Evaluation of New York State's School Finance System

Bruce D. Baker

Department of Educational Theory, Policy & Administration
Rutgers University
New Brunswick, NJ

October 23, 2013

Table of Contents

Introduction

According to Governor Andrew Cuomo, New York State's education funding problem is primarily one of inefficiency and not one of inequitable or inadequate funding.

> "The problem with education in New York is not money," Cuomo said. "We have one of the highest spending rates in the nation. Our performance isn't where our money is."[1]

From the Governor's perspective, the answer is not to provide additional funding or even to redistribute existing funding more equitably, but rather to cap spending growth and make local public schools and districts compete for any additional funds they might receive.

The Governor's view of school funding in New York State is difficult to reconcile with two recent national reports on school funding, both of which rebuked the state for its highly inequitable funding system and for its particularly poor treatment of districts serving high need student populations. New York State's school finance formula provides a striking example of poorly allocated and underfunded state aid, resulting in both substantial inequities in resources across higher and lower need districts and the children they serve and substantive inadequacies in resources specifically available to children attending high need districts. In the most recent edition of *Is School Funding Fair,* New York State received a grade of D for funding fairness and was (and remains) among the most inequitable states in the nation.[2]

Table 1 provides funding fairness estimates based on national data from 2009 to 2011 for the 15 least equitable states. Fairness is evaluated by the relationship between total state and local revenues per pupil and district concentrations of children in poverty. The national *School Funding Fairness* report card identifies as "regressive" funding formulas, those where districts with higher concentrations of children in poverty have predictably lower state and local revenue per pupil, as opposed to progressive states, where districts with higher concentrations of children in poverty have predictably higher state and local revenue per pupil.

Table 1 shows that New York State lies 7th from the bottom, with predicted state and local per pupil revenues in high poverty districts at 84% of predicted state and local per pupil revenues for low poverty districts. Predicted revenues are generated by a statistical model which corrects for regional differences in the competitive wage for teachers and differences in school district size and population density. The goal is to isolate the differences in spending

[1] http://www.wskg.org/wskg_news/cuomo-gets-mixed-reviews-schools-poll

[2] Baker, B. D., Sciarra, D. G., & Farrie, D. (2010). *Is School Funding Fair?: A National Report Card*. Education Law Center.

specifically associated with differences in student poverty concentration by controlling for other factors that may influence operating costs.

Table 1

Updated 2009-11 Estimates of State School Finance System Progressiveness/Regressiveness

	Predicted State & Local Revenue per Pupil [1]				
State Name	***0 percent poverty***	***10 percent poverty***	***20 percent poverty***	***30 percent poverty***	***Fairness Ratio[2]***
Nevada	$11,145	$9,857	$8,719	$7,712	0.69
North Carolina	$10,676	$9,530	$8,506	$7,593	0.71
New Hampshire	$14,696	$13,441	$12,293	$11,243	0.77
North Dakota	$11,851	$10,895	$10,016	$9,208	0.78
Vermont	$15,340	$14,118	$12,993	$11,958	0.78
Illinois	$13,032	$12,151	$11,330	$10,564	0.81
New York	$18,843	$17,767	$16,752	$15,796	0.84
Texas	$9,271	$8,885	$8,515	$8,160	0.88
Idaho	$7,292	$7,017	$6,753	$6,499	0.89
Maryland	$13,656	$13,167	$12,695	$12,240	0.90
Pennsylvania	$13,776	$13,351	$12,939	$12,541	0.91
Alabama	$9,160	$8,899	$8,646	$8,400	0.92
Iowa	$11,477	$11,160	$10,853	$10,554	0.92
Nebraska	$10,723	$10,455	$10,195	$9,940	0.93
Missouri	$9,428	$9,227	$9,030	$8,837	0.94

[1] Predicted state and local revenue based on 3-year model (2009-2011) of U.S. Census Fiscal Survey data, total state and local revenue per pupil as a function of a) adj. census poverty rate, b) enrollment size, c) county population density, d) regional competitive wage variation, and e) state.

[2] Fairness ratio = Predicted State & Local Revenue at 30% Poverty / Predicted State & Local Revenue at 0% Poverty

In another recent report from the Center for American Progress on *Stealth Inequities* in state school finance formulas, New York State is identified among states where state aid systems actually contribute to the funding inequities.[3] Specifically, the report shows that New York State allocates substantial state aid to its lowest need school districts through adjustments to foundation aid sharing ratios, including minimum aid and through a multi-billion dollar program which drives disproportionate property tax relief aid to wealthy downstate suburban districts.

