

RUTGERS UNIVERSITY

School Funding Fairness in New York State

An Evaluation of the Conceptual and Empirical
Basis and Implementation of the New York State
Foundation Aid Program

Bruce D. Baker

10/1/2011

Table of Contents

Introduction.....	2
1.0 Evaluating New York State’s Funding Fairness Profile	4
Table 1. 2008-09 State Funding Fairness Report Card	5
Figure 1. Fairness Profiles – Mid-Atlantic.....	6
2.0 The Intersection of Constitutional Mandates & Educational Costs	7
2.1 Operationalizing “Meaningful High School Education”	8
2.2 Implications of the Reevaluation of State Standards & Assessments.....	9
Figure 2. Matching Adjusted Standards to Inflated Ones	11
2.3 Implications of Drifting Standards for Outcome-based Cost Estimates	11
Table 2. Alternative distributions of “successful” and “successful and efficient” school districts.....	13
Table 3. Alternative Successful Schools Calculation Steps.....	14
Table 4. Alternative Successful Schools Cost Estimates	14
3.0 Current Status & Operation of the Foundation Aid Formula.....	15
4.0 Distributional Problems for High Need Districts.....	16
Figure 3. Comparing Actual Spending & Estimated Costs of Outcome Goals	18
90% Level 3 or 4 in 2006-07	18
Figure 4. Actual Performance levels for 2006 Cohort	19
Table 5. Total Expenditures and Need & Cost Adjusted Expenditures of Top and Bottom 5% Districts.....	20
5.0 Distributional Problems: State Aid to Lower Need Districts.....	20
Figure 5. Components of State Aid.....	21
Figure 6. Beneficiaries of State Aid Adjustments.....	22
Table 6. Foundation and STAR Aid Estimates for Top and Bottom 5% Districts	23
5.1 Regressive Distribution of State Aid Cuts in 2011-12.....	24
Figure 7. Per Pupil Cuts in Total State aid.....	24
Table 7. Cuts for Top and Bottom 5% Districts.....	25
5.2 The Potential for Caps to Codify Existing Disparities.....	25
6.0 The Intersection of State Aid and Educational Efficiency.....	27
7.0 Policy Considerations	28
Appendix A – Duncombe Cost Model.....	30
Appendix B – Foundation Aid State Share Adjustments.....	31
Appendix C - Allocated State Aid 2011-12 Compared with Foundation Formula Aid Initial Estimate	32

Introduction

Funding equity for public elementary and secondary education in New York State is 44th in the nation, or 6th from the bottom. This inequity has roots in the decades of public policy decisions made by the executive and legislative branches of government driven by political dynamics at the state, regional and local levels. Only after 14 years of litigation by a New York City based organization known as the Campaign for Fiscal Equity (CFE) resulted in a trilogy of Court of Appeals decisions in 1995, 2003 and 2006 directing the State to correct this inequity did reform begin.

In 2007 the State enacted major education financing and accountability reforms entitled Foundation Aid and the Contract for Excellence. These reforms embarked the State on a historic journey toward improving the quality of education provided in the poorest urban, rural and suburban communities in the state. Unfortunately, that journey has been halted for the time being at least. Even in the first year of the reforms, in 2007, foreshadowing of this could be detected. Distributional corrections contained in the executive's initial proposal for reform were reduced by half after that proposal was subjected to New York State legislative process.

Then, in each of the four years which have passed since, Foundation Aid has been successively slowed, frozen, reduced and now, in 2011-12, virtually eliminated through two almost mortal blows: the more than \$2.5 billion in education aid cuts under the Gap Elimination Adjustment (GEA) and the cap to education aid under the Personal Income Growth Index Cap (PIGI Cap). Foundation Aid is now almost unrecognizable when compared with the vision that its proponents had 5 years ago and its goals may be now unachievable.

Whether the GEA and the PIGI Cap are the death knell for education finance reform in New York State remains to be seen. Certainly they present the proponents of reform and the literally millions of children in the state's poorest districts with grim prospects for strengthening the education systems in their districts. In any event, it is essential that the depth of funding inequity in the state be plumbed in order to understand the difficulty of challenges before them."

This policy brief provides an evaluation of New York State's public school finance formula, from its judicial and conceptual underpinnings, to its design and distribution of funding to local public school districts. The goal of modern state school finance systems is to ensure that all children in a state, regardless of where they happen to reside or attend school, are provided with the opportunity to achieve adequate educational outcomes. In New York State, the minimally adequate outcome standard in question has been defined by the court of appeals as a "meaningful high school education." Since the high court ruling in 2003, and later in 2006,

however, the opportunity to achieve adequate outcomes remains an elusive policy goal in New York State. Recent cuts to state aid have only made the situation worse.

The following brief is organized into 6 major sections in which I critique the conceptual and empirical flaws of the New York State school finance formula:

In Section 1.0 I explain how New York State continues to operate one of the nations' most regressively distributed state school finance systems. That is, in New York, more than nearly any other state, students attending high poverty school districts have systematically less state and local funding than students attending low poverty districts.

In Section 2.0 I explain that while the court of appeals in 2003 declared the state responsible for providing an opportunity for a meaningful high school education, the state's approach to determining their financial obligation associated with that responsibility was flawed from the outset, and eventually further eroded by dramatic inflation of student assessment scores.

In Section 3.0 I summarize the basic elements of the current 2011-12 foundation aid formula and conclude by pointing out that most of those elements are negated by aid being frozen at 2008-09 levels.

In Section 4.0 I explain that based on more rigorous estimates of costs, the state's highest poverty districts face significant funding deficits when compared to what they would need in order to provide a meaningful high school education. Meanwhile, the state's lowest poverty districts exceed requisite spending levels to achieve meaningful outcome levels. And, current distributions of student outcomes follow suit, with high poverty districts lagging well below acceptable outcome levels and low poverty districts performing quite well.

Section 5.0 details how the state school finance formula exacerbates these inequities. While coming up short on aid to high poverty districts, the state retains foundation aid for districts already spending more than enough to exceed standards. In addition, the state has continued to protect property tax relief aid which goes disproportionately to more affluent districts already exceeding outcome standards. Further, when state aid cuts were levied for school year 2011-12, larger per pupil cuts were levied on higher poverty districts already well behind. Finally, new limits on local property levy growth, with voter override provisions, coupled with limits on education aid based on personal income growth will likely solidify if not exacerbate current inequities for the foreseeable future.¹

Finally, in Section 6.0 I discuss the irony of the state's use of an "efficiency" argument to deprive high need districts of much needed aid, while protecting aid programs like STAR which have been shown time after time in empirical studies to encourage inefficient spending in more affluent school districts.

¹ In fact it has been suggested that this limitation may make it impossible for foundation aid to be ever fully phased-in when the freeze is lifted.

I conclude with broad policy recommendations.

1.0 Evaluating New York State's Funding Fairness Profile

In the fall of 2010, The Education Law Center of New Jersey in collaboration with Educational Testing Service released a national report card on school funding fairness. Among other indicators, the national school funding report card included a new approach for evaluating the relative fairness of funding across local public school districts within states. The report applied a statistical model to national data on school district finances to determine which states allocate systematically more resources to higher than lower poverty school districts (progressive states) and which states allocate systematically fewer resources to higher poverty districts than lower poverty ones (regressive states). Specifically, the funding fairness report evaluated state and local revenues per pupil to determine “fairness,” because state and local revenues are within the control of states.

New York State, along with Pennsylvania and Illinois was among the most regressively funded states in the nation. Indeed, New York's average spending per pupil was higher than most other states, but the funding fairness New York State policy brief in particular noted:

New York does well on spending level because New York has an large number of very wealthy and very high spending local public school districts, primarily in the New York City Metropolitan Area – Westchester and Long Island, but also counties further west in Rockland County and up the Hudson Valley. These are among the highest spending school districts in the nation, and they substantially influence New York's overall, average spending. In short, the rich are doing fine in New York State. (emphasis in original)

New York State's higher need and lower income districts by contrast were, and are to this day much less well funded. In the fall of 2011, The Education Law Center released its updated fairness profiles for state school funding systems, adding data from 2008-09, the most recent year of available federal data on local school finances. Table 1 summarizes the state profiles, ranked from most progressive to most regressive. The profiles are projections of the expected state and local revenue per pupil for districts of specific poverty levels, using U.S. Census poverty rates. New York is once again among the most regressively funded states in the nation.

