

The Education Trust

FUNDING GAPS

2006

As Americans, we rightly take pride in the fact that the United States has led the world in extending free public education to *all* children, including those from racial and language minorities, those living in poverty, and those with disabilities. We extend this opportunity with the conviction that if given a fair shot at a good education these students, through hard work, can rise above the challenges they face and find a secure place at the heart of the American mainstream.

What many Americans don't fully understand, however, is that even as we've extended a free public education to all children, we've rigged the system against the success of some of our most vulnerable children. How do we do that? By taking the children who arrive at school with the greatest needs and giving them less in school. Our low-income and minority students, in particular, get less of what matters most; these students get the fewest experienced and well-educated teachers, the least rigorous curriculum, and the lowest quality facilities.¹

At the core of these inequities is a set of school finance policy choices that systematically shortchange low-income and minority students and the schools and districts that serve them. In this unprecedented look at school funding across multiple levels—federal, state, and district—we show how funding choices at each of these levels tilt away from equity.

- The first analysis examines how *federal* education funds for low-income students are distributed *among states*. It finds that rich states are rewarded with richer federal aid packages, and that poor ones get less.
- The second set of analyses scrutinizes spending differences *among school districts within states* and finds that most states shortchange their highest poverty and highest minority school districts.

- The third analysis examines how school *districts* spend their money, and finds inequalities *within school districts*, with less money spent in schools serving the most disadvantaged students.

Taken together these analyses make clear how—despite our national commitment to fairness and educational opportunity for all—a series of separate school funding choices stack the deck against the students who need the greatest support from their schools.

Over the last several years, there's been a flurry of activity aimed at addressing the achievement gap that separates low-income students and students of color from their more affluent and White peers. Yet year after year test results show precious little progress. It's easy to understand why some are growing frustrated and even discouraged. But the truth is, despite the new attention to the gap, we so far have failed to address the fundamental inequities—such as the funding gaps highlighted in this report—that are buried deep in our education systems. And until these inequities are exposed and addressed by the adults who make the policy choices that affect children we will continue to undermine our professed goal of providing equal opportunities for all.

Funding is just the most easily measured among the myriad ways in which public education systematically puts students of color and low-income students—and the schools these students attend—at a disadvantage. Securing equity in funding would send a powerful signal that equity is more than just a rhetorical priority. Fairer finance systems are not a silver bullet, but they are a first step toward the harder work of substantive education improvement.

We offer this new report with the hope that the information provided herein will arm policymakers, parents, and educators with the facts they need to make new policy choices that will make real our aspiration to give every student a fair chance.



How the Federal Government Makes Rich States Richer

By Goodwin Liu

Assistant Professor of Law, Boalt Hall School of Law, and Co-Director, Chief Justice Earl Warren Institute on Race, Ethnicity and Diversity, University of California, Berkeley. This paper is adapted from a December 2006 article in New York University Law Review.

Any serious effort by the federal government to improve equality of educational opportunity must confront a sobering and often neglected fact: Funding gaps *among* states are even larger than funding gaps *within* states. In 2003-04, the ten highest spending states spent an average of more than 50 percent more dollars per pupil than was spent by the lowest spending ten states. Low-spending states are clustered in the South, Southwest, and West, and serve a disproportionate share of the nation's poor children.

The purpose of Title I of the Elementary and Secondary Education Act is to level the educational playing field for poor children. Given this ambition, one would expect Title I to disproportionately benefit low-spending states, where low-income students are concentrated. But the reality is otherwise. Wealthier, higher-spending states receive a disproportionate share of Title I funds, thereby exacerbating the profound differences in education spending from state to state. Title I makes rich states richer and leaves poor states behind.

The problem lies in the Title I formulas. Under the three main formulas (basic, concentration, and targeted grants), each state's Title I allocation is largely a product of two factors. The first is the number and concentration of poor children in the school districts of each state. This factor benefits poorer states because they have disproportionate numbers of low-income children. But the second factor is the average per-pupil expenditure in the state. This state expenditure factor means that high-spending states get more Title I money per poor child than low-spending states. The net effect is that Title I does not reduce, but rather reinforces, inequality among states.

As Table 1 shows, interstate differences in Title I allocations are not small. Column A lists the number and percentage of the nation's poor children in each state in 2003, and column B lists each state's share of Title I funds in 2003. Together, columns A and B show that states do not receive Title I money in proportion to their shares of the nation's low-income children. Maryland, for example, had fewer poor children than Arkansas but received 51 percent more Title I aid per poor child. Massachusetts had fewer low-income children than Oklahoma but received more than

twice as much Title I aid per poor child. Similarly, Minnesota had fewer poor children than New Mexico but received 27 percent more Title I aid per poor child.

Column C shows each state's Title I funding per poor child in rank order. The amounts per poor child at the top are as much as double the amounts at the bottom, with the variation essentially mirroring interstate variation in per-pupil spending. (Some of the highest amounts in column C reflect statutory minimum allocations for small states.) When these data are adjusted for geographic differences in educational costs, the degree of interstate inequality is slightly reduced but still quite substantial.

The state expenditure factor might be defensible if it served as a reward or incentive for higher state spending on education. But this is implausible for two reasons. First, Title I aid is too small to realistically motivate additional state or local spending; states typically do not spend an additional dollar just to capture a few extra pennies. Second, by linking Title I aid to state per-pupil spending, the state expenditure factor primarily rewards state fiscal capacity (i.e., taxable wealth per pupil, shown in Column A in Table 2), not educational effort (i.e., willingness to tax that wealth, shown in Column B in Table 2). Nonfederal education revenue is more highly correlated with state fiscal capacity than with state effort, and states with higher capacity tend to exert lower effort. Thus, tying federal aid to state per-pupil spending does not reward effort so much as it rewards wealth. Indeed, in the examples above, the wealthier states (Maryland, Massachusetts, and Minnesota) exert less effort than the poorer states (Arkansas, Oklahoma, and New Mexico) but have higher per-pupil spending and thus receive higher Title I aid per poor child.

Simply put, the state expenditure factor in the Title I formula should be eliminated. This reform would bring Title I into line with the aid formulas for special education, English language instruction, and child nutrition, all of which assign equal weight to eligible children regardless of the state where they reside. Title I should simply allocate aid in proportion to each state's share of poor children. Moreover, instead of the state expenditure factor, Title I should include a cost factor to adjust for geographic

Table 1: Children in Poverty and Title I Allocations, 2003-2004 *(with percentage of national total)*

	A		B		C
	Poor children		Title I allocation		Title I allocation per poor child
Wyoming	9,796	0.1	\$28,964,809	0.3	\$2,957
Vermont	9,667	0.1	27,005,035	0.2	2,794
North Dakota	11,245	0.1	30,329,411	0.3	2,697
Massachusetts	112,570	1.3	260,050,569	2.3	2,310
New Hampshire	13,140	0.2	29,733,465	0.3	2,263
Alaska	14,330	0.2	30,431,327	0.3	2,124
Maine	25,025	0.3	47,816,946	0.4	1,911
Delaware	16,038	0.2	30,637,587	0.3	1,910
Connecticut	55,987	0.7	106,557,518	1.0	1,903
New York	638,992	7.6	1,184,751,800	10.7	1,854
New Jersey	155,082	1.9	272,032,782	2.4	1,754
South Dakota	19,125	0.2	32,000,786	0.3	1,673
Michigan	251,533	3.0	420,799,581	3.8	1,673
Pennsylvania	274,088	3.3	438,337,029	3.9	1,599
Rhode Island	27,313	0.3	43,155,247	0.4	1,580
Wisconsin	96,223	1.1	151,746,825	1.4	1,577
Kansas	55,419	0.7	87,046,905	0.8	1,571
Montana	25,827	0.3	40,458,865	0.4	1,567
Ohio	258,749	3.1	399,821,239	3.6	1,545
Minnesota	76,892	0.9	117,728,364	1.1	1,531
Maryland	101,153	1.2	153,983,710	1.4	1,522
West Virginia	63,503	0.8	94,167,837	0.8	1,483
Nebraska	32,413	0.4	46,769,850	0.4	1,443
Illinois	333,173	4.0	478,793,210	4.3	1,437
Hawaii	26,720	0.3	36,094,503	0.3	1,351
Missouri	146,574	1.7	194,886,735	1.8	1,330
California	1,288,493	15.4	1,649,697,459	14.8	1,280
Iowa	49,808	0.6	62,955,699	0.6	1,264
Oregon	93,069	1.1	115,317,070	1.0	1,239
Louisiana	207,871	2.5	256,175,473	2.3	1,232
Virginia	149,256	1.8	182,110,558	1.6	1,220
New Mexico	85,331	1.0	103,273,759	0.9	1,210
Indiana	129,878	1.6	156,540,820	1.4	1,205
Kentucky	138,101	1.6	162,957,050	1.5	1,180
Georgia	292,431	3.5	343,346,663	3.1	1,174
South Carolina	138,465	1.7	157,877,214	1.4	1,140
Washington	138,049	1.6	157,166,797	1.4	1,138
Texas	902,369	10.8	1,018,467,898	9.2	1,129
Mississippi	139,374	1.7	157,215,840	1.4	1,128
Idaho	35,921	0.4	39,875,687	0.4	1,110
Oklahoma	117,122	1.4	128,454,510	1.2	1,097
Tennessee	171,970	2.1	185,694,729	1.7	1,080
Colorado	96,512	1.2	104,115,332	0.9	1,079
Alabama	165,578	2.0	177,362,455	1.6	1,071
North Carolina	248,492	3.0	261,980,283	2.4	1,054
Florida	512,261	6.1	523,834,879	4.7	1,023
Arkansas	105,100	1.3	106,001,974	1.0	1,009
Utah	49,259	0.6	45,809,427	0.4	930
Nevada	59,296	0.7	53,216,311	0.5	897
Arizona	213,295	2.5	187,860,284	1.7	881

