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THE TEACHING PENALTY

An update through 2010

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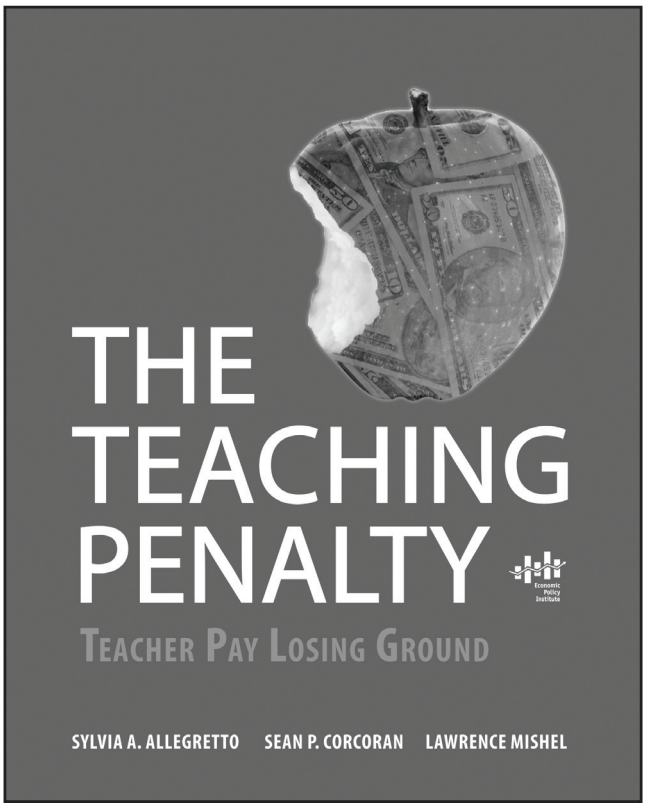
Effective teachers are demonstrably the most important resource schools have for improving the academic success of their students (Hanushek and Rivkin 2006; Rice 2003). Yet for many school leaders, recruiting and retaining talented and effective classroom teachers remains an uphill battle. For decades, a small and declining fraction of the most cognitively skilled graduates have elected to enter the teaching profession (Corcoran, Evans, and Schwab 2004), while rigorous national standards and school-based accountability for student performance have pushed the demand for talented teachers to an all-time high.

Whether teacher salaries are sufficient to attract the best graduates into teaching remains an open question (Bacolod 2007; Stronge, Gareis, and Little 2006; Moulthrop, Calegari, and Eggers 2005), but there is little doubt that the recent fiscal crisis in the states has reenergized the debate over teacher compensation. Many commentators have suggested that teacher salaries and benefits are too high, and that downsizing is necessary to keep public budgets at a sustainable level. Others have argued for a radical restructuring of teacher pay, most notably linking pay increases to performance (Leigh and Mead 2005; Gordon, Kane, and Staiger 2006; and Solmon and Podgursky 2000). As this debate proceeds, sound evidence on the comparability of teacher pay is critical to ensuring we maintain and improve the quality of the teaching force in the United States.



In the EPI study, *How Does Teacher Pay Compare?* (Allegretto, Corcoran, and Mishel 2004), we contributed to this evidence by examining trends in the relative weekly earnings of elementary and secondary school teachers.

We found that the average weekly pay of teachers in 2003 was nearly 14% below that of workers with similar education and work experience, a gap only minimally offset by the better nonwage benefits in teaching. Teacher earnings have fallen below that of the average college graduate in recent decades, losing considerable ground during the late 1990s, as earnings of college graduates grew 11% relative to the much lower 0.8% growth in teacher earnings.

We extended that analysis in a second study released in 2008, *The Teaching Penalty: Teacher Pay Losing Ground*, further disaggregating these trends by seniority level and restricting the analysis to public-sector teachers. Using decennial Census data, we were able to look at an even longer time period and showed how the growing gap in relative pay complicates efforts to maintain a constant level of teacher quality.

