Public Versus Private Employee Costs in Kentucky:
Comparing Apples to Apples

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KCEP
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About KCEP

The Kentucky Center for Economic Policy is a non-partisan initiative that conducts research, analysis and education on important policy issues facing the Commonwealth. Launched in 2011, the center is a project of the Mountain Association for Community Economic Development (MACED) and is a member of the State Fiscal Analysis Initiative, a national network of organizations in 40 states conducting research on state budget, tax and other policy issues. Visit KCEP's website at www.kypolicy.org.

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Executive Summary

This paper investigates the claim that Kentucky public employees are overcompensated at the expense of other Kentucky taxpayers. The research presented makes an apples-to-apples comparison that looks at total compensation (including wages and benefits) and controls for the differences between the public sector and private sector workforces, including the higher levels of education found in the public sector. The paper finds that full-time public sector workers in Kentucky are in fact modestly *undercompensated* compared to their private sector counterparts by 12.8 percent on an annual basis and 9.2 percent on an hourly basis.

This research is timely. A legislative task force is considering changes to the retirement system for public employees that could result in additional cuts to pension benefits beyond the substantial cuts that were made in 2008, including a potential shift away from a defined-benefit pension system. The state's system faces serious shortfalls in the funding needed to pay pension obligations in future years. That funding gap results in part from the serious economic problems the world is still working through, but a good part of the underfunding is self-inflicted. The Kentucky legislature did not make its actuarially required contribution to the Kentucky Retirement System in 13 of the last 18 years.[1]

The state is legally obligated to pay pension obligations that have already been incurred, so benefit cuts will not decrease the state's liability. Nevertheless, the controversy is fueling calls for further cuts. What's more, the Kentucky Chamber of Commerce has charged that both public employees' health benefits and pension benefits are too generous, and that public employees are overpaid compared to the private sector.[2]

The question of what to do about public employee compensation needs to be answered from a variety of perspectives, but one important consideration is whether Kentucky's public employees in fact are overcompensated when compared to similar private sector workers.

The data analysis in this paper indicates that Kentucky public employees, both state and local government employees, are not overpaid. Comparisons controlling for education, experience, hours of work, organizational size, gender, race, ethnicity, citizenship and disability reveal that public employees in both state and local governments earn less than comparable private sector employees. As mentioned above, on an annual basis, full-time state and local employees are undercompensated by 12.8 percent in Kentucky in comparison to otherwise similar private sector workers. When comparisons are made for difference in annual hours worked, full-time state and local employees are undercompensated by a smaller 9.2 percent.

Key Points

- Full-time public sector workers in Kentucky are undercompensated compared to their private sector counterparts by 12.8 percent on an annual basis and 9.2 percent on an hourly basis.
- That compensation gap should be taken into account when the state considers more cuts to pensions and other benefits for public workers.

When comparing public and private sector pay it is essential to take into account that the occupational and educational mix of these sectors are very different, with the public sector employing occupations that require much higher levels of education. Consequently, on average, Kentucky public sector workers are more highly educated than private sector workers; 51 percent of full-time Kentucky public sector workers hold at least a four-year college degree compared to 22 percent of full-time private sector workers. Kentucky state and local governments pay employees with a bachelor's degree 25 percent less in annual compensation, on average, than private employers. The compensation differential is greatest for professional employees, lawyers and doctors. On the other hand, the public sector appears to set a floor on compensation. The 3 percent of workers in state and local governments without high school diplomas earn $41 per year more than comparably educated workers in the private sector.

The mix of wages and non-wage benefits in the total compensation package is also very different between private and public sector full-time workers in Kentucky. State and local government employees receive a higher portion of their compensation in the form of employer-provided non-wage benefits, and the mix of those benefits is different from the private sector. Some non-wage benefits are more generous in the public sector, but it is a serious error to imagine that comparability requires that each and every element of compensation is the same. What is important is that considering both the cost of employer-provided non-wage benefits and direct wages, public sector workers in Kentucky are provided less in annual or hourly compensation than they would earn in the private sector.

