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Unequal Pay

Public Sector Compensation in Connecticut

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Introduction

Public employee pay and benefits in Connecticut are a matter of concern and debate for policymakers, employees and citizens. Elected officials must craft budgets amidst the Covid-19 crisis even as public sector salaries and benefits increase in costs. Public employees often are convinced they are underpaid relative to private jobs, even as private sector workers envy the benefits and job security offered in government employment. Often discussions are carried out via anecdotes or selective use of facts and figures rather than a comprehensive view drawing upon the best analytical methods and data available.

This analysis updates a 2015 study of pay and benefits for state government employees in Connecticut, to which I refer readers for a more comprehensive discussion of various issues involved with measuring public sector compensation. This update includes several improvements over the 2015 study. First, it relies on new and superior data produced by the federal government on fringe benefits paid to public and private sector workers in Connecticut. These new data provide a more accurate view of the various benefits provided in and outside of government. Second, these new fringe benefit data allow the study to include both state and local government employees, whereas the 2015 study limited itself to state government employees. Third, this update analyzes employee salaries at different parts of the wage distribution, whereas the 2015 study looked only at the average employee. Finally, the study relies on more recent data, spanning the years 2014 to 2018, the most current data available.

Comparing public to private sector pay is not a simple matter of looking at average salaries in different sectors of the economy. As **Table 1** shows, the typical state or local government employee in Connecticut differs from the typical private sector employee in a number of ways that typically are related to earnings. State and local government employees in Connecticut work shorter hours, but have more years of education. Public sector workers are more likely to be women or Black, but less likely to be immigrants. State and local government employees in Connecticut also are younger than private sector workers. Given these differences, it is impossible to tell if the salary differential between the median state and local government employee and the median private sector worker is appropriate.

In this study I apply statistical analysis to Census Bureau data to compare salaries paid in the public and private sectors in Connecticut while controlling for differences in earnings-related characteristics. Then, using data from the federal government's National Income and Produce Accounts, I calculate the value of fringe benefits paid in state and local government and private sector jobs.

Table 1

Summary information on median full-time, full-year Connecticut state and local government and private sector employees.

	State and Local Government	Private Sector
Annual Salary	\$62,000	\$57,000
Weekly work hours*	42	44
Years of education	14	16
Immigrant*	11%	20%
Age	43	49
Female*	54%	41%
Black*	11%	7%

Source: Author's calculations from ACS data.
*Figures are means; all other figures are medians.



Salaries

My methodological approach is similar to that used in many other studies of public sector pay, which itself is similar to studies of pay differences by race, gender or other factors. I begin with data from the U.S. Bureau of the Census's American Community Survey (ACS), then apply regression analysis to compare public and private sector salaries while controlling for a range of other variables that often are correlated with salaries, such as education and work experience. The goal is to find the public sector employee salary premium or penalty relative to what similar workers receive in private sector jobs. No method is perfect, nor can a statistical analysis determine if any given employee is over- or underpaid. But the methods and data I use are entirely mainstream.

For salary comparisons I use ACS data from the years 2014-2018. The total sample is equal to 33,307 individuals between the ages of 18 and 62, all of whom report being employed by private sector employers, the Connecticut state government or Connecticut local governments. The sample includes 1,763 state government employees and 1,638 local government employees. Individuals who are self-employed or work for non-profits are excluded. Likewise, both public and private school teachers also are excluded: the shorter work year for school teachers relative to other full-time employees along with other factors complicate the analysis and warrants being analyzed separately.² The sample is limited to individuals who work 35 or more hours per week and 50 or more weeks per year, meaning that part-time and seasonal employees are not considered.