Table 1. 2008-09 State Funding Fairness Report Card

State	Predicted at Mean Poverty	0% Poverty	10% Poverty	20% Poverty	30% Poverty	Fairness Ratio
Alaska	\$17,967	\$9,711	\$14,277	\$20,989	\$30,856	3.18
Utah	\$7,379	\$5,772	\$6,732	\$7,851	\$9,157	1.59
New Jersey	\$16,817	\$13,961	\$15,687	\$17,626	\$19,805	1.42
Ohio	\$10,625	\$8,993	\$9,983	\$11,082	\$12,301	1.37
Minnesota	\$11,533	\$10,026	\$10,945	\$11,948	\$13,043	1.30
Massachusetts	\$14,091	\$12,598	\$13,513	\$14,496	\$15,550	1.23
South Dakota	\$8,575	\$7,794	\$8,274	\$8,784	\$9,326	1.20
Indiana	\$11,065	\$10,137	\$10,709	\$11,313	\$11,951	1.18
Connecticut	\$15,693	\$14,468	\$15,223	\$16,019	\$16,855	1.17
Montana	\$9,300	\$8,577	\$9,023	\$9,492	\$9,986	1.16
Delaware	\$13,031	\$12,125	\$12,685	\$13,271	\$13,884	1.15
Wyoming	\$19,520	\$18,167	\$19,003	\$19,877	\$20,792	1.14
Tennessee	\$7,306	\$6,872	\$7,141	\$7,420	\$7,710	1.12
California	\$8,897	\$8,410	\$8,712	\$9,024	\$9,348	1.11
Kentucky	\$8,930	\$8,561	\$8,790	\$9,026	\$9,268	1.08
Nebraska	\$10,404	\$9,990	\$10,248	\$10,511	\$10,782	1.08
Georgia	\$9,458	\$9,083	\$9,316	\$9,555	\$9,800	1.08
New Mexico	\$10,113	\$9,776	\$9,985	\$10,200	\$10,419	1.07
Arkansas	\$8,808	\$8,608	\$8,732	\$8,859	\$8,987	1.04
Oklahoma	\$7,449	\$7,294	\$7,391	\$7,489	\$7,588	1.04
Oregon	\$9,129	\$8,987	\$9,076	\$9,165	\$9,255	1.03
AVERAGE	\$10,774	\$10,684	\$10,728	\$10,814	\$10,948	1.02
West Virginia	\$9,995	\$9,905	\$9,962	\$10,018	\$10,076	1.02
Kansas	\$11,060	\$10,962	\$11,023	\$11,085	\$11,147	1.02
Vermont	\$15,020	\$14,896	\$14,974	\$15,052	\$15,130	1.02
Rhode Island	\$13,047	\$12,974	\$13,020	\$13,066	\$13,111	1.01
South Carolina	\$9,657	\$9,679	\$9,665	\$9,652	\$9,638	1.00
Louisiana	\$10,289	\$10,336	\$10,307	\$10,277	\$10,248	0.99
Iowa	\$10,764	\$10,824	\$10,786	\$10,748	\$10,711	0.99
Maryland	\$13,505	\$13,584	\$13,535	\$13,485	\$13,435	0.99
Arizona	\$7,899	\$8,005	\$7,939	\$7,872	\$7,807	0.98
Wisconsin	\$10,807	\$10,984	\$10,873	\$10,762	\$10,653	0.97
Mississippi	\$7,930	\$8,086	\$7,988	\$7,891	\$7,795	0.96
Washington	\$9,686	\$9,884	\$9,759	\$9,636	\$9,515	0.96
Colorado	\$9,198	\$9,490	\$9,306	\$9,126	\$8,949	0.94
Texas	\$8,862	\$9,182	\$8,980	\$8,782	\$8,589	0.94
Michigan	\$9,611	\$9,979	\$9,747	\$9,520	\$9,299	0.93
Idaho	\$7,509	\$7,869	\$7,642	\$7,420	\$7,206	0.92
Florida	\$8,975	\$9,427	\$9,141	\$8,864	\$8,595	0.91
Virginia	\$10,621	\$11,253	\$10,853	\$10,467	\$10,094	0.90
Pennsylvania	\$12,976	\$13,788	\$13,274	\$12,778	\$12,302	0.89
Maine	\$12,125	\$12,914	\$12,414	\$11,934	\$11,472	0.89
Alabama	\$9,071	\$9,702	\$9,302	\$8,918	\$8,551	0.88
New York	\$17,375	\$18,702	\$17,859	\$17,055	\$16,286	0.87
Missouri	\$9,163	\$9,886	\$9,426	\$8,988	\$8,571	0.87
North Dakota	\$9,542	\$10,774	\$9,985	\$9,254	\$8,577	0.80
North Carolina	\$9,754	\$11,111	\$10,240	\$9,438	\$8,699	0.78
New Hampshire	\$12,206	\$13,958	\$12,833	\$11,799	\$10,849	0.78
Illinois	\$9,841	\$11,312	\$10,367	\$9,501	\$8,707	0.77
Nevada	\$9,094	\$10,561	\$9,617	\$8,757	\$7,974	0.76

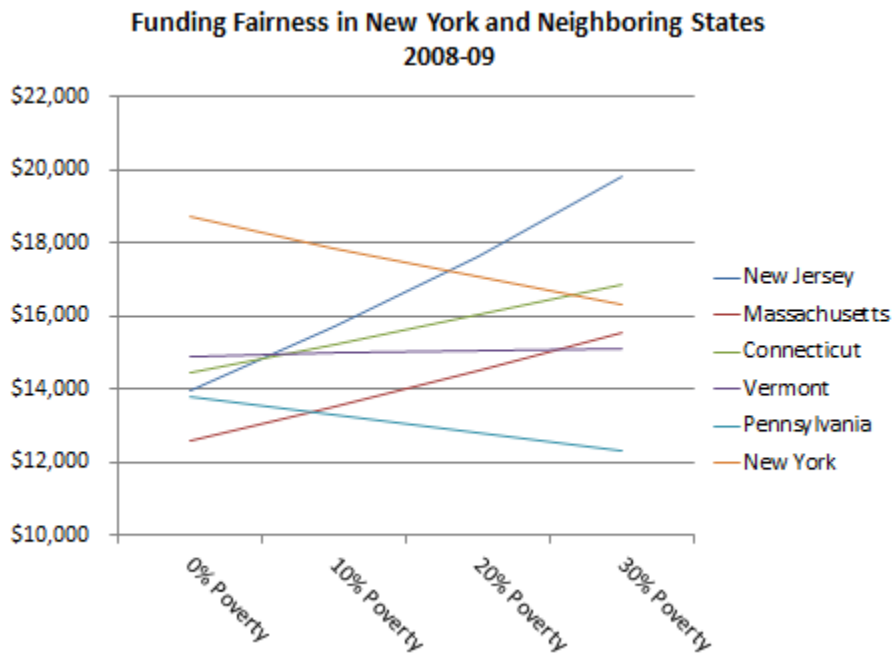
Source: National School Report Card 2011 (2008-09 Data). www.schoolfundingfairness.org

Excludes Hawaii which operates as a single district state.

Figure 1 compares the profiles of New York State and each of its neighbors. While affluent, very low poverty New York State districts have far more state and local revenue per pupil than districts in neighboring states, high poverty New York State districts have relatively average state and local revenue. But, because the state and local revenue of high poverty districts is so much lower than their low poverty neighbors in New York State, these districts face persistent disadvantages in terms of teacher recruitment and retention.

New Jersey presents a striking contrast with New York State. New York State affluent districts have significantly more state and local revenue than New Jersey’s affluent districts, often in adjacent counties. Meanwhile, New Jersey’s higher poverty districts are much better funded than those in New York State. New Jersey’s funding is systematically progressive. Funding in Massachusetts is also progressive. Funding in Connecticut appears progressive, but the relationship is far less systematic. Among New York State’s neighbors, only Pennsylvania parallels New York’s regressiveness.

Figure 1. Fairness Profiles – Mid-Atlantic



2.0 The Intersection of Constitutional Mandates & Educational Costs

During the various rounds of arguments in the school funding adequacy challenge brought against the State of New York on behalf of school children in New York City (Campaign for Fiscal Equity), numerous conceptions and measures of “educational adequacy” were proposed and deliberated. Initially in January of 2001, the trial court judge Leland DeGrasse adopted the plaintiff’s proposed requirement that the state provide for all students to have access to “a meaningful high school education, one which prepares [young people] to function productively as civic participants.” This definition was adopted in part in response to a report from a Mayor’s Advisory Task Force (1999) that thousands of students graduating from the New York City public schools were unable to successfully complete remedial coursework in the City University system.² The appellate division backed off from this rigorous standard, however, adopting the state’s argument that they need only provide the equivalent of an 8th grade education.³ Eventually, in June 2003, the Court of Appeals reversed the appellate court’s decision, returning to the “meaningful high school education” definition.⁴

But the story of shifting standards doesn’t end there. Any broad conception of adequacy must ultimately be operationalized – operationalized in a context of imperfect measures of educational outcomes and in a context of confusing and oft convoluted approaches to determining the costs of providing an adequate education. To make a long story short, while the high court established an apparently rigorous legal definition of educational adequacy – meaningful high school education – when it came to accepting a state school finance model intended to operationalize that definition, the same court dropped the ball and politicians ran off with it.⁵ To this day, they are still running, and in the wrong direction.

In this section, I explain and illustrate how the applied, operational definition of educational adequacy used for guiding the state school finance formula is insufficient for

² Justice DeGrasse noted: “The educational demands of New York City’s current economy were recently summarized by the Mayor’s Advisory Task Force on the City University of New York (“CUNY”). The CUNY Task Force was created by Mayor Giuliani to examine issues faced by CUNY, including the extensive need for remedial education for matriculating students many of whom are graduates of New York City public schools. The Task Force was chaired by Benno Schmidt, formerly President of Yale University and, before that, Dean of the Columbia University School of Law. The Task Force retained both Price Waterhouse Coopers and the RAND Corporation to investigate CUNY’s current operations.” See: http://www.cfequity.org/static_pages/011001fulltextdecision.php

³ <http://www.cfequity.org/pdfs/appellatedecision02.PDF>

⁴ http://www.cfequity.org/static_pages/CFEIIdecision.pdf

⁵ A more thorough discussion of the court’s shifting position during the remedy phase can be found in Baker, B.D., Green, P.C. (2009) *Conceptions, Measurement and Application of Educational Adequacy Standards*. In D.N. Plank (ed) *AERA Handbook on Education Policy*. New York: Routledge

achieving the stated objective of providing for a “meaningful high school education.” The methods behind the formula are suspect. The measures over time flawed. The result, even if it had been implemented, inadequate and inequitable.

2.1 Operationalizing “Meaningful High School Education”

The current foundation aid formula is intended to provide sufficient resources for all children to have access to a meaningful high school education. The State Department of Education’s primer on state aid for 2011-12 explains that:

*The Foundation Amount is the cost of providing general education services. It is measured by determining instructional costs of districts that are performing well.*⁶

Already, this framing suggests an erosion of the “meaningful high school education” standard to a standard based on current districts that happen to be “performing well,” with little or no validation that “performing well” equates to “meaningful high school education.” That is, the cost of an adequate education is merely to be equated with the average spending of districts “performing well,” regardless of how or why they might be performing well.

How this standard is operationalized is explained further in the 2009 technical documentation on how the state calculates the average instructional spending of districts “performing well.”⁷

...an adequate education was operationally defined as a district:

With a simple, unweighted average of 80 percent of its test takers scoring at Level 3 or above on eight examinations (Fourth Grade English Language Arts, Fourth Grade Mathematics, high school Mathematics A, Global History, U.S. History, English, Living Environment and Earth Science) in 2005-06, 2006-07 and 2007-08. Note that, given this operational definition, a district could have less than 80 percent of its test takers with a score at Level 3 on one or more of the tests and still be providing an adequate education.

