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West Virginia's Public Employees Are Compensated Less Than Private Sector Workers

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Across the country, governors and legislators are calling for a reduction in public employee compensation to deal with budget shortfalls due to the Great Recession. The claim is that public employees are better compensated than their private sector counterparts.¹

In West Virginia, two conflicting policies are in play that would impact public employees' total compensation. Acting Governor Tomblin recently signed into law a pay increase for more than 70,000 public employees, including teachers, state police, and school service personnel.² However, lawmakers also are considering capping the amount the state pays toward retiree health care, a significant form of deferred compensation for public employees.

The purpose of this brief is to assess whether state and local government employees are compensated more than their private sector counterparts. A simple comparison of the average compensation of the two is not enough. An "apples to apples" comparison requires controlling for factors like education, age, disability, race, sex, and hours worked. [see Methodology]

Key Findings:

- **Although average compensation for all state and local employees in West Virginia is slightly higher than for all private sector employees, this is largely due to the older age and higher education level of the public sector. These two factors typically lead to higher wages and better benefits.**
 - a. On average, public sector employees in West Virginia are older than private sector employees. The median age of public employees is 46, compared to 40 in the private sector.
 - b. The state's public employees are more highly educated than private sector employees. Approximately 47 percent of full-time West Virginia public sector workers hold at least a bachelor's degree, compared to less than 18 percent of full-time private sector employees.
- **When comparing workers with equivalent education levels, private sector employees have higher average compensation than public sector employees.**
- **After controlling for education, age, race, sex, disability, and hours of work, public sector employees receive slightly less compensation on average than their private sector counterparts.**
- **Workers in West Virginia, including both the public and private sector, earn four percent less in hourly wages today than in 1979 (after adjusting for inflation).**

The Face of West Virginia's Public Workforce

According to the Census Bureau's 2009 Quarterly Census of Wages and Employment, state and local governments employed approximately 116,000 covered workers in West Virginia compared to nearly 552,000 in the private sector.^a This includes 76,000 local government employees and 41,000 state government employees. Collectively, state and local government employees hold 16.8 percent of jobs in West Virginia.

If one only compares the average wage and compensation for public and private sector employees as two large groups, then it appears that public sector employees have slightly lower wages but make up for this difference with better compensation (Table 1).

However, this basic comparison fails to account for the substantial differences in characteristics between public and private sector employees. State and local government

employees are older and have more education than private sector employees, two factors that typically lead to higher wages (Table 2).³

Table 1
Comparing Average Wages and Compensation

	Public Employees	Private Employees
Average Wages/Salaries	\$40,605	\$41,073
Average Compensation	\$62,189	\$59,239

Source: WVCBP analysis of data from Integrated Public Use Microdata Series-Current Population Survey, 2001-2010, and from Bureau of Labor Statistics, Employer Costs for Employee Compensation, unpublished September 2010 detailed compensation data for the South Atlantic Census Division.

^aThe Quarterly Census of Employment and Wages defines a "covered worker" as someone covered by unemployment insurance. This excludes, for instance, self-employed workers.