In this issue brief, we summarize the main findings of our 2004 and 2008 reports, and update key estimates of the teacher pay penalty through 2010. Using data aggregated over the 2006-10 period (to ensure a sufficient sample size in all 50 states and the District of Columbia), we computed the weekly wages of public school teachers relative to comparably educated workers. Our findings:

- Trends in weekly earnings (**Table 1**) show that public school teachers in 2010 earned about 12% less than comparable workers, a gap equivalent to that found in our 2004 study. The weekly earnings disadvantage for teachers relative to comparable workers grew by 10.5 percentage points between 1979 and 2010, with most of the erosion (8.2 percentage points) occurring between 1996 and 2001. This increase in wage disparity for teachers is

TABLE 1

Regression-adjusted weekly wage penalty for public school teachers, 1996-2010

Years	All	Women	Men
1996	-4.3%	-0.7%	-15.1%
1997	-5.3	-0.4	-18.1
1998	-8.4	-2.5	-21.8
1999	-10.0	-4.3	-21.9
2000	-10.2	-5.7	-21.7
2001	-12.6	-7.0	-24.7
2002	-13.5	-8.6	-24.8
2003	-12.4	-7.6	-22.5
2004	-11.4	-6.9	-22.0
2005	-13.4	-8.4	-24.8
2006	-15.1	-10.5	-25.5
2007	-13.0	-7.9	-24.4
2008	-13.8	-9.7	-23.8
2009	-12.4	-7.7	-23.0
2010	-12.1	-6.6	-23.3
Percentage point changes, 1979-2010			
1979-93 **	-1.7%	-5.5%	3.7%
*1993-96**	-1.0	-4.2	-2.0
1996-2010	-7.8	-6.0	-8.2
1979-2010	-10.5	-15.6	-6.5

* Estimated using the March Current Population Survey.
** Estimated for public school teachers with four education controls.

SOURCE: Update of Table 3 in *The Teaching Penalty: Teacher Pay Losing Ground* by Sylvia A. Allegretto, Sean P. Corcoran and Lawrence Mishel; Economic Policy Institute, 2008.

particularly troublesome because the 1990s recovery was one of the few periods in recent decades of strong overall wage growth for workers.

- Recent trends represent only a small part of a much larger long-run decline in the relative pay of teachers. Census data shows that the pay gap between female public school teachers and comparably educated women—for whom the labor market dramatically changed over the 1960-2000 period—grew by nearly 28 percentage points, from a relative wage *advantage* of 14.7% in 1960 to a pay *disadvantage* of 13.2% in 2000. Among all (male and female) public school teachers, the relative wage disadvantage grew almost 20 percentage points over the 1960-2000 period. (Allegretto, Corcoran, and Mishel 2008, p.7)

- Analyzing the weekly earnings of occupations comparable to K-12 teachers confirms the substantial erosion of teacher pay relative to their peers through 2006. Teachers' weekly wages were nearly on par with wages paid in comparable occupations in 1996, but were 14.3%, or $154, below that of comparable occupations in 2006, the latest year analyzed (Allegretto, Corcoran, and Mishel 2008, p.28).

- Improvements in the nonwage benefits of K-12 teachers partially offsets the worsening wage disparities: the weekly *compensation* disadvantage facing teachers in 2006 was about 12%, or roughly 3 percentage points less than the 15% weekly *wage* disadvantage estimated for that year (Allegretto, Corcoran, and Mishel 2008, p. 34). Assuming these benefit trends continued along that path through last year, the weekly compensation penalty for teachers in 2010 was about 9.0%, which may be smaller than the estimated wage penalty of 12.1%, but still is substantial.

- After disaggregating trends in relative compensation through the 1990s by age, nearly all of the increase in the weekly earnings gap between teachers and comparably educated and experienced workers occurred among mid- and senior-level teachers. In other words, mid- and late-career teachers fared far worse, while early-career teachers (age 25-34) experienced roughly the same wage disadvantage in 2006—about 12%—as in 1996 (Allegretto, Corcoran, and Mishel 2008, p. 21).

