2013

Weighted Student Formula Yearbook

Overview

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1. Weighted Student Formula Overview

In the United States, public funding systems at the state and local level are increasingly adopting a "school funding portability" framework, where funding is attached to the students and "follows the child" to the school he or she attends. A weighted student formula (WSF) at the school district level is the most common manifestation of this portable funding strategy. WSF is a student-driven rather than program-driven budgeting process. It goes by several names including results-based budgeting, student-based budgeting, "backpacking" or fair-student funding. In every case the meaning is the same: dollars rather than staffing positions follow students into schools. In many cases, these resources are weighted based on the individual needs of the student.

A weighted student formula helps ensure more funding is allocated to students with more expensive educational needs. In most school districts, even when extra funding is generated for the district by disadvantaged students, it does not necessarily reach the schools these students attend. Furthermore, in most school districts, individual school principals are held accountable for results, but principals have negligible autonomy since decisions about budgeting, expenditures, curriculum and hiring are largely made by district, state and other officials outside individual schools. Integral to meaningful accountability, then, is (1) empowering principals to act as leaders of their schools over these matters, and (2) empowering parents to pick the public schools they believe best meet their children's unique, individual needs.

A full weighted student formula system proposes basing school funding on five key principles:[1]

1. Funding should follow the child, on a per-student basis, to the public school that he or she attends.
2. Per-student funding should vary according to the child's need and other relevant circumstances.
3. Funding should arrive at the school as real dollars—not as teaching positions, ratios or staffing norms—that can be spent flexibly, with accountability systems focused more on results and less on inputs, programs or activities.
4. Principles for allocating money to schools should apply to all levels of funding, including federal, state and local dollars.
5. Funding systems should be as simple as possible and made transparent to administrators, teachers, parents and citizens.

In addition to the actual weighted student formula, a full school empowerment program includes public school choice and principal autonomy. Every school in a district becomes a school of choice and the funding system gives individuals, particularly school administrators, the autonomy to make local decisions. This autonomy is granted based on the contractual obligation that principals will meet state and district standards

for student performance. Student-based funding is a system-wide reform that allows parents the right of exit to the best performing schools and gives every school an incentive to change practices to attract and retain families from their communities.

Under the weighted student formula model, schools are allocated funding based on the number of students that enroll at each individual school, with extra per-student dollars for students who need services such as special education, English language learners instruction, or help catching up to grade level. School principals have control over how their school's resources are allocated for salaries, materials, staff development and many other matters that have traditionally been decided at the district level. Accountability measures are implemented to ensure that performance levels at each school site are met.

Therefore, the key indicator for a robust WSF system is the amount of money that follows a child to the school level. In order for principal autonomy and local decision-making to be meaningful, principals must actually have the resources in real dollars to align with instructional goals. The other components of a school empowerment system will be weaker if the money that follows students is not enough to incentivize principals and other school leaders to better serve students in order to keep the public dollars for those students. In fact, a promising finding from our analyses is that both correlation and regression data suggest that higher budget autonomy—a larger share of district budgets allocated to the school level on a per-student basis—is associated with better school district performance.

In each district the local context has flavored weighted student formula in different ways. Like most education policy, school districts vary on the extent to which they have implemented school empowerment programs. Therefore, the newest installment of the *Weighted Student Formula Yearbook* analyzes 15 school districts with at least one year of district-wide WSF implementation.[2]

Reason Foundation conducted an analysis to determine how these school districts that have adopted a weighted student formula are performing relative to other districts in their state, and relative to each other. In our analysis of the 15 school districts highlighted in the 2013 *Weighted Student Formula Yearbook* we aimed to find areas in which school districts are performing well, in regards to both student achievement and implementation of weighted student formula, and which areas need improvement.

Our methodology for doing so is derived in part from the methodology used to select school districts for the 2012 Broad Prize for Urban Education (hereafter referred to as "Broad methodology").[3] The Broad methodology is well-suited to analyze WSF districts because the purpose of the Broad Prize is to find school districts that demonstrate the strongest improvements in student achievement while reducing achievement gaps among low-income students and students of color.[4]

One of the most significant arguments for weighted student formula is that it will increase equity for disadvantaged students by funding students based on their individual characteristics and allowing the extra funding to follow the child to the school level. Since the underlying assumption of WSF is that putting resources in the "backpacks" of disadvantaged students should improve their academic outcomes and narrow district achievement gaps, the Broad methodology is particularly compatible with measuring whether WSF districts are actually improving outcomes for students, especially disadvantaged students.

