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How Within-District Spending Inequities Help Some Schools to Fail

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# *How Within-District Spending Inequities Help Some Schools to Fail*

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MARGUERITE ROZA and PAUL T. HILL

School district budgets are in the news. In the past year, superintendents in Seattle, Rochester, and Baltimore have all left their jobs under pressure because of unexpected deficits, and as of summer 2003 Oakland's superintendent was in similar trouble because of a \$50 million deficit for the year.

The bad economy is partly responsible. These and thousands of other districts have suffered simultaneous declines in local, state, and federal revenue. But in these cases, district actions made the worst of a tough situation. Instead of adjusting expenditures as revenues declined, these districts continued spending, with some plugging their budgets (that is, inventing revenues to make the books look balanced) in the hope that things would work out in the end.<sup>1</sup> Such plugging is neither new nor limited to Seattle, Rochester, Baltimore, and Oakland. As a former superintendent involved in an earlier financial meltdown elsewhere explained to one of us, "You can always find money if you are committed to doing something. You just spend it now and cover it next year when the budget goes up."

Another justification for budget plugging is uncertainty. Few districts know precisely how much money they have, and surprise surpluses are also possible. Even in these recent recessionary times, the Philadelphia public schools found \$8 million it did not know it had—enough, according to the *Philadelphia Inquirer*, to employ 180 teachers.<sup>2</sup>

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Tracking money is a huge challenge for school districts for many reasons: Their revenues come from many sources (state, local, federal, and philanthropic) at different times. Funders require separate record-keeping for each program, and their rules about cost accounting differ. Districts therefore maintain separate accounting systems for funds from different sources, and information is often kept on separate computer systems, bought and programmed at different times, so they cannot talk to one another.

Expenditure systems are also fragmented and isolated from one another. After five years of trying, Washington, D.C., schools still cannot say how many people they have on the payroll. Philadelphia's surplus became apparent only when the district linked up its separate systems for paying employees and funding benefits, to reveal that some employees were covered by insurance multiple times.

No wonder, then, as business analyst Larry Miller has commented, a superintendent can ask five different district budget managers the same question and get five different answers.<sup>3</sup>

With that as background, it should be no surprise that districts do not know what they spend on particular functions. San Diego superintendent Alan Bersin has tried for two years to find out what different central office services cost and he still cannot say for sure. And determining how much has been spent at any one school is even more difficult. Schools are not cost centers, so districts do not track the dollar value of resources (teachers, services, and equipment) that flow into them. District budgeting processes create big and hidden differences in school budgets. The fact that districts do not know how much is spent at one school versus another allows for serious inequities that often hurt the schools most in need of resources.

This paper focuses on one aspect of district spending ambiguity, namely, differences in per pupil spending masked by teacher salary cost averaging. It shows how an often-discussed phenomenon—that schools serving poor children get less qualified teachers than schools in the same district serving more advantaged children—is hard-wired into district policy.<sup>4</sup> It profiles the budget layering that is then created in attempts to remedy these unacceptable consequences. It also shows how more open funding and accounting practices can help re-sort the most capable teachers so that schools serving poor students can become better staffed.

## Research Study

This paper is the result of five years' study of school district budgets. We did not rely, as most researchers do, on published district budgets but assembled real-dollar budgets for schools from the ground up. This involved identifying the schools to which personnel (administrators and teachers) were assigned and calculating the true dollar cost of employing those individuals, based on their actual salaries and benefit rates. This approach gets results that differ strongly from published district budgets, which assume that all staff members of a given type (for example, teachers, principals) cost the same. The data presented here reflect the actual salary costs of certificated teachers at schools in four districts that cooperated with our research: Baltimore City schools, Baltimore County schools, Cincinnati public schools, and Seattle public schools.

Baltimore City and Baltimore County data were from the 2001–02 school year. Additional figures on the demographics of each school were assembled from district websites, the Common Core of Data from the National Center for Education Statistics, Maryland State's website, and information reported by the *Baltimore Sun*. Cincinnati salary data were from the 2000–01 school year with additional demographic data assembled from district reports and the Common Core of Data. Seattle's salary and benefit data were from the 1999–2000 school year with additional student and school demographics assembled from the district's own school and student reports.

Analysis for each district was conducted separately. In each district, comparisons were made between the true costs of each school and its allotted expenditures assigned by the district. Patterns were then identified among groups of schools identified as low performing, high performing, low poverty, and high poverty. Other factors that distinguished schools and student populations (such as school size, school level, percent minorities, and concentration of Limited English Proficient students) were also considered.<sup>5</sup>

## *Focus on Teachers*

Though we are now studying many aspects of district budgeting, we started with the distribution of teachers. Good teaching matters in determining the learning gains of students.<sup>6</sup> However, research shows that

teacher qualifications are not spread evenly throughout schools in larger urban districts.<sup>7</sup>

Several forces work together to create this imbalance of teachers. Teaching jobs vary substantially from school to school. A high-performing school in a wealthy suburb offers a very different work environment than a chronically low-performing inner-city, high-poverty school. In the former, a teacher may be more likely to have students whose parents read to them at night, emphasize education, enforce homework completion, and come to parent nights. In the latter, a teacher may experience a student population with less parental involvement, greater health needs, increased student mobility, and behavioral problems as well as heavy scrutiny from the district central office and increased staff turnover. These kinds of schools create more difficult jobs for teachers.

Under union contracts, teachers with even one or two years' experience have some say over where they teach, and many teachers with any choices avoid the most challenging schools. In our research, we have seen over and over that schools in wealthier neighborhoods can receive more than a hundred applications for a teacher vacancy, while schools in poor neighborhoods might receive only two or three. For schools serving the poorest children, this means that they have little choice of whom they employ, and their teachers are disproportionately inexperienced.

Historically, experienced teachers have had no incentive to work in challenging schools. Teacher salaries reflect seniority and years of graduate study, not a teacher's productivity or the difficulty of the job done. Within a district's fixed salary scale, a teacher with five years of teaching experience and a teaching certificate makes no more money if he or she chooses a challenging position in a high-poverty school over a less demanding position in a high-performing school.

Therefore, not surprisingly, teachers with enough seniority to make choices seek the positions in the more advantaged schools. Struggling schools are left with no means to lure the most experienced teachers, particularly those with good reputations who can readily find jobs elsewhere in the district. Poor schools are often left with the low-paid rookies, many of whom will transfer to other schools once they have gained experience.

**HOW DISTRICTS COUNT TEACHER SALARIES.** School districts divide up their entire budgets into portions that can be assigned readily to schools (in the form of school allotments) and portions that remain under central office control.<sup>8</sup> Expenditures for teachers and principals are assigned to the schools

where they work and typically make up more than 80 percent of each school's allotment.