Public employers in Kentucky's census region provide on average 26.1 percent of employee compensation expenses in non-wage benefits, whereas private employers devote between 18.2 percent and 22.5 percent to benefits. Specifically, public employers devote a larger share of their compensation packages to health insurance and pension benefits. Health insurance accounts for 6.8 percent to 10.3 percent of private sector compensation but 11.2 percent of state and local government compensation. Retirement benefits also account for a substantially greater share of public employee compensation: 8.3 percent compared to 2 percent to 4 percent in the private sector. Social Security costs for public employers are less than that for private employers because some public employees are not in the Social Security system.[3] Most public employees also continue to participate in defined-benefit plans managed by the state, while most private sector employers have switched to defined-contribution plans, particularly 401(k) plans, which typically involve lower benefits and less retirement security. On the other hand, public employees receive considerably less supplemental pay and vacation time, and public employers contribute significantly less to legally mandated benefits financed through payroll taxes.

Making a Reasoned Comparison

To answer whether Kentucky public employees are overpaid, we need to ask two simple, related questions: Compared to whom? And compared to what? The standard of comparison for public employees is usually similar private sector workers, with respect to education, experience and hours of work.

Ideally, we would compare workers performing similar work in the public sector with the private sector, but that is not always possible. There are too many critical occupations in the public sector—for example, police, fire and corrections—without appropriate private sector analogs. Even private and public teaching is significantly different. Public schools accept all students, while private schools are sometimes highly selective and may exclude or remove any poor performers, special needs or disruptive students.

Consequently, comparing workers of similar "human capital" or fundamental personal characteristics and labor market skills is considered the best alternative. These analyses based on comparisons of personal characteristics capture most of the important and salient attributes observed in the comparable studies. Prior research reveals that education level is the single most important earnings predictor. Education helps create work-relevant skills. People invest heavily in their own and their children's educations by buying homes in communities with good schools and by paying or taking on debt to attend schools, colleges and universities.

Empirically, education is followed by experience in advancing earnings. People increase their skills by working at a variety of job tasks as they advance through occupational levels. Most occupations reward experience, as it is associated with more competent and complex performance arising from on-the-job learning. Other factors widely found to affect compensation include gender, race, ethnicity and disability, although here productivity-related human capital differences are intermingled with labor market disadvantages stemming from historical patterns of discrimination. We control for all these factors in our study.

When including hours worked in the analysis, most studies exclude part-time workers. Since their hours vary, part-time workers earn considerably less than comparable full-time workers, are more weakly attached to the labor force, and often lack benefit coverage. This study follows standard practice by focusing on full-time public and private sector employees, who represent over 80 percent of the state's labor force. The study controls for hours worked per year, and includes only year-round workers who have worked a minimum of 1,000 hours—which is often the minimum threshold to qualify for full employer provided benefits.

We are fortunate to be able to include a control for the organizational size of each sampled full-time worker's employer, which is made possible by the Integrated Public Use Microdata Series of the March Current Population Survey (IPUMS-CPS). An employer's organizational size greatly influences employee earnings. The basic wage gap due to organizational size is 35 percent. Large firms with more than 500 employees comprise less than one third of 1 percent of all firms but provide jobs for nearly half of all private sector employed persons (Oi and Idson 1999; U.S. BLS 2005). Large organizations employ more educated, experienced and full-time workers; nonetheless, even after accounting for these factors, large organizations pay a premium (Troske 1999). When we include benefits in the comparison, the compensation premium grows. Whereas the private sector has a relatively small number of large organizations, the public sector has relatively few small organizations. Over 66 percent of Kentucky employees work in organizations employing more than 100 employees, whereas 90 percent of public employees work in organizations with more than 100 employees (U.S. Census Bureau 2009).

Having decided who will be compared, the other question to be answered is, What should be compared? This is a more complex issue than it initially appears. Comparing wages is insufficient, since employee compensation increasingly includes employer-provided non-wage benefits. Regardless of how employees are paid—whether in wages or benefits—the essential issue in making a comparison is, what it costs a private or public sector employer to employ someone. Employer costs may include not only wages, but paid time off for holidays, vacations, personal and sick days; supplemental pay including overtime and bonuses; insurance, particularly health insurance but also life and disability insurance; retirement plan contributions, whether defined benefit or defined contribution including 401(k) plans; and legally mandatory benefit contributions such as unemployment insurance, Social Security, Medicare, disability insurance and workers' compensation. Once we conclude that the costs of employing a worker are the most appropriate point of comparison, rather than just wages, the more difficult issue is finding the appropriate data to make the comparison.

To obtain wage and demographic data this study uses the Integrated Public Use Microdata Series (IPUMS) of the March Current Population Survey (CPS). The CPS is a monthly U.S. household survey conducted jointly by the U.S. Census Bureau and the Bureau of Labor Statistics. The March Annual Demographic File and Income Supplement is the most widely used source for earnings used by social scientists (King et al. 2009). For the purpose of comparability, the Kentucky data excludes the self-employed and part-time, agricultural and domestic workers. We enhance the reliability of the sample by expanding the number of observations by ten years of data covering the years 2001 through 2010.

