

Measuring Teacher Pay

How Does Teacher Pay Compare? Methodological Challenges and Answers. By Sylvia Allegretto, Sean P. Corcoran, and Lawrence Mishel, Washington D.C. Economic Policy Institute, 2004, 58 pp., \$9.95/paperback

Assessing the Compensation of Public-School Teachers. By Jason Richwine and Andrew G. Biggs, Washington D.C. Heritage Foundation, 2011, 23 pp., Free

Economists from two prominent Washington think tanks have published studies of teacher pay that rely heavily on BLS data. The reports are detailed, thorough, and reach completely different conclusions.

How Does Teacher Pay Compare? Methodological Challenges and Answers

How Does Teacher Pay Compare? takes its cue from the No Child Left Behind Act of 2001, which required a qualified teacher in every classroom. The authors begin by reviewing several earlier studies on the relationship between teacher pay and teacher quality and note that the evidence is mixed. They conclude that there is little evidence that teacher pay changes matter in the short run, but long run trends in teacher pay seem to track trends in teacher quality. They also point to studies that suggest that local considerations, such as student quality, are likely to be capitalized into wages as a compensating wage differential and that failing to account for differentials “confound estimates of the relationship between teacher pay and student outcomes.”

The rest of the book is a detailed,

critical review of the Bureau of Labor Statistics (BLS) Current Population Survey (CPS) and National Compensation Survey (NCS) data on teachers. The authors use the CPS Outgoing Rotation Group sample to measure teacher pay relative to other occupations over time but with a difference; they argue that the Census Bureau’s imputation procedures used for non-response adjustment biases the results against teachers because “teachers are assigned wages that are too high and non-teaching professionals are assigned wages that are too low.” They also state that the growing problem of nonresponse (affecting all surveys, not just CPS) changes the wage gap over time.

There is a short discussion of how teachers’ summers off might be evaluated. Allegretto, Corcoran, and Mishel point out that additional leisure and potential income from summer employment likely overstates a measured wage disadvantage; concurrently, they acknowledge that some teachers use the time to acquire additional professional training or prepare for the next school year. The concept that teachers could enjoy additional leisure and/or potential income from employment outside their field is unique to teaching. In other professions, workers who are not working and not receiving pay are considered unemployed. Off-the-clock time spent adding to professional skills is generally not considered employment either. In terms of wages, their analysis of CPS data shows that pay for all teachers eroded 13 percent between 1979 and 2003 after controlling for inflation, age, region, marital status and ethnicity. For women, the change was even larger — 18 percent.

The authors then use skill level information from the NCS to identify 16 occupations with similar levels of

knowledge, complexity, and supervision, and repeat the comparisons using the CPS data. The list includes most major professional occupational categories that require only a bachelor’s degree. The two most populous jobs in the list are registered nurse and accountant. Neither these nor the other identified occupations are particularly like teaching. Only a couple of the jobs (technical writer and reporter) have communicating information as a primary duty and only the health care jobs on the list would normally be expected to work with children. The study does not make comparisons with other occupations that may be more like teaching, such as post secondary teachers, or even occupations with responsibilities for communicating information, such as sales or public relations. Their comparisons show that teacher wages fell 12 percent relative to those regarded as comparable occupations from 1983–2002.

Fringe benefits usually account for about 30 percent of total compensation, so the authors review the data on benefits to determine whether teachers get a “fringe benefit bias.” NCS Employer Cost for Employee Compensation (ECEC) data are analyzed from 1994 and 2002 to get a sense of whether the benefit effect changes over time. Their findings illustrate that teachers generally receive lower bonus and vacation earnings than other professionals (attributable to fewer bonuses in the public sector and the shorter work year) but larger health and pension benefits. The larger health costs are due to the need for year round health insurance even though the work year may be only 9 months (the relative share of each benefit category does not change a great deal over the two time periods).

The final chapter is a comparison of

CPS and NCS data. On an hourly basis, NCS shows much higher wages for teachers than the CPS and a much shorter work schedule. The authors believe these differences are a measurement problem with the NCS data:

“We investigated further the measurement and work time in the NCS and found that the measurement of work time for teachers is inconsistent with that of other workers and professionals. In fact, this different treatment of work time in the NCS appears to apply to nearly all occupations that do not have regular year round schedules, and it accounts for nearly all the discrepancy between the NCS and CPS measures of weekly and hourly wages.”

The authors point out that several sources of data (including CPS) suggest that teachers work about 1.5 hours per day beyond the official scheduled work day. Allegretto, Corcoran, and Mishel review a number of other studies which indicate that the CPS estimate is at the lower end of what other studies say is “the real work schedule.” Their conclusion is that “hourly or weekly wage data from the NCS (as given) should not be used to make comparisons between teachers and other occupations...”

In fact, this reviewer believes that the NCS measure is consistent. NCS calculates earnings based on the official work schedule for all occupations. It does so because the data are collected from employers who have no way of knowing how much unofficial time is worked. Normally this works well, but some occupations follow the work schedule less closely than others. Teachers are very unusual in the amount of unscheduled time they work.