Published school budgets do not, however, reflect the actual cost of salaries and benefits. Urban districts calculate school budgets using average teacher costs. Thus, in a district where teacher salaries range from \$25,000 to \$65,000 annually, all teachers are assumed to earn some average amount, say \$45,000. This averaging would not distort school budgets if all schools had the same mix of teachers, some with high salaries and some with low.

However, not all schools have the same staffing patterns. Some have disproportionately higher paid staff and others the opposite. But school districts go with the averages. They do not charge the extra costs of all-senior staffs to the schools that employ them, and they do not reimburse schools with low-paid staffs for the difference between districtwide average teacher salaries and the actual salaries paid. This practice creates a transfer of funds from the less to the more advantaged schools. The only way districts can afford to pay more expensive teachers who congregate in certain schools is by drawing on the dollars saved on the low-cost teachers in the schools with the most junior staffs. As a result, when actual salaries vary from school to school, the real cost of each school is not reflected in the school allotment and is not even transparent to district budget personnel.

**WHETHER TEACHER SALARIES MATTER.** Some argue that teacher salary is not an accurate indicator of teacher quality, and therefore variations in teacher salary should not be a matter of concern. Certainly the characteristics that predict teacher effectiveness are hotly debated. Researchers generally agree that teacher effectiveness increases during the first five to seven years of teaching and then tends to level off.<sup>9</sup> Other characteristics of teachers linked to larger student gains are not captured at all in the salary scale. For instance, some studies have correlated teachers' high scores on college entrance exams and verbal assessments with larger student gains.<sup>10</sup> Others show a link between deep content area knowledge and student achievement.<sup>11</sup>

In sum, given the research, at best a weak link exists between salary and teacher effectiveness, based on the link between salary and those first five to seven years of teacher experience. But for any individual teacher, his or her effectiveness cannot be accurately judged by his or her salary.

However, when aggregating salaries to the school level, there is good reason to believe that schools with higher average salaries have more capable teachers. Some schools have many more applicants per opening than others

and thus have the luxury of many choices when hiring. On average, given that each school can hire the best talent available, schools with more applicants get more talent. And our research shows that schools with the most applicants employ higher-salaried teachers.<sup>12</sup> Those with much smaller applicant pools have fewer hiring choices and end up with lower-salaried teachers. In sum, the average salary for all teachers at a given school reflects the school's ability to hire teachers and thus can be related to teacher quality.

## **Findings**

Our analysis of personnel salary data from four districts quantifies the extent to which personnel costs are unevenly distributed among schools and profiles the kinds of students and schools that lose out most because of salary averaging.

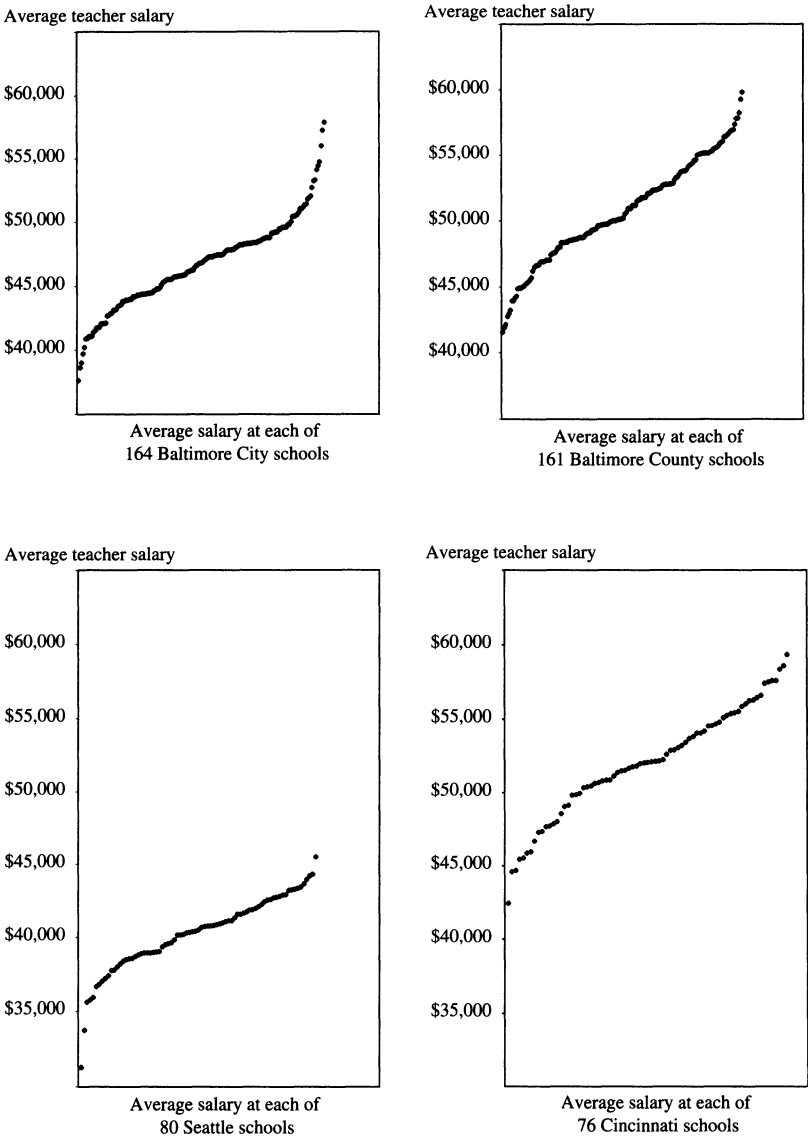
### *Salaries Vary among Schools within Each District*

At the outset of this study, one of us informally phoned more than twenty urban districts (including those in this study) to ask if any used real salaries in their budgets. In every instance, a district official (usually from the budgeting office) claimed that while his or her district did use average salaries in accounting for expenditures, he or she felt that real teacher salaries were evenly distributed in that district. Nearly every respondent went on to say that expenditures in that particular district would not change if average salaries were replaced with real salaries.

Analysis of teacher salaries in the Cincinnati, Seattle, Baltimore City, and Baltimore County districts shows that the opposite is true. In all four districts, some schools were staffed heavily with teachers at the high end of the pay scale and other schools were staffed predominantly with more junior, lower-paid teachers. As a result, from school to school in each district, significant differences were evident in actual salary costs.

The graphs in figure 1 show the distribution of salary costs for all schools in each district. One graph, for example, shows the true average teacher salary for each school in Baltimore City, where the districtwide average is \$47,178. At one elementary school, the average teacher is paid \$37,618, well below the district average. At another school, the teachers average over

**Figure 1. Distribution of Teacher Salaries (School Averages) among Public Schools in Baltimore City, Baltimore County, Cincinnati, and Seattle**





\$57,000. Yet in these schools, as in all other Baltimore City schools, the district uses the districtwide average in its school budgets.