Source: U.S. Census Bureau, Small Area Income and Poverty Estimates, 2003 (children ages 5 to 17 in poverty); U.S. Department of Education Budget Tables, ESEA Title I Grants to Local Educational Agencies by State, 2003.

differences in educational costs. This approach would lessen interstate inequality because poor children are disproportionately concentrated in low-spending states and because equal federal dollars per eligible child provide a bigger boost, proportionally speaking, to low-spending states than to high-spending states.

Although eliminating the state expenditure factor in Title I would be a positive step, its effect on interstate inequality would be modest. A more serious effort to narrow interstate inequality requires three main policy components. First, the federal role in school finance must be substantially increased; the federal government cannot buy much equality when it spends only nine cents of every education dollar. Second, because interstate differences in education funding primarily reflect differences in fiscal capacity, federal aid should compensate for differences across states in their ability to support education. Medicaid provides an example of federal aid distributed in inverse proportion to state fiscal capacity. Third, in aiding states with low education spending, federal policy should distinguish between low fiscal capacity and low effort. Where low spending is due to low effort, the primary federal role should be to spur states toward greater effort. Congress could require low-effort states to gradually increase their effort up to a minimum threshold as a condition of receiving significantly expanded federal aid.

These reforms would not be cheap, and they would require robust political will. But the problem of interstate inequality is both glaring and longstanding. If we are serious about wanting to ensure that every child in America meets high standards, then we must develop a federal school finance policy equal to the task.

Table 2 State Fiscal Capacity and Educational Effort by State, 2003-2004 (with percent of national average)

	A		B		C	
	Total taxable resources (per pupil)		Educational effort		Nonfederal revenue (per pupil)	
Alabama	\$178,064	89	3.27	93	\$5,819	83
Alaska	159,139	80	3.66	104	5,822	83
Arizona	160,354	81	3.12	89	5,003	72
Arkansas	167,832	84	3.53	100	5,929	85
California	168,055	84	3.42	97	5,743	82
Colorado	230,315	116	2.96	84	6,818	98
Connecticut	253,996	128	3.44	98	8,737	125
Delaware	362,954	182	2.24	64	8,130	116
Florida	209,398	105	2.96	84	6,199	89
Georgia	195,964	98	3.80	108	7,453	107
Hawaii	225,548	113	3.82	109	8,627	123
Idaho	157,727	79	3.57	101	5,626	80
Illinois	209,172	105	3.35	95	7,010	100
Indiana	208,503	105	3.96	113	8,264	118
Iowa	224,688	113	3.40	97	7,645	109
Kansas	212,974	107	3.79	108	8,075	116
Kentucky	187,524	94	3.28	93	6,147	88
Louisiana	182,526	92	3.23	92	5,890	84
Maine	187,498	94	4.27	121	8,013	115
Maryland	252,749	127	3.22	91	8,140	116
Massachusetts	234,883	118	3.39	96	7,966	114
Michigan	181,531	91	4.24	120	7,688	110
Minnesota	234,525	118	3.48	99	8,152	117
Mississippi	148,437	75	3.62	103	5,380	77
Missouri	206,812	104	3.30	94	6,823	98
Montana	178,136	90	3.65	104	6,505	93
Nebraska	232,972	117	3.42	97	7,968	114
Nevada	226,288	114	2.81	80	6,362	91
New Hampshire	232,031	117	3.39	96	7,875	113
New Jersey	234,549	118	4.34	123	10,186	146
New Mexico	157,280	79	3.79	108	5,962	85
New York	226,166	114	4.08	116	9,216	132
North Carolina	213,979	108	2.90	82	6,201	89
North Dakota	229,595	115	3.15	89	7,223	103
Ohio	201,149	101	3.92	111	7,890	113
Oklahoma	163,416	82	3.50	100	5,725	82
Oregon	202,845	102	3.43	98	6,966	100
Pennsylvania	216,454	109	3.75	106	8,113	116
Rhode Island	207,837	104	3.62	103	7,534	108
South Carolina	177,184	89	3.81	108	6,746	96
South Dakota	241,334	121	2.72	77	6,557	94
Tennessee	206,282	104	2.61	74	5,388	77
Texas	170,616	86	3.68	105	6,282	90
Utah	146,631	74	3.31	94	4,857	69
Vermont	203,727	102	4.63	131	9,425	135
Virginia	248,386	125	2.95	84	7,340	105
Washington	206,431	104	3.07	87	6,343	91
West Virginia	166,089	83	4.27	121	7,086	101
Wisconsin	217,554	109	3.91	111	8,514	122
Wyoming	263,292	132	3.49	99	9,191	131

Note: "Total taxable resources" (column A) is a measure of state fiscal capacity developed by the U.S. Department of Treasury; 2003 figures are available at <http://www.treas.gov/offices/economic-policy/resources/estimates.shtml>. Nonfederal revenue data (column C) are from U.S. Census Bureau, Public Elementary-Secondary Education Finances: 2003-04 (table 1). The data in columns A and C are cost-adjusted dollars per weighted pupil. The cost adjustment applies the state-level Geographic Cost of Education Index in Jay G. Chambers, Geographic Variations in Public Schools' Costs (NCES Working Paper No. 98-04, 1998) (table III-3). Pupil weights are 1.9 for students with disabilities, 1.6 for students in poverty, and 1.2 for English-language learners. Enrollment data used to derive weighted pupil counts are from NCES, Digest of Education Statistics 2005 (table 33 (fall 2003 enrollment) and table 52 (children ages 6 to 21 served under the Individuals with Disabilities Education Act, Part B, 2003-04)); U.S. Census Bureau, Small Area Income and Poverty Estimates, 2003 (children ages 5 to 17 in poverty); and U.S. Department of Education, National Clearinghouse for English Language Acquisition and Language Instruction Educational Programs, ELL Demographics by State, 2003-04. Dividing column C by column A yields the "Educational effort" figures in Column B. Across the states, nonfederal revenue is more strongly correlated with fiscal capacity (.62) than with effort (.45). Further, capacity and effort are negatively correlated (-.39). With some exceptions, states with higher capacity tend to make less effort yet raise more revenue than states with lower capacity.

How States Shortchange the Districts That Need the Most Help

By Ross Wiener and Eli Pristoop

Education Trust

States bear primary responsibility for public education.² As education has become more important to being an active citizen and earning a livelihood, states have increasingly exercised their authority to set rules for who can teach, what students are expected to learn in school, and how student learning is measured. Just as important, states determine how—and how equitably—education is funded.

The analyses on the pages that follow examine how well the states are living up to their obligation to fund public education equitably. There are encouraging examples of states that have stepped up to their responsibilities, but on the whole these data reveal serious problems with most state funding systems.

What This Analysis Does—and What it Does Not Do

This analysis focuses on state and local revenues. Federal revenues (which made up 8.9 percent of public school revenues in 2004) are not included, in order to isolate the specific effect of *state* policies on the educational opportunities provided to low-income children and children of color. Federal education funds are specifically meant to supplement, not supplant, state and local revenues. So it is appropriate to examine whether state policies equitably support public education in high-poverty and high-minority districts.³ When states fail to equitably fund public education, federal funds are forced to make up for shortfalls, instead of providing the additional opportunities Congress intended.