There is only one reliable source of benefit information in the United States: Employer Costs for Employee Compensation (ECEC) survey, which is collected by the U.S. Department of Labor, Bureau of Labor Statistics (BLS). The ECEC includes data from both private industry and state and local government employees and provides data for private employers by firm size. Larger employers, over 500 employees, are significantly more likely to provide employees with benefits, in part because larger workforces allow administrative costs to be spread and risk to be diversified in insurance plans. State and local governments resemble large private employers. The compensation cost analysis below controls for employer size in making comparisons.

The Most Important Factor in Earnings: Education Level

Kentucky public employees are substantially more educated than their private sector counterparts. Approximately 51 percent of Kentucky public employees hold at least a bachelor's degree compared to 22 percent in the private sector. Higher educational levels are strongly associated with higher earnings in the labor market. Table 1, column 1 reports the returns to education in comparison to workers who have not completed high school.[4] A high school graduate, all else equal, earns on average 23 percent more than someone without a high school diploma. The education premium jumps to 40 percent on average if the worker attended some college, and if the worker holds an associate's degree the return to education increases to 50 percent. Completing college with a bachelor's degree yields an 80 percent premium, and a master's degree increases average earnings by 84 percent compared to an individual without a high school diploma. A professional degree (law or medicine) yields an average 130 percent pay premium, and a doctorate produces a 139 percent return.

Table 1

Highest Degree Earned	Earnings Return to Education Compared	All Private Employers	Private 1 to 99 Employees	Private 100 to 499 Employees	Private 500 and More Employees	State and Local Government
Less than high school	0%	9%	11%	8%	7%	3%
High School	23%	38%	42%	41%	37%	24%
Some College	40%	19%	18%	18%	20%	14%
Associates	50%	10%	10%	11%	11%	7%
Bachelors	80%	16%	11%	14%	18%	19%
Masters	84%	4%	3%	5%	5%	25%
Professional Degree	130%	1%	2%	1%	1%	4%
Doctorate	139%	1%	0%	1%	1%	4%
College Plus		22%	17%	21%	25%	51%

Source: Author's analysis of March Current Population Survey (U. S. Census Bureau) and Employer Costs for Employee Compensation Survey (Bureau of Labor Statistics). See data appendix for more information.

The public sector employs more highly educated workers. As private sector organizations become larger, they rely substantially more on educated labor. Smaller private sector organizations employ more workers with a high school education or less than either larger private employers or state and local government. Only 3 percent of state and local government workers lack a high school education, whereas 11 percent of private sector employees do not have a high school diploma in firms employing less than 100 employees. The number improves to 7 percent when we examine private employers with 500 or more employees.

The returns to education, however, are not equally distributed between the private and public sectors in Kentucky. Table 2 provides computations of the annual earnings of full-time workers in Kentucky by educational attainment, comparing private sector and state/local sector employee wages and compensation. These comparisons do not adjust for the many factors we take into account in more refined analyses presented below (such as experience, annual hours worked, race, gender, etc.). The public sector has established a floor on earnings, allowing those without a high school education to earn slightly more than their private sector counterparts (Asher and DeFina 1999) (see Table 2). On the other hand, college educated public sector employees earn considerably less than similarly educated private sector employees.

Table 2

Year - 1000+ Hours	Annual Wage Earnings			Public
Full-Time	Private	Public	Public-Private	Premium/Penalty
Less than high school	$24,007	$21,514	-$2,494	-10%
High School	$31,805	$25,929	-$5,876	-18%
Some College	$37,383	$30,785	-$6,598	-18%
Associates	$40,728	$36,474	-$4,254	-10%
Bachelors	$57,560	$39,263	-$18,297	-32%
Professional Degree	$134,979	$54,014	-$80,965	-60%
Masters	$65,685	$45,594	-$20,091	-31%
Doctorate	$146,519	$67,244	-$79,275	-54%
All	$41,022	$37,258	-$3,764	-9%

	Total Compensation			Public
Full-Time	Private	Public	Public-Private	Premium/Penalty
Less than high school	$32,453	$32,494	$41	0%
High School	$42,715	$38,390	-$4,325	-10%
Some College	$49,250	$45,625	-$3,624	-7%
Associates	$53,337	$52,831	-$505	-1%
Bachelors	$74,755	$56,196	-$18,559	-25%
Professional Degree	$176,756	$76,036	-$100,720	-57%
Masters	$84,878	$64,702	-$20,176	-24%
Doctorate	$184,125	$95,298	-$88,828	-48%
All	$54,052	$53,727	-$326	-1%

Source: Author's analysis of March Current Population Survey (U. S. Census Bureau) and Employer Costs for Employee Compensation Survey (Bureau of Labor Statistics). See data appendix for more information.