*518 school districts met this standard, including: 6 High Need Urban/Suburban districts, 90 High Need Rural districts, 290 Average Need districts and 132 Low Need districts. (2009 Technical Final)*⁸

So, “performing well” which is to mean “adequate” which by extension is assumed equivalent to “meaningful high school education,” can be equated to an average of 80% of

⁶ <http://www.oms.nysed.gov/faru/PDFDocuments/Primer11-12D.pdf>

⁷ http://www.oms.nysed.gov/faru/documents/technical_final.doc

⁸ http://www.oms.nysed.gov/faru/PDFDocuments/technical_2009.pdf

children in a district scoring at level 3 or 4 on state assessments. Note that the 80% (scoring at level 3 or higher) threshold indicated here is lower than the recent (2006-07) actual average (about 85%) percent of children scoring at level 3 or higher on Regents exams across districts statewide (unweighted). In addition, New York State's average performance is itself relatively average at the 8th grade level on the National Assessment of Educational Progress. New York State performs better than average at the 4th grade level.⁹ Thus, the assumption embedded in current policies is that a "meaningful high school education" in New York State is similar to the national average quality of education (as measured by tested outcomes).

2.2 Implications of the Reevaluation of State Standards & Assessments

During the Spring of 2010, analyses by Dan Koretz of Harvard revealed that between 2006-07 and 2008-09 percentages of students scoring at level 3 or higher became substantially inflated. Recently produced documents related to the test score inflation investigation also provide new insights into the relationship between Regents assessment scores and college readiness.

"We see that students with Regents Math A passing scores of 65 typically do not meet the CUNY cut-score for placement into college-level Mathematics courses. Indeed, these students may have only a little better than a 50-50 chance of earning a grade of "C" or higher in CUNY's remedial Mathematics courses."¹⁰

Digging deeper, Koretz and colleagues estimated the grade 8 math cut scores that would have been required to have incrementally increasing odds of getting at least a 75 or 80 on Math A Regents, a level identified by the researchers as closer to "college" ready than the 65 noted above (which only gave a 50/50 chance of passing college math).

For the 2006 cohort evaluated, the 8th grade level 3 cut-score was 650. But, statewide, students would need a score of 660 to merely have a 50/50 chance of a Regents Math A score of 80 or higher, and 648 (nearly the current cut score) to merely have a 50/50 chance of a Regents Math A score of 75. In high needs districts students would need 8th grade scores of 668 and 655 merely to have a 50/50 chance of scoring 80 or 75 respectively on Math A Regents. That is, the current cut-scores for Level 3 in 8th grade math - the cut scores accepted in the analyses in this report and in the state's empirical definition of adequacy - are lower than the scores needed to have a 50/50 chance at college readiness in high need districts. Further, the State Education Department (SED) and Legislature have relied on an assumption that having 80% of children reach these cut-points defines the public policy standard, which is then inferred to meet the

⁹ <http://nces.ed.gov/nationsreportcard/statecomparisons/Default.aspx>

¹⁰ Everson, H.T. (2010) Memo to David Steiner: Relationship of Regents ELA and Math Scores to College Readiness Indicators. July 1, 2010

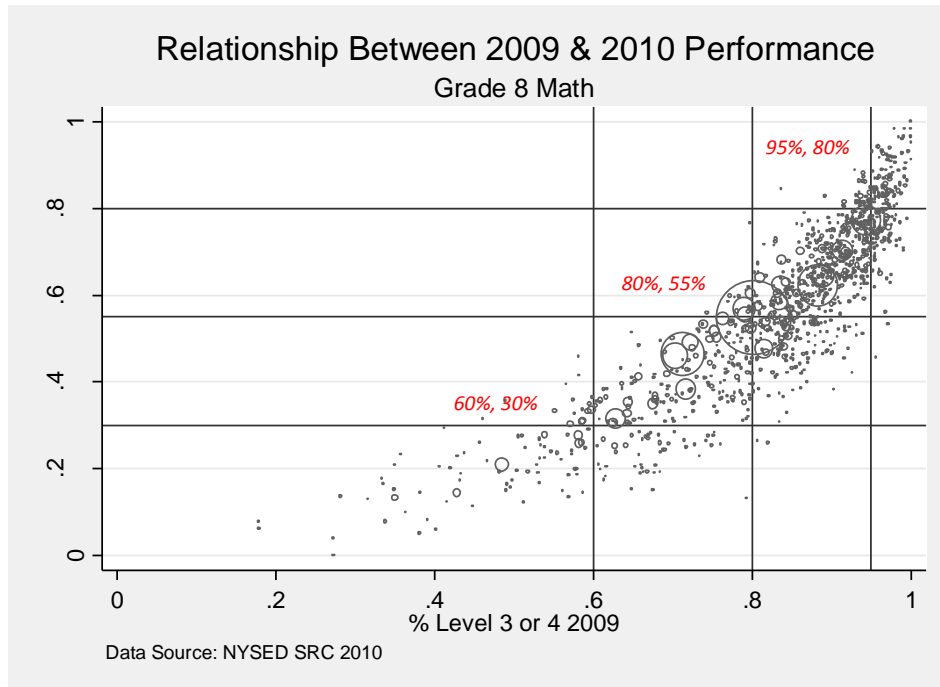
constitutional standard. By that definition, a meaningful high school education is characterized as having an 80% chance of having less than a 50% chance of being prepared to pass college math courses.

That is, using an 80% threshold for students scoring level 3 or higher on 8th grade math is to assume acceptable that only 80% of children will obtain a cut-score that is associated with less than a 50/50 chance of scoring 75 on Regents Math A (for children in high need districts). The Everson memo notes that “of the 6,500 or so students with Regents Math A scale scores below 75, nearly 90% were placed into remedial courses at CUNY.” (p. 2) Given that the meaningful high school education standard arose in part from trial testimony regarding remedial backlog in the CUNY system, it is hard to conceive how the present operational definition when applied to pre-inflated test scores, is sufficient.

Further, the approach used for determining “adequacy” by the 80% threshold for scoring level 3 or higher does not necessarily require that students score level 3 or higher across all tests, but rather that the average percentage of students across tests and grades district-wide exceed 80%.

An additional year’s worth of data provides more insights. For 2010, the Regents adjusted the assessment cut scores to address the inflation issue, and as one might expect proficiency rates adjusted accordingly. Figure 2 shows the rates of children scoring at level 3 or 4 in 2009 and again in 2010. Each circle is a district, and circle size indicates the overall enrollment size of districts (with NYC represented as its separate districts). I have selected a few key, rounded, points for comparison. Districts where 95% of children were proficient or higher in 2009 had approximately 80% in 2010. Districts that had 80% in 2009 had approximately 55% in 2010. This means that the operational standard of adequacy using 2009 data was equivalent to 55% of children scoring level 3 or 4 in 2010. This also means that *if we accept as reasonable, a standard of 80% at level 3 or 4 in 2010*, that was equivalent to 95% - not 80% - in 2009.

Figure 2. Matching Adjusted Standards to Inflated Ones



2.3 Implications of Drifting Standards for Outcome-based Cost Estimates

Problems with outcome measures alone might thwart any reasonable method to determine the costs across different settings of achieving those outcomes. That is, if a sufficiently rigorous method was used. But the chosen method for determining the costs of achieving desired outcomes is not sufficiently rigorous to begin with, and under these circumstances the approach is destined to fail. Further, the relationship between the state’s described method for estimating costs – the foundation funding level – and the values that ultimately appear in the foundation aid formula is unclear.

The state’s method for determining the instructional spending of school districts “performing well” is to identify districts performing well and take the average instructional spending per pupil of the lower half of those districts. In their September, 2004 Amicus Brief, William Duncombe and John Yinger of Syracuse University explained:

Using only the lowest spending schools is equivalent to assuming that the lowest-spending schools are the most efficient and that other schools would be just as efficient if they were better managed. Both parts of this assumption are highly questionable. The successful schools approach on which these figures are based makes

no attempt to determine why some schools spend less per pupil than others; the low spending in the selected schools could be due to low wage costs and a low concentration of disadvantaged students, not to efficiency. Moreover, even if some schools get higher performance for a given spending level than others, controlling for wages and student disadvantage, there is no evidence that the methods they use would be successful at other schools.¹¹

Quite simply, there is no basis for such an approach either from a lay standpoint regarding the “reasonableness” of the approach or from a scholarly standpoint regarding rigor of methods and basis for key decisions. From a lay standpoint, as noted by Professors Duncombe and Yinger, there may be a plethora of reasons why the lower half of districts meeting the standards are in the lower half, from simply being in lower cost regions to having less needy students. Further, cutting the sample in half rather than some other proportions is entirely arbitrary. From a research standpoint, due to these same factors and many more, this method is not, nor is it likely to ever be widely accepted and printed (other than to critique its unreasonableness) in legitimate scholarly journals.

The loose methodology of successful schools analysis allows state officials to pick and choose the order in which they carry out specific steps, resulting in vastly different results. Currently, the state begins by identifying those districts statewide meeting the 80% standard. Then, the state selects the lowest 50% of districts by their adjusted instructional spending – the efficiency filter.¹² By taking the lower half spending districts statewide (whether applying their spending adjustments first or not), state officials exclude nearly all downstate districts. Yet, they maintain the assertion that the cost estimates are still applicable to those districts. The weakness of this assumption did not slip past one dissenting justice in the final ruling where this procedure was accepted by the majority. In her dissent, in the 2006 ruling on the validity of the new foundation formula and its underpinnings, Chief Judge Kaye explained:

The 50% number not only is wholly arbitrary, but also has the effect of eliminating most of the school districts in Westchester and Nassau, the two counties that border New York City and thus most resemble the City in the concentration of students who are not English proficient and in the higher regional costs, particularly in hiring and retaining capable teachers.¹³

¹¹ http://cpr.maxwell.syr.edu/efap/CFE_Articles/Amicus_brief.pdf

¹² Existing documentation is unclear regarding whether the “instructional spending” per pupil figure used is adjusted for each district by the Pupil Need Index and by the Regional Cost Index prior to excluding the upper half. But, because the regional cost index adjustment is generally insufficient, changing the order of these operations has only modest effects (see following analysis)

¹³ <http://www.cfequity.org/pdfs/resources/11.20.06CourtRuling-NYSLRB.pdf>

Table 2 provides examples of how the distribution of districts changes by region when different assumptions - different orders of calculations - are tested. In the first column, I summarize the number of all districts in 2008 that would qualify as successful. Notice that the largest number of “successful” districts exists were the largest number of districts and children exist - in the Long Island/NYC area. The second largest group is in the Hudson Valley. But, when one takes a simple cut of the lower half based on un-adjusted per pupil instructional spending, we are left with only a handful of Long Island/NYC and Hudson Valley districts, and left with far more Finger Lakes, Western New York and Mohawk Valley districts. One would think that adjusting instructional spending by the PNI and RCI and then taking the lower half might produce a more balanced result. But even this approach cuts out disproportionate numbers of downstate districts.