The Reason analysis does not establish a causal relationship between weighted student formula and school performance for disadvantaged kids. Instead, the analysis is designed to be more of a status check on where the districts stand in regard to performance of disadvantaged kids given the school finance focus on improving equity for these kids.[5]

Ten of the 15 school districts analyzed in the *Yearbook* were eligible for the 2012 Broad Prize, and for those 10 districts we used data available in the district data reports found at the Broad Prize for Urban Education website.[6] We then replicated the Broad methodology for the five remaining districts that were not assessed for the 2012 Broad Prize, but are analyzed in the *Yearbook:* Cincinnati Public Schools, Hartford Public Schools, Oakland Unified School District, Poudre School District and Minneapolis Public Schools.

Reason's analysis grades 10 performance metrics. Scores are determined by comparing each individual school district with other school districts in the same state and sorting them into a decile ranking. Based on the school district's decile rank within its own state, the analysis then compares it with the other districts studied in this *Weighted Student Formula Yearbook*. Finally, it assigns the studied school districts a grade based on how they measure up against one another.

This analysis also grades and ranks studied school districts on two other measures: the number of school empowerment benchmarks the district has reached, and the degree of autonomy principals have over school budgets. In determining the grades on these two measures, districts are compared only with the other districts covered in this *Yearbook*.

The districts in this *Yearbook* each met between six and 10 of the school empowerment benchmarks and received grades ranging from an F to an A+. Each district has a comprehensive chapter profile that details the ranking and grade for each district. Houston Independent School District (HISD) was the highest ranked district in the *Yearbook*. Houston showed significant improvement for disadvantaged students across multiple indicators. For example, Houston is outperforming all other districts analyzed in the *Yearbook* in having the smallest 2011 achievement gap in mathematics proficiency between White and African-American and White and Hispanic elementary school students. HISD is closing every achievement gap among middle school students, and HISD disadvantaged students are increasing proficiency rates at a faster rate than the

"rest of state" average proficiency rate improvement. In 2013, HISD won the Broad Prize for the second time since 2002 for being the most improved urban school district.

In contrast, Baltimore City School District received the lowest grade in the *Weighted Student Formula Yearbook*, largely based on student performance. For example, Baltimore City School District performed poorly relative to other Maryland school districts for 2011 proficiency rates among African-American and low-income elementary and high school students. BCPS ranked in the bottom 10 percent of all Maryland school districts across all subjects and grade levels for 2011 proficiency rates for students overall and among low-income students. BCPS is also failing to close achievement gaps, particularly between low-income and non-low income students.

One plausible explanation for the differences between Houston and Baltimore may be the amount of budget autonomy school principals enjoy in each district. There is a correlation between district performance outcomes and the percentage of district funds that are funneled directly to schools. If Baltimore allocated more than 29 percent of funds directly to schools, so principals controlled more money, it might help improve student outcomes by allowing principals to better align resources with instructional goals.[7] Houston Independent School District principals have discretion over 43 percent of the district's budget. This is a larger percentage of budget autonomy relative to Baltimore.

Table 1: WSF Districts 2013 Rank and Grade

District	Rank	Grade
Houston Independent School District	1	A+
Hartford Public School District	2	A
Cincinnati Public School District	3	A-
Oakland Unified School District	4	A-
Poudre Public School District	5	B+
Minneapolis Public School District	6	B
San Francisco Unified School District	7	B
Boston City Public School District	8	B-
St. Paul Public School District	9	C+
Prince George's County Public School District	10	C
Denver Public School District	11	C
Newark Public School District	12	C-
Milwaukee Public School District	13	D
Baltimore Public School District	14	F
New York City Department of Education	N/A	N/A

In fact, the most intriguing finding of the *Weighted Student Formula Yearbook,* with the most potential for future research, is the relationship between budget autonomy (money following the child) and specific student improvement metrics.[8]

Correlation results show that budget autonomy is positively correlated with every performance outcome measure except for 2011 achievement gaps. This relationship suggests that higher budget autonomy—a larger share of district budgets allocated to the school level on a per-student basis—is associated with better school district performance.[9]

The regression analysis shows similar results. Holding all else constant, a one-percent increase in budget autonomy predicts that a given school district would have higher standing proficiency rates, and faster proficiency rate improvement relative to other districts within its state. These findings hold for disadvantaged student groups. Limiting the regression to only disadvantaged student groups, holding all else constant, a one-percent increase in budget autonomy predicts that a given school district would have higher standing proficiency rates, and faster proficiency rate improvement relative to other districts within its state. Also, regression results show that school districts with a larger share of their budget used for weighted student formula greatly increase the likelihood that achievement gaps are closing.