Assessing the Compensation of Public-School Teachers

In *Assessing the Compensation of Public-School Teachers*, Jason Richwine and Andrew G. Biggs of the Heritage Foundation conclude “that public-school teacher salaries are comparable to those paid to similarly skilled private-sector workers, but that more generous fringe benefits for public-school teachers, including greater job security, make total compensation 52 percent greater than fair market levels...” This suggests to them that teacher pay could be reduced without much harm to retention and that more effective teachers could be hired at a comparable cost.

As with the Economic Policy Institute (EPI) study, Richwine and Biggs begin with CPS data. In this case, however, they use the Annual Social and Economic Supplement rather than the Outgoing Rotation Group used in the EPI study. There are a number of other differences that may be of interest to econometricians but their initial result is quite consistent despite using a different technique, time period, and dataset. They show a 19.3 percent wage disadvantage for teachers when they control for a number of demographic and human capital variables such as education, experience, gender, and race.

The authors argue that the result of their study reflects a lower value of an education degree: “Given the relative lack of rigor of education courses, many teachers have not faced as demanding a college curriculum as other graduates.” They note that while teachers as a group score better than the national average on intelligence tests, they score below average among their college graduate peers. In order to learn more from the model, the authors replace the CPS dataset with the BLS National Longitudinal Survey

of Youth that includes scores from the Armed Forces Qualification Test (AFQT) which they regard as “similar to a full-scale IQ test.” Replacing education with the AFQT score in their regression eliminates the pay disparity for teachers.

The next part of the study looks at teachers who leave their profession for other jobs. Richwine and Biggs contend that teachers who are underpaid should be able to raise their salaries by changing jobs. They use data from the BLS Survey of Income and Program Participation (SIPP) to show that teaching to non-teaching job changes actually lead to a 3.1 percent decrease in pay, while non-teaching to teaching job changes lead to an 8.8 increase after controlling for variables such as age, education, and metropolitan area. The authors’ analysis also indicates the value of teachers’ benefits as more than 50 percent of total compensation, meaning the value of benefits is larger than their salaries (the ECEC puts the value of benefits at about 30 percent of total compensation).

The higher estimate comes from three adjustments to the ECEC data framework: 1) The authors argue that public sector organizations, such as school districts, enjoy relatively generous pension funding rules that allow the recipients to enjoy better benefits than the funding cost would suggest 2) They suggest that the public sector practice of providing retiree health insurance, the cost of which is not included in the ECEC, understates teacher compensation 3) They further contend that the ECEC does not properly account for the shorter work year of teachers.

The next section analyzes the value of teacher job security. Richwine and Biggs examine a report published by the BLS Office of Publications and Special Studies that examines unem-

ployment rates for a list of occupations that Allegretto, Corcoran, and Mishel identify as similar to teaching. This report found that public school teachers had an unemployment rate of 2.1 percent during the period of 2005–2010 compared to 4.1 percent for non-teachers. The authors, relying on their earlier research, determine that the value of this extra job security is worth a compensating wage differential of about 8.6 percent of total compensation.

Interestingly, the final section of the report titled “How Much Should Teachers Be Paid?” never actually answers that question. It merely suggests that lowering teacher pay would free up resources for other areas, but explains that existing salary structures and union contracts may make that difficult. Richwine and Biggs recommend that greater flexibility be given to school administrators and suggest that a market driven pay-for-performance system will move teacher pay more in line with similarly skilled private sector employees.

Most compensation professionals and educators will likely find the

EPI study more convincing. It uses standard measures that analysts will be comfortable with and the adjustments made to data are plausible and explained well. To their credit, its authors innovate when they attempt to use skill information from the NCS to create a data-driven approach to comparable occupations, albeit with limited success. They do not resolve the comparison issues of a 9-month work schedule but do provide some insight on teacher hours of work.

In this reviewer’s opinion, the Heritage study raises a number of questions that deserve wider discussion, but overall it does not close the sale on the idea that teachers are actually overpaid. By first presenting a CPS result showing that teachers make less than most professionals and then arguing that intelligence (which has rarely, if ever, been used in compensation studies) should replace education in the model, the authors give the impression that they are shopping for data that give a particular result. The turnover data are genuinely interesting but do not really address the issue of whether teacher pay is at an appro-

priate level. The argument that school districts have a comparative advantage funding pensions might suggest that a relatively generous pension program is to be expected but it does not further the argument that overall compensation is too high. Finally, their point that ECEC does not account for the shorter work year when funding year round benefits is simply incorrect. Those adjustments are made and are reflected in the higher ECEC estimates of cost per hour actually worked.

Reviewing these studies helps one to understand why teacher compensation is such a controversial public policy question. Both sets of authors grapple with genuinely difficult technical issues and neither group settles the argument. Teaching is a unique occupation and any analysis of teacher pay must take that into account. It’s harder than it sounds. □

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