance*. Forthcoming.

Biggs, Andrew G. "Proposed GASB Rules Show Why Only Market Valuation Fully Captures Public Pension Liabilities." *Financial Analysts Journal*, March/April 2010.

Biggs, Andrew G., with Nada Eissa and Gayle Reznik. "The Treatment of Married Women by the Social Security Program." Center for Retirement Research at Boston College. 2009-2010.

Biggs, Andrew G. "Improving the Social Security Statement." RAND/Wharton/Dartmouth Financial Literacy Research Center. 2009-2010.

Biggs, Andrew G. "Exploring Alternate Ways to Express Estimated Future Retirement Benefits in the Social Security Statement." RAND/Wharton/Dartmouth Financial Literacy Research Center. 2010.

Biggs, Andrew G. "The Case for Raising Social Security's Early Retirement Age." AEI Retirement Policy Outlook. October 27, 2010.

Biggs, Andrew G. "What Every American Needs to Know about Government Entitlement Reform." AEI Retirement Policy Outlook. September 16, 2010

Biggs, Andrew G., with Eileen Norcross. "The Crisis in Public Sector Pension Plans." Mercatus Center. June 23, 2010

Biggs, Andrew G. "A New Social Security 'Notch'? Bad News for People Born in 1947." Issues in Brief. Center for Retirement Research. May 25, 2010

Biggs, Andrew G. "The Market Value of Public-Sector Pension Deficits." AEI Retirement Policy Outlook. April 6, 2010.

Biggs, Andrew G. "An Options Pricing Method for Calculating the Market Price of Public Sector Pension Liabilities." American Enterprise Institute Working Paper. February 26, 2010.

Biggs, Andrew G., Burdick, Clark, Smetters, Kent A. "Pricing Personal Account Benefit Guarantees: A Simplified Approach." In *Social Security Policy in a Changing Environment*, Jeffrey Brown, Jeffrey Liebman and David A. Wise, editors. National Bureau of Economic Research/University of Chicago Press.

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Biggs, Andrew G. "Social Insecurity? Personal Accounts and the Stock Market Collapse." Retirement Policy Outlook, American Enterprise Institute for Public Retirement Policy Research, November 21, 2008.

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Committee on Oversight and Government Reform
Witness Disclosure Requirement – "Truth in Testimony"
Required by House Rule XI, Clause 2(g)(5)

Name: Andrew G. Biggs

1. Please list any federal grants or contracts (including subgrants or subcontracts) you have received since October 1, 2008. Include the source and amount of each grant or contract.

1. "The Treatment of Married Women by the Social Security Program.
Center for Retirement Research at Boston College. 2009-2010.Grant from Social Security Administration, $41,451.
2. "Improving the Social Security Statement." RAND/Wharton/Dartmouth Financial Literacy Research Center. 2009-2010.
Grant from Social Security Administration, $39,862
3. "Exploring Alternate Ways to Express Estimated Future Retirement Benefits in the Social Security Statement."
RAND/Wharton/Dartmouth Financial Literacy Research Center. 2010. Grant from Social Security Administration, $18,035

2. Please list any entity you are testifying on behalf of and briefly describe your relationship with these entities.

3. Please list any federal grants or contracts (including subgrants or subcontracts) received since October 1, 2008, by the entity(ies) you listed above. Include the source and amount of each grant or contract.

I certify that the above information is true and correct.
Signature:

Date: 3/4/2014