Table 2
Characteristics of Public Sector Different than Private Sector

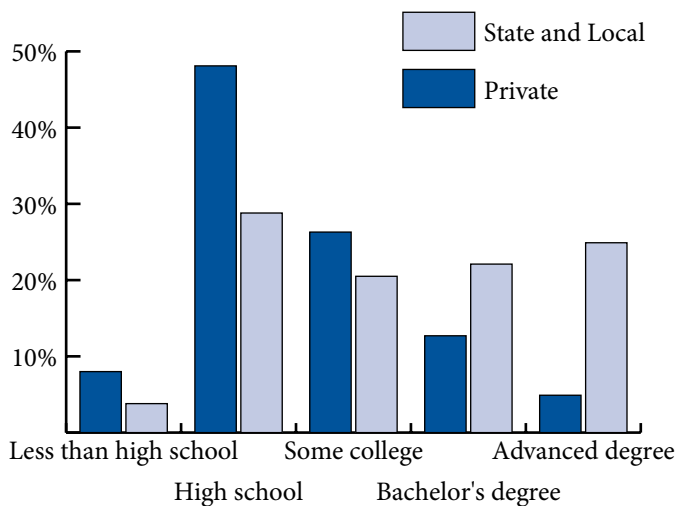
	All Private	All Public	State Only	Local Only
Percent of total workers in West Virginia	81.7%	18.3%	8.4%	9.9%
Highest level of educational attainment				
Less than high school	8.0%	3.8%	3.9%	3.7%
High school	48.1%	28.8%	27.7%	29.7%
Some college	26.3%	20.5%	21.3%	19.8%
Bachelor's degree	12.7%	22.1%	23.8%	20.6%
Advanced degree	4.9%	24.9%	23.3%	26.2%
Age				
18-24	9.7%	3.7%	3.3%	4.1%
25-34	25.1%	17.5%	17.3%	17.7%
35-44	27.9%	24.5%	24.1%	24.8%
45-54	25.2%	29.7%	29.0%	30.3%
55-64	12.2%	24.6%	26.3%	23.1%
Median age	40	46	46	46
Mean hours worked annually				
	2,131	2,115	2,103	2,126

Source: WVCBP analysis of data from IPUMS-CPS, 2001-2010.

Note: Only full-time employees ages 18 to 64, 2001-2010. Totals may not sum to 100 due to rounding.

The most important difference between the two groups is level of education. State and local government employees in West Virginia have a higher degree of educational attainment than private sector workers (**Figure 1**). For example, approximately 47 percent of public employees in West Virginia have a bachelor's degree or higher compared to just 18 percent in the private sector. The contrast is even starker when looking at workers with an advanced degree (e.g. Master's, PhD, MD, JD). Nearly 25 percent of state and local workers have an advanced degree, compared to just five percent of private sector employees.

Figure 1
Educational Attainment Higher in Public Sector



Source: WVCBP analysis of data from IPUMS-CPS, 2001-2010.

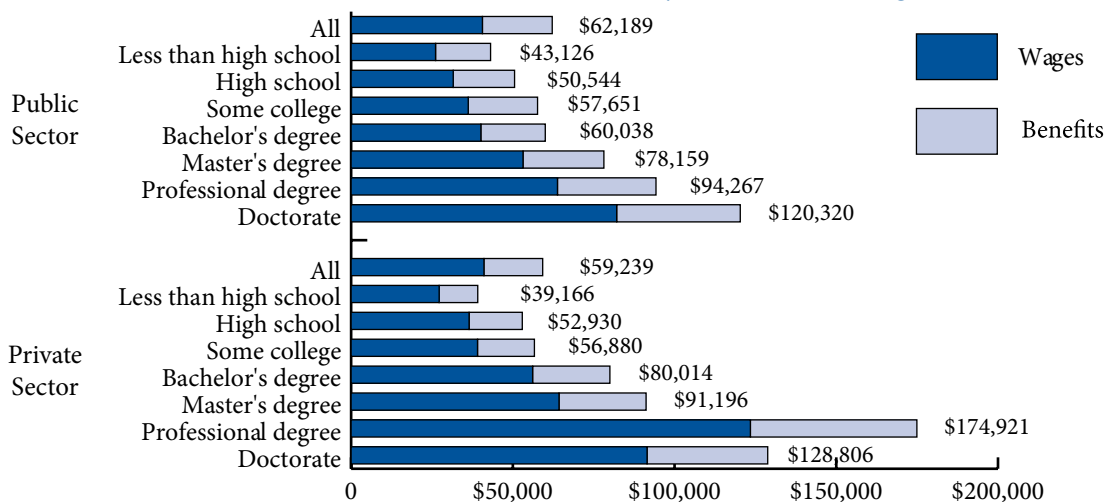
One reason for the high level of educational attainment in the public sector is the strong concentration of educators at the local level. According to the 2008-2009 No Child Left Behind Report Card, approximately 39 percent of public educators in West Virginia had at least a bachelor's degree, and 61 percent had a master's degree or higher.⁴

**Public Sector:
More Education, Less Compensation**

As one would expect, higher levels of education are strongly linked with higher earnings for West Virginia's workers. Although both public and private sector employees experience higher average wages and salaries as education levels increase, private sector employees in West Virginia earn more than public employees at each level of education.