[3] Baker, B. D., & Corcoran, S. P. (2012). The Stealth Inequities of School Funding: How State and Local School Finance Systems Perpetuate Inequitable Student Spending. *Center for American Progress*.

How Inequities Exacerbate Inadequacies

New York State's school finance system displays key elements of classic school funding formula failure.

1. Establishing inadequate foundation formula to begin with
2. Underfunding that formula
3. Applying secondary funding formulas that override original formula (caps & cuts)
4. Protecting aid programs and formula components that exacerbate inequity

First, in response to court order in Campaign for Fiscal Equity v. State, the state employed the highly malleable and empirically suspect approach of evaluating the spending of a *filtered* sample of "successful" school districts in order to set the basic funding level for the foundation aid formula.[4] Setting a low base figure necessarily leads to understating all other costs addressed in the formula, since all other cost factors are multiplied by that base. The state then chose almost immediately upon adoption to not fully fund the formula they had derived from these depressed "cost" estimates. In a two-step process, the state shortchanged the formula by freezing foundation aid at prior year levels and then implementing the deceitfully named "gap elimination adjustment." By 2013-14, many high need districts in the state receive only about 50% of the aid they are calculated to receive had the original formula ever been fully funded.

Next, in the name of stemming supposed out of control spending, the state imposed limits on increases to local property taxes as well as constraining its own ability to increase total state spending to needed levels. Local property tax limits, in effect, prohibit many districts from making up for the aid the state has not provided. As such, districts are unable to even achieve the level of spending the state has defined for them as sufficient to achieve desired outcomes. Meanwhile, the state continues to protect aid programs that might be tapped to redistribute much needed aid to high need districts, including tax relief programs that disproportionately favor more affluent school districts, minimum aid and other adjustments to local contribution requirements within the foundation aid formula.[5]

---

[4] Taylor, Baker and Vedlitz (2005) illustrate how this method is often applied toward achieving whatever finding the interested party wishes to achieve and how this method is unlikely to yield reasonable estimates of the actual costs of achieving desired outcomes. Taylor, L., Baker, B., & Vedlitz, A. (2005). Measuring educational adequacy in public schools. *College Station: Bush School of Government and Public Service, Texas A&M University*. This report was followed by a report for the National Research Council. Baker, B. D., Taylor, L. L., & Vedlitz, A. (2008). Adequacy estimates and the implications of common standards for the cost of instruction. *National Research Council*.

[5] Baker, B. D., & Corcoran, S. P. (2012). The Stealth Inequities of School Funding: How State and Local School Finance Systems Perpetuate Inequitable Student Spending. *Center for American Progress*.

While many of these factors are political concerns beyond the scope judicial evaluation of the constitutional claims in the present case, these political tradeoffs are indicative of a persistent unwillingness on the part of the legislature and governor to make reasonable attempts to improve current conditions – to achieve constitutionally adequate funding for all children statewide, where the courts have been entirely deferential to the state's definition of what constitutes adequate funding.

Inequities and inadequacies, while separable school finance concepts are, in important practical ways interconnected. [6] Given the information in Table 1 above, one might assert that even though high poverty New York State districts have fewer resources than lower poverty New York State districts, they clearly have more total state and local revenues than even lower poverty districts in other states, including Pennsylvania. The problem with this assertion is that the majority of cost pressures involved in providing adequate educational services are local or regional. It might be less expensive, for example, to provide adequate educational programs and services in Mount Vernon if not for the high labor costs stimulated by the spending behavior of far more affluent Westchester County districts, most of which can also provide more desirable working conditions. The spending behaviors of these surrounding districts necessarily influence the costs for all. Specifically, they influence the ability of districts to pay a competitive wage in order to recruit and retain quality teachers, the largest driver of school district expense.

Therefore, inequities across districts within labor markets often result in inadequacies for high need districts.

Further, students graduating from local public school districts in the same region must compete with each other for access to postsecondary education and employment. Those growing up in impoverished neighborhoods already face a substantial uphill challenge, a challenge that can be moderated by the provision of targeted interventions both in their communities and their schools. Those targeted interventions, which include early childhood education and reduced class sizes, among other things, cost money. If the money isn't there, the interventions won't be there either.