Second, the analysis does not examine whether funding in any particular state is *adequate*. Rather, taking current spending as it is, this analysis asks whether the districts with the highest concentrations of low-income students and students of color are getting their fair share of state money.

Third, this report examines school district revenues, not practices or policies in terms of how the money is spent. At the Education Trust, we are acutely aware that how money is spent matters immensely in whether education is improved. We spend most of our time and energy trying to improve practice and policy so that existing resources in public

education are used effectively. But we also know that many necessary improvements in the education of low-income and minority students will cost money.

Fourth, we have applied a consistent methodology to examining funding equity in 49 states (the exception is Hawaii, which operates a single, statewide school district). This methodology, which is described in the text and explained in detail in the technical appendix, allows for cross-state comparisons and provides good information on how funding is distributed between high- and low-poverty and high- and low-minority districts. But it is not ideally suited to analyzing a few unique state contexts. For example, the Clark County school district, home to Las Vegas, serves approximately 70 percent of Nevada's public school students, so it is not possible to divide Nevada's districts into comparable quartiles.

We do not mean to imply that we have described the full range of school funding inequities. States that do not necessarily show large funding disparities in this analysis might show inequities if looked at through a different lens. We encourage researchers and advocates to use this data as a starting point for additional analysis.

How We Did the Analysis

This study analyzes annual financial data from each of the nation's approximately 14,000 public school districts, gathered by the U.S. Census Bureau and the U.S. Department of Education. The calculations are based on the total amount of state and local revenues each district received for the 2003-2004 school year, the latest year for which such financial data are available.⁴

To calculate funding gaps for each state, we compare average state and local revenues per student in the highest-poverty school districts—those in the top 25 percent statewide in terms of the percent of students living below the federal poverty line—to per-student revenues in the lowest poverty school districts.⁵ These quartiles are built so each contains approximately the same total number of students. This procedure also is used to establish comparable quartiles for analyzing funding in high- and low-minority school districts.

The analysis accounts for the fact that school districts vary in how much they need to spend depending on the different prices they have to pay for goods and services and the different kinds of students they have. Accordingly, we adjust for the local cost of providing education. In 2006, the National Center for Education Statistics released a new formula for adjusting for cost differences across school districts across the entire United States, and we applied that formula in these analyses.⁶ Using this new formula allows for the most fair comparisons across districts, but it makes the data in this report not perfectly comparable to previous Education Trust *Funding Gap* reports.

Similarly, we adjust our calculation of school district revenues based on the number of special education students enrolled, recognizing that districts with disproportionately more students with disabilities have higher costs and, thus, effectively less money to spend. The formula we used for this adjustment was developed by the American Institutes of Research and is widely used in school funding analyses.⁷

Most States are Unfair to Their High-Poverty and High-Minority Districts

In 26 of the 49 states studied, the highest poverty school districts receive fewer resources than the lowest poverty districts.⁸ As can be seen in Table 3, across the country, state and local funds provide \$825 per student less in the highest poverty districts than in the most affluent districts.⁹ Four states—Illinois, New Hampshire, New York, and Pennsylvania—shortchange their highest poverty districts by more than \$1,000 per student per year. These states, and others that allow funding gaps to persist, are compounding the disadvantages that low-income students face outside of school and undercutting public education's ability to act as an engine of social mobility.

In 28 states, high-minority districts receive less state and local money for each child than low-minority districts (Table 4). Across the country, \$908 less per student is spent on students in the districts educating the most students of color, as compared to the districts educating the fewest students of color.¹⁰

Equal Dollars Are Not Good Enough

The absolute dollar numbers in Table 3 actually understate the inequity suffered by high-poverty districts. To educate children growing up in poverty to common, meaningful standards costs more. Children from low-income families need more instructional time and especially well trained teachers. To provide another way of looking at state funding gaps, we also calculate the gaps with a 40 percent adjustment for educating students growing up in poverty.¹¹

We use this 40 percent adjustment because it is included in the federal Title I formula to determine whether state funding policies are fair to low-income students. Title I funding to states that do not meet this standard is reduced.¹² Studies that have attempted to quantify the additional costs of educating students growing up in poverty have often produced higher adjustments. Maryland, for example, determined that it would require virtually double the foundation funding to educate low-income students up to its state standards, and phased in a funding formula to meet that goal beginning in 2002.¹³ Others, such as Professor Liu, use a 60 percent adjustment.

Applying the 40 percent adjustment, the number of states that underfund school districts serving large numbers of poor children grows to 34, and the national gap goes from \$825 to \$1,307. Underneath this national gap lie huge differences among the states. Six states have per-student funding gaps that exceed \$1,000 between high- and low-poverty districts; once the 40 percent adjustment is applied, Michigan and Montana join the four states that have funding gaps in excess of \$1,000 (Illinois, New Hampshire, New York, and Pennsylvania).

A similar analysis based on districts serving students of color finds the same pattern: After the 40 percent adjustment for low-income students is made, school districts serving the largest concentrations of students of color receive \$1,213 less per child than school districts serving the fewest children of color every year. (No adjustment is made on the basis of the percent minority enrollment.) Thirty states have funding gaps between their highest and lowest minority districts, and twelve have funding gaps that exceed \$1,000 per child (Colorado, Illinois, Kansas, Montana, Nebraska, New Hampshire, New York, North Dakota, South Dakota, Texas, Wisconsin, and Wyoming).

How to Read Tables 3 and 4

Tables 3 and 4 illustrate the gap in funding between highest and lowest poverty districts (Table 3) and highest and lowest minority districts (Table 4). When highest poverty and highest minority districts receive less per pupil, the gaps are shown with negative numbers. So, for example, the highest poverty districts in Alabama receive an average of \$323 less per student than the lowest poverty districts, and the highest minority districts receive an average of \$241 per student less than the lowest minority districts. In states where the highest poverty districts receive more money per pupil, the number is positive. So, for example, the highest poverty districts in Minnesota receive \$1,349 per student more than the lowest poverty districts.

Table 3: Poverty Funding Gaps by State, 2004

State	Gap Between Revenues per Student in the Highest - and Lowest - Poverty Districts (no adjustment for low-income students)	Gap Between Revenues per Student in the Highest - and Lowest - Poverty Districts (40% adjustment for low-income students)
Alabama	-\$323	-\$656
Alaska	2,474	2,054
Arizona	-225	-736
Arkansas	-158	-500
California	218	-259
Colorado	-70	-440
Connecticut	666	59
Delaware	-207	-371
Florida	-272	-461
Georgia	156	-292
Hawaii	*	*
Idaho	-55	-257
Illinois	-1,924	-2,355
Indiana	518	93
Iowa	82	-176
Kansas	-549	-885
Kentucky	852	448
Louisiana	-200	-481
Maine	-137	-543
Maryland	-123	-432
Massachusetts	1,299	694
Michigan	-573	-1,072
Minnesota	1,349	950
Mississippi	207	-191
Missouri	190	-271
Montana	-789	-1,148
Nebraska	515	210
Nevada	-249	-297
New Hampshire	-1,084	-1,297
New Jersey	1,824	1,069
New Mexico	1,106	679
New York	-2,319	-2,927
North Carolina	-344	-543
North Dakota	271	17
Ohio	683	113
Oklahoma	133	-213
Oregon	579	302
Pennsylvania	-1,001	-1,511
Rhode Island	311	-394
South Carolina	414	127
South Dakota	-147	-438
Tennessee	591	330
Texas	-249	-757
USA	-825	-1,307
Utah	860	663
Vermont	-403	-894
Virginia	-114	-436
Washington	196	-110
West Virginia	-22	-345
Wisconsin	-351	-742
Wyoming	-303	-539

Table 4: Minority Funding Gaps by State, 2004

State	Gap Between Revenues per Student in the Highest - and Lowest - Minority Districts (no adjustment for low-income students)	Gap Between Revenues per Student in the Highest - and Lowest - Minority Districts (40% adjustment for low-income students)
Alabama	-\$241	-\$437
Alaska	4,955	4,435
Arizona	-230	-680
Arkansas	445	253
California	-160	-499
Colorado	-799	-1,032
Connecticut	-74	-602
Delaware	408	353
Florida	17	-106
Georgia	566	271
Hawaii	*	*
Idaho	-836	-849
Illinois	-1,223	-1,524
Indiana	1,345	1,096
Iowa	-327	-414
Kansas	-1,514	-1,630
Kentucky	150	274
Louisiana	355	111
Maine	-817	-874
Maryland	-302	-454
Massachusetts	1,663	1,139
Michigan	68	-251
Minnesota	898	623
Mississippi	413	26
Missouri	795	662
Montana	-1,787	-1,838
Nebraska	-1,280	-1,374
Nevada	-470	-496
New Hampshire	-2,371	-2,392
New Jersey	1,730	1,087
New Mexico	246	18
New York	-2,239	-2,636
North Carolina	-211	-296
North Dakota	-1,259	-1,290
Ohio	1,285	942
Oklahoma	-133	-383
Oregon	222	127
Pennsylvania	-454	-709
Rhode Island	-21	-639
South Carolina	392	206
South Dakota	-962	-1,140
Tennessee	275	202
Texas	-792	-1,167
USA	-908	-1,213
Utah	-202	-311
Vermont	-800	-613
Virginia	418	239
Washington	-87	-225
West Virginia	244	290
Wisconsin	-1,043	-1,270
Wyoming	-1,020	-1,041

Note: All dollar amounts in this chart have been adjusted to account for regional cost differences and the additional cost of educating students with Individualized Education Programs. This has the effect of reducing the effective level of funding in high-cost districts and districts with large numbers of students with disabilities. In addition, the third column in this table contains gap numbers that have been adjusted to account for the additional cost of educating low-income students (40% adjustment). For a more detailed explanation of the methodology used in this report, see the Technical Appendix.