In effect, taking the approach in the left half of Table 2 - similar to the state’s own approach (as documented) - we are applying a much stricter efficiency filter in downstate districts than in upstate ones. Downstate, we are including only the bottom spending 30% whereas in western New York, we are counting nearly all (41/42) successful districts. These differential “efficiency” standards are at best arbitrary and thoughtless and at worst intentionally manipulative - intended to drive down the overall base cost and total state cost of funding the foundation formula.

Table 2. Alternative distributions of “successful” and “successful and efficient” school districts

Region	Global Efficiency Standard (below state mean spending) 2008			Regional Efficiency Standard (below regional mean spending) 2008		
	# All	# Lower Half	# Adj. Lower Half*	# All	# Lower Half	# Adj. Lower Half*
Mohawk Valley & North Country	36	25	27	36	23	22
Southern Tier	20	19	16	20	13	12
Western New York	42	42	41	42	25	21
Central New York	15	15	14	15	5	6
Capital District	32	27	23	32	18	15
Finger Lakes	37	36	32	37	22	21
Hudson Valley	64	11	15	64	31	30
Long Island/NYC	82	15	24	82	51	44
ALL	328	190	192	328	188	171

*adj. by RCI and PNI before identifying lower half

Here’s an example of the extent of variation that can be produced when applying successful schools analyses to determine the base cost for New York State school districts. In each case, the PNI and RCI are used to adjust (deflate to the lowest cost region and no additional pupil needs) the 2007-08 instructional spending figure. Table 3 provides the alternative steps – order of operations – that might be applied to produce different results. One might, for example, apply the pupil need index and regional cost index before or after identifying the lower half. Or,

perhaps most appropriately (though still far from sufficient) one might take the lower half spending districts within each region (Version 2a and 2b).

Table 3. Alternative Successful Schools Calculation Steps

Steps	Version 1a	Version 1b	Version 2a	Version 2b
1	Identify Success by % Level 3 or 4 over 80%	Identify Success by % Level 3 or 4 over 80%	Identify Success by % Level 3 or 4 over 80%	Identify Success by % Level 3 or 4 over 80%
2	Identify Lower Spending Half of All Districts	Identify Lower Spending Half of All Districts	Identify Lower Spending Half of All Districts within Each Region	Identify Lower Spending Half of All Districts within Each Region
3	Take Average of Lower Half	Adjust using PNI and RCI to identify underlying “base” cost	Take Average of Lower Half	Adjust using PNI and RCI to identify underlying “base” cost
4	Adjust using PNI and RCI to identify underlying “base” cost	Take Average of Lower Half	Adjust using PNI and RCI to identify underlying “base” cost	Take Average of Lower Half

Table 4 tests these approaches applied to 2007-08 estimates of instructional spending per pupil¹⁴ based on the alternative sequencing of calculations above. The first and most obvious issue above is that none of the figures generated bears any resemblance to the current foundation level. The second feature is that among those estimates using the efficiency filter, the difference in base cost for Hudson Valley districts is as much as \$9,197 - \$7,693 = \$1,504, or nearly 20%, with the currently used method (statewide average efficiency filter) generating the lower value.

Table 4. Alternative Successful Schools Cost Estimates

Region	Version 1a Mean of Lower Half, Adj.	Version 1b Mean of Adj. Lower Half	Version 2a Mean of Regional Lower Half, Adj.	Version 2b Mean of Adj. Regional Lower Half
Mohawk Valley & North Country	\$7,181	\$7,244	\$6,904	\$6,955
Southern Tier	\$6,591	\$6,705	\$6,190	\$6,221
Western New York	\$7,154	\$7,258	\$6,582	\$6,642
Central New York	\$7,572	\$7,693	\$6,699	\$6,752
Capital District	\$7,723	\$7,781	\$7,311	\$7,333
Finger Lakes	\$7,248	\$7,334	\$6,841	\$6,904
Hudson Valley	\$8,029	\$8,072	\$9,119	\$9,197
Long Island/NYC	\$8,306	\$8,323	\$8,812	\$8,850
ALL	\$7,447	\$7,514	\$7,703	\$7,766

¹⁴ Where instructional spending is derived by multiplying the instructional share of total spending (IE2%) times the total expenditure per pupil from the 2007-08 Fiscal Profiles

Most important in Table 4 are the regional variations and specifically the much higher regional averages of even the lower half spending districts in the Hudson Valley and Long Island. The 2011-12 Foundation Aid program proposes a foundation level of \$6,535. But for these regions, even after they average spending has been adjusted (reduced) by the regional cost factor, their instructional spending is well above this level. In fact, this very low foundation level cannot be justified by any of the below calculations (except perhaps in the southern tier region).

The bottom line is not that the state should simply pick the order of its steps more carefully, but rather that the method is simply too empirically loose for use in such high stakes decision making – deciding how much revenue is need to achieve a constitutionally adequate education for all children in New York State. While the “standard” may be explicitly stated - “80% at level 3 or 4” - there are many ways to reduce the sample of those districts that meet that additional standard in order to manipulate the final “base cost” figure to fit within the pre-defined budget constraint. In many cases, while successful schools analysis has the veneer of an empirical framework for calculating costs, the imprecision of the method allows it to revert to a more typical political negotiation for determining foundation funding. All final decisions regarding the level and distribution of state aid are necessarily products of the political process. The empirical estimates that inform the political process on the front end should not be.

3.0 Current Status & Operation of the Foundation Aid Formula

The 2011-12 foundation aid formula is described as follows.

$$\text{District Foundation Aid per Pupil} = [\text{Foundation Amount} \times \text{Pupil Need Index} \times \text{Regional Cost Index}] - \text{Expected Minimum Local Contribution}$$

That is, the state determines the need and cost adjusted target funding for each district, by taking the foundation funding level and multiplying it times the pupil need adjustment index (PNI) and then times the regional labor cost adjustment index (RCI). This approach is entirely reasonable to the extent that the foundation level of funding, the regional cost index and pupil need index are reasonable. That is, to the extent that the target level of funding generated for each district by this formula actually represents what those districts would need to provide a meaningful high school education.

In 2011-12, the foundation level of funding was set to \$6,535, a value which on its face is far lower than existing spending levels in nearly every New York State public school district or charter school. The pupil need index combines measures of poverty (U.S. Census Poverty and Free or Reduced Lunch) shares of children with limited English language proficiency, and district population sparsity. Finally, the Regional Cost Index is intended to recognize “regional variations in purchasing power around the State, based on wages of non-school professionals.”

Once a districts' target level of funding is determined, the state must determine the share of that target that will be paid for by the local district and the share that will be picked up by the state – State Foundation Aid. The state share of aid, or total foundation aid is determined as follows:

*Total Foundation Aid = Selected Foundation Aid X Selected Total Aidable Foundation Pupil Units (TAFPU). Selected Foundation Aid is the district's Foundation Aid per pupil, but no less than \$500.*¹⁵

That is, no matter whether a district could raise double or triple their target funding per pupil on their own, each district is provided a minimum of at least \$500 per pupil in state foundation aid. Total Aidable Foundation Pupil Units (TAFPU) include additional weighted adjustments for children with disabilities (not addressed in the PNI), pupils in summer school and half versus full day kindergarten.

Then, for 2011-12 setting aside and effectively negating all of the above calculations, payable foundation aid for each district is held to 2008-09 foundation aid levels (when the underlying foundation level was \$5,695, not the stated \$6,535 for 2011-12).¹⁶

4.0 Distributional Problems for High Need Districts

Perhaps more important than the underling mechanics of the aid formula, or how the calculations are performed, is whether that aid formula produces an equitably distributed and adequate level of funding. The National Report Card findings addressed previously already cast doubt on the equity yielded by the New York State school finance system in 2008-09, but the level of available revenue was relatively high, on average. Notably, those averages were driven by affluent suburban, very low poverty districts.

Here, I rely on cost estimates generated by a “cost function” model estimated by William Duncombe of Syracuse University (model in Appendix A). In short, the approach uses historical data on New York State school districts to estimate the “cost” of achieving a specific level of educational outcomes, given the varied student characteristics, varied conditions of local public school districts, and varied competitive prices for key schooling inputs such as teachers. The approach also attempts to account for those circumstances where districts spend more than they would otherwise need to in order to achieve specific outcome levels (inefficiency). This approach, unlike simply taking the average spending of districts “performing well,” accounts

¹⁵ <http://www.cfequity.org/pdfs/resources/11.20.06CourtRuling-NYSLRB.pdf>

¹⁶ For 2008-09 foundation formula information, see: <http://www.oms.nysed.gov/faru/PDFDocuments/Primer08-09A-revised.pdf>

more thoroughly for the various attributes of school districts that influence the costs of “performing well.” And this approach, unlike “successful schools” analysis appears in numerous rigorous peer reviewed journals in economics, education and public policy.¹⁷

Cost estimates can be helpful in both an absolute and a relative sense. First, in an absolute sense, we can use the models estimated by William Duncombe to project the per pupil costs of achieving specific outcome standards in various districts or types of districts. Second, we can use cost indices which represent the relative costs of achieving any given level of outcomes in districts with different needs and costs as a basis for adjusting the value of current expenditures. For example, two districts might each spend \$12,000 per pupil. A district with average student population characteristics in a labor market with average costs is assumed to need an average level of spending to achieve average outcomes. We give such a district a cost index of 1.0. But, let’s say one of our districts that spends \$12,000 per pupil actually has far less than average poverty rate and few or no children with limited English proficiency. That district might have a cost index of .80, meaning that it would cost 20% less in such a district to achieve the average outcome. By contrast, our other district might have much higher poverty than average and many children with limited English proficiency, and the district might be in a high wage labor market. That district might have a cost index of 1.5. If we divide each district’s \$12,000 in per pupil spending, we see that the true value of their spending is far from equal:

$$\text{District A: } \$12,000 / .80 = \$15,000$$

$$\text{District B: } \$12,000 / 1.5 = \$8,000$$

Figure 3 shows the projected per pupil costs of having 90% children achieve level 3 or 4 on 2006-07 assessments, in 2006-07 dollars. Districts are organized into quintiles by poverty for comparison, with poverty serving as a reasonable proxy and strong correlate of other student need factors. In 2006-07 it was projected that low poverty districts would need to spend just under \$15,000 per pupil to achieve a 90% rate of children scoring level 3 or higher. Those

¹⁷ Downes, T., Pogue, T. (1994). *Adjusting School Aid Formulas for the Higher Cost of Educating Disadvantaged Students*. *National Tax Journal XLVII*, 89-110.