Comments on Efficiency

An argument that reoccurs with some consistency in debates over the adequacy of education funding is that there exists little or no proof that adding more money would likely have any measurable positive effects. This argument hinges on the oft repeated (and soundly

[6] Baker, B., & Green, P. (2008). Conceptions of equity and adequacy in school finance. *Handbook of research in education finance and policy*, 203-221.

refuted[7]) phrase that there exists "no systematic relationship between funding and outcomes." This argument fails to excuse the facial inequity of permitting some children attending some schools to have twice or more, the resources of others, especially where, as in New York State, higher need children are the ones with systematically fewer resources. Quite simply, if money doesn't matter, then why would some children need so much more than others?

The more recent extension of the "no systematic relationship" or "money doesn't matter" argument that now dominates political rhetoric regarding school spending is that all local public school districts already have more than enough money, even those with the least, and that if they simply used that money in the most efficient way, we could see that current spending is more than adequate. This assertion is echoed in the Governor's quote at the outset of this report. An extension of this argument is that therefore, even cutting funding to these schools would not cause harm and does not compromise the adequacy of their funding, if they take advantage of these cuts to improve efficiency.

A version of this argument goes that if schools and districts paid teachers based on test scores they produce, and if schools and districts systematically dismissed ineffective teachers, productivity would increase dramatically and spending could decline. Further, that because improving teacher quality is argued to be more effective and less costly than smaller class sizes toward improving student outcomes, one could increase class sizes dramatically (double them[8]), recapture the salary and benefits funding of those laid-off in the process and use that money to pay excellent teachers more. Thus, educational adequacy can be achieved at much lower cost – a much lower cost that what is currently even being spent. Such arguments provide the basis for the current batch of politically palatable resource-free reforms.

The most significant problem with this argument is that there exists absolutely no empirical evidence to support it.[9] It is entirely speculative, frequently based on the assertions that teacher workforce quality can be improved with no increase to average wages, simply by firing the 5% of teachers least effective at tweaking test scores each year and paying the rest based on the student test scores they produce, or that the funding wage increases required to substantively improve the teacher workforce is necessarily dramatically less costly than maintaining equally productive smaller class sizes.

---

[7] Baker, B. D. (2012). Revisiting the Age-Old Question: Does Money Matter in Education? *Albert Shanker Institute*.

[8] http://www.nytimes.com/2011/12/03/nyregion/bloombergs-remarks-on-teachers-draw-scrutiny.html?_r=0

[9] For a critique of oft-cited reports making these assertions, see: Baker, B., & Welner, K. G. (2012). Evidence and Rigor Scrutinizing the Rhetorical Embrace of Evidence-Based Decision Making. *Educational Researcher*, *41*(3), 98-101. For a more thorough critique, see:

Baker, B.D. & Welner, K.G. (2011). *Productivity Research, the U.S. Department of Education, and High-Quality Evidence*. Boulder, CO: National Education Policy Center. Retrieved [date] from http://nepc.colorado.edu/publication/productivity-research.

As Kevin Welner and I point out in a recent article in *Educational Researcher*, the logical way to test these very assertions would be to permit or encourage some schools and districts to experiment with alternative compensation strategies, and other "reforms," and to evaluate the cost effectiveness, or relative efficiency of these schools and districts. That is, do schools/districts that adopt these strategies land in a different location along the curve? Do they get the same outcomes with the same kids at much lower spending? In fact, some schools and districts do experiment with different strategies and those schools carry their relevant share of weight in any statewide cost model.

Too often, such experimentation falls disproportionately on the state's neediest children, because the state lacks the political will to provide sufficient funding to districts serving those children. Pure speculation that some alternative educational delivery system would produce better outcomes at much lower expense is certainly no basis for making a judicial determination regarding constitutionality of existing funding. Experimentation is no substitute for adequacy.

Recent and ongoing litigation over school funding adequacy in Kansas provides useful parallels to New York State. In 2006, the Kansas high court dismissed *Montoy v. Kansas*, accepting the legislature's proposed 3-year phase-in remedy based on cost estimates developed by the state. The state legislature and governor immediately retreated from the proposed phase-in, and found itself in court again in the case of *Gannon vs. Kansas*, where plaintiffs argued that the state itself had – under court order – determined what it considered to be constitutionally adequate funding and that the state had then chosen to disregard its own remedy. The state's central theory at trial was similar to that laid out above – because money doesn't really matter, and all districts already spend more than they would need to *efficiently* provide adequate education, then substantial cuts don't matter. Thus, no harm is caused and certainly no constitutional violation exists.