Source: Education Trust calculations based on data from U.S. Census Bureau and U.S. Department of Education data for the 2003-2004 school year.

Some states demonstrate that equitably funding education is possible. Kentucky and Massachusetts, for example, have targeted more money to high-poverty districts and coupled the monetary resources with meaningful accountability and technical assistance—and real progress has been accomplished.¹⁴ But equitable funding is not a panacea. Washington, for example, does not distribute its money in a particularly unfair way in comparison to other states, but that does not make up for the fact that it simply spends less on education than other states with similar wealth. There are, of course, examples where increased education funding has not translated into commensurate improvements in teaching and learning. We have to confront those issues seriously, but ignoring or condoning funding gaps only makes it harder to tackle the substantive problems.

Per-Student Funding Gaps Add Up

For example, when you consider the per-student funding gap for low-income students (without 40-percent adjustment for low-income students) in...	Between two typical classrooms of 25 students, that translates into a difference of....	Between two typical elementary schools of 400 students, that translates into a difference of....	Between two typical high schools of 1,500 students, that translates into a difference of....
New York	\$57,975	\$927,600	\$3,478,500
Illinois	\$48,100	\$769,600	\$2,886,000
Michigan	\$14,325	\$229,200	\$859,500
North Carolina	\$8,600	\$137,600	\$516,000
Delaware	\$5,175	\$82,800	\$310,500

Table 5: Percent of Elementary-Secondary Public School System Revenue from Local Sources by State: 2003-2004

State Name	Percent of System Revenue from Local Sources
Alabama	32.8
Alaska	25.7
Arizona	43.3
Arkansas	15.4
California	34.1
Colorado	49.6
Connecticut	59.7
Delaware	27.9
Florida	45.6
Georgia	46.7
Idaho	31.6
Illinois	56
Indiana	44
Iowa	45.5
Kansas	40.8
Kentucky	30.4
Louisiana	38.2
Maine	50.4
Maryland	55.9
Massachusetts	53.6
Michigan	30
Minnesota	22.6
Mississippi	30.3
Missouri	47.9
Montana	40.4
Nebraska	58.2
Nevada	32.4
New Hampshire	48.6
New Jersey	53.3
New Mexico	13.1
New York	48.9
North Carolina	32.5
North Dakota	46.7
Ohio	49.2
Oklahoma	36.1
Oregon	38.2
Pennsylvania	56.1
Rhode Island	52.3
South Carolina	43.6
South Dakota	50.3
Tennessee	45.6
Texas	52.7
Utah	34.7
Vermont	23.9
Virginia	54.3
Washington	29.7
West Virginia	28.7
Wisconsin	41.7
Wyoming	38
USA	43.9

Source: "Public Education Finances 2004", US Census Bureau, March 2006, Page 5, Table 5.

States Can Close Funding Gaps

Education reform poses many complicated issues, where additional innovation and research is still needed. Making education funding more fair, however, is not one of these issues. States need to take a greater share of education funding and target more money to the districts with the biggest challenges.

First, states should reduce reliance on local property taxes. As shown in Table 5, states vary dramatically in the extent to which local taxes fund schools—from a low of 13 percent in New Mexico to a high of 60 percent in Connecticut. Because wealth and property value are so unequally distributed, using local taxes as the primary resource for schools inherently gives wealthier communities an advantage in providing better educational opportunities. It is antithetical to states' professed commitments to close achievement gaps to rely on local communities to fund education. This tradition reinforces privilege, exacerbates inequality, and is anachronistic at a time when we expect

all students within a state to meet consistent, meaningful standards.

Once states assume more responsibility for education funding, they should target funds to help educate low-income children. In Massachusetts, for example, local taxes account for a majority of public schools' revenue, but state funding is highly targeted, which allows the state to do more to address funding equity than some other states. Wisconsin, in contrast, actually allocates a majority of all public education revenue at the state level, but still maintains funding gaps that disadvantage both high-poverty and high-minority districts.

It is unfair that children's educational horizons are limited by their neighborhoods' demographics. As state education systems grow into their responsibilities in a standards-based world, they need to ensure that budgets reflect fairness and that resources are targeted to districts with the most need. Aligning state education funding policies with goals would mark necessary, but not sufficient, progress toward equality of educational opportunity.

How Districts Shortchange Low-income and Minority Students

By **Marguerite Roza**

Research Assistant Professor in the Center on Reinventing Public Education at the Daniel J. Evans School of Public Affairs at the University of Washington.

It is well known that some school districts have more money to spend than others with consequent ill effects on poor and minority students. Analyses such as the ones contained in this report and well-publicized court cases have long documented the inequities between wealthier and poorer school districts.

Less well known is that, almost universally, school districts themselves magnify those initial inequities by directing more non-targeted money to schools and students with less need. Even school districts that claim to be spending more on high-poverty and high-minority schools can in fact spend considerably less, leading to predictable and devastating results for low-income and minority students.

To understand how these inequities develop within districts, it is necessary to understand the way school budgets are built. Typically, district budget documents report how money is spent by category and program rather than by school. As a result, even superintendents and school board

members often do not know whether they spend more money on one school than another or whether they spend more or less on low-income and minority students. Layered onto those opaque accounting practices are long-established policies and practices—particularly regarding personnel assignments—that virtually guarantee that low-income and minority children have access to fewer resources than their more advantaged peers.¹⁵

No large-scale national databases or analyses can be used to see these problems. However, in the last five years I and others have carefully analyzed the spending patterns of dozens of districts in more than 20 states. In some cases the districts only allowed us to examine their finances with the understanding that we would not name them. However, we can say that in many ways they typify large and medium-sized districts throughout the country. Two major patterns emerged in almost every district studied and can be presumed to be replicated in most large and medium-sized school districts.

- 1) Less money is spent on salaries in high-poverty schools than on salaries in low-poverty schools within the same district.
- 2) Districts assign a larger share of unrestricted funds to low-poverty schools.

Let us examine each of these inequitable patterns.

1) Less money is spent on salaries in high-poverty schools than on salaries in low-poverty schools within the same district.

Evidence abounds that in many school districts the most experienced and highly paid teachers congregate in the district’s more affluent schools. At the same time, the least qualified, lowest paid teachers tend to serve in the schools with the highest numbers of low-income and minority students. A typical pattern is that a new teacher will start his or her career at a high-poverty school and, as he or she gains experience and moves up the pay scale, will transfer to a more affluent school. District transfer policies, sometimes codified in teacher union contracts, help facilitate this migration pattern. Additionally, after teaching in high-poverty schools, some newer teachers leave the profession, also contributing to the teacher turnover in the schools.

Although there are no guarantees that teacher experience is an indicator of teacher quality, researchers generally agree that teacher effectiveness increases during the first five to seven years of teaching. Educationally, the migration pattern of teachers means that students who attend high-minority and high-poverty schools have a lower chance of encountering a teacher at the peak of his or her effectiveness than students who attend more affluent schools with fewer students of color.

Financially, such teacher migration patterns mean that considerably less salary money is spent on high-poverty and high-minority schools. This disparity is often hidden by the fact that most district budgets report the distribution of staff *positions* at individual schools and not the distribution of teacher *costs* or teacher quality. Typically a district will allocate one teacher to a set number of students across all schools or types of schools (for example, all elementary schools will have a 1:18 ratio or all high schools will have a 1:22 ratio). The district will then report salaries at a particular school as the number of positions multiplied by the average salary paid by the district. By reporting salaries in this way (known as salary averaging), school districts disguise the actual salaries paid at individual schools.