In summary, Reason's analysis of the weighted student formula districts was a three-step process: First, Reason completed a background profile on each WSF district and determined how many school empowerment benchmarks were met by each district;

Second, Reason analyzed each district through the Broad methodology to determine its student performance metrics and analyzed the amount of budget autonomy in actual dollars each district gave school principals and then assigned grades to the performance metrics, budget autonomy and school empowerment benchmark indicators for each district.

Finally, using data from the district performance analysis, Reason Foundation conducted correlation and regression analyses to estimate the effect of budget autonomy, school empowerment benchmarks and poverty on several performance metrics: 2011 proficiency rates, proficiency rate improvement, 2011 achievement gaps, achievement gap improvement and achievement gap closure.

This overview provides more details of the school empowerment benchmarks, the rating and grading methodology, and the regression analysis between budget autonomy and other performance metrics.

2. School Empowerment Benchmarks

Each district profiled in this *Yearbook* is rated based on 10 benchmarks of a robust school empowerment program. The rationale for each benchmark is described in this overview. The benchmarks were determined based on the authors' analyses of the commonalities and best practices within existing weighted student formula programs and the recommendations of other studies of student-based budgeting.[10]

School budgets based on students, not staffing

Schools should receive revenue in the same way that the district receives revenue, on a per-pupil basis reflecting the enrollment at a school and the individual characteristics of students at each school. The current staffing model used in most school districts is a very inefficient way to fund schools and creates serious inequities between schools. For example, if under a district staffing model a school receives one administrator for every 300 students, a school with 300 students and a school with 599 students would draw down equivalent resources for that staffing position. However, if schools receive budgets based on dollars related to per-pupil funding, it gives school principals the money that each student generates and allows principals to more efficiently allocate revenue and staff. This also helps as school enrollments decrease or increase. The staffing model is a very inefficient method to allocate resources as student populations change over time. For example, a staffing model cannot easily reallocate teachers as enrollment changes from one school to another. However, principals can individually assess their staffing needs and allocate staff to fit the enrollment conditions at each individual school.

Districts charge schools actual versus average salaries

While sending schools revenue rather than staffing positions increases equity, it does not go far enough. In most districts schools are charged for average teacher salaries rather than actual teacher salaries. This means that a more-popular school with more-experienced teachers is often subsidized by less-popular schools with less-senior staff members. In most districts, all teachers are charged based on an average salary of perhaps $52,000. If one school has 10 first-year teachers and another school has 10 five-year teachers, on paper each school would be charged $520,000. Yet, the resources that each school is receiving based on staffing are vastly different. In essence, schools with newer teachers are subsidizing schools with veteran teachers. If both schools received dollars and were charged actual salaries, the school with less-expensive teachers would have money left over to spend at the discretion of the principal on teacher training, the arts or to hire additional teachers. In this way, charging schools for actual teacher salaries increases equity.

School choice and open enrollment policies

In order for student-based budgeting to improve outcomes for students, families need to be able to choose between schools. This gives less-popular schools an incentive to improve to attract and retain families. School choice also shows district officials which schools hold the most value to customers. While the majority of schools will show improvements once principals control school budgets and public schools begin to compete with one another, if some schools cannot improve they can be merged with higher-performing schools or they can close and students and resources can be redirected toward higher-performing schools.

School choice is an accountability mechanism that reveals which schools are serving students effectively, by giving dissatisfied families the right to exit to a higher-performing school.

Principal autonomy over budgets

Principals must be able to make decisions about how to spend resources in terms of staffing and programs. The more "unlocked" dollars a principal controls, the more autonomy that principal has over designing the school to meet the needs of the students in the school. Districts that place more of their operating budget into weighted student formula allocations offer principals more autonomy and more real decision-making power. In addition, the more money that "follows the child," the more robust will be the within-district competition to better serve students at individual schools.

