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Federal Pay is Out of Line with Private Sector Pay: CBO Supports Heritage, AEI Conclusions

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Abstract

A January 2012 report by the Congressional Budget Office (CBO) shows that federal government employees receive substantially higher compensation than similarly skilled workers in the private sector. The report's methodology and conclusions are broadly similar to previous studies from both The Heritage Foundation and the American Enterprise Institute. This Q&A discusses the CBO's findings, highlighting the similarities and differences among the three approaches. Three studies, three approaches, three similar results—make a strong case for reforming federal wages and benefits.

The Congressional Budget Office (CBO) recently released a report showing that federal employees receive substantially higher compensation than similarly skilled workers in the private sector.[1]

The CBO report was spurred in part by two years of work conducted by The Heritage Foundation and the American Enterprise Institute (AEI). Both institutions have released studies concluding that federal employees receive a compensation premium over comparable private-sector workers, and that Congress can make targeted reductions in federal compensation without harming the quality of public services. Last year, James Sherk and Andrew Biggs testified before Congress to this effect.[2]

While we have some quibbles, the CBO's methodology and conclusions are broadly similar to our own. This Q&A discusses the CBO's findings, highlights the similarities and differences in our approaches, and suggests where to go from here.

Question: *What, specifically, does the CBO conclude about federal compensation?*

The CBO finds that the average federal worker receives wages that are 2 percent higher than a similarly skilled private-sector worker, and benefits that are 48 percent higher.[3] The average federal worker receives total compensation (wages plus benefits) 16 percent greater than market levels.

Talking Points

- The Congressional Budget Office (CBO) released a report in January showing that federal workers receive greater compensation, on average, than comparably skilled private-sector workers.
- The CBO report was spurred in part by studies from both The Heritage Foundation and the American Enterprise Institute.
- Though the CBO's approach is not identical to the approaches in either the Heritage or AEI studies, all three reports draw the same conclusion: Many federal workers are overpaid.
- Federal compensation should be scaled back and reallocated to reward the most productive federal workers. The government should replace the seniority system with performance pay, paying higher salaries to good workers without guaranteeing raises for mediocre performers.
- Fair treatment of workers and taxpayers calls for federal employees to receive neither more nor less in total compensation than they would outside government.

This paper, in its entirety, can be found at **http://report.heritage.org/bg2653**

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However, the CBO stressed that these are broad averages. More skilled and educated workers generally receive a smaller premium than less-educated workers. The CBO found that the average federal employee with no more than a high-school degree received 36 percent higher compensation than a similar private-sector worker, and that the average federal worker with a bachelor's degree received a 15 percent premium. Federal employees with professional degrees (e.g., in law or medicine) or a Ph.D., who make up about 7 percent of the federal workforce, would actually earn *more* in the private sector, on average.

Question: *What work have Heritage and AEI done on this topic?*

For two years leading up to the CBO report, Heritage and AEI analyzed the issue of federal compensation, resulting in two flagship reports—"Inflated Federal Pay" by James Sherk (the Heritage study),[4] and "Comparing Federal and Private Sector Compensation" by Andrew Biggs and Jason Richwine (the AEI study).[5]

Question: *Do all three reports draw the same conclusions?*

Broadly speaking, yes. The CBO, Heritage, and AEI studies all conclude that federal workers enjoy a premium in combined wages and benefits over comparable private-sector workers, and the premium declines as worker skills increase. However, methodological differences do exist across the three studies, the most important of which involves the statistical techniques used to analyze wages.

Question: *Why does the CBO find a much smaller federal wage premium than Heritage or AEI?*

All three studies are based on the "human capital" model of wages, which uses regression analysis to control for differences in education, experience, region of residence, and demographic factors, etc. Yet the average federal wage premium reported by Heritage is 22 percent, versus 14 percent reported by AEI, and just 2 percent reported by CBO.

A major reason for this discrepancy is that the studies differ on whether it is appropriate to control for firm size (the number of people employed in a worker's company).[6] AEI and the CBO do control for firm size while Heritage does not. The CBO reports that it would have found a 9 percent average wage premium had it not controlled for firm size. This is a controversial issue that also arises when measuring benefits, and we discuss it in more depth below.

A second reason for the difference in wage estimates is more technical. Following standard practice in the literature, both AEI and Heritage use the natural logarithm of wages as the dependent variable in their regression analyses. The CBO correctly points out that the greater dispersion of wages in the private sector can skew averages derived from regression analysis of log-wages. The CBO instead uses a maximum likelihood regression specification that does not involve logs.

CBO has identified a real drawback in the prior literature, and its own methodology is a cutting-edge attempt to fix that drawback. At the same time, its approach may introduce other problems, particularly regarding how well the model fits the data. It would have been helpful if the CBO had published more detailed results so that researchers could better assess their model.