Duncombe, W. and Yinger, J.M. (2008) Measurement of Cost Differentials In H.F. Ladd & E. Fiske (eds) pp. 203-221. *Handbook of Research in Education Finance and Policy*. New York: Routledge.

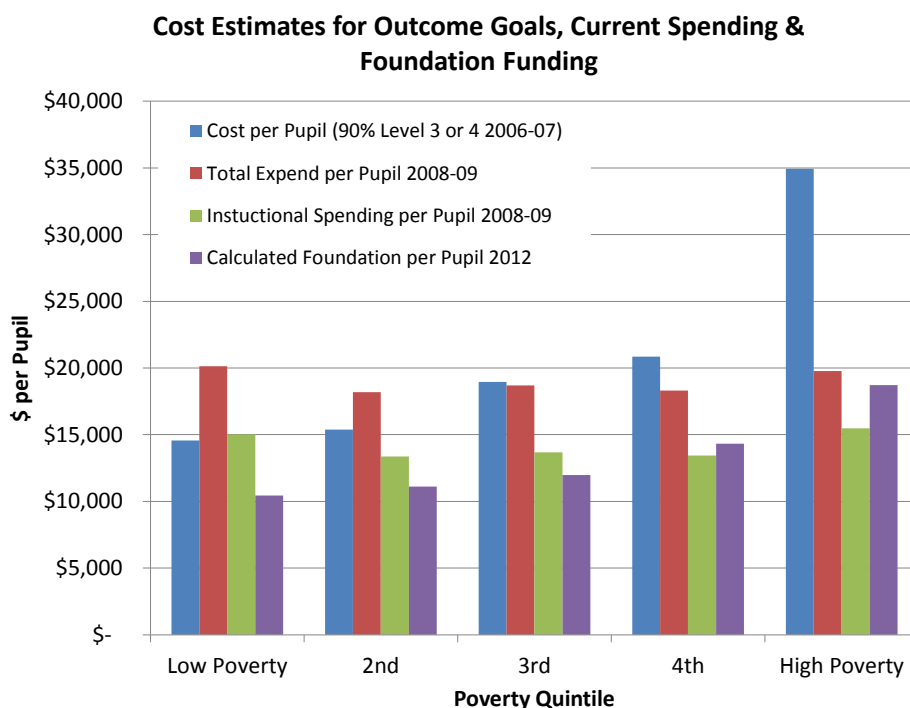
Duncombe, W., Yinger, J. (2005) How Much more Does a Disadvantaged Student Cost? *Economics of Education Review* 24 (5) 513-532. Duncombe, W. and Yinger, J.M. (2000). Financing Higher Performance Standards: The Case of New York State. *Economics of Education Review*, 19 (3), 363-86.

Duncombe, W. and Yinger, J.M. (1998) “School Finance Reforms: Aid Formulas and Equity Objectives.” *National Tax Journal* 51, (2): 239-63. Duncombe, W. and Yinger, J.M. (1997). Why Is It So Hard to Help Central City Schools? *Journal of Policy Analysis and Management*, 16, (1), 85-113.

Imazeki, J., Reschovsky, A. (2004) Is No Child Left Beyond an Un (or under)funded Federal Mandate? Evidence from Texas. *National Tax Journal* 57 (3) 571-588.

districts in fact spent more than that in total, and marginally more than that in instructional spending. Nonetheless, under the 2011-12 (five years later, without any inflation adjustment) foundation aid calculations – if fully funded (which it is not) – those districts would not even receive that much. At the other end of Figure 3, high poverty districts would have needed to have spent nearly \$35,000 per pupil to achieve a 90% proficiency rate. But they spent less than \$20,000 in total, about \$15,000 in instructional spending. Even if fully funded, the 2011-12 foundation level is less than what these districts spent in total in 2008-09. To put it really simply, costs go up as poverty rises, but in New York State, school funding does not.

**Figure 3. Comparing Actual Spending & Estimated Costs of Outcome Goals
90% Level 3 or 4 in 2006-07**



Data sources:

NYSED FARU Fiscal Profiles

<http://www.oms.nysed.gov/faru/documents/masterfileforweb0809.xls>

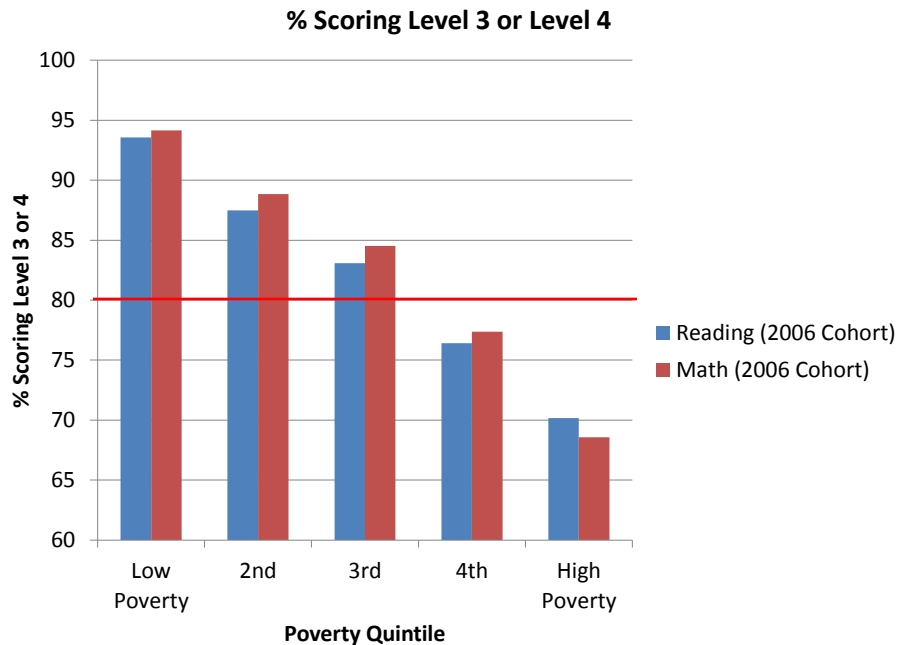
Cost projections estimated by William Duncombe

Foundation Funding Targets = $(\$6,535 \times \text{PNI} \times \text{RCI} \times \text{TAFPU}) / \text{DCAADM}$

Figure 4 summarizes the actual assessment outcomes of the 2006 cohorts for districts in each of the poverty quintiles. As can be seen, those districts in the lowest poverty quintile which spent somewhat more than needed to achieve 90% proficiency, did on average achieve better than 90% proficiency. In fact, districts in each of the first three quintiles achieve better than 80% proficiency, the state’s proposed “adequacy” target, but a target I dismiss herein as far from meeting the “meaningful high school education” requirement. By contrast, districts in the highest

poverty quintile which received far less than they would have needed to achieve 90% proficiency do, in fact, achieve far less than 90% proficiency (falling below 70% in Math).

Figure 4. Actual Performance levels for 2006 Cohort



Data Source: NYSED State Report Card 2010 (Total Cohort Subgroup Results)

How do districts compare in terms of their need and cost adjusted actual spending levels and which districts are currently most advantaged and most disadvantaged? To address this question, I take each district’s actual 2008-09 total expenditure per pupil and divide their total expenditures per pupil by their comprehensive cost index from the Duncombe model. Then, I identify the top and bottom 5% of all districts by their need and cost adjusted spending levels.

Table 5 lists the large (over 2,000 students) districts among the top and bottom groups. The average adjusted spending, and for that matter the average actual spending for the top group is approximately double that of the bottom group. Those in the bottom group have invariably high poverty rates (where U.S. Census Poverty rates of 30% in New York State approximate subsidized lunch rates of 80% to 100%). By contrast, those in the top spending group have relatively low poverty rates. Utica and Poughkeepsie have the lowest need and cost adjusted spending per pupil among all districts enrolling over 2,000 pupils.

Table 5. Total Expenditures and Need & Cost Adjusted Expenditures of Top and Bottom 5% Districts

Group	Total Expenditures per Pupil	Need/Cost Adjusted Expenditures per Pupil	Poverty (Census)
Bottom 30	\$15,939	\$13,231	25%
Top 30	\$30,014	\$30,081	7%
Bottom Group			
AMSTERDAM	\$13,799	\$13,209	27%
BINGHAMTON	\$15,365	\$12,331	35%
BRENTWOOD	\$18,608	\$14,058	14%
BUFFALO	\$18,364	\$13,165	36%
GLOVERSVILLE	\$15,946	\$14,257	29%
JAMESTOWN	\$15,463	\$13,419	31%
LACKAWANNA	\$17,803	\$12,742	33%
LANSINGBURGH	\$13,908	\$12,169	22%
NEW YORK CITY	\$20,274	\$13,454	27%
NIAGARA FALLS	\$17,119	\$13,998	28%
POUGHKEEPSIE	\$17,752	\$11,400	27%
ROCHESTER	\$18,956	\$13,585	36%
SCHENECTADY	\$15,714	\$13,490	29%
SYRACUSE	\$18,232	\$13,316	35%
UTICA	\$14,940	\$10,679	38%
Top Group			
ARDSLEY	\$27,087	\$31,422	3%
BAYPORT BLUE P	\$23,377	\$29,184	3%
BREWSTER	\$23,592	\$27,706	5%
HENDRICK HUDSON	\$23,826	\$28,388	5%
HEWLETT WOODMERE	\$30,501	\$30,256	6%
JERICHO	\$29,724	\$28,355	4%
KATONAH LEWISB	\$28,117	\$28,477	3%
LONG BEACH	\$29,642	\$28,740	11%
LYNBROOK	\$22,066	\$28,049	4%
MARLBORO	\$27,323	\$32,489	11%
MINEOLA	\$31,747	\$34,492	5%
MT PLEAS CENTRAL	\$24,623	\$27,606	4%
NANUET	\$24,866	\$29,627	5%
NORTH SHORE	\$29,497	\$31,385	3%
SAYVILLE	\$21,475	\$27,927	3%
SYOSSET	\$25,990	\$28,362	3%

Data sources: NYSED FARU Fiscal Profiles <http://www.oms.nysed.gov/faru/documents/masterfileforweb0809.xls> & Cost projections estimated by William Duncombe

5.0 Distributional Problems: State Aid to Lower Need Districts

Given the findings of the previous section, one might assume that the state simply lacks sufficient total available aid to bring high poverty districts closer to their necessary revenue levels to provide “meaningful high school education.” That is, that the state is targeting all the revenue it can to meet these needs but still can’t get there. Further, one might assume that if the state made any further modifications or changes to the distribution of aid, it would do so in a fashion that would distribute additional aid to those districts facing the largest funding gaps, and

not to those already spending at very high levels given their own wealth. Finally, one might also expect that if the state was to cut funding from the system, it certainly would not cut larger shares of funding from those districts facing the most significant funding gaps. But, every one of these assumptions while plainly logical turns out to be false.