Principal autonomy over hiring

This means that principals have more control over personnel. When principals can fire and hire staff with fewer constraints from collective bargaining and stipulations like seniority and bumping rights, they can staff their schools in ways that fit their students' needs. Using the weighted student formula, principals can often choose their employees as teaching positions become available. However, principals generally have less autonomy over replacing existing staff for performance issues.

School-level management support

A district should offer some kind of formal principal training to help principals learn management best practices. There are several models including principal academies, principal coaches and mentors, district liaisons and networks, and extra help from district finance personnel for budget development. Many districts recruit innovative new principals to lead empowerment schools and have retraining programs for current principals. The bottom line is that districts need a mechanism to support principals and help them become entrepreneurial leaders of their schools.

Published transparent school-level budgets

Parents and taxpayers should have detailed and transparent budgets at the school level that show school enrollment and staffing trends. These budgets should reveal the amount of resources that are allocated through student-based budgeting and the amount of resources that are spent at the school level but controlled by the central office. In addition, some districts also report detailed weighted information about student populations and the resources that follow these student groups. Finally, some districts also include school-level performance and student achievement data as part of the budget transparency.

Published transparent school-level outcomes

Parents and taxpayers should have school-level profiles on a variety of outcomes including overall achievement distinguished by sub-group, value-added achievement gains, achievement gaps, graduation rates, attendance and other school-level outcome measures. This information should be published in easily accessible profiles for every school in the district. These profiles often contain rating systems such as grades or labels that help parents easily identify the status of each individual school.

Explicit accountability goals

A district should have explicit performance measures for each school. These performance measures are often described in school-level academic plans and detail a school's specific goals for academic improvement for various groups of students. In addition, many districts have overarching accountability frameworks that set specific district-wide minimums for performance, and reward or intervene in schools based on each school's ability to meet district targets. These accountability systems often include performance pay systems and escalating levels of intervention for schools with poor performance.

Collective bargaining relief

School districts with weighted student formula programs often have negotiated for more autonomy in union contracts to minimize work rules that interfere with school-level autonomy. These contract stipulations often waive union rules that detail the length of the school year, instructional minutes and acceptable teacher duties. Some student-based budgeting and school empowerment programs have negotiated new contracts that allow autonomy for the details of a teacher's job description to be decided at the school level, as long as both the principal and the teacher agree to the working conditions.

3. *Weighted Student Formula Yearbook* Ranking and Grading Methodology

The following first describes data used to measure student achievement and district budget autonomy, then details Reason Foundation's data analysis for 10 performance metrics, and finally explains Reason Foundation's method of grading each school district.

Detailed data on various measures of student achievement were obtained for each district from federal and state records.[11]

Measures of student achievement examined include:

- Reading, mathematics and science proficiency rates as determined by state-mandated standardized tests used for federal accountability, and

- High school graduation rates based on adjusted four-year cohort graduation rates.

Also, district budget data were collected for each district in the *Weighted Student Formula Yearbook* to determine each district's level of budget autonomy.[12]

Reason Foundation used 10 performance metrics to measure student achievement for each school district in the *Weighted Student Formula Yearbook*. Performance metrics were calculated and compared using within-state district performance rankings, rather than district performance metrics in absolute terms, to control for cross-state inconsistencies in state standardized tests. Performance rankings were calculated for each performance metric—excluding achievement gap closure metrics—and are constructed of deciles (the 1st decile being the best performing and the 10th, the worst).[13] Proficiency rate data were used to measure all of the following performance metrics other than graduation rates.

2011 Actual vs. Predicted (Expected) Proficiency Rates and Improvement in Actual vs. Predicted (Expected) Proficiency Rates

Predicted or expected proficiency rates are calculated for each subject and grade level for each district's overall student population using an ordinary least squares regression. Generally, a large, low-income student population is an indicator of low performance, which is controlled for to predict how well a school district *should be* performing given the performance of other school districts in the state. If a school district's actual proficiency rate is higher than its predicted proficiency rate, then the district is over-performing what is expected given the low-income student population. If a school district's actual proficiency rate is lower than its predicted proficiency rate, the opposite is true.

Improvement or average change in residuals is calculated as the slope of the best fit line among the available data points from 2008 to 2011. A district whose actual proficiency rate improved over time, but at a slower rate than its predicted proficiency rate would be under-performing given the percentage of low-income students in the district. A district whose actual proficiency rate improved more quickly than its predicted proficiency rate would be performing above expected.