When actual salaries are examined, the differences between high-poverty schools and low-poverty schools are significant and pervasive, as shown in Table 6.

Table 6: Gap between average teacher salaries in top and bottom poverty quartiles, by school district (2003-2004)

District	Salary Gap
Austin*	\$3,837
Dallas*	\$2,494
Denver*	\$3,633
Fort Worth*	\$2,222
Houston*	\$1,880
Los Angeles**	\$1,413
Sacramento**	\$4,846
San Diego**	\$4,187
San Francisco**	\$1,286
San Jose Unified**	\$4,008

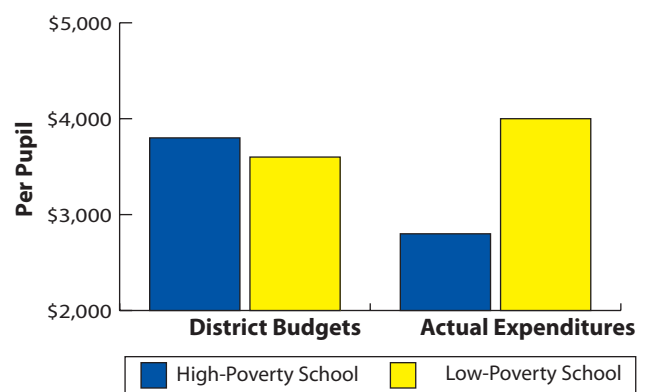
Sources: *Center for Reinventing Public Education Analyses, 2005
 **Education Trust, Hidden Funding Gap, 2005, available at <http://www.hiddengap.org/>

In each city cited here, the district effectively spends less on teaching in schools with high concentrations of low-income students. And these are not the most extreme examples. A 2002 analysis of Baltimore City showed that teachers at one high-poverty school were paid an average of almost \$20,000 less than those at another school in the same district.¹⁶

Salary differences translate into big effects on school spending. For a school with 600 students and 25 teachers, a \$4,000 average salary gap creates a difference of \$100,000 per school. For a school with 1,700 students and 100 teachers, that is a difference of \$400,000 per school.

Members of the general public often believe that high-poverty and high-minority schools receive more money than other schools because they know that there are special programs targeted to high-poverty schools. In some cases, however, targeted funds don’t even make up for the salary differences.

Figure 1: Salary Averaging Diverts Resources Budgeted for High-Poverty Schools to Low-Poverty Schools*



Source: Roza, Marguerite and Paul Hill. "How Within-District Spending Inequities Help Some Schools to Fail," Brookings Papers on Education Policy (2004).

2) Districts further exacerbate inequality by assigning a larger share of unrestricted funds to low-poverty schools.

Each school in a district is supposed to receive an equal share of unrestricted funds, in addition to whatever categorical allocations are intended for the special needs of the students it has (such as for special education services or English-language instruction). Even after the salary differences between high- and low-poverty schools are accounted for, low-poverty schools still get more than their share of unrestricted dollars. In fact, salary differences only explain between 20 and 80 percent of the differences between spending at high- and low-poverty schools.

This somewhat unexpected finding first emerged in various analyses some two years ago,¹⁷ and other recent analyses confirm it. For example, data from the Public Policy Institute of California documented that low-poverty elementary schools tend to have larger teacher/pupil ratios and higher non-teacher expenditures than higher poverty schools.¹⁸

Table 7: Unrestricted spending per pupil in elementary schools across sampled California Districts

Category	Low Poverty	High Poverty
Unrestricted Teacher Expenditures	\$2570	\$1973
Teachers per 1000 students	44.9	41.5
Average teacher salary	\$57,242	\$47,545
Unrestricted Other Expenditures	\$1839	\$1648
Total Unrestricted	\$4409	\$3621

Source: Rose, et. al (2006)

Interviews with district leaders have helped make sense of how and why this happens in their districts. Sometimes the placement of more expensive magnet or alternative programs drives up the costs in schools with fewer low-income students. In Chicago, for instance, selective enrollment schools (those with admission requirements) spend some 15 percent more than the district average per pupil.¹⁹ In one district, the more affluent communities have smaller schools where per-pupil costs are higher. More often, the patterns are created in response to pressures to equalize services across all schools. Where earmarked categorical funds such as federal Title I money pay for such extra services as full-day kindergarten or reading specialists in high-need schools, more flexible state and local money is often used to fund the same services in the low-need schools.

The result is that general or unrestricted funds are skewed toward schools that do not qualify for targeted programs. Even when states restrict certain funds to

provide extras for low-income students, school districts use unrestricted funds to provide similar services to more affluent students.

While the patterns somewhat vary by district, it is clear that most districts distribute the state and local funds they control inequitably. Again, this is masked by the way budgets are reported, showing expenditures coded by activity, function, and program, but not by school or student.

Emerging research indicates that there may be yet another way local districts shortchange low-income and minority students by inequitably distributing categorical funds targeted to specific kinds of students, such as money targeted to English-language learners. The way this seems to work is that districts put equally funded programs into schools regardless of how many students need them. For example, a district might allocate \$100,000 to each school with English-language learners, even though one school might have 200 students with limited English proficiency and another—often a more affluent school—might have only 20. This results in a per-pupil cost of \$500 in the first school and \$5,000 in the second. The research into this practice is still in the early stages²⁰ and deserves further scrutiny.

The important point here is that school budgets are tangled webs, and it takes considerable amounts of analytic energy to unravel them in order to understand exactly how money is spent and on which students. When examined closely, however, it is clear that the typical school budget document is used to conceal very inequitable spending patterns.

To change these patterns, school boards, superintendents, and members of the general public should demand that budget documents be much more accurate and transparent so that all involved know exactly how resources are being distributed among different schools within the same school district. Accuracy demands that school budgets reflect actual teacher salaries, not district averages. Relying on average teacher salaries obscures the fact that less teacher salary money is allocated to the highest poverty and highest minority schools, where novice teachers and those with the least credentials are concentrated. One hopeful sign is that California, Texas, and Colorado have recently changed their school accounting practices to make it easier for school districts to report actual salaries by school level.

Collecting and disseminating truthful information about individual school budgets will help in acknowledging the problems, but it will take deliberate policies to change the underlying inequities. An increasing number of districts, including some of those that have allowed me and my colleagues to study them, are adopting student-based

allocation policies known as weighted student funding.²¹ Others are changing the way teachers are compensated in order to change the way teacher talent and experience are distributed. If public school systems are serious about closing achievement gaps, they must begin to allocate more resources to the students with the greatest need. The previous sections of this report illustrate the important role of federal and state policies, but we cannot achieve real funding equity until we design school budgets that better respond to student needs.

Conclusion and Recommendations

The fundamental promise of standards-based reform is that inputs vary so that outcomes can be held constant. While there are many intangibles on the input side of the education equation, we can at least measure whether money is being appropriately targeted to provide extra support to the students and schools who start out behind. By this score, we have yet to deliver on the promise of standards-based reform.

For standards and accountability to represent more than a hollow exhortation to “do better,” education funds must be directed to the places where they are most needed. Changing how education funds are distributed presents political challenges, but isolated progress at every level of government demonstrates that these issues can be overcome. Education is too important to our identity as Americans – and who we aspire to be – to allow current funding inequities to persist.

Below are recommendations for each level of government.

Federal Government

- **Invest more in education.** Despite a 40 percent increase in Title I funding within three years of enacting *No Child Left Behind* (NCLB), the federal government still only provided 8.9 percent of public education funds in 2004. There is only so much equity that can be secured with 9 cents of every education dollar.
- **Target federal funds to high-poverty states.** Title I currently rewards states that spend more on education without regard to differences in state capacity, which compounds the disadvantage of living in a low-wealth state. Federal policy should distinguish among states based on their effort in education funding, and help to address differences in capacity.
- **Use federal funds more aggressively to force states and districts to disburse their own funds equitably.** State and local policy have to be aligned with the national goal of closing achievement gaps, or the relatively small amount of federal funds will represent mere drops in a leaky bucket. Congress could start by updating the “comparability” provisions in Title I, which allow states to ignore inequities in state/local funding in Title I schools.

State Governments

- **Take more responsibility for education funding.** As the constitutional guarantors of educational opportunity, states should ensure that public schools are funded adequately regardless of community wealth. Because the traditional role of local property

taxes in funding local school districts inherently puts low-wealth and low property value communities at a disadvantage, states should rely more on statewide sources of revenue.