- If the policy goal is to improve the quality of the entire teaching workforce, then raising the *level* of teacher compensation is critical to recruiting and retaining higher quality teachers. Policies that solely focus on changing the *composition* of current compensation (e.g., merit or pay-for-performance schemes) without actually increasing compensation levels are unlikely to be effective. Simply put, improving *overall* teacher quality requires correcting the teacher compensation disadvantage in the labor market.

- Analysts from across the political spectrum have found trends comparable to ours—that teachers face an earnings disadvantage, and that this disadvantage has grown over the long run. As we reviewed in the 2008 study, only two widely cited analysts seem to disagree with this finding, but the data they examine are inappropriate for this task, as the Bureau of Labor Statistics clearly warns in a statement on its website.

- States vary widely in how much they underpay public teachers compared with other college graduates. Based on analyses of data over the 2006-10 period, public school teachers in 19 states saw weekly wages lag by at least 25% (see **Table 2**). Only three states had a pay disparity under 10%, and there is no state where teacher pay is equal to or better than that of other college graduates.

For an even more robust analysis, we invite readers to consult the two prior studies mentioned above, which addressed the entire range of methodological issues pertinent to understanding teacher wage trends: the use of employer- or employee-based surveys of earnings; the pay interval (annual, weekly, or hourly) examined; the level and changes in nonwage benefits; the existence of "summers off"; and standards of comparison (comparable occupations, comparably educated workers).

TABLE 2

Public school teacher and college graduate weekly wages, by state

States	Average weekly wages (2006-2010 average) in $2010: Public teachers: BA level	Public teachers: MA level	Public teachers: Total*	Other college graduates: BA level	Other college graduates: MA level	Other college graduates: Total*	Ratios: Average weekly wages teacher/other college graduates: BA level	Ratios: MA level	Ratios: Total*	Share of teachers with BA only
United States	904	1,165	1,034	1,202	1,495	1,348	75.2%	77.9%	76.7%	50.4%
Alabama	799	924	869	1,115	1,238	1,184	71.6	74.7	73.4	43.7
Alaska	1,009	1,188	1,095	1,207	1,419	1,308	83.6	83.7	83.7	52.2
Arizona	846	985	929	1,226	1,478	1,377	69.0	66.6	67.5	40.1
Arkansas	813	960	869	1,006	1,144	1,059	80.8	83.9	82.1	62.0
California	1,183	1,396	1,279	1,363	1,740	1,532	86.8	80.3	83.5	55.1
Colorado	790	1,025	913	1,215	1,482	1,355	65.1	69.1	67.4	47.6
Connecticut	1,036	1,351	1,288	1,414	1,721	1,659	73.3	78.5	77.6	20.0
Delaware	887	1,180	1,072	1,189	1,401	1,323	74.6	84.3	81.1	36.7
District of Columbia	992	1,216	1,133	1,275	1,654	1,513	77.8	73.5	74.9	37.2
Florida	862	1,032	923	1,064	1,287	1,144	81.0	80.1	80.6	64.0
Georgia	822	1,031	927	1,202	1,470	1,336	68.4	70.2	69.4	49.9
Hawaii	905	1,026	957	1,049	1,352	1,180	86.3	75.9	81.1	56.7
Idaho	803	926	842	1,080	1,360	1,168	74.4	68.1	72.1	68.5
Illinois	838	1,217	1,058	1,215	1,558	1,414	69.0	78.1	74.8	41.9
Indiana	888	1,101	1,012	1,089	1,296	1,209	81.6	85.0	83.7	41.7
Iowa	791	1,003	865	1,034	1,225	1,101	76.5	81.8	78.6	64.9
Kansas	732	911	804	1,051	1,310	1,156	69.6	69.5	69.6	59.7
Kentucky	769	988	936	1,055	1,221	1,181	72.9	80.9	79.2	24.1
Louisiana	779	863	796	1,115	1,362	1,164	69.9	63.3	68.3	80.0
Maine	847	988	912	1,049	1,287	1,159	80.7	76.7	78.7	53.6
Maryland	1,061	1,383	1,236	1,321	1,601	1,473	80.3	86.4	83.9	45.6
Massachusetts	1,009	1,250	1,157	1,345	1,668	1,543	75.0	74.9	75.0	38.7
Michigan	914	1,380	1,219	1,236	1,464	1,385	73.9	94.3	88.0	34.6
Minnesota	896	1,153	1,048	1,177	1,457	1,343	76.1	79.1	78.0	40.9
Mississippi	739	870	785	998	1,213	1,074	74.1	71.7	73.1	64.6
Missouri	699	923	821	1,081	1,251	1,174	64.7	73.7	69.9	45.5
Montana	751	984	843	875	1,020	932	85.8	96.4	90.4	60.7
Nebraska	818	1,059	915	1,045	1,236	1,121	78.3	85.7	81.6	59.9
Nevada	854	1,057	972	1,121	1,418	1,293	76.2	74.5	75.1	42.0
New Hampshire	960	1,114	1,035	1,276	1,483	1,376	75.2	75.1	75.2	51.5
New Jersey	1,325	1,444	1,381	1,464	1,747	1,597	90.5	82.7	86.5	53.1
New Mexico	834	1,023	928	1,093	1,452	1,271	76.3	70.5	73.0	50.4
New York	899	1,406	1,321	1,267	1,545	1,498	71.0	91.1	88.2	16.9
North Carolina	769	949	828	1,062	1,324	1,148	72.5	71.7	72.2	67.0