2011 Proficiency Rates and Proficiency Rate Improvement

Proficiency rates for 2011, overall and for each reported student group (African-American, Hispanic, and low-income), grade level (elementary, middle and high school) and subject (reading, mathematics and science), are each assigned decile ranks by district. The same is done for improvement or average change in proficiency rates from 2008 to 2011. Improvement in proficiency rates is measured as the slope of the best fit line (average change) of proficiency rates regressed on year from 2008 to 2011. Districts with the greatest positive slope (average change) were assigned the highest decile rank.

2011 Achievement Gaps between White and African-American, White and Hispanic, and low-income and non-low-income students, and Achievement Gap Improvement

Achievement gaps are measured across all grade levels (elementary, middle and high school) and school subjects (mathematics, reading and science). Internal district achievement gaps are measured as the difference in proficiency rates between disadvantaged and non-disadvantaged student groups within a given district. Because internal district achievement gaps are measured for each district in the state, Reason Foundation was able to rank relative size of achievement gaps across districts in the state, and how quickly those achievement gaps are closing from 2008 to 2011.

The achievement gap closure metrics count the number of achievement gaps that are closing in three ways: internal district achievement gaps, internal district versus internal state achievement gaps and external district achievement gaps.[14] An achievement gap is considered to be closing if the disadvantaged student group proficiency rate is increasing faster than the advantaged student group proficiency rate, measured as the slope (average change) of the best fit line of the advantaged student group's proficiency versus the disadvantaged student group's proficiency from 2008 to 2011.

2011 Graduation Rates

Districts' 2011 four-year cohort graduation rates overall and among African-American, Hispanic, and low-income students were ranked by state and assigned deciles. At the time of this analysis, four-year cohort graduation rate data were only available for the 2011 school year, therefore graduation rate improvement could not be measured.

Grades are given for the 10 performance metrics listed above as well as a grade for the number of school empowerment benchmarks each district has reached and a grade for the amount of autonomy district principals have over school budgets. All grades are determined relative to the performance of other school districts in the *Weighted Student Formula Yearbook.*

Grades were determined for each performance metric (other than achievement gap closure) by assigning points to each district's available decile rank, shown in Table 2.

Table 2: Points per Decile Rank

Points	Decile(s)
10	1
9	2
8	3
7	4
6	5
4	6
3	7
2	8
1	9
0	10

All 15 school districts' percentage of total points earned out of total possible were then divided into 10 percentiles by performance metric.[15] Districts in the top percentile were given an A, and those in the lowest percentile were given an F.

Similarly, grades given for the three achievement gap closure measures were determined by giving districts one point per achievement gap closing. The school districts' percentages of achievement gaps closing were then divided into 10 percentiles by achievement gap measure and assigned grades.

Principal autonomy grades were divided into five percentiles and assigned letter grades; districts with the highest amount of principal autonomy were in the top percentile and those with the smallest amount of principal autonomy, the lowest percentile. Student empowerment benchmark grades were given with the lowest number of benchmarks reached (6 out of 10) receiving a "D" and highest (10 out of 10) receiving an "A+". Seven benchmarks reached is given a "C", eight benchmarks reached is given a "B", nine benchmarks reached is given an "A".

Finally, overall grades were calculated by adding the number of points that each district gained per given letter grade in each graded category. The total number of points per district was divided into 10 percentiles with the lowest percentile receiving an "F" and highest percentile receiving an "A". The district with the highest number of total points (Houston Independent School District) was given an "A+".

4. The Potential of Budget Autonomy: Correlation and Regression Analysis

Using data from the district performance analysis, Reason Foundation conducted correlation and regression analyses to estimate the effect of budget autonomy, school empowerment benchmarks and poverty on several performance metrics: 2011 proficiency rates, proficiency rate improvement, 2011 achievement gaps, achievement gap improvement and achievement gap closure. Budget autonomy is calculated for each school district as the percentage of the FY2011 unrestricted and restricted funds

Table 3: FY 2011 District Budget Autonomy		
District	FY2011	FY2011 Rank
Minneapolis	62.2%	1
Oakland	56.9%	2
San Francisco	53.3%	3
Cincinnati	53.0%	4
Hartford	46.4%	5
St. Paul	44.1%	6
Houston	43.2%	7
Poudre	41.3%	8
Denver	40.6%	9
Milwaukee	38.4%	10
Baltimore	32.1%	11

that were allocated to the school level on a per-student basis as part of the weighted student or student-based formula. The proxy for school empowerment benchmarks is a dummy variable taking the value of one if the school district reached eight or more school empowerment benchmarks, and zero if fewer than eight were reached. Lastly, the proxy for poverty is the percentage of students in each school district that qualified for free or reduced lunch in 2011.