First, let’s consider the allocation of state aid for the foundation aid program, along with one other major aid program kept outside of the state general education aid programs, the New York State School Tax Relief Program (STAR), which constitutes approximately 15% of all aid related to public schools. Previously, I explained how each district is assigned a target revenue level based on differences in needs and costs, and that districts are then expected to pay a fair share of that target with local property taxes. Over time, the legislature has tweaked the state aid share formula to ensure that no district gets more than 90% of their target from the state and that no district receives less than \$500 per pupil, and further that higher wealth (but not the highest) receive a more gradually reduced level of state aid than they would if aid was based strictly on the state Income Wealth Index (IWI) or Combined Wealth Ratio. Each of these modifications drives more state aid for foundation funding to wealthier districts at the expense of aid to poorer districts. STAR aid, managed through an entirely separate formula, has also been historically allocated in greater amounts to higher wealth districts.

Figure 5. Components of State Aid

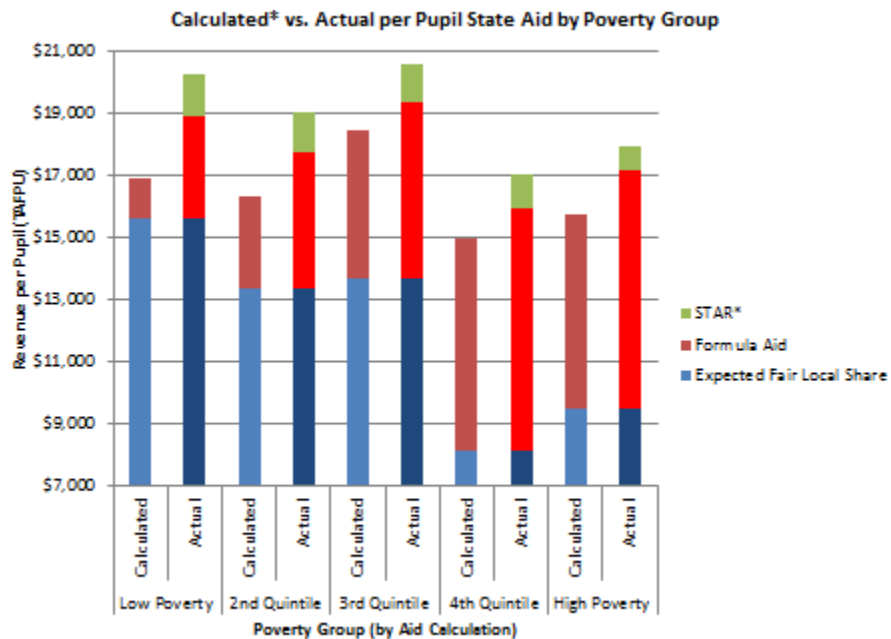


Figure 5 shows the state aid that would be received by each district in each quintile by poverty, if foundation aid was allocated solely in accordance with each district’s income wealth index (or combined wealth ratio, See Appendix B for distribution pattern). Next, Figure 5 shows

the state aid levels produced by the adopted formula for districts in each quintile, based on 2011-12 budget simulations, with adjustments to state share, including the \$500 minimum (Selected Foundation Aid). Finally, Figure 5 adds to those formula projections, the average STAR aid received in the most recent documented year (2008-09), which is intended to offset a portion of the local effort. For the highest poverty districts actual aid with STAR is approximately \$2,000 per pupil higher than simulated foundation aid based only on the income wealth index. But, for the lowest poverty districts, the combined benefits of STAR aid and adjustments to the state share of foundation aid increase their state funding by over \$3,000 per pupil. That is, most of the adjustment to the formula goes to those who need it least.

Figure 6. Beneficiaries of State Aid Adjustments

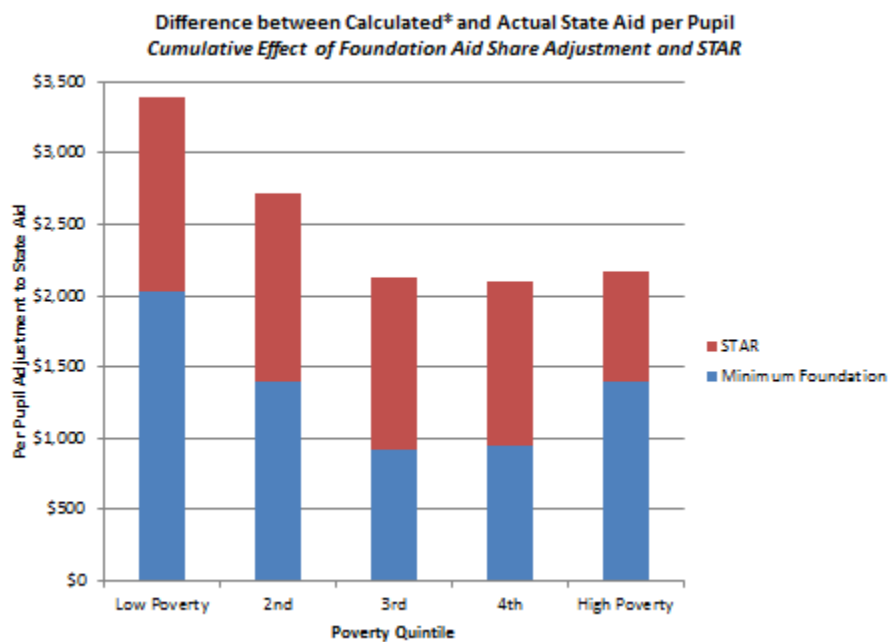


Figure 6 isolates the differences in adjusted formula funding versus estimated state share of foundation funding prior to adjustments. Then Figure 6 adds STAR aid per pupil. The effect of these shifts in state aid on the lowest poverty districts are to increase their state aid by nearly \$3,500 per pupil, while high poverty districts receive total adjustment of slightly greater than \$2,000 per pupil.

Table 6. Foundation and STAR Aid Estimates for Top and Bottom 5% Districts

District	Calculated Foundation State Aid per Pupil [a] 2011-12	Adjusted (Selected) Foundation Aid per Pupil [a] 2011-12	STAR per Pupil [b] 2008-09	Local Effort Rate [b] 2008-09
Most Advantaged				
ARDSLEY	\$0	\$2,335	\$2,453	16.49
BAYPORT BLUE	\$0	\$3,705	\$1,553	15.85
BREWSTER	\$0	\$2,669	\$1,543	14.89
HENDRICK HUDSON	\$0	\$2,263	\$2,429	12.14
HEWLETT WOODMERE	\$0	\$1,745	\$2,033	18.06
JERICHO	\$0	\$500	\$895	13.83
KATONAH LEWIS	\$0	\$1,167	\$1,978	14.32
LONG BEACH	\$0	\$1,473	\$1,537	13.06
LYNBROOK	\$0	\$2,686	\$1,565	15.63
MARLBORO	\$1,179	\$4,216	\$958	22.62
MINEOLA	\$0	\$1,703	\$1,646	13.46
MT PLEASANT CENTRAL	\$0	\$2,065	\$2,444	12.48
NANUET	\$0	\$2,621	\$1,116	15.02
NORTH SHORE	\$0	\$1,285	\$991	13.16
SAYVILLE	\$229	\$3,760	\$1,527	15.36
SYOSSET	\$0	\$1,562	\$1,243	13.80
Most Disadvantaged				
AMSTERDAM	\$7,228	\$8,132	\$1,032	15.21
BINGHAMTON	\$9,023	\$9,496	\$988	22.69
BRENTWOOD	\$12,012	\$12,764	\$453	11.01
BUFFALO	\$11,838	\$11,852	\$348	17.95
GLOVERSVILLE	\$8,925	\$9,499	\$859	18.46
JAMESTOWN	\$10,294	\$10,408	\$729	18.26
LACKAWANNA	\$10,709	\$11,261	\$517	22.27
LANSINGBURGH	\$8,520	\$9,301	\$807	15.38
NIAGARA FALLS	\$10,261	\$10,677	\$805	18.04
POUGHKEEPSIE	\$10,850	\$10,850	\$511	9.33
ROCHESTER	\$12,571	\$12,643	\$357	20.82
SCHENECTADY	\$10,259	\$10,974	\$875	20.66
SYRACUSE	\$11,289	\$11,619	\$300	20.79
UTICA	\$10,720	\$10,798	\$800	20.63
<i>Data Sources:</i>				
[a] Foundation formula simulation constructed from 2011-12 foundation aid formula district estimates (4/1/2011). Selected Foundation Aid is the calculation of what the foundation aid would be if the formula was funded at proposed 2011-12 levels. It is not the actual level of aid received in 2011-12.				
[b] NYSED FARU Fiscal Profiles http://www.oms.nysed.gov/faru/documents/masterfileforweb0809.xls				