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TABLE 2 (CONT.)

Public school teacher and college graduate weekly wages, by state

States	Average weekly wages (2006-2010 average) in $2010						Ratios			Share of teachers with BA only
	Public teachers			Other college graduates			Average weekly wages teacher/ other college graduates			
	BA level	MA level	Total*	BA level	MA level	Total*	BA level	MA level	Total*	
North Dakota	781	1,003	839	894	1,078	942	87.4%	93.1%	89.0%	74.2
Ohio	872	1,177	1,063	1,103	1,395	1,285	79.1	84.4	82.7	37.6
Oklahoma	685	815	721	1,072	1,215	1,111	63.9	67.1	64.9	72.3
Oregon	1,052	972	999	1,152	1,407	1,322	91.4	69.1	75.5	33.1
Pennsylvania	964	1,143	1,061	1,140	1,406	1,285	84.5	81.3	82.6	45.5
Rhode Island	1,180	1,425	1,315	1,184	1,467	1,340	99.7	97.1	98.1	44.8
South Carolina	793	912	863	995	1,092	1,052	79.7	83.5	82.0	41.3
South Dakota	727	962	817	897	1,130	986	81.1	85.1	82.9	61.6
Tennessee	794	966	864	1,051	1,393	1,191	75.6	69.4	72.6	59.2
Texas	872	1,002	902	1,225	1,518	1,293	71.2	66.0	69.8	76.6
Utah	833	1,049	907	1,117	1,371	1,204	74.6	76.5	75.3	65.7
Vermont	855	1,040	951	983	1,229	1,111	87.0	84.6	85.6	48.0
Virginia	892	1,127	1,008	1,291	1,692	1,488	69.1	66.6	67.7	51.0
Washington	955	1,112	1,054	1,285	1,601	1,485	74.3	69.4	71.0	36.7
West Virginia	800	972	892	1,028	1,177	1,107	77.8	82.6	80.5	46.9
Wisconsin	853	1,153	1,015	1,116	1,336	1,235	76.5	86.3	82.2	46.1
Wyoming	925	1,131	1,005	999	1,141	1,054	92.6	99.1	95.3%	61.1

* Totals are weighted averages of the BA and MA level weekly wages where the weights are the shares of teachers with a bachelor's degree (BA) or master's degree (MA). This insures that the distribution of education among teachers and other college graduates does not affect the comparison.

SOURCE: Authors' analysis of weekly wages computed from the Current Population Survey ORG files averaged over the 2006-10 period and inflation adjusted to 2010. (Update of Table B-4 in *The Teaching Penalty: Teacher Pay Losing Ground* by Sylvia A. Allegretto, Sean P. Corcoran and Lawrence Mishel; Economic Policy Institute, 2008.)

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