Since public sector employees typically receive a larger portion of their total compensation in the form of benefits (35 percent versus 29 percent), simply comparing wages and salaries may not reveal the whole picture. When benefits are included in total compensation, public employees with less than a high school degree or some college are slightly better off than their private sector counterparts. However, all other public employees are compensated less than private sector employees with the same degree (**Figure 2**). For example, state and local government employees with a bachelor's degree receive nearly \$20,000 less in compensation, on average, than private sector employees.

Figure 2
Compensation of Public and Private Sector Employees, Controlling for Education



Source: WVCBP analysis of data from IPUMS-CPS, 2001-2010, and from BLS unpublished ECEC data for September 2010.

Note: Figures adjusted to 2010 dollars.

Comparing Apples to Apples

A true apples to apples comparison between public and private sector workers cannot simply account for education; it must also control for age, race, sex, hours worked annually, and disability status – factors that influence one’s earnings and compensation. **Table 3** shows that West Virginia’s public employees are not compensated at a higher level than private sector employees when all of these factors are taken into account.

If a public sector employee worked instead for the private sector, he or she would earn 9.3 percent more on average. Similar to a study of compensation in New Jersey, this analysis shows that, on average, West Virginia’s public employees receive roughly the same total compensation as their private sector counterparts.⁵

Table 3
The Pay Penalty for Public Employees

	Wages/Salary	Total Compensation
Public Employee	-9.3%***	-0.7%***

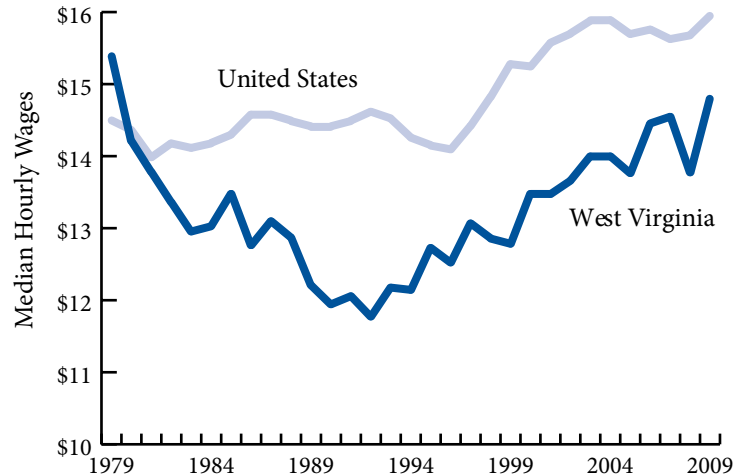
The dependent variable for model one (Wages) is the natural log of wages, and the natural log of total compensation for model two (Total Compensation). Control variables: age, race, annual hours of work, education level, sex, and disability. *** p < 0.001

Source: WVCBP analysis of data from IPUMS-CPS, 2001-2010, and from BLS unpublished ECEC data for September 2010.

Wages Not Rising with Economic Growth

While much attention is focused on which sector receives higher pay and benefits, the story that often gets ignored is that the majority of workers in West Virginia - both public and private - have failed to benefit from overall economic growth over the last three decades. Since 2001, average annual pay in West Virginia has increased 8.9 percent for private sector workers and 4.9 percent for public sector employees.⁶ However, median wages for all workers in West Virginia remain approximately four percent lower today than they were in 1979 (**Figure 3**). In 2009, the typical West Virginia worker made 7.2 percent less than the national average.