Question: *How did the studies measure wages?*

All three studies used similar data on wages. The Bureau of Labor Statistics (BLS) and the Census Bureau jointly conduct the Current Population Survey (CPS).[7] Each month the CPS asks how much employees earn and how many hours they work each week. In March, the

1. Justin Falk, "Comparing the Compensation of Federal and Private-Sector Employees," Congressional Budget Office, January 2012, at *http://cbo.gov/doc.cfm?index=12696* (February 9, 2012).
2. James Sherk and Andrew Biggs, "Are Federal Workers Underpaid? (Part 2 of 2)," testimony before the Subcommittee on the Federal Workforce, Postal Service, and the District of Columbia, Oversight Committee, U.S. House of Representatives, March 12, 2011, at *http://www.youtube.com/watch?v=1Z0JoXg9_ts* (February 9, 2012).
3. For a description of which fringe benefits each study counted, see the question "Why do all three studies generate different benefit premiums for federal workers?" below.
4. James Sherk, "Inflated Federal Pay: How Americans Are Overtaxed to Overpay the Civil Service," Heritage Foundation *Center for Data Analysis Report* No. 10-05, July 7, 2010, at *http://www.heritage.org/research/reports/2010/07/inflated-federal-pay-how-americans-are-overtaxed-to-overpay-the-civil-service*.
5. Andrew G. Biggs and Jason Richwine, "Comparing Federal and Private Sector Compensation," American Enterprise Institute *Working Paper*, June 8, 2011, at *http://www.aei.org/paper/100203* (February 9, 2012).
6. To "control for firm size" means to compare federal salaries with private-sector salaries at only the largest firms in the Current Population Survey, which are firms with 1,000 or more workers. Not controlling for firm size means comparing federal salaries with private-sector salaries at both large and small firms.
7. The federal government uses the CPS to calculate official statistics about the labor market, such as the unemployment rate.

CPS asks how much workers earned the previous year.

Heritage defined hourly pay as weekly wages divided by weekly hours worked. The CBO defined hourly pay as annual earnings divided by the number of weeks worked per year times the number of hours worked per week. AEI used annual earnings and made "usual hours worked per week" a control variable.

The three studies also differed in how they treated extremely low and high wages reported in the CPS. Unlike AEI or Heritage, the CBO used federal administrative data to estimate the pay of top-earning federal employees, but the CBO did not drop any workers with outlying wages. The AEI and Heritage studies dropped workers who reported earnings that were unreasonably low for full-year, full-time workers. Unlike AEI or the CBO, the Heritage study also trimmed the top of the wage distribution to eliminate outliers on the high end of the wage distribution, which could also be the result of measurement error.[8]

Question: *Why do the three studies generate different benefit premiums for federal workers?*

The studies use different data sources for benefits. While detailed wage data is readily available, data on benefits are much more limited. The CBO used unpublished data on benefits from the Bureau of Labor Statistics (BLS) and the Office of Personnel Management (OPM). CBO could then impute the value of benefits received by individual federal employees in the CPS data. Heritage and AEI did not have access to these data and had to use alternative approaches.

The Bureau of Economic Analysis (BEA) estimates the wages and total compensation earned by federal and private-sector workers. Using these data, the Heritage approach was to assume that the same portion of the federal premium was unexplained by observable characteristics for total compensation as for wages.[9]

The AEI study used the "Employer Costs for Employee Compensation" dataset published by the BLS to measure private-sector benefits, and the authors pieced together reports from OPM and the Office of Management and Budget to measure federal benefits.

The three studies also examined different types of benefits. All included data on health care, retirement benefits, and legally required benefits. However, the BEA benefits data that the Heritage study used did not include some other benefits, such as paid leave. The unpublished data that the CBO used did include the value of paid leave, as did the BLS/OPM data relied upon by AEI.

Both AEI and the CBO used risk-adjusted discount rates to value deferred compensation, though they disagreed on which rate to use. (Further discussion on discount rates below.) In addition, the AEI study counted implicit subsidies available to federal workers in their defined-contribution investments, worth about 2 percent of wages.[10]

Finally, the Heritage and CBO studies do not attempt to quantify the value of greater job security for federal workers. The AEI study does so, concluding that job security adds roughly 17 percent of wages to effective federal compensation.

Question: *Why is the discount rate that is applied to defined-benefit pensions so important?*

A significant portion of employee benefits are deferred until retirement. In order to compare these future payments to wages and other benefits received today, the future benefits must be discounted, a process by which interest is deducted from the future dollar amount for each year between the time of payment and the present.

The interest rate used has large effects on the measured present value of future benefits. Economists almost universally believe that the proper interest rate to apply to a future benefit amount is a function of the risk or safety of that benefit. If a benefit is guaranteed, it should be discounted using a low rate offered by guaranteed investments, such as U.S. Treasury securities. A riskier benefit should be discounted at a higher interest rate. Some government actuaries want to assume much higher returns on their pension funds—effectively treating risky investments as risk-free—but, as the CBO recognizes, this is at odds with the principles of financial economics and the manner in which financial markets price risk.

Consistent with academic research on state and local pensions, the AEI study assumed that accrued benefits—benefits that have

8. The AEI study excluded workers who reported less than $9,000 in annual salary. The Heritage study excluded individuals who reported earning less than $5 an hour or more than $60 an hour. Heritage analysis of untrimmed data produced almost identical results.