The school districts that are covered in the *Weighted Student Formula Yearbook* but did not fully adopt a weighted student formula until FY2012 (Boston Public Schools, Newark Public Schools and Prince George's

County Public Schools) were excluded from the correlation and regression analysis. Also, New York City was excluded from the analysis due to lack of comparable proficiency rate data year to year from 2008 to 2011. The remaining 11 school districts' ranking data for each performance metric was included.
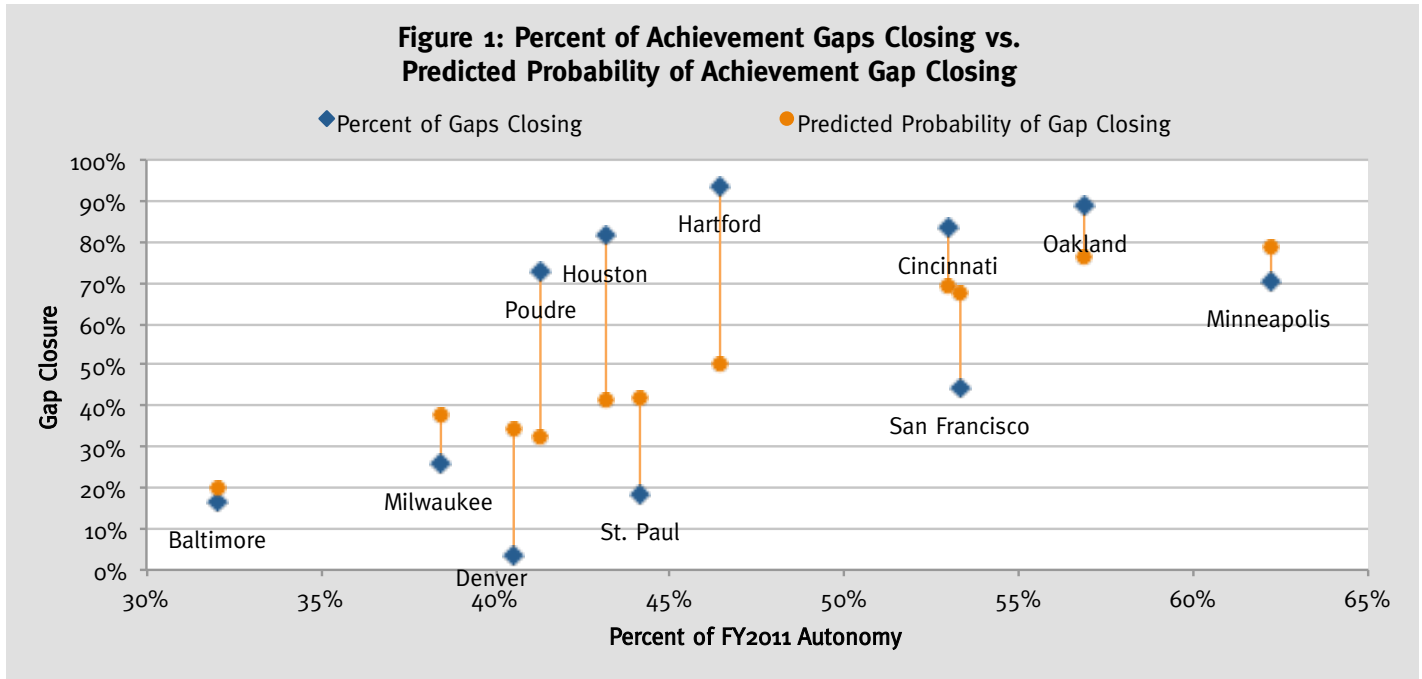
Correlation results show that the percentage of low-income students is negatively correlated with 2011 proficiency rate ranks, achievement gap improvement and achievement gap closure, suggesting that these performance outcomes are worse in school districts with larger low-income student populations. The opposite is true for proficiency rate improvement ranks—that a large, low-income student population is associated with higher proficiency rate improvement ranks. This positive correlation is likely the result of "floor effects": proficiency rates are already relatively low, therefore there is room for improvement.