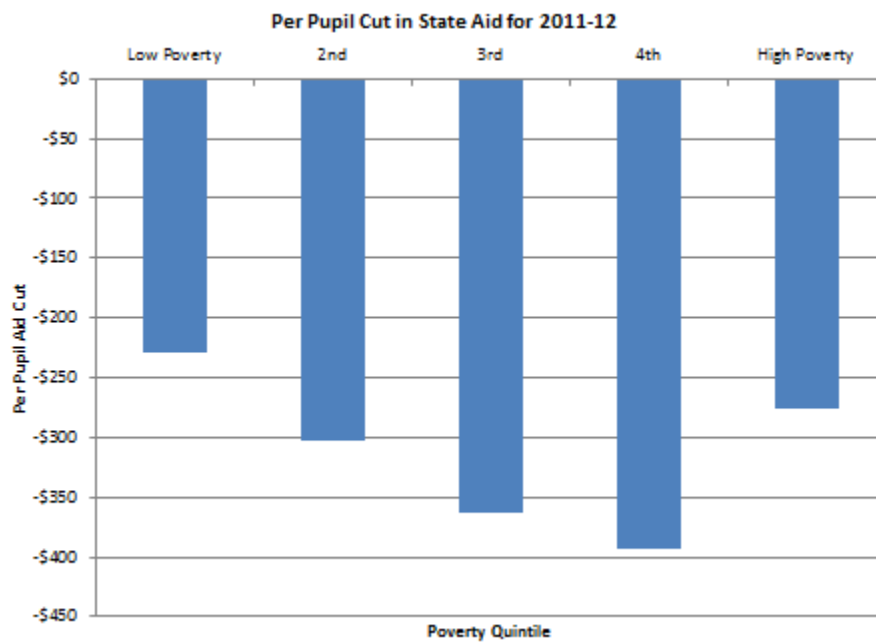
Table 6 summarizes the aid shifts for the most advantaged and most disadvantaged districts in the state, along with their current local effort rates. Currently, local effort rates tend to be comparable or even higher in disadvantaged districts calling into question the already dubious supposition of STAR that the wealthy are in greater need of tax relief. Table 6 shows that all but one of the advantaged school districts receive over \$1,000 per pupil in foundation aid, with more than half over \$2,000 per pupil in foundation state aid – aid that these districts arguably do not need. On top of that, most of these districts then receive at least \$1,000 per pupil in STAR aid. Meanwhile, the highest need and most financially deprived districts in the state receive only

marginal adjustments to their foundation aid and all but one receive less than \$1,000 per pupil in STAR aid.

5.1 Regressive Distribution of State Aid Cuts in 2011-12

Now that it is clear that there exists significant state aid allocated to very low poverty districts, many of which already spend well in excess of what they need in order to achieve “meaningful high school education,” it would obviously make little sense that if state aid cuts were levied, that those would have disproportionate negative effect on high poverty districts. Clearly, there is significant aid available to be cut from low poverty districts before ever touching aid to high poverty districts. As noted previously, foundation aid remains frozen at 2008-09 levels. But overall, aid levels were cut between 2010-11 and 2011-12. Figure 7 shows the average per pupil cuts in state aid by district poverty quintile. The smallest cuts per pupil occur in the lowest poverty districts and are far less, on average, than those districts currently receive in foundation aid, no less the sum of foundation aid and STAR aid.

Figure 7. Per Pupil Cuts in Total State aid



Data Source: Foundation formula simulation constructed from 2011-12 foundation aid formula district estimates (4/1/2011)

Table 7. Cuts for Top and Bottom 5% Districts

Advantaged Group		Disadvantaged Group	
Name	Cut per Pupil	Name	Cut per Pupil
ARDSLEY	-\$124	AMSTERDAM	-\$314
BAYPORT BLUE	-\$290	BINGHAMTON	-\$426
BREWSTER	-\$238	BRENTWOOD	-\$299
HENDRICK HUDSON	-\$130	BUFFALO	-\$271
HEWLETT WOODMERE	-\$143	GLOVERSVILLE	-\$203
JERICHO	-\$119	JAMESTOWN	-\$274
KATONAH LEWIS	-\$81	LACKAWANNA	-\$236
LONG BEACH	-\$255	LANSINGBURGH	-\$159
LYNBROOK	-\$132	NEW YORK CITY	-\$267
MARLBORO	-\$205	NIAGARA FALLS	-\$426
MINEOLA	-\$116	POUGHKEEPSIE	-\$399
MT PLEASANT CENTRAL	-\$239	ROCHESTER	\$57
NANUET	-\$167	SCHENECTADY	-\$383
NORTH SHORE	-\$41	SYRACUSE	-\$218
SAYVILLE	-\$407	UTICA	-\$32
SYOSSET	-\$111		
Average	-\$175	Average	-\$257

Data Source: Foundation formula simulation constructed from 2011-12 foundation aid formula district estimates (4/1/2011)

Table 7 summarizes the per pupil cuts for the most advantaged and most disadvantaged districts. The most disadvantaged districts in the state received per pupil cuts in aid that were significantly larger than those received by the most advantaged districts in the state. This might make sense if that's all there was left to cut from the most advantaged districts. But the previous table (Table 6) indicates that is hardly the case.

5.2 The Potential for Caps to Codify Existing Disparities

To add insult to injury, the 2011 New York State Legislature adopted a series of tax cap and education aid growth cap provisions that effectively lock the current inequities and inadequacies into place for the foreseeable future. First, the legislature adopted a 2% cap to the growth in total local levy (Chapter 97 of the Laws of 2011). That is, a district is not allowed to grow its total local levy by more than 2% in any given year (or the CPI, the lower of the two) even to simply accommodate growth in enrollment. Higher need districts are more dependent on state revenue than local revenue, and have lower local revenue per pupil to begin with. But this is a mixed blessing. If your local revenue is low, then a 2% increase of that number is low. Districts with low local revenue per pupil will be limited to smaller per pupil increases in revenue because the caps are proportionate to what they presently raise. In years where state aid comes up short, districts with depressed local revenues per pupil will be hard pressed to make up the difference while staying within their caps. Districts are permitted to override those caps if they can achieve

a 60% vote in local referendum. Such referenda override procedures have been shown to lead to increased inequities in other states such as Massachusetts.^{18, 19}

Finally, the 2011 State Legislature also capped their own ability to increase total state aid, increasing the likelihood that districts will need to increase their local levies and increasing the likelihood that inequities will emerge from uneven successes in override referenda. Growth in total education aid is now limited to growth in statewide personal income. But, it is not entirely clear whether this means that each district's growth in state aid will be similar limited to the statewide rate in personal income growth. I assume this to be the case. This state spending limitation provision effectively overrides any and all other calculations in the foundation aid formula. The override and cap provisions, are in effect, the new formula.

It is not as if the research on the relationship between tax and expenditure limits and public school quality is ambiguous. Several studies have shown the deleterious effects of strict tax and expenditure limits on the quality of elementary and secondary education. For example, Figlio (1998) in a study of Oregon's Measure 5 found that:

"Oregon student-teacher ratios have increased significantly as a result of the state's tax limitation."²⁰

Figlio and Rueben (2001) in the find:

"Using data from the National Center for Education Statistics we find that tax limits systematically reduce the average quality of education majors, as well as new public school teachers in states that have passed these limits."²¹

Finally, in a non-peer reviewed, but high quality working paper, Downes and Figlio (1998):

"find compelling evidence that the imposition of tax or expenditure limits on local governments in a state results in a significant reduction in mean student performance on standardized tests of mathematics skills."²²

¹⁸ K. L. Bradbury, C.J. Mayer, K.E. Case (2001) Property Tax Limits, Local Fiscal Behavior and Property Values: Evidence from Massachusetts under Proposition 2 ½ . *Journal of Public Economics* 80 (2001) 287–311

¹⁹ Small city school districts were subject to a 2% tax cap until 1985. That cap resulted in more than half of these districts teetering on the verge of bankruptcy before a state bailout via Hurd Aid.

²⁰ National Tax Journal Vol 51 no. 1 (March 1998) pp. 55-70

²¹ Journal of Public Economics (April 2001, Pages 49-71)

²² <http://ase.tufts.edu/econ/papers/9805.pdf>

6.0 The Intersection of State Aid and Educational Efficiency

As discussed previously, the foundation aid formula is built on analyses of spending behaviors of successful school districts, where a central premise is that the lower spending successful school districts are the most efficient. Therefore, a reasonable state aid formula would provide that level of resources which, if used efficiently, would provide for a meaningful high school education. Acknowledging the state defense of its “efficiency filter” analysis, it is certainly not in the interest of the state to allocate its limited financial resources at inefficiently high levels or to allocate aid in such a way as to encourage or stimulate inefficiency.

In 2011-12 about \$14.894 billion is allocated in payable foundation aid, with almost \$1 billion going to adjustments in the state share of foundation aid more heavily weighted to more affluent districts, and about \$700 million going to foundation aid for districts that otherwise wouldn’t receive foundation aid (See Appendix C). Further, in 2008-09, STAR aid totaled over \$3.5 billion and was targeted disproportionately to more affluent districts, a figure that has remained relatively constant through 2011-12 (in total). But how does this all relate to the state’s preferences for efficient allocation of aid, or allocation of aid to promote efficiency?

As it turns out, a handful of empirical research studies have evaluated specifically the efficiency consequences of New York STAR tax relief program. Specifically, authors have explored whether providing disproportionate property tax relief to more affluent communities in fact encourages those communities to spend more rather than tax less, and to potentially spend more while having less regard for the returns to the additional spending. Addressing the efficiency question directly, Tae Ho Eom and Ross Rubenstein (2006) found:

We test this hypothesis by examining the introduction of New York State’s large state-subsidized property tax exemption program, which began in 1999. We find evidence that, all else constant, the exemptions have reduced efficiency in districts with larger exemptions, but the effects appear to diminish as taxpayers become accustomed to the exemptions.²³

Jonah Rockoff (2010) similarly finds that STAR subsidies encouraged additional spending, but did not also explore efficiency consequences:

²³ Eom, T.H., Rubenstein, R. (2006) Do State Funded Property Tax Exemptions Increase Local Government Inefficiency? An Analysis of New York State’s STAR Program. Public Budgeting and Finance 26 (1) 66 - 87

I find that tax-price reductions for homeowners in New York State led to an increase in local school district expenditures, crowded out a significant portion of the intended tax relief, and raised taxes for other property owners. (p. 27)²⁴

To the extent that property tax relief was granted in greater proportion in more affluent communities, one might also expect STAR aid to have exacerbated inequities in addition to promoting inefficiency. Indeed that is precisely what Tae Ho Eom and Kieran Killeen (2007) found:

Similar to many property tax relief programs, New York State's School Tax Relief (STAR) program has been shown to exacerbate school resource inequities across urban, suburban, and rural schools. STAR's inherent conflict with the wealth equalization policies of New York State's school finance system are highlighted in a manner that effectively penalizes large, urban school districts by not adjusting for factors likely to contribute to high property taxation. As a policy solution, this article presents results of a simulation that distributes property tax relief using an econometrically based cost index. The results substantially favor high-need urban and rural school districts.²⁵

That is, while espousing the virtues of funding high poverty districts only to those levels where efficient attainment of meaningful high school education might occur, the State of New York continues to maintain and hold harmless against cuts, a state aid program which knowingly increases inequity and encourages inefficiency.