- **Target more funding to high-poverty districts.** Disbursing education dollars at the state level creates the opportunity for more equitable funding, but does not make equity inevitable. States need to assess the relative challenges across school districts and ensure that funding equitably addresses these challenges.
- **Set funding equity standards for school districts.** States have devolved authority for funding individual schools to school districts, but this cannot allow states to abdicate responsibility for ensuring equitable educational opportunities within districts.

Local School Districts

- **Publish transparent budget and allocation figures.** While the destination of federal and state funds is easily traceable at the school-district level, school district budgets remain opaque and expenditures are often not even tracked at the school level. The lack of transparency shields local spending patterns from scrutiny and provides cover for pervasive and indefensible inequality among schools within the very same school districts.
- **Examine contract and budgeting provisions that perpetuate inequality.** Most school districts have negotiated away their ability to use differential pay to attract and retain the best teachers in the hardest-to-staff schools. Along with salary-averaging budgeting practices, this helps concentrate the most highly paid teachers in the schools with the fewest low-income students and students of color.
- **Implement weighted student funding.** To make good on the promise of educating just about all students to a common standard, we have to identify students’ needs and then allocate funds proportionate to those needs. School budgets currently are oriented to funding programs and staff allocations, without adequate differentiation based on student needs.

Pitched debates have been joined over whether it is possible for public education to educate all students to meaningful levels of academic proficiency. The truth is that we cannot know how much more is possible until we adjust our systems toward this goal. It would be a shame if the debates over what’s possible in public education were resolved without addressing patent unfairness in education funding.

Appendix

Table 8: Percent Distribution of Elementary-Secondary Public School System Revenue by Source and State, 2003-2004

State	Federal	State	Local
Alabama	11.7	55.5	32.8
Alaska	19.4	54.9	25.7
Arizona	11.8	44.9	43.3
Arkansas	12.5	72.1	15.4
California	11.4	54.5	34.1
Colorado	6.7	43.7	49.6
Connecticut	5	35.3	59.7
Delaware	8.1	64	27.9
District of Columbia	15.4	.	84.6
Florida	10.1	44.4	45.6
Georgia	8.5	44.8	46.7
Hawaii	11.1	86.6	2.4
Idaho	10.2	58.2	31.6
Illinois	8.6	35.5	56
Indiana	6.4	49.6	44
Iowa	8.3	46.2	45.5
Kansas	7.8	51.4	40.8
Kentucky	11.8	57.8	30.4
Louisiana	13.8	48	38.2
Maine	8.9	40.7	50.4
Maryland	6.4	37.7	55.9
Massachusetts	6.5	39.8	53.6
Michigan	7.9	62	30
Minnesota	6	71.4	22.6
Mississippi	14.9	54.9	30.3
Missouri	7.9	44.2	47.9
Montana	15.2	44.4	40.4
Nebraska	9	32.8	58.2
Nevada	7.2	60.4	32.4
New Hampshire	5.6	45.8	48.6
New Jersey	4.3	42.4	53.3
New Mexico	17.2	69.7	13.1
New York	7.5	43.6	48.9
North Carolina	9.7	57.9	32.5
North Dakota	15.2	38.1	46.7
Ohio	6.9	43.9	49.2
Oklahoma	12.8	51.1	36.1
Oregon	9.1	52.7	38.2
Pennsylvania	8	35.9	56.1
Rhode Island	7.2	40.5	52.3
South Carolina	10.4	46	43.6
South Dakota	15.6	34.2	50.3
Tennessee	11	43.4	45.6
Texas	10.5	36.8	52.7
Utah	10	55.3	34.7
Vermont	8	68	23.9
Virginia	7	38.7	54.3
Washington	8.5	61.8	29.7
West Virginia	11.3	60	28.7
Wisconsin	6.1	52.2	41.7
Wyoming	9.9	52.1	38
USA	8.9	47.1	43.9

Notes: Some data appear under local sources for Hawaii's state-operated school system for consistency with data presented for all other school systems.

Source: Public Education Finances 2004. US Census Bureau. March 2006. Table 5.

Endnotes

- ¹ For disparities in access to teacher quality, see Peske, H., and Haycock, K. *Teaching Inequality: How Poor and Minority Students Are Shortchanged on Teacher Quality*; Education Trust, 2006. For disparities in access to challenging curriculum, see Barth, Patte, *A New Core Curriculum for All*, The Education Trust, 2003. Both reports are available under reports and publications at www.edtrust.org. The specific urls are (Peske and Haycock): <http://www2.edtrust.org/NR/rdonlyres/010DBD9F-CED8-4D2B-9E0D-91B446746ED3/0/TQReportJune2006.pdf>; and (Barth): http://www2.edtrust.org/NR/rdonlyres/26923A64-4266-444B-99ED-2A6D5F14061F/0/k16_winter2003.pdf. For an examination of disparity in facilities and capital improvements, see Filardo, Mary, et. al, *Growth and Disparities: A Decade of U.S. Public School Construction, Building Educational Success Together (BEST)*, 2006, available at <http://www.edfacilities.org/pubs/GrowthandDisparity.pdf>.
- ² Almost every state's constitution creates an affirmative obligation to provide public education. See discussion in, for example, Thro, William E., "The Role of Language of the State Education Clauses in School Finance Litigation," *West's Education Law Reporter*, vol. 2 no. 2, 1993.
- ³ Non-supplantation language is common in federal education statutes; for an example, see Section 1120(A)(b)(1) of the No Child Left Behind Act, which says, "A State educational agency or local educational agency shall use Federal funds received under this part only to supplement the funds that would, in the absence of such Federal funds, be made available from non-Federal sources for the education of pupils participating in programs assisted under this part, and not to supplant such funds."
- ⁴ Local revenues include local property taxes used for school facilities, construction bonds, etc. For a more detailed explanation of the data sources and methodology used to generate the numbers used in the report, see the Technical Appendix, available as a separate document on The Education Trust web site, www.edtrust.org.
- ⁵ The poverty rate in this analysis is defined as the percent of people ages 5 to 17 living in each school district with a household income below the federal poverty line, as estimated by the U.S. Census Bureau. In 2003, the poverty line for a family of four with two children was \$18,660. <http://www.census.gov/hhes/poverty/threshld/thresh03.html>. It should be noted that this is a more restrictive definition of poverty than eligibility for the federal free or reduced-price lunch programs, which include students with income at or below 130 percent and 185 percent of the poverty line, respectively (Federal Register, Vol. 68, No. 49, Notices). Federal Title I funds are distributed to states and local districts on the basis of poverty. Districts often then use the free and reduced-price lunch programs to distribute Title I money to schools.
- ⁶ Taylor, L.L., and Fowler, W.J., Jr. *A Comparable Wage Approach to Geographic Cost Adjustment* (NCES 2006-321), U.S. Department of Education. Washington, DC: National Center for Education Statistics, 2006.
- ⁷ Chambers, Jay et al, *What Are We Spending on Special Education Services in the United States, 1999-2000?* American Institutes for Research, Center for Special Education Finance, 2002. For more information see the Technical Appendix, available at www.edtrust.org.
- ⁸ Hawaii is excluded from inter-district funding analyses, as is the District of Columbia because each operates a single, state-wide school district.
- ⁹ This national figure is not the same as the average of each state's funding gap. Rather, it is the difference between the aggregate cost-adjusted per-student funding level in the districts among all states with the highest proportion of low-income students compared to the per-student funding in the districts with the lowest proportion of low-income students across all the states.
- ¹⁰ Race and poverty are often highly correlated, which is why many of the states with the largest poverty gaps also have similar gaps for minority students. However, this isn't always the case. High-poverty school districts in Washington state, for example, receive slightly more in state/local funding (\$196 per-student), but high-minority districts get \$87 less per-student than low-minority districts. In some states, the minority funding gap is much bigger – up to three times bigger – than the poverty funding gap.
- ¹¹ This means, for example, that if a state provides districts with \$10,000 per non-low-income student, equity demands that the state provide at least \$14,000 per low-income student.
- ¹² One of the criteria for states to receive Title I "Incentive Grants" under No Child Left Behind is whether states have distributed money "evenly." The definition of evenly includes a 40 percent differential for low-income children. *No Child Left Behind Act*, Section 1125(A), Education Finance Incentive Grant Program. Other studies also have used this 40 percent adjustment. See for example, *Inequalities in Public School District Revenues*, U.S. Department of Education, National Center for Education Statistics, 1998; *School Finance: Per Pupil Differences between Selected Inner City and Suburban Schools Varied by Metropolitan Area*, U.S. General Accounting Office, 2002.
- ¹³ Hunter, Molly A., *Maryland Enacts Modern, Standards-Based Education Finance System: Reforms Based on "Adequacy" Cost Study*, National Access Network. See http://www.schoolfunding.info/resource_center/MDbrief.php3.
- ¹⁴ For an analysis of Kentucky's progress, see *Gaining Ground: Hard Work and High Expectations for Kentucky's Schools*, The Prichard Committee for Academic Excellence, 1999. <http://www.prichardcommittee.org/pubs/ggground.pdf>. For an analysis of Massachusetts's progress, see "Staying the Course," *Education Week*, January 5, 2006 at <http://www.edweek.org/rc/articles/2004/10/15/qc-archive.html>.
- ¹⁵ Together with Kevin Carey, I plan to quantify how inequities from different levels of government add up for individual schools and their students in a forthcoming study.
- ¹⁶ Roza, Marguerite, and Hill, Paul, *How Within-District Spending Inequities Help Some Schools to Fail*, Chapter from the 2004 Brookings Institute Papers on Education Policy (2004). <http://www.crpe.org/pubs/pdf/InequitiesRozaHillchapter.pdf>
- ¹⁷ Roza, Guin, and Davis (forthcoming). *What is the sum of the parts?*, Center on Reinventing Public Education.
- ¹⁸ Rose, Heather et al., *School Resources and Academic Standards in California: Lessons from the Schoolhouse*, Public Policy Institute of California, 2006. http://www.ppic.org/content/pubs/report/R_106HRR.pdf
- ¹⁹ John Myers, "Some more equal than others." *Catalyst-Chicago*, 2005.
- ²⁰ Roza, Guin, and Davis (forthcoming).
- ²¹ For a discussion of weighted student funding, including several case studies of districts that are implementing this policy, see *Fund the Child: Tackling Inequity and Antiquity in School Finance*, the Fordham Foundation, June, 2006, available online at: <http://www.edexcellence.net/fundthechild/FundtheChild062706.pdf>.