In Baltimore County, the districtwide average was \$50,830. Again, some schools have average salaries that deviate substantially from the district average. Teachers at one elementary school are paid an average of only \$41,520. Similar salary patterns existed in Seattle and Cincinnati.

### *Uneven Salaries Impact Spending Patterns*

Under current budgeting practices, variations in teacher salaries create uneven spending patterns in ways that do not show up in official budget documents. For each school, we determined the difference between the real salary costs and the average salary figure used for accounting and budgeting purposes by the districts. In other words, for a school with a majority of highly paid teachers, this calculation determined how much the total of real teacher salaries paid exceeded the amount that would have been paid if the school were constrained to spend no more on teachers than the district average. For a school with lower-salaried teachers, the analysis shows how much less was spent at the school than if it were allowed to spend at the district average.

Table 1 summarizes the implications of teacher salary variations on school expenditures. The average Baltimore City school stands to gain or lose 5.9 percent of its school budget as a result of salary averaging, which impacts the average school's bottom line by over \$100,000. In Baltimore County, the variations are even greater (most likely because the county demographics represent greater variations in student body ethnic makeup and family income). Here the average school's budget is impacted by 6.5 percent, which means that the average school gains or loses over \$120,000. Seattle's school allotments were impacted by a lesser amount, \$72,576. For the four districts, salary averaging introduced an error between 4.9 percent and 6.5 percent in the average school's allotment.

It is important to examine the extremes. In each district, there were some schools for which salary averaging meant gains or losses of much greater magnitude. In Baltimore City, one school spends more than half a million dollars over its average teacher salary allocation (22 percent of its budget), while another effectively loses \$379,489. In one Cincinnati school with much lower than average salaries, the district's budget documents showed expenditures totaling \$959,730 more than was actually spent at the school,

**Table 1. The Impact of Salary Averaging on School Expenditures in Four Districts**

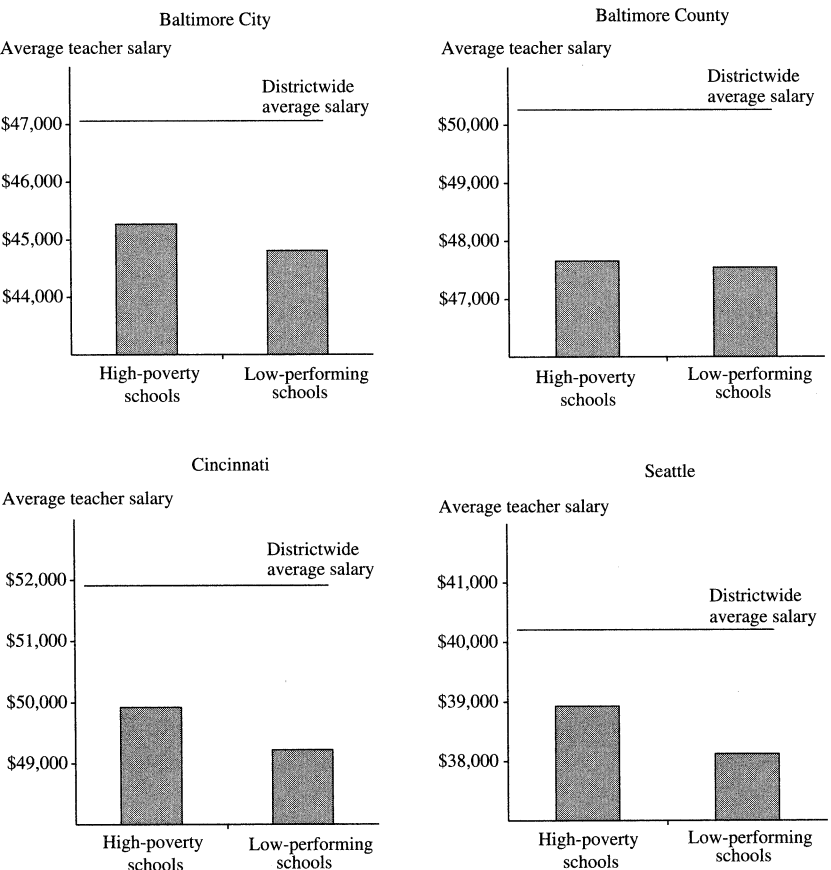
	<i>Baltimore City</i>	<i>Baltimore County</i>	<i>Cincinnati</i>	<i>Seattle</i>
<i>Average gain or loss</i>				
In school budget as a result of salary averaging	± 101,786	± 120,612	± 106,974	± 72,576
Per pupil dollars	± 246	± 232	± 189	± 144
Average percent of impact on each school's budget	5.9	6.5	5.9	4.9
<i>Maximum benefit</i>				
As a percent of the school's budget	21.8	17.7	15.6	11.0
In real dollars	553,138	411,052	522,495	238,539
Per pupil dollars	2,322	1,917	497	322
<i>Maximum loss</i>				
As a percent of the school's budget	-20.8	-18.4	-19.2	-21.8
In real dollars	-379,489	-470,436	-959,730	-263,622
Per pupil dollars	-521	-544	-613	-637

based on real teacher salaries. That school had no way to recoup the million dollars that was transferred elsewhere to pay for other schools' higher teacher salaries.

### *Some Schools Win, Some Lose*

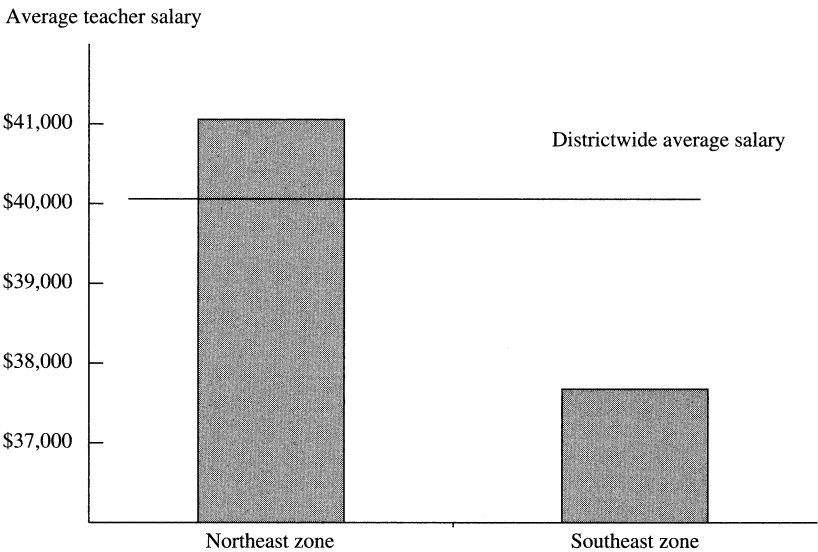
In each district, specific types of schools routinely received fewer teacher salary dollars than the official district budget claimed. In each city, high-poverty, low-performing schools were staffed with teachers whose salaries were lower than average (see figure 2).<sup>13</sup> In Baltimore City, teachers in high-poverty schools earn an average of nearly \$2,000 less than the average across the whole district (and some \$4,000 less per year than those in the lowest-poverty schools). And teachers in the low-performing schools are paid even less. The salary differences in Baltimore County are even greater. The difference between the average salaries districtwide and those at high-poverty schools was over \$2,400. And again, teachers at low-performing schools were paid even less. The same patterns existed in Seattle and Cincinnati with lower-paid teachers congregating in high-poverty and low-performing schools.