7.0 Policy Considerations

Here, I offer both short term and long term recommendations for moving New York State school finance toward the policy objective of providing equal opportunity for children in New York to attain a meaningful high school education. Three relatively obvious short term goals include:

1. Eliminate cap and override provisions that severely constrain high need local districts' ability to raise revenue when necessary and constrain the states' ability to raise and distribute necessary increases in state aid.

²⁴ Rockoff, J. (2010) Local Response to Fiscal Incentives in Heterogeneous Communities. Working Paper, National Bureau of Economic Research & Columbia University.
http://www0.gsb.columbia.edu/faculty/jrockoff/papers/local_response_draft_january_10.pdf

²⁵ Eom, T.H., Killeen, K. (2007) Reconciling State Aid and Property Tax Relief for Urban Schools: Birthing a New STAR in New York State. *Education and Urban Society* 40 (1) 36-61

2. Increase existing aid dramatically, target aid more aggressively to those districts that need it most, or both. This means taking aid from provisions like the minimum foundation aid and reallocating that aid based on wealth and need, or more generally restructuring the aid sharing ratios to target aid to those districts in greatest need.
3. Eliminate or restructure aid programs that distribute aid in ways that encourages inefficiency. This means eliminating STAR aid, and using state revenue saved to drive more funding into the foundation aid formula, specifically in a more targeted pattern according to wealth and need. Alternatively, STAR aid itself might be modified to be targeted with greater consideration for the needs and costs of local public school districts (as discussed by Eom and Killeen, 2007).

These short term solutions alone may amount to the reshuffling of as much as \$5 billion, which might go a long way toward improving equal educational opportunity in New York.

Other longer term endeavors are important to ultimately achieving and sustaining more equal educational opportunity and some of the groundwork has already been laid out. Specifically, the state must stop pretending that the present biennially updated successful schools analysis yields any valid measure of the cost of providing a meaningful high school education. While the majority of the court in 2006 did not refute this assumption, a state with such rich technical capacity can surely do better than this and should. Toward developing a better understanding of the true costs of providing a meaningful high school education, the state should:

1. Use the rich information generated by Dan Koretz to carefully consider the relationship between state assessment performance and genuine access to higher education, a reasonable metric for determining what constitutes a “meaningful high school education.”
2. Consider more rigorous empirical analyses in order to get a better handle on the costs and variations in costs of achieving a truly “meaningful high school education.”

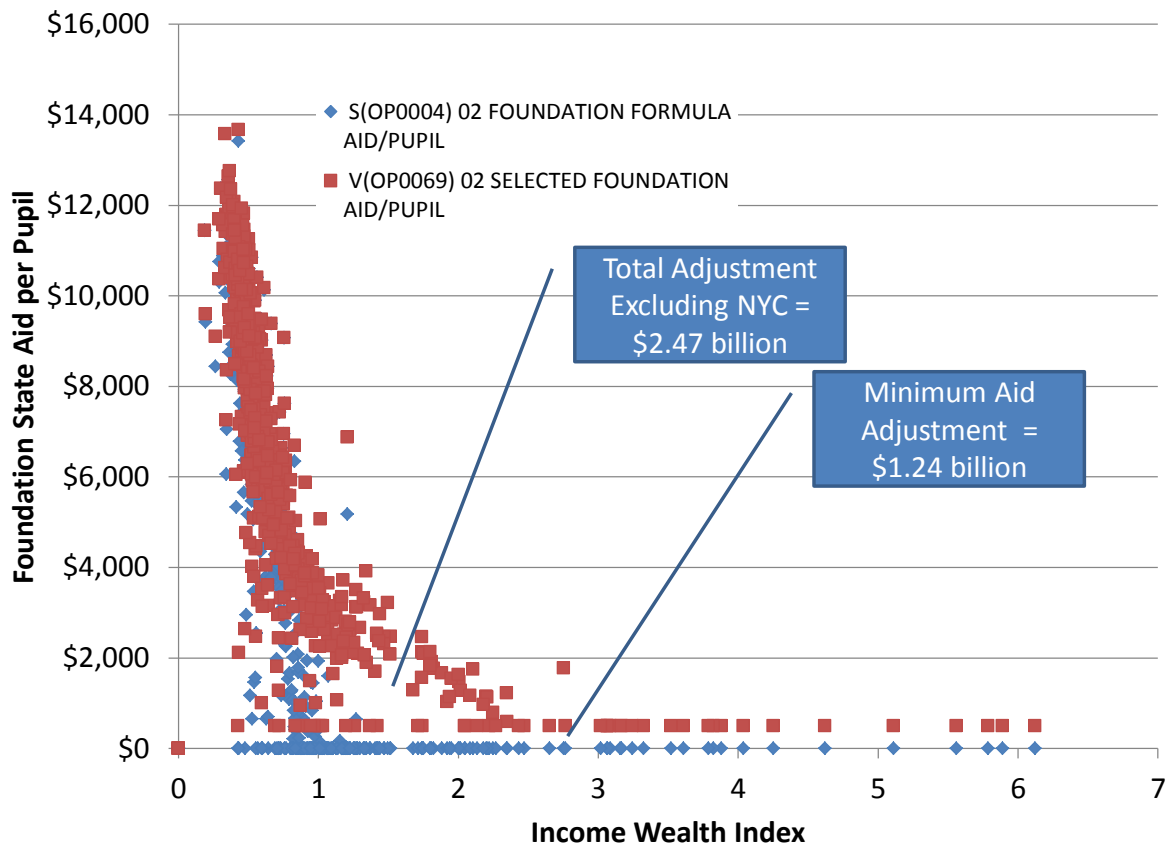
Further, the state should continue pursuing additional analyses linking k-12 and higher education data to determine factors and thresholds associated with college success. The Koretz analyses provide a useful preliminary assessment to build upon. Additional analyses, like those prepared by William Duncombe and used herein might more directly link more valid outcome standards to cost estimates, which may in turn guide more rational future foundation aid programs.

Appendix A – Duncombe Cost Model

	Level 3 or 4			Level 4 Only		
DV = Expenditure per Pupil [1]	Coef.	Std. Err.	P>t	Coef.	Std. Err.	P>t
Teacher Labor Cost [2]	1.511	0.124	*	1.804	0.083	*
Outcome Index [3]	2.611	0.824	*	0.778	0.165	*
Student Needs						
% Free or Reduced (2yr Avg.)	0.012	0.003	*	0.008	0.002	*
% Severe Disability (2yr Avg.)	0.009	0.002	*	0.010	0.002	*
Enrollment Size						
Enroll >250 and <500	-0.257	0.112	*	-0.301	0.138	*
Enroll >500 and <1000	-0.343	0.112	*	-0.399	0.138	*
Enroll >1,000 and <1,500	-0.386	0.112	*	-0.453	0.138	*
Enroll >1,500 and <2,000	-0.423	0.113	*	-0.502	0.139	*
Enroll >2,000 and <2,500	-0.411	0.113	*	-0.481	0.139	*
Enroll >2,500 and <3,000	-0.460	0.114	*	-0.540	0.140	*
Enroll >3,000 and <5,000	-0.474	0.114	*	-0.569	0.140	*
Enroll >5,000 and <7,500	-0.479	0.115	*	-0.570	0.141	*
Enroll >7,500 and <10,000	-0.511	0.116	*	-0.611	0.141	*
Enroll >10,000 and <15,000	-0.520	0.122	*	-0.646	0.144	*
Enroll >15,000	-0.513	0.188	*	-0.672	0.165	*
Indirect Efficiency Controls						
% Owner Occupied Housing Units (2000)	-0.002	0.001	*	-0.002	0.001	*
Per Pupil Adjusted Gross Income	2.089	0.562	*			
Per Pupil Adjusted Gross Income (squared)	-0.079	0.023	*			
Tax Share [4]	-0.180	0.024	*	-0.141	0.021	*
Total Aid Rate [5]	0.803	0.198	*	0.305	0.127	*
Year						
yr2003	0.014	0.011		0.032	0.009	*
yr2004	0.010	0.013		0.027	0.011	*
yr2005	0.010	0.016		0.021	0.012	**
yr2006	0.046	0.018	*	0.091	0.016	*
yr2007	0.065	0.021	*	0.112	0.020	*
Constant	-31.490	6.778	*	-12.160	1.038	*
Centered R2 = 0.2424				Centered R2 = 0.2532		
<p>[1] Total spending without tuition, transportation, debt service and other undistributed expenses</p> <p>[2] Estimated teacher salary for teachers with 1 to 5 years of experience, with average experience and average share with a graduate degree</p> <p>[3] Outcome index combines percentages of students scoring above threshold on state assessments in elementary (math, ELA and social studies), middle (Math, ELA and Science) and high school (math, English, global history, US History, Geography), and cohort 4 year graduation rates</p> <p>[4] Ratio of value of median residential value in each district divided by property values (with correction for STAR exemptions)</p> <p>[5] State Aid share (total aid rate, excluding building and transportation)</p> <p>Note: Teacher Wages and Outcome Index treated as endogenous. Instruments include average characteristics of other districts sharing labor market, including population density (based on county data), enrollment, percent nonwhite students, median house values and percent limited English Proficient Students.</p> <p>*p<.05, **p<.10</p>						

Appendix B – Foundation Aid State Share Adjustments

Effect of Foundation Aid Adjustments



Appendix C - Allocated State Aid 2011-12 Compared with Foundation Formula Aid Initial Estimate

Effect of Foundation Aid Adjustments - Final Allotment 2011-12

