Teacher Compensation and Local Labor Market Conditions in California: Implications for School Funding

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Spending on teachers accounts for slightly more than half of total education spending in California and is an important driving factor in school budgets. This paper addresses the following questions:

1. How does teacher compensation vary across California school districts and how much of the variation is driven by labor market factors beyond districts' control?
2. What are the important variables in a formula designed to equalize the labor purchasing power of districts?
3. How might equalizing the labor purchasing power of California districts further the state's education goals?

Summary of Key Findings

Teacher compensation and experience levels vary substantially across California school districts

District teacher salaries are determined by two key components: the salary schedule adopted by the district and the experience level of teachers within the district.

Teacher salaries and benefits vary substantially across California school districts. In 2003–04, districts in Santa Clara and Orange counties offered the highest compensation, on average surpassing $70,000 for a teacher with 10 years of experience and 60 units of education beyond a bachelor's degree (i.e., a mid-career teacher). At the other extreme, compensation packages in Yolo County and the North Coast counties fell short of $55,000 per year for teachers at the same position in the salary schedule.

The data show that districts across California also differ in the experience levels of their teachers. In 2003–04 the median district had an average teacher experience level of about 10.6 years. However, in one quarter of districts, teacher experience averaged less than 8.8 years; and in another quarter of districts, average experience exceeded 12.2 years.

Study Methods

For this paper, teacher compensation refers to the sum of salaries and the districts' contribution toward benefits.

The authors examine regional cost differences by dividing the state into 30 labor market regions based on the Metropolitan Statistical Areas (MSAs) designated by the U.S. Bureau of the Census.

The authors study the effect of nonteacher wages on teacher compensation for teachers with differing levels of education and experience. The measures of nonteacher wages that they use are the wages of occupations that require an education level similar to teachers. They account for differences in demographic and other labor market variables across districts in their analyses.

The authors also analyze the effect of a district's enrollment growth and the age level of workers in the region on teacher-experience levels, and thus on wages. Again, they take differences in demographic and labor market variables into consideration. Based on their analysis, the authors construct a school funding formula that equalizes the ability of districts to pay teachers.

The study draws on data from the California Department of Education's (CDE) Standardized Account Code Structure (SACS) as well as salary schedule data reported by districts to the CDE (Form J-90). Nonteacher regional wages are calculated from the 2000 PUMS U.S. Census data. (PUMS stands for Public Use Microdata Samples.)

Local labor market conditions affect compensation, particularly for experienced teachers

Salary schedules reflect local labor market conditions because school districts must compete with other employers to attract employees. In theory, districts in regions with higher nonteacher wages must offer teachers relatively higher salaries. The data bear this out, but the relationship is not perfect. For mid-career teachers, the authors find that districts facing a nonteacher wage 10% above the state average tend to offer mid-career teachers 6% above the state average mid-career teacher compensation. The authors also find that these differences are not uniform across teacher-experience levels. Teacher compensation at years 10 and 20 varied substantially, while beginning compensation varied less. This may stem from state incentives for districts to offer a minimum teacher salary of $34,000.

Average experience levels vary across districts and depend on regional demographic factors

The average experience level in a district affects total spending on teachers because experience determines where most teachers place on the districts' salary schedule. This study shows that a district's average teacher experience level is affected by the general age level of workers in the region. Some regions are more attractive to young people, who move to other regions as they grow older. Enrollment growth also affects the average experience level, with growing districts hiring more new, inexperienced teachers and therefore tending to have lower average teachers' salaries.

In addition to these factors, working-condition differences, such as those related to the portion of students in poverty, affect the experience level of teachers in the district. Districts with more student poverty tend to have teachers with lower experience levels.

Districts have limited ability to adjust to local labor market conditions

Overall, districts cannot fully adjust to external labor market conditions because their revenue is constrained by the state.

Districts in high-wage regions have some ability to cut back on nonteacher expenses, but ultimately they need to reduce teacher compensation or the number of teachers to balance their budgets. This analysis indicates that as external wage pressures grow, districts cut back on the number of teachers they hire and reduce the number of other certificated staff per student (e.g., counselors and nurses).

A formula to equalize the labor purchasing power of districts could be based on a comparable wage index, adjusted for enrollment growth

California's school funding system could be altered to equalize labor purchasing power across school districts. To do this, California could construct a baseline, statewide teacher-salary schedule and then use a comparable wage index (e.g., regional nonteacher wages) to adjust that baseline schedule appropriately for each district. Based on these regionally adjusted salary schedules, each district would receive sufficient revenue to hire enough teachers to reach some statewide target teacher-pupil ratio. Ultimately, districts determine their own salary schedule and their own mix of resources, but the formula would enable them to afford a standard resource set.

Enrollment trends might be a factor in a new finance formula, given the financial opportunities presented by district enrollment growth and the reciprocal obstacles posed by declining enrollment. Such a formula could also account for the age composition of districts' labor pools. To equalize purchasing power, shrinking districts would receive additional revenue as would districts with an older population.

Several other states already use regional cost adjustments to determine district funding levels. These adjustment strategies vary, reflecting the particular combination of teacher compensation and school finance policies in each state.

Authors' Conclusions

The formula outlined in this paper is only a starting point for considering how the state finance system could help local districts adjust to regional labor costs. It does not, for example, include funding adjustments for resource needs based on student characteristics. Such adjustments might be needed for districts with high shares of poor students, English learners, or special education students. Those districts might need to hire more teachers—or teachers with specialized skills—to help students meet the state's academic performance standards.

The proposed formula provides a straightforward computation for equalizing districts' purchasing power, enabling them to afford equal levels of tangible resources. But it does not address the issue of student outcomes. Further, the authors' analysis suggests that changing the resource mix in school districts based on labor costs alone may not substantially affect test scores. However, the funding-formula adjustments in this paper could be combined with a formula designed to increase academic performance based on student characteristics. Other studies in this project, which look at the relationship between resources and student achievement, explore this hybrid approach.

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