**Figure 2. Average Teacher Salaries in Baltimore City, Baltimore County, Cincinnati, and Seattle**



In Seattle, salary differences also showed up when comparing schools in different parts of the district (see figure 3). Teachers in elementary schools in the district's wealthier Northeast zone averaged salaries over \$41,000, while teachers in the Southeast zone earned an average of \$37,670. These kinds of deviations show that dollars are being diverted from schools in Seattle's Southeast zone to schools in the Northeast.

**Figure 3. Seattle Salaries Vary across the District**

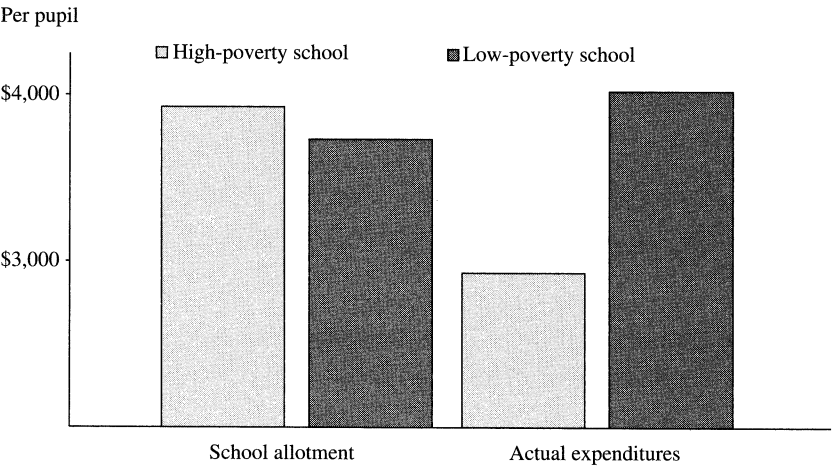


*Budget Layering Works Counter to Salary-Averaging Policies*

Education leaders have long recognized the patterns of chronic low performance in high-poverty schools. Yet leaders in large urban districts continue to ignore the very budgeting practices that systematically funnel resources away from poor and low-performing schools. Instead of fixing the budgeting problem, the policy response has been to layer on additional funds to counteract the inequities.

In a prominent example, the federal government has stepped in to help high-poverty schools. The now \$11.7 billion Title I program for disadvantaged students was designed to provide high-poverty schools with extra resources above and beyond what the district spends in state and local dollars. These and other programs insist that the extra federal dollars supplement funds from state and local sources. Federal dollars are supposed to be added only after poverty schools get at least an equal share of state and local funds.

**Figure 4. Salary Averaging Diverts Resources Allotted to High-Poverty Schools to Low-Poverty Schools**



However, current Title I legislation allows districts to use average salary figures when comparing expenditures among schools.<sup>14</sup> As a result, high-poverty schools appear to receive the same basic education resources as do low-poverty schools, when, in fact, as the data demonstrate, they do not.

Programs such as the federal Title I grants serve to add a layer of funds for certain (mainly high-poverty) schools. While these funds do help equalize total spending, not all federal dollars make it to the children they were designed to help. When federal Title I dollars are used to purchase the services of lower-salaried teachers, some of those dollars are diverted to higher-salaried teachers at other schools. In effect, the salary averaging provision enables districts to divert some of the federal grant dollars away from the very children they are designed to reach.

The effect of salary averaging on both the base funding level and the Title I allotments is displayed in figure 4. Figure 4 shows the difference between the real and budgeted figures for a high-poverty and low-poverty school in Seattle. In this instance, the high-poverty school is supposed to get more per pupil resources (in part because of Title I and other compensatory funds) as indicated by a higher allotment. When actual expenditures are computed using real salaries, the opposite is true. The low-poverty school actually receives fewer real-dollar resources than the high-poverty one.

*Teacher Incentives Can Miss the Mark*

Another layering of funds can take the form of salary incentives. With increased pressure to improve teacher quality in some schools, thirty-four states now offer retention bonuses to veteran or accomplished teachers.<sup>15</sup> Yet, when these dollars are directed to teachers in higher-performing, wealthier schools (where veteran teachers are more likely to serve), the policy serves as another budgeting layer that misses the mark. Education resources never reach the schools most in need of teaching resources and the dollars essentially increase the already large disparities between high- and low-poverty schools.

Five states offer salary incentives or retention bonuses specifically for teachers in high-poverty, high-minority, or low-achieving schools.<sup>16</sup> While these dollars more appropriately target the students that need them, they, too, serve as a budget layer added on to correct the inequities created by the districts' budgeting policies.

An analysis of Maryland's salary incentives clarifies the impact of the state's \$2 million investment in this program in Baltimore City alone. Maryland offers a \$2,000 stipend for teachers holding an advanced professional certificate and working in a low-performing (deemed "reconstitution eligible") school. More than one thousand Baltimore City teachers received bonuses. Figure 5 shows the distribution of salaries before and after adding on the bonuses. The distribution of salaries with bonuses among schools looks very similar to the distribution without bonuses.

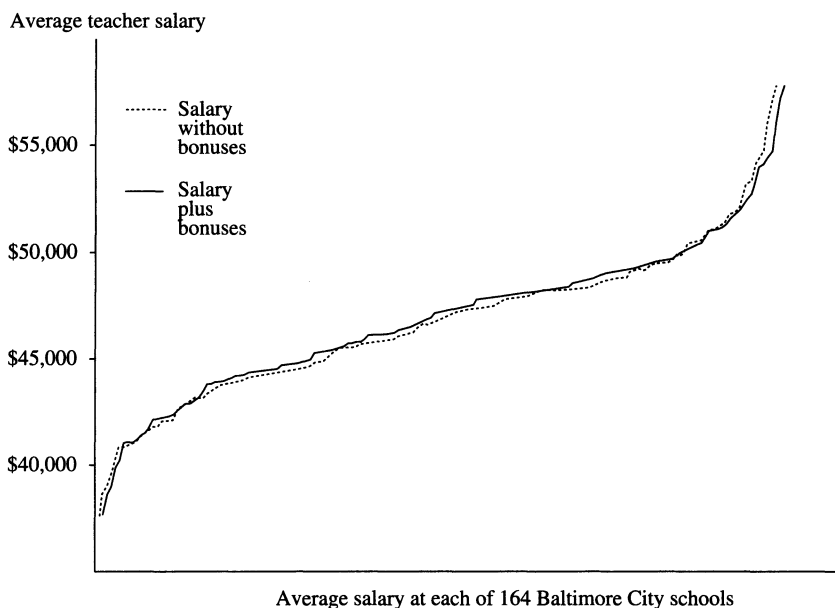
A comparison of average salaries in low-performing schools both with and without the bonuses shows that directing bonuses at low-performing schools did mitigate some of the disparity by raising salaries slightly (see figure 6). The salary difference between low-performing schools and the district average narrowed by 20 percent with the state-paid bonuses.