The dependent variable of the regression is the natural log of annual wage earnings. The control variables are: educational attainment, measured in terms of years of education; undergraduate degree field; potential work experience (equal to age minus years of education minus 6) and experience-squared; county of residence, to capture differences in local costs of living and wage rates; eight broad occupational categories, to capture qualitative differences between jobs such as work conditions; usual hours of work per week (with a minimum of 35); gender, race, Hispanic ethnicity, marital status and immigrant status, all of which are independently associated with earnings in both the public and private sectors; year; and whether the individual is a state or local government employee.

Two of these variables – county of residence and college major – are not often included in public-private pay comparisons. County of residence controls for different costs of living and wage levels in different parts of the Connecticut. As work by Texas A&M economist Lori Taylor has shown, wages and costs of living can differ between cities, suburbs and rural locations.³ If public employees tend to be clustered across these areas differently than private sector workers, they could appear to be differently paid even if both sets of workers were paid reasonably relative to local wages levels. Including college majors is designed to gain a better grasp on the underlying skills and knowledge of public and private sector employees. It is widely known, for instance, that individuals majoring in STEM fields tend to earn more after graduation than other college students.⁴ Including tight geographic controls and data on college majors has only minor effects on the public sector wage differences found by the model, but including these variables is theoretically reasonable and increases the predictive power of the model. Excluding geographic and college major variables would not qualitatively change the results of the wage analysis.

I perform a quantile regression, which allows me to estimate the public sector wage premium or penalty paid at different parts of the salary distribution. My focus is on the median public sector employee, but I also will show salary results for employees at the 5th, 25th, 75th and 95th percentiles of the earnings distribution.

I find using American Community Survey data that the median state or local government worker in Connecticut receives a salary that is 1.8 percent higher than is received by similar private sector workers.⁵ In the ACS data the median Connecticut public employee salary is \$62,000, versus about \$60,925 paid to private sector employees with similar education, experience and other earnings-related characteristics.

At the 25th percentile of the public sector wage distribution employees receive salary premium of 5.1 percent, while at the 75th percentile state and local salaries are 2.6 percent lower than jobs held by comparable private sector employees. This result is consistent with other findings that the public sector pays relatively more competitive salaries to lower-paid employees while being less generous in pay to higher-paid employees. At the 95th percentile the state and local employee salary penalty reaches 11.4 percent, while at the 5th percentile state and local employees receive salaries 10.0 percent higher than those paid to comparable private sector workers.

It is worth noting that in July of 2020 Connecticut state government employees received an across-the-board salary increase, with a second increase slated for late 2020. Because the data employed here run only through the year 2018, such pay increases – along with any recent changes in private sector salaries – are not included in this paper’s wage analysis

Benefits

To calculate the value of benefits I rely upon data from the National Income and Product Accounts (NIPA), which are the official ledger books of the United States economy. The NIPA are constructed by the federal government’s Bureau of Economic Analysis (BEA) according to international standards designed to be uniform across different countries. The BEA states that its “measures of compensation provide comprehensive and consistent economic measures of the income earned by all U.S. workers. In contrast to other available measures of compensation, the NIPA measures include not just wages and salaries but also noncash benefits—such as employer contributions to pension plans, to health insurance, and to social insurance programs.”⁶

The employer-funded benefits captured by the NIPA data include: employee pension and retirement funds; private insurance funds, such as group health and life insurance; workers’ compensation; supplemental unemployment insurance; and publicly administered government employee insurance plans. Additionally, the benefits data includes employer contributions for government social insurance including: Social Security; Medicare; unemployment insurance; Pension Benefit Guaranty Corporation premiums; veterans life insurance; workers’ compensation; military medical insurance; and temporary disability insurance.

For my purposes, the key figure is the ratio of average benefits to average wages. Based upon total wages and benefits paid between 2014 and 2018, Connecticut state and local government employees earn current and future benefits equal to 45.1 percent of their annual salaries. (Table 2.)

Table 2:

Total wages and benefits paid, 2014 to 2018.