A full-time worker without a high school education earns, on average, annual wages of 10 percent less when employed by state and local government ($21,514) compared to the private sector ($24,007). However, when we compare total compensation, a full-time worker on average without a high school education earns $41 per year more when employed by state and local government ($32,494) compared to the private sector ($32,453). High school graduates earn annual wages 18 percent less ($25,929) on average working for state and local government compared to ($31,805) for workers employed by private employers, but when we compare total compensation public employees with a high school degree earn 10 percent less than private sector workers. On average, workers with some college or an associate's degree face wages that are 18 percent and 10 percent less, respectively, than those of the same education level in the private sector, and 7 percent and 1 percent less in total compensation.

This difference becomes even more significant as workers gain more education. On average, private sector employers pay workers with four year college degrees and advanced degrees substantially higher wages and compensation than do public sector employees. State and local workers with a bachelor's degree make 32 percent less in salary and 25 percent less in total compensation—for those with a professional degree, the discrepancy rises to 60 percent less in salary and 57 percent less in total compensation. Workers with a master's degree must face on average a 31 percent lower salary and 24 percent smaller total compensation, while those with a doctoral degree must face a 54 percent lower salary and 48 percent smaller total compensation. As we shall observe below, fewer average work hours in the public sector will reduce these large private sector wage premiums for college educated labor.

The Growing Role of Non-Wage Benefits in Employee Compensation Costs

Non-wage benefits, once referred to as fringe benefits, account for an increasing portion of employee compensation. Non-wage benefit growth is partially fueled by the tax deductibility of health insurance payments and pension contributions, allowing employers to compensate employees without either the employer or employee paying income tax at the time of compensation. Sometimes referred to as tax "efficient" compensation, the federal government foregoes $300 billion annually in income tax revenue to subsidize these benefits (U.S. Congress, Joint Committee on Taxation 2006). Health insurance and pension benefits are particularly attractive to middle- and upper-income employees, who face higher marginal income tax rates.

Organizational size is the single strongest predictor of employee non-wage benefit participation and compensation. For example, employee participation in retirement plans varies considerably by organization size. Organizations with 1 to 99 employees have employee pension participation rates of 38 percent; organizations with 100 to 499 employees have participation rates of 64 percent; and in organizations with 500 or more employees 81 percent of employees participate in retirement plans. The pattern is similar for health insurance benefits. Organizations with 1 to 99 employees have employee participation rates in medical insurance plans of 43 percent; organizations with 100 to 499 employees have participation rates of 61 percent; and in organizations with 500 or more employees 71 percent of employees participate in medical insurance plans. This pattern is replicated for prescription drug and dental care plans (U.S. DOL BLS 2009).

Public sector employees receive more of their compensation in the form of non-wage benefits than private sector workers. Table 3 provides the distribution of employer costs of compensation in September 2010. The Employer Costs for Employee Compensation (ECEC) survey provides the only valid and reliable estimate in the United States of non-wage benefit costs incurred by employers. It is conducted quarterly by the U.S. Bureau of Labor Statistics. The ECEC includes data from both private industry and state and local government employees and provides data for private employers by firm size. This study uses these ECEC sample estimates to calculate relative non-wage benefit costs for private and public employees in Kentucky. (Please see the Data Appendix for more a detailed description.) Benefits costs range from 18.2 percent for small private employers to 22.5 percent for private employers with 500 or more employees compared to 26.1 percent for state and local

Table 3
Employer costs per hour worked for employee compensation: East South Central Census Division, National Compensation Survey, September 2010