© The Education Trust, 2006

Data Analysis by Eli Pristoop

About the Education Trust



The Education Trust, Inc. was created to promote high academic achievement for all students, at all levels – pre-kindergarten through college. While we know that all schools and colleges could better serve their students, our work focuses on the schools and colleges most often left behind in plans to improve education: those serving African-American, Latino, Native American and low-income students.

The Education Trust works side-by-side with policymakers, parents, education professionals, community and business leaders—in cities and towns across the country—who are trying to transform their schools and colleges into institutions that genuinely serve all students. We also bring lessons learned in local communities back to Washington to help inform national policy debates.

202-293-1217 • 1250 H Street, NW • Suite 700 • Washington, DC 20005 • www.edtrust.org



The Education Trust

FUNDING GAPS

2006

Technical Appendix

How States Shortchange the Districts that Need the Most Help

The *Funding Gaps* report contains an analysis of disparities in funding between high- and low-poverty and high- and low-minority school districts. It is based on school district-level financial data collected by the U.S. Census Bureau and the U.S. Department of Education for the 2003–2004 school year, the latest year for which all the data are available. That data was supplemented with other school- and district-level data regarding student enrollment and child poverty, also collected by the Census Bureau and the Department of Education.

The scope of the analysis included estimates for 49 individual states and for the nation as a whole.¹ Vocational and special education systems were excluded from the study, as were supervisory or administrative districts (which usually serve multiple local districts). Also excluded from the study were federally and state-operated institutions, such as Department of Defense schools. The final database used in the analysis included 13,878 school districts enrolling approximately 47.7 million students.

Data Sources and Variables

The following is a list of data sources and individual variables used for each dataset required to perform this analysis. In addition, their designated abbreviations and Web site address are also included.

School District Financial Data: Federal, State, and Local Governments, Public Elementary-Secondary Education Finance Data for Year 2004, U.S. Census Bureau (often referred to as the “F-33” database). <http://www.census.gov/govs/www/school.html>

- State identification number (STATE)
- School level code (SCHLEV)
- NCES ID Code (NCESID)
- Fall membership, October 2003, FY 2004 (V33)
- Total revenue from state sources in thousands of dollars (TSTREV)
- Total revenue from local sources in thousands of dollars (TLOCREV)

School District Enrollment Data: Common Core of Data (CCD), Local Education Agency (School District) Universe Survey Data, 2003–2004 National Center for Education Statistics (NCES). <http://nces.ed.gov/ccd/pubagency.asp>

- NCES Local Education Agency ID (LEAID)²
- NCES code for type of agency (TYPE03)
- Special Education – IEP students (SPECED03)³

School Enrollment Data: NCES, Common Core of Data, Public Elementary/Secondary School Universe Survey Data for 2003–2004. <http://nces.ed.gov/ccd/pubschuniv.asp>

- NCES Local Education Agency ID (LEAID)⁴
- American Indian / Alaskan Native students (AM03)
- Asian / Pacific Islander students (ASIAN03)
- Hispanic students (HISP03)
- Black, non Hispanic students (BLACK03)
- Total Ethnic (TOTETH03)⁵



NCES provides student enrollment data by race/ethnicity at the school level, but does not include it in its district-level enrollment files. For this analysis, minority enrollment at the district level was calculated as the sum of the minority enrollment in each school within the district.

School District Poverty Data: *Small Area Income and Poverty Estimates, School District Estimates for 2003*, U.S. Census Bureau. <http://www.census.gov/hhes/www/saie/district.html>

- CCD District ID (CCDID)⁶
- Estimated population of children 5 to 17 years of age (CPOP517)
- Estimated population of poor children 5 to 17 years of age (CPOP517P)

Note: The number of low-income children in each school district changes from year to year. This can change the makeup of the districts designated as being in the “highest poverty” and “lowest poverty” quartiles for the purposes of conducting this analysis. This, in turn, can affect the funding gap calculations for that state.

Comparable Wage Index: *School District CWI and State CWI for 2003* NCES, <http://nces.ed.gov/edfin/prodsurv/data.asp>

- NCES Agency ID (LEAID)⁷
- Comparable Wage Index for 2003 (CWI_2003) (from school district CWI file)
- Comparable Wage Index for 2003 (CWI_2003) (from State CWI file)

The Comparable Wage Index (CWI) was developed for the NCES by Dr. Lori Taylor of Texas A & M University and Dr. William Fowler of the NCES. The CWI uses baseline estimates from the 2000 census and annual data from the Occupational Employment Statistics (OES) survey of the Bureau of Labor Statistics (BLS) to generate labor market level comparable wages for college graduates who are non-educators, but similar to educators in terms of education level and age. The labor markets are then matched with local school districts to create a comparable wage index across all school districts in the United States. This cost adjustment makes it possible to compare the per-pupil funding of districts that must spend varying amounts to pay teachers and purchase educational materials.

In past years, The Funding Gap used the Cost of Education Index (CEI) for cost adjustments. This index was created by education researcher Jay Chambers, and was developed for the 1993-1994 school year based on data from the Schools

and Staffing Survey (SASS) administered by the NCES. We have decided to use the CWI this year because it is based on more recent data and will be updated annually, but this change limits the comparability between the gap numbers in this year’s report and prior reports. It should be noted that Professor Goodwin Liu used the Chambers index for the state fiscal capacity and effort table, Table 1 (See below for full citation).

Dataset Construction

To perform this analysis, data from each of the five datasets were merged into a single dataset. To calculate district-level data for minority student enrollment, school-level data were aggregated within each district. Once the datasets were merged, districts that did not meet certain criteria were eliminated from the study. Those included:

- Districts with no NCESID;
- Districts that received no state and local revenues;
- Districts that enrolled no students;
- Non-local school districts (TYPE03 values other than 1 or 2) , which excludes special state and federal districts serving special student populations, and regional or supervisory districts and;
- Districts with school levels other than elementary, secondary, or unified (SCHLEV values other than 1, 2, or 3). Excluded district types include vocational, special education, non-operating school system, and educational service agencies. These types often overlap with regular school districts, serving students from multiple districts.

Forty districts were missing data for the Comparable Wage Index. When this occurred, they were adjusted using the 2003 state CWI, which is a weighted average of the state’s local wages. Twenty-three districts lacked updated 2003 poverty data. For these districts, the prior year’s poverty rates were used. Additionally, Tennessee’s race data were not available from the NCES for the year in question. Tennessee’s race data were provided directly to The Education Trust by the Tennessee Department of Education’s Office of the Deputy Commissioner. Finally, New York State’s special education data were not available from the NCES for the 2003-2004 academic year. To determine a number, the percent of students with IEPs from each of New York’s districts the prior year was multiplied by each district’s enrollment numbers for the 2003-2004 school year to estimate the number of students with IEPs in each district in 2003-2004.