	Average Values, 2014 To 2018, \$ Billions.	
	State and Local Government Employees	Private Sector Employees
Wages	\$13.20	\$98.05
Benefits	\$5.95	\$18.48
Total Compensation	\$19.14	\$116.54
Benefits as % of Wages	45.1%	18.8%

Source: NIPA regional data.

In Connecticut private sector jobs, the NIPA data find that employees earn benefits equal to 18.8 percent of their annual salaries. One potential objection to this figure is that it applies to Connecticut private industries as a whole, while industries that attract employees that are more comparable to state and local government employees might pay more generous benefits. Table 3 shows benefits as a percentage of wages by Connecticut industry type. If anything, the 18.8 percent figure for all Connecticut private nonfarm industries is likely higher than in industries that attract employees comparable to the public sector. For instance, finance and insurance pay benefits equal to 14.9 percent of wages; real estate and rental and leasing, 15.5 percent; and professional, scientific, and technical services, 14.9 percent. Thus, it does not appear that using a statewide average for all Connecticut private nonfarm employees biases the analysis toward finding a compensation premium for state and local government workers.

However, several benefits are not fully accounted for in the NIPA data. These include paid leave, such as vacation and sick pay. Paid leave does not involve a direct employer cost, but instead implies that an employer receives fewer days of annual work for a given amount of annual salary or benefits. Unfortunately, there are not data available to easily compare paid leave in Connecticut public sector positions to those in the private sector. Instead, I rely on the Bureau of Labor Statistics' National Compensation Survey, which gathers data by region. In 2018, employees in state and local government and in private industry in New England received paid leave equal in value to 11.4 percent of their wages. Thus, for these purposes paid leave is ignored.

Table 3: Connecticut benefits as percentage of wages, 2014 to 2018, by industry.

Industry	Benefits as Percentage of Wages
All Private Nonfarm	18.8%
Forestry, Fishing, And Related Activities	30.4%
Mining, Quarrying, And Oil And Gas Extraction	23.8%
Utilities	36.4%
Construction	19.7%
Manufacturing	25.4%
Wholesale Trade	15.3%
Retail Trade	20.2%
Transportation and Warehousing	22.9%
Information	18.9%
Finance and Insurance	14.9%
Real Estate and Rental and Leasing	15.5%
Professional, Scientific, and Technical Services	14.9%
Management of Companies and Enterprises	14.1%
Administrative and Support and Waste Management and Remediation Services	19.0%
Educational Services	22.2%
Health Care and Social Assistance	21.9%
Arts, Entertainment, and Recreation	21.4%
Accommodation and Food Services	17.0%
Other Services (Except Government and Government Enterprises)	16.1%
Government and Government Enterprises	44.8%
Federal Civilian	43.7%
Military	42.2%
State and Local	45.1%

Source: Author's calculations from National Income and Product Accounts data.

In addition, the NIPA data account for retiree health benefits differently than they account for pensions. Like pensions, retiree health benefits are earned while working but not received until retirement. For Connecticut state employees, it is possible to calculate the value of accruing retiree health benefits via actuarial disclosure made by the state.⁷ The most recent valuation of retiree health benefits for state employees was published in October 2018 and measured benefits as of June 2017. For 2017, the state reported a “service cost” of \$981 million, which represented the value to employees of the future benefits they earned in that year. The plan collected \$121 million in employee contributions in 2017, leaving a net employer-provided service cost of \$840 million. Employee payroll in 2017 was \$3.74 billion. Thus, the employer-funded value of future retiree health benefits earned in 2017 was equal to 22.4 percent of employee wages. In 2017 the plan had 49,538 active employee members with an average salary of \$75,578, and the average value of accruing benefits per employee was \$16,961.⁸

However, the NIPA data account for retiree health benefits on a cash basis, where the value of benefits in each year is measured as the amount of payments to retirees, not the value of future benefits accrued by employees today. Since we are seeking to measure current employee compensation, the NIPA data may not produce correct values. However, it is possible to use Connecticut’s actuarial disclosures to account for these differences. Connecticut reports that in 2017, state agencies contributed \$667 million toward the payment of public employee retiree health benefits. It is these current payments that are captured in the NIPA benefits data. As noted above, the value of newly-accruing retiree health benefits in 2017 was \$840 million, a difference of \$173 million. This additional value omitted in the NIPA data is equal to 4.6 percent of employee payroll. I add this additional amount to the total benefits value of 45 percent of wages reported in the NIPA data, producing total public employee fringe benefits equal to 49.6 percent of wages and salaries.