Compensation component	State and local government	Private Industry: 1-99 workers: 1-99 workers	1-49 workers	50-99 workers	100 workers or more: 100 workers or more	100-499 workers	500 workers or more
Total compensation	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Wages and salaries	66.2%	74.4%	75.4%	71.9%	68.2%	69.8%	67.0%
Total benefits	33.8%	25.6%	24.6%	28.1%	31.8%	30.2%	33.0%
Paid leave	7.0%	5.2%	4.7%	6.4%	6.8%	5.9%	7.6%
Vacation	3.1%	2.6%	2.4%	3.2%	3.7%	2.9%	4.3%
Holiday	2.1%	1.8%	1.7%	2.0%	2.1%	2.0%	2.2%
Sick	1.6%	0.6%	0.5%	0.6%	0.7%	0.6%	0.8%
Personal	0.3%	0.3%	0.2%	0.5%	0.3%	0.3%	0.3%
Supplemental pay	0.7%	1.8%	1.7%	2.0%	2.8%	2.7%	2.9%
Overtime and premium	0.3%	0.9%	0.9%	1.0%	1.2%	1.2%	1.2%
Shift differentials	0.2%	0.1%	0.1%	0.1%	0.5%	0.5%	0.6%
Nonproduction bonus	0.2%	0.8%	0.8%	0.9%	1.0%	1.0%	1.1%
W-2 Wages	73.9%	81.4%	81.8%	80.2%	77.8%	78.3%	77.5%
Benefits Not in Pay	26.1%	18.6%	18.2%	19.8%	22.2%	21.7%	22.5%
Insurance	11.5%	7.5%	7.2%	8.1%	10.4%	9.5%	11.1%
Life	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.3%
Health	11.2%	7.0%	6.8%	7.5%	9.7%	9.0%	10.3%
Short-term disability	0.0%	0.1%	0.1%	0.2%	0.2%	0.2%	0.3%
Long-term disability	0.1%	0.1%	0.1%	0.2%	0.2%	0.1%	0.2%
Retirement and savings	8.3%	2.3%	2.0%	3.2%	3.6%	4.0%	3.2%
Defined benefit	7.0%	0.7%	0.7%	0.7%	1.8%	1.9%	1.7%
Defined contribution	1.3%	1.7%	1.3%	2.5%	1.8%	2.2%	1.5%
Legally required benefits	6.3%	8.9%	9.0%	8.5%	8.2%	8.2%	8.2%
Social Security	4.3%	5.0%	5.1%	4.9%	5.0%	4.7%	5.2%
Medicare	1.1%	1.2%	1.2%	1.2%	1.2%	1.1%	1.2%
Federal unemployment insurance	0.0%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%
State unemployment insurance	0.1%	0.7%	0.7%	0.6%	0.5%	0.5%	0.4%
Workers' compensation	0.7%	1.8%	1.8%	1.7%	1.4%	1.7%	1.2%

Source: Bureau of Labor Statistics. Unpublished data.

government employees. The compensation data reveal considerable variation within the private sector by organization size and between the private sector and state and local government compensation. However, large private sector employers most closely resemble public employers in the proportion of compensation devoted to benefits.

Public employees not only receive somewhat more of their compensation in benefits, but the mix of wages and benefits is different among paid leave, supplemental pay, insurance, retirement security and legally mandated benefits. While overall paid leave costs are similar, private sector employees receive more vacation pay while public employees receive greater sick leave compensation. Holiday and personal time compensation is similar. Public employees receive less than 1 percent of compensation in supplemental pay, whereas private sector employees in large organizations gain 2.9 percent of their earnings from supplemental pay, particularly bonuses. On the other hand, public employees receive considerably more of their compensation from employer provided health insurance. Health insurance accounts for 9.7 percent of private sector compensation in organizations employing 100 employees or more but 11.2 percent of state and local government employee costs. Retirement benefits also account for a substantially greater share of public employee compensation: 8.3 percent compared to 3.6 percent in private sector organizations with more than 100 employees.

As with all benefits, the differences between private and public employees' compensation costs shrink as the private organization comparison increases in size. Legally required benefits account for a greater share of the small employers' compensation; as organizational size increases, these benefit costs decrease in relative importance. In local and state government employment, legally required benefits represent a substantially smaller share of benefit costs for several reasons. First, state and local governments do not participate in the federal unemployment system. Second, since state and local governments offer more stable employment, they pay lower rates into the state unemployment insurance trust fund because unemployment insurance contribution rates are partially experience-rated.[5] Third, state and local governments have fewer workers' compensation claims.

In summary, state and local government workers receive more of their compensation in employer-provided benefits. Specifically, public employers provide a greater share of their compensation in the form of employee health insurance and retirement benefits. Public employees receive less of their wages in the form of supplemental pay and have less costs for legally required benefits (financed through payroll taxes, such as workers' compensation and unemployment insurance) than private sector employees. To determine whether public employees are overpaid, the specific question that should be addressed is whether higher benefit costs more than offset the lower wages paid to Kentucky public employees. That is the question we turn to next.