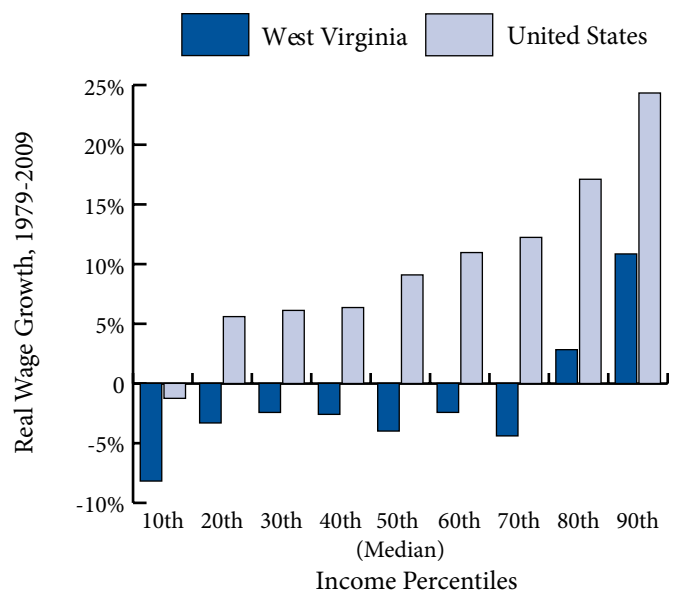
Figure 3
Wages Still Below Historical Levels in WV



Source: EPI analysis of CPS data. Note: The universe is all wage earners ages 18-64, employed in the private and public sectors.

The wage disparity runs deep in West Virginia, with all but the top wage earners experiencing a decline in hourly wages since 1979 (**Figure 4**). The lowest wage earners – those in the 10th percentile earning on average just \$7.46 per hour – have seen their wages decline by 8.2 percent, while the top percentile had a wage increase of 10.8 percent. Also of note is the fact that only the 80th and 90th percentiles in West Virginia experienced any wage increases, in contrast with broader growth at the national level.

Figure 4
Real Wages Increased Only for Top Earners in WV



Source: EPI analysis of CPS data. Note: The universe is all wage earners ages 18-64, employed in the private and public sectors.

Conclusion

West Virginia's public employees are not compensated more than their private sector counterparts. In fact, after controlling for a number of factors - education level, age, race, hours worked annually, sex, and disability status – the data reveal that public employees are actually compensated less.

The bigger issue is that most workers in West Virginia have experienced wage stagnation/decline and lower median wages than the national average over the past three decades, regardless of sector. More attention should be directed toward addressing this problem rather than debating whether to cut public employees' benefits or freeze wages.

Endnotes

- 1 Jeffrey Keefe, "Debunking the Myth of the Overcompensated Public Employee: The Evidence" (Washington, D.C.: Economic Policy Institute, September 2010), downloaded from http://www.epi.org/publications/entry/debunking_the_myth_of_the_overcompensated_public_employee.
- 2 Associated Press, "Tomblin signs \$67M public pay raise bill," *The Journal*, March 29, 2011, accessed at http://www.journal-news.net/page/content_detail/id/558680/Tomblin-signs--67M-public-pay-raise-bill.html?nav=5006.
- 3 Bureau of Labor Statistics, The Editor's Desk, "Earnings by age and sex, third quarter of 2010," accessed at http://www.bls.gov/opub/ted/2010/ted_20101025.htm.
- 4 West Virginia Department of Education, "West Virginia Achieves Report Card" (2009), downloaded from <http://wveis.k12.wv.us/nclb/pub/rpt0809/cache/pdf999.pdf>.
- 5 Jeffrey Keefe, "Are New Jersey Public Employees Overpaid?" (Washington, D.C.: Economic Policy Institute, July 2010), downloaded from <http://www.epi.org/publications/entry/BP270>.
- 6 West Virginia Center on Budget and Policy analysis of data from the Bureau of Labor Statistics' Quarterly Census of Employment and Wages, accessed at <http://www.bls.gov/cew/>.

Methodology

Based on the work of John Schmitt at the Center for Economic and Policy Research (CEPR) and Jeffrey Keefe for the Economic Policy Institute (EPI), this analysis uses data from two sources. Wage and demographic data were obtained from the Annual Social and Economic Supplement of the Census Bureau's Current Population Survey (CPS). Since data on benefits are not included in the CPS, these came from the Bureau of Labor Statistics' unpublished "Employer Costs for Employee Compensation" (ECEC) estimates for the South Atlantic Census Division.