The NIPA data will tend to bias private sector retiree health benefits in the opposite direction, though it is difficult to tell by how much. According to the Medical Expenditure Panel Survey, 10.5 percent of Connecticut private sector establishments offer health benefits to retirees under the age of 65 and 9.9 percent offer benefits to retirees age 65 and over.⁹ However, even employers providing health benefits to current retirees may not offer similar benefits to current employees, and it is the compensation of current employees that we are concerned with. For instance, in 1997 21.4 percent of Connecticut business establishments provided health benefits to retirees under the age of 65 and 21.5 percent offered them to employees over age 65, more than double the percentages providing such benefits to retirees today.¹⁰ This implies that even Connecticut employers that have maintained retiree health benefits for current retirees have reduced employee eligibility for those benefits. And NIPA data reflecting payments to current retirees will overstate the value of retiree health benefits being earned by current employees.

For instance, Pratt & Whitney, Connecticut’s largest employer, reports in its 2019 financial statements that it owes \$810 million in retiree health benefits.¹¹ In that year the firm paid out \$69 million in retiree health benefits – the value that would be captured in NIPA benefits data – but employees in 2019 earned only \$2 million in future retiree health benefits, an amount that is *de minimus* for a firm employing 240,000 employees. Pfizer, another major Connecticut employer, faced \$1.87 billion in accrued retiree health costs and paid out \$147 million in retiree health benefits, but

the cost of newly-accruing benefits in 2018 was only \$37 million.¹² While there are no centralized data that make it possible to accurately calculate the value of newly-accruing retiree health benefits for Connecticut private sector workers today, it is not unreasonable to assume the value to be close to zero. To the degree that the NIPA benefits data capture payments made to current retirees these data will overstate the benefits earned by current employees. However, there do not appear to be comprehensive data available reporting private sector spending on retiree health benefits in Connecticut. For that reason, I leave benefits for private sector employees at the 19 percent of wages reported in the NIPA data while noting that this figure would slightly overstate private sector benefits.

Combined Wages and Benefits for the Public Employee

Based on data from the National Income and Product Accounts and state actuarial reports on retiree health benefits, the average Connecticut public sector worker receives benefits (excepting retiree health coverage) equal to 49.6 percent of annual salaries. With a median annual public sector salary of \$62,000, total annual benefits – either paid in the present or owed to the employee in the future – are equal to \$30,764. Total annual compensation to the median state or local government employee in Connecticut is approximately \$92,764.

The average private sector employer in Connecticut pays benefits equal to 19 percent of employee wages. With private sector firms paying comparable employees approximately \$60,925 annually, benefits for a private sector employee with characteristics similar to the median state and local government employee are equal to \$11,575. Total compensation to a comparable private sector employee is equal to \$72,500.

Thus, a reasonable estimate using common statistical methods and reputable data sources concludes that the median Connecticut state or local government employee receives total compensation that is approximately 28 percent higher than is paid to comparable private sector workers. Ninety-five percent of the \$20,263 total compensation premium paid to a median state and local government employee is in the form of more generous benefits. This fact is important, because state and local governments often misunderstand the true costs of the benefits they promise to employees and rarely benchmark the generosity of these benefits against private sector employers.