Assessing Private and Public Relative Pay and Benefits

To assess private and public relative employment costs we use the micro data from the IPUMS-CPS, which provide us with a sample of Kentucky employees with demographic characteristics including full-time status, education level and years of experience, as a function of age, gender, race, disability, citizenship, employer organizational size and industry. Compared to Kentucky private sector employees, Kentucky state and local government employees on average are more experienced (21.6 years compared to 20.8 years); are more likely to be female (59 percent to 42 percent); work fewer weekly hours (42.2 to 43.5); are more likely to be black (7.4 percent to 6.7 percent); are more likely to be Asian (1.5 percent to 1.1 percent); are less likely to be Hispanic (0.6 percent to 2.6 percent); and are less likely to be disabled (1.4 percent to 1.9 percent).

The Employer Cost of Employee Compensation data allow us to use the statistics on the benefit share of compensation by employer size to calculate total employer compensation costs for each employee in the sample. Table 4 reports the results of twelve earnings equations estimating Kentucky state and local government employee earnings compared to similar Kentucky private sector employees. Columns one and two provide estimates for employee wages. We find in column one that Kentucky public employees (state and local government employees) have annual wage earnings a statistically significant 21.8 percent less than comparable private sector employees. In another estimate, separating state and local employees, we learn that state government employees have annual wage earnings 22.3 percent less and local government employee 21.4 percent less than private sector employees. Column two provides hourly wage estimates. Using this comparison with private sector employees, we learn that Kentucky public employees have hourly wage earnings of 18.2 percent less than comparable private sector employees. This breaks down into 16.3 percent less for state government employees and 20.0 percent less for local government employees.

Table 4

2001-2011 CPS PUMS September 2010 ECEC	Employees Annual Wages	Employees Hourly Wages	Employees Annual Total	Employees Hourly Total
Kentucky Public Employee	-21.8% ***	-18.2% ***	-12.8% ***	-9.2% ***
State Gov Employee	-22.3% ***	-16.3% ***	-14.1% ***	-8.1% ***
Local Gov Employee	-21.4% ***	-20.0% ***	-11.6% ***	-10.2% ***

prob 0<.0001 *** <.01 ** <.05 *
Full Time Workers
Obs 10570 and 1625 state-local employees

Source: Author's analysis of March Current Population Survey (U. S. Census Bureau) and Employer Costs for Employee Compensation Survey (Bureau of Labor Statistics). See data appendix for more information.

When we compare total compensation between Kentucky public and private employees, that earnings gap narrows but it does not disappear. Columns three and four report the estimates for total compensation. Reported in column three, Kentucky public employees' annual total compensation costs are 12.8 percent less than comparable private sector employees. Kentucky state employees receive total compensation of 14.1 percent less than private sector employees, while local government employees earn 11.6 percent less. When we compare hourly estimates, the total compensation gap narrows but it remains both economically and statistically significant. Kentucky public employees cost 9.2 percent less than comparable private sector workers. State government employees' total hourly compensation costs 8.1 percent less and local government employees 10.2 percent less than comparable private employees. In summary, these estimates show that Kentucky state and local government employees earn significantly less in total hourly compensation than comparable Kentucky private sector workers. Given the relatively large sample size and the statistical power it permits, this analysis concludes that Kentucky public employees are modestly undercompensated in relation to comparable private sector employees.

Conclusion: Kentucky Public Employees *Are Not* Overpaid

The earnings equation estimates indicate that Kentucky public employees, both state and local government employees, are not overpaid. Rather, local and state public employees are undercompensated. When we make comparisons controlling for education, experience, hours of work, organizational size, gender, race, ethnicity, citizenship and disability, both state and local public employees earn less wages and compensation (including all benefits) than comparable private sector employees.

The data analysis also reveals substantially different approaches to staffing and compensation between the private and public sectors, reflecting their differing occupations. On average, Kentucky public sector workers are more highly educated than the private sector workforce; 51 percent of full-time Kentucky public sector workers hold at least four-year college degree compared to 22 percent of full-time private sector workers. For college educated labor, Kentucky state and local governments pay significantly less than private employers. The earnings differential is greatest for professional employees, lawyers and doctors. These earnings differences may create opportunities for cost saving by reviewing professional outsourcing contracts to examine what work might be performed by lower-cost public employees.