Regarding this theory, a three judge panel eloquently opined:

> Here, it is clearly apparent, and, actually, not arguably subject to dispute, that the state's assertion of a benign consequence of cutting school funding without a factual basis, either quantitatively or qualitatively, to justify the cuts is, but, at best, only based on an inference derived from defendant's experts that such costs *may possibly* not produce the best value that can be achieved from the level of spending provided.

Further, that:

> This is simply not only a weak and factually tenuous premise, but one that seems likely to produce, if accepted, what could not be otherwise than characterized as sanctioning an unconscionable result within the context of the education system.

And:

> Simply, school opportunities do not repeat themselves and when the opportunity for a formal education passes, then for most, it is most likely gone.

The judges went on to tackle the logical extension of the state's argument, noting that the state was effectively endorsing experimentation on children who have "no recourse from a failure of the experiment."

> If the position advanced here is the State's full position, it is experimenting with our children which have no recourse from a failure of the experiment. Here, the legislative experiment with cutting funding has impacted Kansas children's K-12 opportunity to learn for almost one-third of their k-12 educational experience (2009-10 through 2012-13).[10]

Notably, in Kansas, the remedy proposed and adopted by the state while imperfect, was more robust than that proposed in New York and the funding shortfalls and cuts in Kansas were, as a proportion of the remedy, smaller though still substantial. As a result, while Kansas school funding remains in decline[11] with no new remedy in sight Kansas state school finance system remains less regressive than New York's.

From CFE to Minimum Sound Basic Spending Targets & Foundation Aid

I close this introduction with a walkthrough of the recent historical and conceptual underpinnings and resulting elements of the New York State foundation aid formula. Briefly, the history and logic behind the current foundation aid formula is as follows. The 2007 foundation aid formula was adopted by the state specifically to achieve compliance with the high court's order in Campaign for Fiscal Equity. The state argued that this new formula was built on sound empirical analysis of the spending behavior of districts that achieved adequate outcomes on state assessments. The state argued that the foundation formula applied this evidence, coupled with additional *evidence-based* adjustments to address student needs and regional cost variation, in order to identify a specific target level of per pupil spending for each district statewide, which would provide comparable opportunities to achieve adequate educational outcomes.

To summarize and rephrase:

1. The court mandated in C.F.E. that the state establish a finance system that would ensure the provision of a "sound basic education" for New York City;

[10] http://www.shawneecourt.org/DocumentCenter/View/457
[11] http://www.cbpp.org/cms/index.cfm?fa=view&id=4011

2. The state (The Regents & NYSED) defined empirically, in terms of student outcomes, a school or district level standard of 80% proficient or higher on state assessments as an indication that funding was sufficient;
3. The State (The Regents & NYSED) determined that the lower spending half of districts achieving this outcome standard represented those achieving the adequate outcome standard at *efficient* spending levels;
4. The Regents and NYSED then proposed, and the Legislature and Governor eventually adopted statewide, a Foundation Aid Formula that embedded as its target for each local public school district, a spending figure built on the "successful schools" analysis.
5. The Legislature, Regents, NYSED and the Governor adopted a formula for determining the share of that spending target to be funded through state aid and the share to be raised locally.

Put simply, the spending targets arrived at via successful schools analysis, with weights applied through the foundation aid formula, are the state's (The Regents, NYSED, the Governor and the Legislature) own empirical representation of district spending levels required to meet their constitutional mandate, as laid out in C.F.E. The foundation aid formula *IS* the state's own definition of its constitutional responsibility to provide for local public school districts to achieve sufficient spending levels to produce adequate educational outcomes.

With deference to the state's own definitions and calculations, this leads to two very simple comparisons for evaluating whether the state has met its constitutional obligation:

1. **State Aid Gaps:** How does current state aid received by local public school districts compare to the state aid that should be received when carrying out the calculations of full implementation of the foundation aid formula?
2. **Sound Basic Spending Gaps:** How does current general education instructional spending per pupil compare with sound basic spending per pupil as represented by the spending targets established in the foundation aid formula, derivative of the successful schools model?

Section 1.0 of this report provides detailed analyses of both State Aid Gaps and Sound Basic Spending Gaps, with emphasis on small city plaintiffs' school districts.