Yet, as the graph shows, the incentives were not nearly sufficient to fully remedy the disparities in salary. In one sense, they served as another funding layer in a budgeting system wrought with problems.

**Implications**

Opaque and unaccountable budgeting threatens more than the financial stability of school districts. It renders many urban districts unable to serve

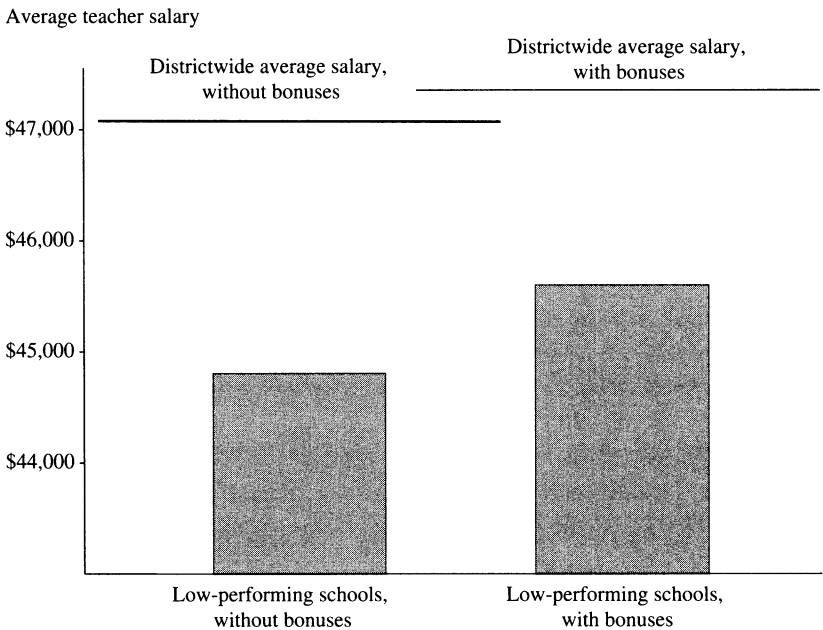
**Figure 5. Distribution of Teacher Salaries (School Averages) among Baltimore City Public Schools with and without Incentive Bonuses**



the poor and minority students who depend most on district-provided education. Their schools have the greenest teachers, and they experience the highest rates of teacher turnover, ensuring that whatever teachers learn on the job will move elsewhere with them. Schools that consistently lose in the market for experienced teachers often have annual teacher turnover rates above 50 percent. Such schools are turbulent and difficult to lead. They are also impenetrable for parents, who cannot build stable and mutually confident working relationships with teachers and principals. In the absence of financial incentives to attract teachers, and without freedom from regulation to allow improvements in working conditions, the poorest schools will always get the teachers with the fewest options and lose those teachers as soon as they gain seniority.

Strong though the case for change may be, changing the budgeting and teacher allocation practices will not be easy. They are deeply embedded in school district operations, as a result of collective bargaining agreements and

**Figure 6. Impact of Bonus on Teacher Salaries in Low-Performing Baltimore City Schools**



state laws and federal regulations written expressly to allow such practices. New laws such as No Child Left Behind put pressure on practices that systematically shortchange schools serving disadvantaged children. New competition from charter schools and voucher programs will also lead some districts to question whether they can continue resource allocation methods that virtually guarantee that their lowest-performing schools are also their most weakly staffed.

These practices are so deeply embedded that many districts will defend them even in the face of evidence that they hurt schools in the poorest neighborhoods.<sup>17</sup> In an earlier study several respondents from urban districts echoed one official who said, “I just don’t want to force principals to choose teachers on the basis of cost. That would mean that only junior teachers could get access to some good jobs.” Arguments that extra funds spent in one school must come from somewhere else, or that letting a few schools corner the market in experienced teachers leaves others with only green



recruits, have little effect in district environments where linkages and trade-offs are invisible.

State and federal laws also enable spending and staffing inequities. At the state level, collective bargaining laws permit senior teachers to make personnel choices that distort the allocation of funds within school districts. State funding schemes for schools are also blind to within-district spending inequities, allocating dollars on a programmatic, instead of per pupil, basis. Washington State, for example, pays districts on a weighted per teacher basis, providing more money for senior teachers than for junior ones, but requires nothing in terms of how districts distribute teachers among schools. Thus students, who are the intended beneficiaries of state funds, can still be treated inequitably.

Even federal law has accommodated the practice of teacher-driven district funding policies. The Elementary and Secondary Education Act (ESEA) has long included provisions that require district funds to be distributed equitably before federal program funds are distributed (the “comparability” and “nonsupplanting” provisions). However, in the early 1980s, these provisions were amended to allow averaging of teacher salaries. Districts were henceforth allowed to maintain major inequities in school funding, as long as these were driven by teacher allocation. Thus (apparently in most cases unwittingly) members of Congress eviscerated the provisions generally thought to guarantee the promise that federal funds were going to be something extra for disadvantaged children.

Even in the current policy environment, district leaders can take steps toward making resource allocations transparent and improving poor schools’ access to good teachers. So can many others, including state and local officials, and groups of parents who know that their children have been short-changed.

### *What Districts Can Do*

Districts that want to reverse inequities in school funding and teacher quality will have battles to fight. Teachers unions will not easily give up hard-won privileges for senior teachers that allow them to work in the nicest schools. Parents in neighborhoods that have the most and best of everything will also resist transfers of dollars and people to other schools.

Districts can, however, take a first step by making resource allocation transparent. That requires, at a minimum, tracking real-dollar spending on

a per pupil basis, using real teacher salaries, not averages. Though few districts have developed the capacity to do this, the necessary data management and computational methods are well known and not technically challenging.<sup>18</sup>

An annual report of real-dollar expenditures would not be politically neutral—families in schools with low real spending would surely demand an explanation. But it would also strengthen the district's position in contract negotiations and against demands for even more spending in already high-spending schools.

### *What States Can Do*

State agencies overseeing collective bargaining could require that salary and benefit agreements hold students harmless against distortions in spending. State laws could also clarify the expectation that collective bargaining agreements not violate the principle of horizontal equity among the children in a school district.