Budget autonomy is positively correlated with every performance outcome measure except for 2011 achievement gaps. This relationship suggests that higher budget autonomy—a larger share of district budgets allocated to the school level on a per-student basis—is associated with better school district performance.[16]

The regression analysis shows similar results. Holding all else constant, a one-percent increase in budget autonomy predicts that a 2011 proficiency rate rank will increase by approximately three deciles, and that a proficiency rate improvement rank will increase by one decile rank. Limiting the regression to only disadvantaged student groups, holding all else constant, a one-percent increase in budget autonomy predicts that a 2011 proficiency rate rank will increase by approximately one decile rank, and that a proficiency rate improvement rank will increase by approximately two deciles. Regarding achievement gap improvement, regression results show that a one-percent increase in budget autonomy predicts that an achievement gap improvement rank will improve by three decile ranks, holding all else constant.[17]

A probit regression model was used to estimate the likelihood of achievement gap closure given the percent of budget autonomy. Results show that a school district that allocated 50 percent of its FY2011 budget to weighted student formula, where money follows the student, is nearly 10 times more likely to close achievement gaps than a district that only allocated 20 percent of its FY2011 budget to weighted student formula.

Figure 1, below, shows the percentage of gaps closing for each of the 11 school districts plotted against the percentage of autonomy each school district had in FY2011.[18] The corresponding data point is the predicted probability of closing a given achievement gap. In most cases, districts with a larger amount of money following the child have a larger percentage of achievement gaps closing and have a greater probability of closing any one achievement gap.[19]

**Figure 1: Percent of Achievement Gaps Closing vs.
Predicted Probability of Achievement Gap Closing**

◆ Percent of Gaps Closing   ● Predicted Probability of Gap Closing

[Chart: Y-axis labeled "Gap Closure" ranging from 0% to 100% in 10% increments; X-axis labeled "Percent of FY2011 Autonomy" ranging from 30% to 65% in 5% increments. Districts plotted: Baltimore, Milwaukee, Denver, Poudre, Houston, St. Paul, Hartford, San Francisco, Cincinnati, Oakland, Minneapolis.]

5. Conclusion

The purpose of this *Yearbook* is to profile school districts in the United States that have embraced a decentralized "school empowerment" approach to governing individual schools and adopted a weighted student formula budgeting system. In these innovative districts, dollars follow students into schools, principals and school communities have discretion over resources at the school level, and districts embrace open enrollment and let parents choose between schools within the district. This *Yearbook* profiles 15 school districts and details how each district has implemented weighted-student formula financing systems and how those students are performing using the Broad methodology. This *Yearbook* utilizes primarily district-level documents including district budgets, policy manuals and website descriptions of school financing systems in addition to some supporting studies and newspaper accounts. The *Yearbook* attempts to capture how these policies are currently portrayed in school district reports and public information. This report offers some initial support for the idea that decentralization matters and that controlling resources at the school level is one strategy that can help support efforts to improve outcomes for all students.

It is meant to be a starting point for policymakers interested in learning how weighted student formula works in practice in the United States. The *Yearbook* concludes with a final chapter focused on best practices based on the aggregated experience of all the districts.

Endnotes

1   These principles are described in *Fund the Child: Tackling Inequity & Antiquity in School Finance*, Thomas B. Fordham Institute, June 2006, http://www.edexcellence.net/fundthechild/Manifesto%20Report.pdf

2   These 15 districts do not cover the full range of WSF programs. Other variations on the WSF theme include Hawaii's state-level program, pilot programs such as Los Angeles and Clark County, Nevada that include a subset of schools in a district, charter-school dominant programs such as the New Orleans Recovery School District and Tennessee's Achievement District that use a WSF-type funding allocation but do not have a traditional district central office, and state-level WSF funding streams such as Indiana and California that do not include the full components of school empowerment system. In addition, there are also several districts that are just implementing WSF in FY 2014 (or later) such as Chicago and Adams 12 in Colorado that will be included in later versions of the *Yearbook*.

3   The Eli and Edythe Broad Foundation, MPR Associates, *The 2012 Broad Prize for Urban Education Summary of Data Collection and Analysis Procedures*, http://www.broadprize.org/asset/1214-2012summaryprocedures.pdf, 2012.