Notably, with deference to the state's own definitions and calculations, the question of "efficiency" addressed earlier is moot. That is, the state is in no position to argue that the sound basic spending targets they have set for their funding formula are inefficiently high and that districts should be expected to achieve the desired outcomes with less than current state estimates of need. The state, by its own declaration has already accounted for efficiency in its

estimation of sound basic spending targets. The state has determined its own spending targets for all districts based on the average spending of successful districts that meet the imposed efficiency requirements.

1.0 State Aid Gaps and Sound Basic Spending Gaps

In this section, I begin by providing a walkthrough of how the foundation aid formula is intended to work, specifically focusing on the determination of state aid toward financing each district's *sound basic education target* level of per pupil general instructional expense. In section 1.2 I show how the state failed to ever implement (or even come close) the original proposed phase in amounts of state aid, in the years following C.F.E.

Next, in Section 1.3, I compare the state aid that *should be* provided to achieve this target spending level to the state aid that *actually has been* provided in recent Years. I show that:

- For some high need small city school districts including Utica, state aid shortfalls (from estimated need) are nearly 50% and most state aid shortfalls for small city districts studied herein are greater than 30%.
- State aid shortfalls per pupil in average daily membership in most cases exceed $3,000 per pupil and in select cases exceed $4,000 per pupil. In Utica the state aid shortfall exceeds $6,000 per pupil.

To summarize section 1.3, the state has adopted a formula whereby the explicit design of that formula is to first calculate a target level of general instructional spending per pupil and second, to determine the share that the state will pay toward that spending target. Yet, state aid to these high need, small city districts in some cases barely exceeds 50% of the aid that the state itself estimate to be needed in order to fund the *sound, basic education target.*

Next, in Section 1.4, I compare small city district's actual general instructional spending per pupil to their sound, basic spending targets. Notably, because districts have been so shorted of state aid, many have levied much higher local tax effort than would otherwise be required, in an attempt to close the gap. But, as I show in Section 1.4, when comparing General Education Instruction Spending to sound, basic education targets, applying the most recent figures, all small city districts fall short, and many well short.

- Kingston, Utica, Niagara Falls and Newburgh each have general instructional spending per pupil more than $3,000 below sound, basic spending targets.

- Mt. Vernon, Jamestown and Poughkeepsie each have general instructional spending per pupil greater than $4,000 below sound, basic spending targets.

Finally in section 1.5, I show that all but Poughkeepsie have greater than average local effort rates. Meanwhile districts that have little or no foundation aid state aid gap tend to have much lower local effort rates. Notably, because of the relative weakness of Poughkeepsie's tax base, additional levy increases would do little to offset state aid gaps and spending shortfalls.

1.1 Formula Basics

The New York State foundation aid formula may be described as follows.

District Foundation Aid per Pupil = [Foundation Amount X Pupil Need Index X Regional Cost Index] – Expected Minimum Local Contribution

That is, the state determines the need and cost adjusted target spending 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 reasonable only 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 2012-13, the inflation adjusted foundation level of funding [for aid calculation purposes] was set to $6,580[12], 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,

[12] See: http://www.oms.nysed.gov/faru/PDFDocuments/Primer12-13A.pdf.

"The Foundation Amount is the cost of providing general education services. It is measured by determining instructional costs of districts that are performing well. It is adjusted annually to reflect the percentage increase in the consumer price index. For 2007-08 aid, it is $5,258. It is further adjusted by the phase-in foundation percent. For 2009-10, the adjusted amount is: $5,410 x 1.038 (CPI) x 1.025 (phase-in), or $5,756. For 2010-11, the adjusted amount is: $5,708 x 0.996 x 1.078, or $6,122. For 2011-12, the adjusted amount is: $5,685 x 1.016 x 1.1314, or $6,535. For 2012-13, the adjusted amount is: $5,776 x 1.032 x 1.1038, or **$6,580.**"

In this case, the matching 2012-13 figure is arrived at by taking P(OP0002) 02 ADJUSTED FOUNDATION AMT/PUPIL for each district and dividing by PNI [O(PC0409) 05 PNI = 1 + EN%, MIN 1; MAX 2] then RCI [N(MI0123) 03 REGIONAL COST INDEX (RCI)], from: File DBSAD1, 3-29-12. Prior years also match. Interestingly, however the 2013-14 aid worksheets yield a foundation level of only $6,515, or a cut to the foundation level of $65.