The best remedy, however, is the most direct one. States could fund children, not teachers or other goods and services. If states made it clear that dollars were generated by children and should follow children to the schools in which they enroll, they could then demand that districts report real-dollar per pupil funding and be expected to explain any situations in which dollars intended for poor or disadvantaged students are spent instead on others.

### *What the Federal Government Can Do*

The long-standing comparability and nonsupplanting principles of federal education programs provide great leverage over state and local spending practices. Though this leverage was undercut a few years after ESEA Title I was written, it could be established simply by requiring districts to calculate spending based on real-dollar cost, including actual, not average, teacher salaries.

This idea was proposed in the 2001 reauthorization cycle for ESEA by a bipartisan coalition including House Democrat George Miller of California, Senate Democrat Joseph I. Lieberman of Connecticut, House Republican John A. Boehner of Ohio, the Bush administration, and the Democratic Leadership Council. However, horse trading with union interests (and civil rights groups that apparently thought it best to keep this issue under wraps)

led to its being quietly shelved. The same amendments could be offered, more publicly and with greater political force, in the next reauthorization cycle.

### *What Parent Groups Can Do*

The patterns of spending clearly violate the principles of horizontal equity established by the Fourteenth Amendment. Courts have struck down school financing schemes in virtually every state, finding that variations in state funding for districts constitute denials of equal protection of the laws. As our studies have found, variations of per pupil funding within districts are often greater than the within-state variations that have been found unconstitutional.

Parent groups have standing to complain if districts systematically short-change particular students, especially if those children are poor or are from ethnic minority groups. Within-district spending data of the kind we have illustrated, whether provided by government agencies or privately funded researchers, can support a strong claim of discrimination, which could move courts to order sweeping remedies.

Parent groups might prefer to avoid litigation, using the threat of it to enter serious negotiations with their school districts. School districts will almost surely prefer negotiated remedies to unpredictable and possibly draconian court orders.

### **Conclusion**

Equalizing per pupil spending within districts is necessary, but probably not sufficient. Districts that equalized real-dollar spending among their schools would still find that schools serving poor students had trouble attracting their share of the best-trained and most productive teachers. While these schools might benefit from having extra funds to spend on smaller class sizes or better technology, they might still be short of teachers who can set the tone for a school and help younger teachers learn their trade. Districts should monitor the distribution of teacher talent within the district and add financial incentives to influence the distribution if need be. These policy changes, coupled with efforts to improve school climate and leadership, would go far toward addressing the core problems facing poor schools.

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## Comment by Susan Sclafani

Marguerite Roza and Paul T. Hill raise an issue that should be on the front page of newspapers across the country. Those of us serving with Rod Paige, when he was superintendent of schools of the Houston Independent School District, had considered the issue of the implications of teacher salary cost averaging. (I was his chief of staff.) We started the planning for actual teacher salary costs, not just weighting for pupil funding, which we had already done. We recognized that great differences existed in actual teacher salaries when we looked carefully at high school budgets. We compared teacher salaries at a premier high school that produced fifty-five to sixty National Merit scholars every year and an inner-city high school that was 98 percent Hispanic and had a much lower rate of college-bound students. The difference in actual teacher salaries was \$1 million a year.

Having seen that, and having seen the differential outcomes of those two institutions, we recognized that the lower-funded school could have done many things with that money to attract the kinds of teachers who would be able to help those students improve their skills and knowledge and prepare for college.

We made the argument to the board of education. The board accepted it. We agreed to phase in the move to actual teacher salary costs over time, because clearly such movement is an issue of staff management. Principals had to start using the natural attrition within their schools, if they had a highly experienced, high-salaried faculty, to begin evening out the disparity with other schools. We expected that when one of the high-priced teachers left, the school would bring in a new, less-experienced person.

What better way to mentor new people coming into the profession, we argued, than to put them in schools with high expectations for students, with high achievement levels, and with highly skilled teachers? Doing this, we suggested, would offer opportunities at the school level to bring in new ideas, to get people to think differently about what they were doing—so as to change the status quo thinking that kept a high-powered high school from being a high-powered high school for all kids.

And the board agreed. The plan stipulated 10 percent the first year, 30 percent the second year, and so on, for a total of seven years to full use of actual salaries. Each year, the school would be responsible for paying a progressively larger percent of the actual cost of the salaries of the teachers

at that school. Over time, the school would pay the full salary costs of the teachers. This would have happened. We knew the retirement rates in the district would enable the plan to work, without having to have principals cast off great teachers because suddenly they were too expensive.

We heard all of the arguments on the other side—that principals were going to have to hire people by what they cost, that principals would no longer be able to consider quality. We countered that principals could find high-quality young people to bring into the profession and into their schools.

Paige left Houston in 2001 to become U.S. secretary of education. In the spring of 2003, the board of education voted to table the proposal and to come back to it at a later time. It was not that the board did not want to follow through on it, but the time was not right. And I can tell you what happened in between.

Principals of the high-powered schools said: “How are we going to explain this to our parents? How are we going to tell them that we can’t hire the best any more?” They talked to their school board members and said: “We’re going to see white flight. We’re going to see a decline in the achievement levels of our schools. And all of this will be for somebody’s theory about the good this will do for other schools.” The principals continued: “There’s no proof; there’s no one else doing this”—and this part is true because we had surveyed other districts. “There is no other school district in the United States” that attempted to implement such a proposal. The school administrators in Edmonton, Canada, whose system we looked to as our model in terms of changing to a weighted per pupil, decentralized move, passed on the idea—“Not even they did this”—because they knew it was not the right thing to do.

The board accepted the opponents’ reasoning, member by member, with a sufficient number of them agreeing to table the proposal. The minority board members were not of sufficient numbers or interest, apparently, to overcome that view. As a result, these two high schools still have a million-dollar difference in teacher salaries; high-powered schools still have no responsibility for mentoring or entry of new people into the profession; and new teachers are still allowed to go into the less-wealthy schools, those serving children of great poverty, to learn how to be teachers and, after they are able to prove themselves over time—ten years, fifteen years—then they are considered to fill vacancies at a high-powered school. This situation is destructive for kids as well as for faculty morale. Everybody knows that when a person becomes a good teacher, he can teach in one of those good

schools on the west side of Houston, and until then, he is forced to stay put. And, if he does not prove himself to the satisfaction of the principals doing the interviewing at those schools, then he is stuck in the school that he is in. The situation is thus bad for morale because now that teacher feels that he should have or could have gone elsewhere and somebody has told him that he is not good enough.

Not only did a turnover of new teachers occur among schools in the district, but the high-poverty schools also became the training grounds for suburban schools. The scenario that played out was: Go to Houston, learn how to teach, and then be hired in the suburbs.