Benefits are allocated differently between private and public sector full-time workers in Kentucky. State and local government employees receive a higher portion of their compensation in the form of employer-provided benefits, and the mix of benefits is different from the private sector. Public employers provide 26.1 percent of employee compensation in the form of benefits, whereas private employers devote between 18.2 percent to 22.5 percent of compensation in benefits. Specifically, public employers provide more of their compensation in health insurance and pension benefits. Health insurance accounts for 6.8 percent to 10.3 percent of private sector compensation but 11.2 percent of state and local government compensation. Retirement benefits account for 8.3 percent of public employee compensation compared to 2.0 percent to 4.0 percent in the private sector. Public employees also continue to participate in defined benefit plans managed by the state, while private sector employers have switched to defined-contribution plans, particularly 401(k) plans. On the other hand, public employees receive considerably less supplemental pay and vacation time, and public employers contribute significantly less to legally mandated benefits.

A standard earnings equation finds that full-time state and local employees are undercompensated by 12.8 percent. We observe, however, that public employees work fewer hours, particularly employees with bachelor's, master's, and professional degrees. An earnings equation controlling for work hours of full-time employees demonstrates that Kentucky public employees earn 9.2 percent lower compensation than comparable private sector workers with comparable annual hours worked.

Simply comparing private and public employee benefits leads to an obvious but incorrect answer: that public employees are overpaid. Focusing on one or another component of compensation for comparison misses the essential point that different employee groups have different preferences and respond differently to various mixes of compensation. For example, young people have a greater preference for cash, while older workers prefer retirement benefits. What citizens need to focus on in this debate is the cost of comparable levels of total compensation, controlling for education, experience, hours of work and other characteristics that influence employee productivity. When we look at overall compensation we learn that Kentucky public employees pay for their better benefits through lower wages and salaries than comparable private sector employees.

Table 2 in this paper shows that public employee wages on average are $3,764 below private sector wages and public sector employee total compensation is 1 percent less than private sector compensation. But such a comparison can be misleading because it does not make an apples-to-apples comparison: specifically, it does not control for the substantially higher level of education found among workers in the public sector. When we do make the appropriate comparisons, an even deeper public employment penalty emerges. Simple comparisons of private and public sector average wages are ill-informed, because the average public employee is considerably more educated than the average private sector worker.

Data Appendix

This study uses the Integrated Public Use Microdata Series (IPUMS) of the March Current Population Survey (CPS). The CPS is a monthly U.S. household survey conducted jointly by the U.S. Census Bureau and the Bureau of Labor Statistics. The March Annual Demographic File and Income Supplement is the most widely used source for earnings used by social scientists (King et al. 2009). This sample provides organizational size, a critical variable for our analysis of benefits. The sample is restricted to private sector and public sector state and local employees and excludes federal employees, the self-employed, and part-time, agricultural, and domestic workers. The IPUMS-CPS identifies an employee's fulltime status, education level, experience level as a function of age minus years of education plus five, gender, race, employers' organizational size and industry. The IPUMS-CPS sample was selected for this analysis because the March CPS Annual File provides information on organizational size, which is not provided by the larger CPS sample in the Merged Outgoing Rotation Groups (MORG).

The Employer Cost of Employee Compensation (ECEC) data, part of the National Compensation Survey, was used to calculate total compensation costs as a markup on wages. Because the survey's method of data collection is expensive, the sample is not sufficiently large enough to provide reliable state level benefit cost estimates. We would have preferred to analyze compensation costs by each state. The BLS did share their unpublished sample estimates for 10 major occupations by organizational sizes for private employers and state and local government in the East South Central Census division. This study uses these ECEC sample estimates to calculate relative benefit costs for each private and public employee in the sample. The calculation was done by calculating the relative benefit mark-up for each private sector employee based on the size of organization that employs the individual and the employee's occupation. State and local government employees' wages were similarly marked up using an occupational benefit weight calculated using the ECEC data. It is assumed that when employees share information about their earnings they do not distinguish paid time off from time worked in salary data. Therefore paid time off is not included in the mark-up. CPS wages also include supplemental pay (Table A1). Specifically, this is a mark-up of total compensation relative to W-2 wages.

The IPUMS CPS sample for March 2005 to 2010 was used for the estimates, covering pay for the years 2004 through 2009. The sample size was 6,622 total observations and 1,059 public employee observations.

References

Asher, Martin, and Robert Defina. 1999. The impact of changing union density on earnings inequality: Evidence from the private and public sectors. Journal of Labor Research. Vol XVIII, Number 3. Summer.