9. Since benefits are more generous than wages, the total compensation premium should actually be larger than the wage premium. This methodology gives a lower bound on the federal advantage.

10. For more information, see Biggs and Richwine, "Comparing Federal and Private Sector Compensation," p. 16.

already been earned—are effectively guaranteed, and so they were discounted using the 4 percent yield on Treasuries at the time. (The current yield on Treasuries of the appropriate duration is around 2.6 percent.) The CBO agreed with this basic approach but added 1 percentage point to the Treasury yield based on a belief that accrued federal pension benefits have a risk consistent with private-sector defined-benefit pensions.

Question: *Why does firm size affect the analysis so much*?

Larger businesses offer higher wages and benefits than smaller ones, even after controlling for observable worker characteristics, but it is not clear why this is the case. Some research suggests that larger and more successful businesses pay a premium to hire employees who are superior in ways that standard statistics cannot measure, such as initiative or leadership ability. At the same time, higher pay at large firms could represent a "compensating differential" for aspects of large businesses that employees dislike, such as bureaucracy and red tape. For these reasons, CBO and AEI controlled for firm size.

But does the federal government pay higher wages for the same reasons as do large private firms? Federal employees do not disproportionately come from large businesses, so the government may not selectively hire the same types of workers as large firms. This is why the Heritage study did not use a firm-size control. Until research further clarifies why large firms pay more, there is no "correct" approach to the firm-size issue. Both approaches are legitimate and provide a range of plausible values.

Question: *Does the CBO put a value on job security?*

The CBO agrees with the premise of AEI's job-security premium estimate, noting that "greater job security and less uncertainty about the size of pay raises tend to decrease the compensation that the federal government needs to offer, relative to compensation in the private sector, to attract and retain employees."[11]

However, the CBO chose not to attempt to value the greater job security enjoyed by federal employees. This is understandable, given that quantifying such a value from the data is tricky. The CBO also argues that there may be countervailing factors, such as the fact that federal compensation is more heavily weighted toward retirement benefits than many workers might prefer. This would make it harder to attract employees, although it also implies that the federal government could, at no cost, increase its ability to attract and retain workers by shifting compensation from retirement benefits toward wages.

Question: *Is there important evidence that the CBO did not consider?*

The CBO could have bolstered its conclusions by discussing quit rates and job queues. If federal employees are severely underpaid—as the Office of Personnel Management and public-sector unions argue—the government would have significant recruiting and retention problems. If federal workers are overpaid, the government would have high application rates and low turnover.

The data clearly show that federal employees are much less likely than private-sector workers to quit their jobs. Before the recession, federal employees quit at just one-third the rate of private-sector workers. Queue models and the limited data on job applications also suggest that the federal government receives more applications per vacancy than the vacancies of private-sector employers.[12] These objective market signals of labor demand strongly suggest that the combination of wages, benefits, job security, and work conditions—the "total package"—offered by the federal government is more desirable than what is offered by the private sector.

Question: *How should federal compensation be reformed in light of the CBO's findings?*

Fair treatment of workers and taxpayers calls for federal employees to receive neither more, nor less, in total compensation than they would outside government. The CBO report shows that many federal employees are overpaid, but also that some—especially the most talented workers—are not. The AEI and Heritage studies do not find a pay penalty for highly educated federal employees as was found in the CBO study, but do find that the federal compensation premium shrinks considerably for higher-level federal employees.

In either case, an across-the-board pay freeze is a blunt instrument that does not ensure that each employee is paid appropriately. A better approach would be to reform

11. Falk, "Comparing the Compensation of Federal and Private-Sector Employees."

12. Biggs and Richwine, "Comparing Federal and Private Sector Compensation," pp. 33–35.

the General Schedule. The government should replace the seniority system with performance pay, paying higher salaries to good workers without guaranteeing raises for mediocre performers.

Benefits should also be overhauled, particularly retirement benefits. The CBO noted that "The most important factor contributing to differences between the two sectors in the costs of benefits is the defined-benefit pension plan that is available to most federal employees."[13] Phasing out this plan would be an effective means of reducing the federal premium, while leaving federal employees with a defined-contribution pension (the Thrift Savings Plan) that is still more generous than a typical private-sector 401(k) plan. The Heritage Foundation has outlined a number of other concrete steps Congress could take as well.[14]

Conclusion

The CBO report is an excellent contribution to the ongoing debate over federal pay reform. Its methodology and conclusions are broadly similar to prior reports from The Heritage Foundation and AEI, which both also concluded that federal workers receive greater compensation, on average, than comparable workers in the private sector. Though the CBO's approach is not identical to the approaches in either the Heritage or the AEI studies—and we have quibbles with some of the CBO's methodological choices—all three reports make a strong case for reforming federal wages and benefits.

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13. Falk, "Comparing the Compensation of Federal and Private-Sector Employees," pp. viii–ix.
14. James Sherk, "Opportunity, Parity, Choice: A Labor Agenda for the 112th Congress," Heritage Foundation *Special Report* No. 96, July 14, 2011, pp. 10–11, at *http://www.heritage.org/research/reports/2011/07/opportunity-parity-choice-a-labor-agenda-for-the-112th-congress*.