The changes described by Roza and Hill will not happen without a sustained political campaign to make them happen. This is going to be the absolutely critical piece. Even having the information available to parents is not enough without the rallying call, without the parents' getting so exercised that they go back to the school board to say, "This should not have been postponed, this needs to happen as soon as possible, and we need to have those additional resources."

Houston went further than many school districts in terms of having gone to a weighted per pupil funding system. The state provided the dollars on a weighted per pupil basis, yet we did as every other district around us did—we allocated those dollars on an average basis. Every twenty-two kids get a teacher; five hundred kids earn a school an assistant principal. A school needs, if I remember correctly, four hundred kids before it gets a librarian. It gets a piece of a nurse—courtesy of a subsidization from Medicaid—for free; the rest of the position is paid for out of the local allocation, depending upon the number of kids in the school.

That formula, in itself, is inherently unfair. The premise behind Title I was "supplement, not supplant." The district was supposed to fund an adequate program for all children and then add Title I funds on top. Equal funding of all schools was not adequately funding some schools, most especially those with many high-poverty children.

The results of this change have been dramatic. Winners and losers emerged who were held harmless at the beginning of the process. But the schools with more affluent children understand that they can have a Parent-Teacher Association fund-raiser and collect \$100,000 if things got lost in their budget.

One of the middle schools, over three years, lost \$500,000 because of the weighted per pupil model. Other schools gained. A large elementary school

gained \$1.5 million, which was dedicated to some of the things that it wanted to do. Many schools were providing intense remediation for children who needed it. While the district had a salary schedule, schools—now that they had their own funding—were able to supplement that schedule if it helped them to attract and retain teachers.

Most districts have never looked carefully at or do not have accurate enough accounting systems to be able to know the disparate funding that is occurring at their schools. In many states, the dollars come to them on the basis of how many students they have in their districts. Given that that is just the way things have always been done, states do not look beyond it.

Now that schools will be held accountable for the performance of children in poverty, the principals and faculty in those schools are going to start calling for the additional funding that their students deserve to help meet the new expectations.

It is difficult to raise performance levels of children in poverty enough to make up for some of the resources they have not had—to give them the kind of enrichment that other children have had. If I believed it were not possible, I would not be in education. The later the intervention, the more intensive that intervention is going to have to be. Maybe high schools cannot make it all happen within a four-year time period, particularly doing what they currently do.

But, what the No Child Left Behind Act says is that, starting with four-year-olds, after twelve years of schooling they should be at high levels of achievement—providing that the way in which schools are funded and what is done with those dollars are rethought.

Perhaps the current financial crisis of the states may turn out to be the best thing that will have happened to education, especially if it forces school districts and schools to look more carefully at how they are spending their dollars.

Unfortunately, in good times, new dollars come in and new programs get piled on top of what is already there. Title I is notorious for this. Unless people start considering zero-based budgeting, determining whether their spending is effective in improving student achievement, needed changes will not be made.

But an opportunity exists now to start looking at the cost-benefit analysis on these programs, to ask which ones are providing the kind of bang for the buck that is needed to raise student achievement. It is a great time to get rid of sacred cows that people like but that do not improve student achieve-



ment—and look more clearly and more carefully at how the dollars in hand are being spent.

I think that what would be revealed is that the problem is not so much that the money is not sufficient, but that it is not being used well.

President George W. Bush is committed to putting more dollars into Title I and into the Individuals with Disabilities Education Act because he knows that the public will not believe that more money is not necessary and that much more intensive work could be done in certain areas with additional dollars. But school districts must take a good, hard look at how they are spending their dollars and see whether those funds are benefiting the children most in need, as well as maintaining comprehensive programs for all children.

School spending should not go to teaching reading and math to only some; it should deliver a full, rich core curriculum to all children. But this will not happen unless the schools are ready to do the intensive work needed to serve the children with the greatest obstacles to learning.

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### Comment by Sheree Speakman

Marguerite Roza and Paul T. Hill explain a core financial issue that prevents school leaders from using money effectively to improve the learning quality and outcomes of the classroom experience. The authors demonstrate the inequitable financial result that comes from using the age-old central office dictate of budgeting schools using average salaries while staffing them according to contractual bargaining norms. This practice gives the false appearance of equity, while it drives higher-priced resources—that is, better-paid teachers—to higher-performance schools. Across America, schools are exhorted to perform at the averages of their budgetary inputs, while their spending realities support relatively few options. After all, quality is not purchased by the average dollar but by the most effective application of dollars to the issue at hand.

Roza and Hill do not conclude so directly, but the practical remedy for this problem is to budget and account for school dollars using a weighted per pupil allocation factor, as discussed in the comment by Susan Sclafani. The implementation dictates of this weighted allocation method, over time,



forces lower-salaried teachers into the good schools and improves the number of teachers or the salary range in the low-performing schools. Therefore the projected outcome of weighted per pupil funding, that is, moving toward equity in teacher salary assignment across all schools within a district, puts school and district leaders into the unenviable position of explaining to parents with real power within the institutional school system why their children are not skimming the best (read: the most expensive) of everything. Most district leaders would not be able to deliver this message successfully and thus most do not. The only other possible message, therefore, is a battle cry for more money, a cry that is in everyday use.

The No Child Left Behind Act (NCLB) is going to be the stimulus that forces the stakeholders of K–12 education to change the school finance debate from its decades-old emphasis on the mathematical calculation of equity to the real discussion of how spending will be used to trigger a demonstrable improvement in student learning and outcome measures. Because NCLB has, for the first time in the nation's history, changed the desired framework for K–12 education from compulsory attendance to mandatory learning, money that flows into the system should result in targeted, step increases in results. In a financial framework, this is known as the cost-benefit results of resource investments in schools and programs.

To move to cost-benefit as the framework for resource allocation and budgeting, a better understanding is needed of how much money or how many resources are at stake. Roza and Hill's analysis centers on teacher salaries in Cincinnati, Seattle, Baltimore City, and Baltimore County. Their figures 1–4 and table 1 show that the notion of using "salary averaging introduced an error between 4.9 percent and 6.5 percent in the average school's allotment." The dollars that equate to these percentages in the study created a loss to low-resource schools ranging between \$400,000 and \$1 million. These dollars are significant enough in value to provide an investment in resources, teachers, and supplemental education materials that might improve the learning environment. Thus Roza and Hill make the case in a compelling fashion that to think about the significance of these dollars is to invite solutions; that is, transition strategies for school districts that put teacher budgeting practices into place for resource reallocation methods and strategies, from which true equity and improved outcomes can result.