Funding Gap Calculations and Methodology

Once the data were assembled, the funding gaps were calculated as follows:

1) Calculate adjusted state and local revenue amount

Total state and local revenues for each school district are calculated as the sum of total state revenues (TSTREV) and total local revenues (TLOCREV).

This sum is adjusted for the district's Comparable Wage Index. Districts with average costs have a CWI equal to 1. Those with below-average costs have a CWI of less than 1, and those with above-average costs have a CWI of greater than 1. The adjusted state and local district revenues (ADJREV) are calculated by taking the total state and local revenues and dividing by the cost index:

$$\text{ADJREV} = (\text{TSTREV} + \text{TLOCREV}) / \text{CWI}$$

This increases the resources that are effectively available in districts with below-average CWIs, and decreases the resources that are effectively available in districts with above-average CWIs.

2) Calculate adjusted pupil count

The pupil count used in the calculation of revenues per student was adjusted for the additional costs of serving two groups of students: students with disabilities and students living in households with incomes below the federal poverty line.

To account for the additional cost of serving students with disabilities, the number of special education students with individual education plans (SPECED03) was multiplied by 1.9, reflecting the estimate that special education students cost, on average, 90 percent more to educate than non-special education students (individual costs vary widely, depending on the nature of the disability). This estimate is based on the recent study of special education spending, *What Are We Spending on Special Education Services in the United States, 1999-2000?* (Jay G. Chambers, Thomas B. Parrish, Jennifer J. Harr, American Institutes for Research, Center for Special Education Finance, September 2002).

To account for the additional cost of serving low-income students, the number of students living below the federal poverty line (\$18,660 for a family of four in 2003) was multiplied by a cost factor that varied among different tables in the report. For Column 2 of Table 3, no adjustment for poverty was used. Column 3 uses a 40 percent cost adjustment. Column 3 of Table 4 also uses a 40 percent cost adjustment for low-income students (not for minority students). Adjustments for the cost of educating low-income students are widely used in academic studies of education funding, as well as in recent analyses performed by the U.S. Department of Education and the U.S. General Accounting Office. For a further discussion of the source and rationale for these adjustments, see the main body of the text and accompanying footnotes.

The adjusted pupil count for each school district is calculated as follows:

Where:

V33 = Total enrollment, all students

SPECED03 = Total special education enrollment

POV03 = Total low-income enrollment, calculated as the percent of students living below the poverty line (CPOP517P / CPOP517) multiplied by total enrollment (V33)

The adjusted pupil count (ADJPUPIL) equals:

$V33 + (\text{SPECED03} * 0.9) + (\text{POV03} * (\text{poverty adjustment}))$

In Column 2, Tables 3 and 4, the poverty adjustment is 0.

In Column 3, Tables 3 and 4, the poverty adjustment is 0.4.

3) Calculate the cost-adjusted funding per-pupil

After calculating the total adjusted state and local revenues using the Cost of Education Index, we take that amount (ADJREV) and divide it by the adjusted pupil count (ADJPUPIL) for each school district:

Adjusted revenues per student (ADRVSTD) = ADJREV / ADJPUPIL

4) Identify the groups of districts with the highest and lowest percentages of low-income and minority students

To perform this calculation, we rank all the districts in a state from top to bottom in terms of the percent of low-income students (CPOP517P / CPOP517). We then divide the districts into four quartiles with approximately the same number of students in each group. For example, if a state had 1,000,000 students, each quartile would contain approximately 250,000 students. To identify the top quartile in this hypothetical state, begin with the highest poverty district and then move down the list, adding up the cumulative enrollment in the districts until the sum reaches 250,000. The student count in each quartile is not precisely the same, because each quartile group consists of whole school districts. In New York State, for example, one district – New York City – contains, by itself, significantly more than 25 percent of all students.

To calculate national funding gap amounts, this procedure was applied to all districts nationwide, including those in Hawaii and the District of Columbia, which were excluded from state-level analyses because they consist of one unified statewide school district.

To calculate minority funding gaps, the same procedure was used based on the percent of minority students within the district.⁸ That amount was calculated as the sum of American Indian, Asian, Black, and Hispanic students, divided by total enrollment:

$$(AM03 + ASIAN03 + BLACK03 + HISP03) / DISTTOTETH03$$

4) Calculate average per-student revenues in the districts with the highest and lowest percentages of low-income students

Having identified the quartiles of students with the highest and lowest percentage of low-income students, the average per-student funding level of each quartile is calculated as the sum of district revenues within the quartile divided by the sum of district pupils within the quartile, or:

$$\sum (ADRVSTD * V33) / \sum (V33)$$

This process was repeated for the quartiles of school districts with the highest and lowest percentage of minority students within each state.

Both the poverty and minority calculations were repeated for the United State as a whole. The national funding gap numbers in Tables 3 and 4 are not based on an average of the state funding gap amounts on those tables. Rather, they are based on creating four quartiles for all districts nationwide, including Hawaii and the District of Columbia, which are not included in the individual state analyses.

How the Federal Government Makes Rich States Richer

For a fuller analysis and a broader discussion of the issue of the way Title I dollars are distributed, see Goodwin Liu's full article, "Interstate Inequality in Educational Opportunity," *New York Law Review*, December 2006. <http://www.law.nyu.edu/journals/lawreview/issues/index.html>

It should be noted, however, that Professor Liu used slightly different weighting techniques for his analysis than those used elsewhere in the paper. To adjust for the cost of education in different geographical areas, Liu uses the state-level Geographic Cost of Education Index in Jay G. Chambers, *Geographic Variations in Public Schools' Costs* (NCES Working Paper No. 98-04, 1998) (table III-3). (In *How States Shortchange the Districts that Need the Most Help*, the district-level Comparable Wage Index is used. See full citation above.)

To adjust for the cost of educating different kinds of students, Professor Liu uses 1.9 for students with disabilities, 1.6 for students in poverty, and 1.2 for English-language learners. (In *How States Shortchange the Districts that Need the Most Help*, the pupil weights are 1.9 for students with disabilities, 1.4 for students in poverty, and no adjustment for English-language learners.)

How Districts Shortchange Low-Income and Minority Students

For technical citations and more information on the within-district funding inequities examined by Marguerite Roza, see the following research reports and working papers from the Center on Reinventing Public Education at the University of Washington (<http://www.crpe.org/>):

Roza, Marguerite, *District fiscal practices and their effect on school spending*, Center on Reinventing Public Education, 2005. http://www.crpe.org/workingpapers/pdf/Roza_AspenInstitute.pdf

Roza, Marguerite, and Hill, Paul, *How Within-District Spending Inequities Help Some Schools to Fail*, Chapter from the 2004 Brookings Institute Papers on Education Policy, 2004. <http://www.crpe.org/pubs/pdf/InequitiesRozaHillchapter.pdf>

Roza, Marguerite with Hawley Miles, Karen, *A New Look at Inequities in School Funding: A Presentation on the Resource Variations Within Districts*, Center on Reinventing Public Education, 2002. http://www.crpe.org/pubs/pdf/report_schoolfundingweb.pdf

Roza, Marguerite, with Miller, Larry, and Hill, Paul, *Strengthening Title I to Help High-Poverty Schools: How Title I Funds Fit Into District Allocation Patterns*, Center on Reinventing Public Education, 2005. http://www.crpe.org/workingpapers/pdf/TitleI_reportWeb.pdf

Endnotes

¹ Hawaii and the District of Columbia were excluded from the analysis because each operates a single school district, making inter-district comparisons impossible. However, they were included as individual districts when studying inter-district funding gaps across the entire United States.

² This is the same value as the "NCESID" in the F-33 dataset.

³ IEP refers to an "Individualized Education Program" – a personalized, written instructional plan for students with disabilities designated as special education students under the federal Individuals with Disabilities Education Act (IDEA).

⁴ This is the same value as the "NCESID" in the F-33 dataset.

⁵ Total Ethnic is the sum of Black Non Hispanic, White Non Hispanic, Hispanic, Asian/Pacific Islander, and American Indian/Alaskan Native students.

⁶ This is the same number as the NCESID in the F-33 dataset, and the LEAID in the district and school universe datasets.

⁷ Also the same as NCESID, LEAID, and CCDID.

⁸ In past years, the denominator for the percent minority calculation was the V33. The V33 is the total district enrollment number from the census bureau, and the DISTOTETH03 is the total number of students in a district that NCES has race data for. In approximately 200 of the 13,878 districts we analyzed, the difference between V33 and DISTOTETH03 was more than 10% of the V33. Therefore, this year, we chose to use DISTOTETH03 as our denominator, and base our percent minority calculation solely on students for which race data was available.