Bender, Keith A. and John S. Heywood. 2010. "Out of Balance? Comparing Public and Private Sector Compensation over 20 Years." Center for State and Local Government Excellence and National Institute on Retirement Security. April.

Blanchflower, David G. 2006 A Cross-Country Study of Union Membership. Institute for the Study of Labor (IZA). Discussion Paper No. 2016. Bonn, Germany, March.

Keefe, Jeffrey H. 2012 "State and Local Public Employees: Are They Over Compensated?" ABA Journal of Labor and Employment Law Volume 27, Number 2, Winter 2012. pp. 239-256.

King, Miriam, Steven Ruggles, Trent Alexander, Donna Leicach, and Matthew Sobek. 2009. Integrated Public Use Microdata Series, Current Population Survey: (IPUMS CPS) Version 2.0. (Machine-readable database). Minneapolis, Minn.: Minnesota Population Center (producer and distributor).

Lav, Iris J. 2010. "Property Tax Cap Wouldn't Improve State and Local Policies: A Response to the Manhattan Institute." Washington, D.C.: Center on Budget and Policy Priorities. June.

Lee, David S. 1999. Wage inequality in the U.S. during the 1980s: rising dispersion or falling minimum wage? Quarterly Journal of Economics, vol. 114(3), pp. 941–1023.

McNichol, Elizabeth, and Nicholas Johnson. 2010. "Recession Continues to Batter State Budgets; State Responses Could Slow Recovery." Washington, D.C.: Center on Budget and Policy Priorities. May 2010.

Munnell, Alicia H., and Mauricio Soto. 2007. "State and Local Pensions Are Different from Private Plans." Cambridge, Mass.: Center for Retirement Research, Boston College.

Oi, Walter, and Todd Idson. 1999. "Firm Size and Wages. Chapter 33." Handbook of Labor Economics, Volume 3, Edited by O. Ashenfeher and D. Card. Elsevier Science. pp. 2166-2214.

Schmitt, John. 2010. "The Wage Penalty for State and Local Government Employees." Washington, D.C.: Center for Economic and Policy Research. May.

Troske, Kenneth. 1999. Evidence on the employer size-wage premium from worker-establishment matched data. The Review of Economics and Statistics, Vol. 81(1): pp. 15–26. February.

U.S. Census Bureau. Statistics of U.S. Businesses: 2006. Kentucky - All industries - by Employment Size of Enterprise. Paid Employees.

U.S. Department of Labor, U.S. Bureau of Labor Statistics, (U.S. DOL). 2010. Employer Costs for Employee Compensation, June 2010 with unpublished detailed compensation data for the East North Central Census Division,).

U.S. Department of Labor, U.S. Bureau of Labor Statistics, (U.S. DOL). 2009. National Compensation Survey: Employee Benefits in the United States, March 2009. September 2009 Bulletin 2731.

U.S. Department of Labor, U.S. Bureau of Labor Statistics (U.S. DOL), 2009 Quarterly Census of Employment and Wages (QCEW).

U.S. Department of Labor, U.S. Bureau of Labor Statistics, (U.S. DOL), 2005.New Quarterly Data from BLS on Business Employment Dynamics by Size of Firm.

U.S. Joint Committee of Taxation. 2006. Estimates of Federal Tax Expenditures for Fiscal Years 2006-2010. GPO.

End Notes

[1] Kentucky Retirement Systems, "Comprehensive Annual Financial Report, Fiscal Year Ended June 30, 2011."

[2] Kentucky Chamber of Commerce, "The Leaky Bucket," February 2010, http://www.kychamber.com/Dockycc1/governmentaffairs/LeakyBucket/LeakyBucketWhitePaper.pdf. Kentucky Chamber of Commerce, "Building a Stronger Bucket," http://www.kychamber.com/docs/governmentaffairs/pensionpages.pdf.

[3] KY is at about the national average in this regard, with 26.2 percent of state and local employees not covered by Social Security compared to a national average of 27.5 percent. Dawn Nuschler, Alison M. Shelton, John J. Topoleski, "Social Security: Mandatory Coverage of New State and Local Government Employees," Congressional Research Service, July 25, 2011, http://www.nasra.org/resources/CRS percent202011 percent20Report.pdf.

[4] A standard earnings equation using CPS data for full-time workers in Kentucky was estimated to produce the estimates of the returns to education.

[5] The less an employer's former employees use unemployment, the lower the rates and vice versa.