The answers to true equity and improved outcomes will be found in many places. Focusing on finance and budgeting as levers to a successful solution set, specific answers will be found in better policy, improved

accounting and disclosure practices, and the use of pre- and posttesting of instructional programs. This testing must be focused specifically on producing a better understanding of student growth and the associated costs of the specific instructional programs producing the growth in learning. Further, this growth and program cost information must be gathered to calculate and study cost-benefit ratios and norms. Understanding what works, for which students and at what cost, year after year is the next most important discussion framework. Said and framed differently, this is the underlying knowledge set anticipated by the full implementation of NCLB.

The leading issue preventing effective financial analysis, budgeting, and resource allocation from becoming the norm is the relatively mediocre quality of accounting practices and systems in public education. Numerous reasons can be cited for this, but a simple collective statement will suffice: Excellent accounting and analysis have not been rewarded, and the opposite practice has not been sanctioned. Further, at the level of student performance and classroom teaching, the system moves financially to reward poor performance and poor children. But district leaders have not used these additional dollars to remediate poor performance and teaching, but instead to siphon monies away from said schools to those where performance gains are more common. The remedy is to start an incentives system where failure is rewarded with higher-quality and tangible resources. To do this, the actors in the system, that is, the principals, administrators, and teachers, must come to understand the underlying fundamentals of school finance and school budgeting as a first imperative. Little demand exists for this information, however, as the level of discretionary spending in school resources is pitifully low, often below 5 percent of dollars budgeted to a school. When someone in the system has little discretion, he spends precious little time on the issue.

So where is the largest opportunity for improvement in financial practices, leading to significant additional dollars to invest in low-resource schools? The opportunity lies in the understanding of programs, and program accounting, within school finance. In all cases, the accounting in American education now centers on a presentation of functional spending: salaries, computers, building costs, and textbooks, to name a few. In a small number of places, an emphasis is put on presenting functional costs at the school site, by location. But in a very few instances, does anyone other than the school business official have a good understanding and presentation of program accounting? Examples of program accounting include the expen-

diture of Title I dollars in the district and in schools, the use of dollars to buy reading and language arts programs, and the use of Safe and Drug Free Schools money. In every American school, dozens of programs are being implemented for which there is little accounting and fewer cost-benefit metrics available for review. Thus starting to identify, understand, and report the cost-benefit of literacy or Title I would be an enormous asset to the emergence of resource reallocation strategies. Dollars should be taken away from things that do not work, or work in few instances, and redeployed to people and programs that do work for improved student learning.

Roza and Hill offer solutions that point, rightly so, at policy changes that would correct inequitable distributions of teacher talent and put more tangible resources into classrooms. But the real payoff is to start to peel back the onion of decades of investment in school-based and categorical programs, including human resource programs, that do not produce the results stated in the promises made at the outset. After evaluating the endless array of school-based programs, resource investments could be narrowed to those that do work for a significant proportion of students. Where programs have proved ineffective, they are nonetheless a reason for employment and thus attractive to every person so employed. Now, with a mandate for learning, not attendance, resource reallocation practices must be undertaken that bring equity and stated performance targets into positive alignment for all students.

## Notes

1. See, for example, Moss Adams LLP, *Seattle Public Schools Financial Operations and Information Systems Audit* (April 16, 2003) ([www.seattleschools.org/area/finance/budget\\_page.html](http://www.seattleschools.org/area/finance/budget_page.html) [October 22, 2003]).

2. Susan Snyder, "Schools Uncover Extra Millions," *Philadelphia Inquirer*, April 18, 2003.

3. Larry Miller, "Bad Economy Could Be Good for Struggling School Districts," *Seattle Times*, May 1, 2003.

4. See, for example, Kati Haycock, "Honor in the Boxcar, Equalizing Teacher Quality," *Thinking K-16* (Spring 2000), pp. 1–28.

5. Only analysis of those factors that presented significant trends is included here.

6. Eric A. Hanushek, J. F. Kain, and S. G. Rivkin, *Teachers, Schools, and Academic Achievement*, Working Paper 6691 (Cambridge, Mass.: National Bureau of Economic Research, August 1998); and William L. Sanders and J. C. Rivers, *Cumulative and Residual Effects of Teachers on Future Academic Achievement* (University of Tennessee, Value-Added Research and Assessment Center, 1996).

7. See Haycock, "Honor in the Boxcar"; and Education Week, *Quality Counts 2003: "If I Can't Learn from You": Ensuring a Highly Qualified Teacher for Every Classroom* (Bethesda, Md.: January 9, 2003).

8. Districts allocate only some 40–60 percent of their general fund into the school budgets. The remaining portion remains centrally controlled and typically includes transportation, food services, staff development, central administration, and so on.

9. M. Fetler, "High School Staff Characteristics and Mathematics Test Results," *Education Policy Analysis Archives*, vol. 7, no. 9 (1999); R. J. Murnane and B. R. Phillips, "Learning by Doing, Vintage, and Selection: Three Pieces of the Puzzle Relating Teaching Experience and Teaching Performance," *Economics of Education Review*, vol. 1, no. 4 (1981), pp. 453–65.

10. R. P. Strauss and E. A. Sawyer, "Some New Evidence on Teacher and Student Competencies," *Economics of Education Review*, vol. 5, no. 1 (1986), pp. 41–48.

11. D. H. Monk, "Subject Matter Preparation of Secondary Mathematics and Science Teachers and Student Achievement," *Economics of Education Review*, vol. 13, no. 2 (1994), pp. 125–45.

12. Marguerite Roza, "Policy Inadvertently Robs Poor Schools to Benefit the Rich," *Seattle Post Intelligencer*, September 24, 2000, p. F1.

13. Low-poverty schools were designated relative to the student demographics in each district studied. In Baltimore County, a high-poverty school was defined as one in which more than 60 percent of the students received free or reduced-price lunch; in Baltimore City, more than 80 percent; in Seattle, more than 75 percent; and in Cincinnati, more than 90 percent. In each district, student performance data were considered from the same year as the salary data and natural cutoffs were drawn to define lowest-performing schools. In Baltimore City and Baltimore County, we examined results from the Maryland School Performance Assessment Program. In Cincinnati, low-performing schools were those that the district labeled as "under review." In Seattle, we considered Iowa Tests of Basic Skills scores in reading and math.

14. Roza, "Policy Inadvertently Robs Poor Schools to Benefit the Rich."

15. Education Week, *Quality Counts 2003*.

16. Education Week, *Quality Counts 2003*.

17. Seattle schools defended the practice of salary cost averaging even after an independent auditor claimed that it corrupted district budget oversight and had led, in recent years, to annual budget errors as great as \$10 million. See Seattle Public Schools, *Management Response, Financial Operations, and Information Systems Audit* (Seattle Public Schools' Executive Management Team, May 1, 2003), p. 13.

18. The Annenberg Task Force for School Communities That Work has published a tool kit for how to analyze district data in this manner. It is available at [www.schoolcommunities.org](http://www.schoolcommunities.org).