It is not a simple matter to calculate the public sector compensation premium or penalty paid at different wage levels. While the ACS data make it possible to calculate salary differentials at different points in the wage distribution, one cannot apply the 49.6 percent ratio of benefits to salaries at different salary levels. The reason is that certain benefits are proportional to earnings while other benefits have a more-or-less fixed dollar value. For instance, the value of

accrued pension benefits generally rises along with the workers' earnings while the value of health care or retiree health benefits are comparable in dollar terms among employees with different salaries. At this time, the federal Bureau of Economic Analysis has not released lower-level NIPA data that would make it possible to determine the fixed versus variable components of public and private sector compensation in Connecticut.¹³

Conclusions

My analysis of Census Bureau data for a typical employee, Connecticut state or local government employment pays a salary that is roughly comparable to what a similar employee would earn in a private sector job. However, data from the National Income and Product Accounts show that **state and local jobs in Connecticut offer fringe benefits that are over twice as generous as private sector jobs**. As a result of these more generous benefits, in particular pensions and retiree health benefits, **a typical public sector employee receives total compensation that is approximately 28 percent higher than is paid to a comparable private sector worker**.

Connecticut faced significant budgetary challenges even prior to the Covid-19 pandemic and economic downturn, in part due to high public pension and retiree health obligations. Policymakers will need to balance spending priorities even more finely as the state seeks to recover from the Covid recession. The results of this analysis demonstrate that **state and local government employee compensation, in particular employee benefits, could be restrained considerably in cost and generosity before risking that public sector occupations would become financially uncompetitive with private sector jobs**.



End Notes

- 1 Andrew G. Biggs is a resident scholar at the American Enterprise Institute in Washington, D.C., where he has written extensively on public employee compensation.
- 2 For discussion of teacher compensation, see Biggs, Andrew G. and Richwine, Jason. “The Truth About Teacher Pay.” *National Affairs*, Fall 2019.
- 3 Taylor, Lori L. “Comparing Teacher Salaries: Insights from the U.S. Census,” *Economics of Education Review*, 27(1), (2008): 48-57.
- 4 See, for instance, Altonji, Joseph G., Lisa B. Kahn, and Jamin D. Speer. “Trends in Earnings Differentials across College Majors and the Changing Task Composition of Jobs.” *The American Economic Review* 104.5 (2014): 387-393.
- 5 This result is statistically significant at the 0.01 level of certainty, implying that it is not the result of the data drawing on a non-representative sample of public and private sector workers.
- 6 Bureau of Economic Analysis. NIPA Handbook. Chapter 10: Compensation Of Employees. Updated: November 2019. Available at <https://www.bea.gov/system/files/2019-12/Chapter-10.pdf>.
- 7 Segal Consulting. “State of Connecticut State Employee OPEB Plan (SEOPEBP). Actuarial Valuation and Review of Other Postemployment Benefits (OPEB) for Reporting Date June 30, 2018 Measured at June 30, 2017 in accordance with GASB Statement No. 75.”



- 8 In Connecticut, local government employees generally have their own retiree health plans, while teachers (who are not analyzed in this study) participate in a single statewide plan. For the purposes of this study I assume that these locally-sponsored OPEB plans offer retiree health benefits that are comparable to the state plan, but potential differences should be borne in mind in applying the results of this study to any specific local jurisdiction within the state.
- 9 Medical Expenditure Panel Survey. “Table II.A.2.h Percent of private-sector establishments that offer health insurance by health insurance offers to retirees by State: United States, 2018.” Note that an “establishment” is a place of work, which may either be a free-standing business or a location that is part of a larger employer.
- 10 Medical Expenditure Panel Survey. “Table II.A.2.e(1997) Percent of private-sector establishments that offer health insurance by plan options and insurance offerings to retirees by State: United States, 1997.”
- 11 United Technologies. Annual Report, 2019.
- 12 Pfizer. 2019 Annual Report. Appendix A.
- 13 The author has discussed this matter with BEA staff, who have promised to raise the issue and consider releasing these more detailed data in the future.