4   The Broad Prize, Overview, http://www.broadprize.org/about/overview.html

5   A detailed explanation of the methodology used to determine performance metrics and grading can be found in the methodology appendix of the *Weighted Student Formula Yearbook*.

6   The Eli and Edythe Broad Foundation, MPR Associates, *2012 Broad Prize District Data Reports*, http://www.broadprize.org/resources/reports2012.html, 2012.

7   Baltimore and other school districts often claim in district documents to offer a higher percentage of budget dollars from the general fund. However, when you look at the main sources of unrestricted and restricted grants (like special education and Title I) that are included in district education budgets, the school allocation or WSF allocation that goes to schools is often much less than advertised. In order to be fair to every district, we have tried to include all major sources of revenue from local, state and federal sources that go to yearly operations in a way that makes district budgets (which vary widely in structure and details) as equivalent as possible. While restricted grants obviously have specific requirements, there are still some districts that manage to allocate these revenues on a per-student basis to follow the child. We exclude obvious non-instructional categories like capital funding.

8   District performance was analyzed using proficiency rate data from FY2008–FY2011 (the most recent data at the time of analysis). In statistically examining the relationship between budget autonomy and district performance, FY2011 budget data were used. Three of the school districts highlighted in the *Yearbook*—Boston, Newark and Prince George's County—did not implement WSF district-wide until FY2012 and therefore had to be left out of the statistical analysis. New York City was also excluded from the analysis due to unreliable data. The remaining 11 school districts were included in all correlation and regression estimations.

9   This relationship is statistically significant with 90 percent confidence or higher among the combined rankings of all student groups and when rankings are limited to only disadvantaged student groups.

[10] See William G. Ouchi, *Making Schools Work, A Revolutionary Plan to Get Your Children the Education They Need* (Simon & Schuster, 2003); *Fund the Child: Tackling Inequity & Antiquity in School Finance*, Thomas B. Fordham Institute, June 2006, http://www.edexcellence.net/fundthechild/Manifesto%20Report.pdf; Jay Chambers et al., *A Comparitive Study of Student-Based Budgeting and School-Based Decision Making in San Francisco and Oakland Unified School Districts* (American Institutes for Research, October 2008) http://www.air.org/news/documents/A%20Tale%20of%20Two%20Districts_Final.pdf; Larisa Shambaugh, Jay G. Chambers and Danielle DeLancey, "Implementation of the Weighted Student Formula Policy in San Francisco: A Descriptive Study of an Equity-Driven, Student-based Planning and Budgeting Policy," American Institutes for Research, August 2008. http://www.air.org/news/documents/REL_2008061.pdf.

[11] California Department of Education, Adequate Yearly Progress Data Files, http://www.cde.ca.gov/ta/ac/ay/

Ohio Department of Education, Disaggregated School Data, http://ilrc.ode.state.oh.us/Downloads.asp

Data Interaction, Connecticut Academic Performance Test, http://solutions1.emetric.net/CAPTPublic/Index.aspx

Colorado Department of Education, Schoolview Data Lab, http://www.schoolview.org/performance.asp

Minnesota Department of Education, Data Center, http://w20.education.state.mn.us/MDEAnalytics/Data.jsp

[12] Data collection is explained in detail in the extended methodology found in the appendix.

[13] A detailed explanation of using rankings rather than absolute measures of student performance is further explained in the extended methodology found in the appendix.

[14] Each of the three achievement gap closure metrics is explained in detail in the extended methodology section, found in the appendix.

[15] New York City is left out of the percentile calculation for the following performance metrics due to unreliable data: proficiency rate improvement, achievement gap improvement, internal district achievement gap closure, internal district versus internal state achievement gap closure, and external achievement gap closure.

[16] This relationship is statistically significant with 90 percent confidence or higher among the combined rankings of all student groups and when rankings are limited to only disadvantaged student groups.

[17] Budget autonomy is statistically significant at the 0.1 percent significance level or higher for all regression results mentioned.

[18] The percentage of achievement gaps closing is used as a proxy for the probability of achievement gap closure.

[19]   In order to strengthen the explanatory value of these regressions, further research needs to be conducted. These performance outcomes are determined using time-series data (proficiency rates from 2008 to 2011), and at the time of the analysis only one year of budget data was available. Additional analysis needs to be conducted using time-series data, which would likely explain additional variance of the regressors.