Current Population Survey

CPS March Supplement data for 2001-2010 were downloaded from the Integrated Public Use Microdata Series (IPUMS), a project of the Minnesota Population Center at the University of Minnesota.^{M1} The CPS is a monthly household survey of the Census Bureau and is "the primary source of information on the labor force characteristics of the U.S. population."^{M2}

In order to make the best comparison, only full-time workers in West Virginia were kept in the sample. This entailed removing cases for part-time, domestic, seasonal/agricultural, self-employed, and federal employees.

Several variables needed to be recoded. Due to the small sample size within many of the race categories in West Virginia, race was recoded as a white/non-white dummy variable. Educational attainment was recoded into seven dummy variables (less than high school, high school, some college, bachelor's, master's, professional, PhD). Class of worker was recoded into a public/private sector dummy.

The CPS contains data on average hours worked per week and number of weeks worked, but does not contain a variable for total hours worked annually. This analysis created a new annual variable for hours worked by multiplying the two variables.

Finally, the CPS provides wage and salary data from the prior year – in this case, 2000 through 2009. Since the unpublished ECEC data was from 2010, all wage data in the CPS sample were adjusted to 2010 dollars using the Consumer Price Index.

Employer Costs for Employee Compensation

The ECEC provides estimates of the average cost that employers pay for their employees' wages/salaries and benefits per hour (excluding self-employed, domestic, seasonal/agricultural, and federal employees).^{M3} The Bureau of Labor Statistics provided unpublished data for the South Atlantic Census Division, which includes West Virginia, Virginia, Delaware, Maryland, the District of Columbia, Florida, Georgia, North Carolina, and South Carolina. Tables include per hour estimates of total compensation, benefits, and wages for full-time public and private sector employees.

For public sector employees, a more detailed breakdown by occupational group is provided. Private sector employees are first divided by establishment size (less than 100, 100-499, 500 or more workers), then by occupational group.

A ratio of benefits to wages was created for each category. This number was then multiplied by the wage data for corresponding cases in the CPS to get an estimate of total benefits. Cases were matched using firm size and occupational data available in the CPS. Finally, the wage and benefits data were added together to arrive at an estimated total compensation for each case.

Regression Analysis

After applying the proper person weight, two ordinary least squares regression models were run using a variation of the standard earnings equation.

$$\ln(wage) = \beta_0 + \beta_1 Male + \beta_2 White + \beta_3 Age + \beta_4 Disability + \beta_5 HoursWorked + \beta_6 HighSchool + \beta_7 SomeCollege + \beta_8 BA + \beta_9 MA + \beta_{10} Professional + \beta_{11} PhD + \beta_{12} PublicSector + \epsilon$$

$$\ln(compensation) = \beta_0 + \beta_1 Male + \beta_2 White + \beta_3 Age + \beta_4 Disability + \beta_5 HoursWorked + \beta_6 HighSchool + \beta_7 SomeCollege + \beta_8 BA + \beta_9 MA + \beta_{10} Professional + \beta_{11} PhD + \beta_{12} PublicSector + \epsilon$$

Both models controlled for factors that commonly influence one's wage and/or compensation: age, race, gender, disability, level of education, and hours worked annually. By holding these factors constant, the impact and significance of whether one works in the public or private sector can be measured.

For more detailed methodological or syntax information, please contact Elizabeth Paulhus at epaulhus@wvpolicy.org.

^{M1} Miriam King, Steven Ruggles, J. Trent Alexander, Sarah Flood, Katie Genadek, Matthew B. Schroeder, Brandon Trampe, and Rebecca Vick. Integrated Public Use Microdata Series, Current Population Survey: Version 3.0. [Machine-readable database]. Minneapolis: University of Minnesota, 2010.

^{M2} U.S. Census Bureau, home page of the Current Population Survey, accessed at <http://www.census.gov/cps/>.

^{M3} Bureau of Labor Statistics, "Technical Note on ECEC," accessed at <http://www.bls.gov/news.release/ecec.tn.htm>.