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 district's 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.* [13]

That is, no matter whether a district could raise double or triple their target spending 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.

1.2 Failure to Fund the Original CFE Remedy

The 2007 foundation aid formula was adopted by the state specifically to achieve compliance with the high court's order in Campaign for Fiscal Equity. The state argued that this new formula was built on sound empirical analysis of the spending behavior of districts that achieved adequate outcomes on state assessments. The state argued that the foundation formula applied this evidence, coupled with additional *evidence-based* adjustments to address student needs and regional cost variation, in order to identify a specific target level of per pupil spending for each district statewide, which would provide comparable opportunities to achieve adequate educational outcomes. The state determined the share of that target spending to be raised through local tax revenues and estimated the amount to be paid by the state toward achieving each districts' *sound basic spending target.*

Then, they simply failed to fund it.

The Foundation Aid formula was to be phased in from 2007 to 2010-2011. The data behind the base spending calculation had been drawn from 2003-2005, and included general education instructional spending of school districts that a) achieved 80% proficiency rates on state assessments, and b) were in the lower half spending districts among those who achieved

[13] http://www.cfequity.org/pdfs/resources/11.20.06CourtRuling-NYSLRB.pdf

desired outcomes. The formula for transitioning these figures to spending targets involves a combination of inflation adjustment, and phase-in percent to bring the dated estimates up to date and project the annual increases for hitting the adequate spending target in future years – four years out in the case of the original proposed remedy.

Table 2 and Table 3 address the original remedy state aid shortfalls for small city plaintiffs' districts. Even by 2013-14, these districts remained 23% to 30% below state aid levels for the fourth year of phase in in 2010-11. On a per pupil basis (Table 3), by 2013-14 most were still over $2,000 per pupil below the original 2010-11 phase in target.

Table 2

	Foundation Aid as Originally Enacted [without phase-in percentage or cost of living adjustments]						Actual State Aid		
Small City	*2006-07 Foundation Aid Base*[1]	*2007-08 Foundation Aid*	*2008-09 Foundation Aid*	*2009-10 Foundation Aid*	*2010-11 Foundation Aid*		Actual 2012-13[2]	Actual 2013-14[3]	GAP 2013-14
Jamestown	$33,405,788	$37,290,804	$43,895,331	$50,150,207	$52,830,869		$37,639,646	$39,202,717	26%
Kingston	$33,789,116	$36,568,341	$41,293,023	$45,767,575	$47,685,241		$31,536,228	$33,566,660	30%
Mt Vernon	$57,574,811	$60,666,934	$65,923,543	$70,901,861	$73,035,427		$50,992,370	$52,894,029	28%
Newburgh	$76,705,390	$87,094,761	$104,756,692	$121,483,580	$128,652,247		$82,817,153	$85,959,169	33%
Niagara Falls	$60,187,673	$65,831,488	$75,425,974	$84,512,517	$88,406,750		$64,160,722	$66,995,889	24%
Port Jervis	$19,697,385	$21,848,862	$25,506,374	$28,970,253	$30,454,773		$21,862,206	$22,629,422	26%
Poughkeepsie	$39,808,009	$43,637,357	$50,147,249	$56,312,500	$58,954,751		$43,644,123	$45,199,828	23%
Utica	$54,499,785	$63,371,138	$78,452,438	$92,735,317	$98,856,552		$67,209,809	$69,569,176	30%

[1] Worksheet provided by New York State Division of Budget, 2007-08

[2] (Foundation Aid [DBSAA1, 3-29-12, E(FA0197) 00 2012-13 FOUNDATION AID] + GEA [AA(FL0026) 00 2012-13 GAP ELIM ADJUST ON BT1213] + GEA Partial Restoration [AB(FL0027) 00 2012-13 GAP ELIMINATION ADJMT RESTORATION])

[3] (Foundation Aid [DBSAA1, 03/26/13, E(FA0197) 00 2013-14 FOUNDATION AID] + GEA [AA(FA0186) 00 2012-13 GAP ELIMINATION ADJUSTMENT (SA1213)] + GEA Partial Restoration [AB(FA0187) 00 2013-14 GEA RESTORATION])

Table 3

	Foundation Aid as Originally Enacted [without phase-in percentage or cost of living adjustments]						Actual State Aid		
Small City	2006-07 Foundation Aid Base (per DCAADM)	2007-08 Foundation Aid (per DCAADM)	2008-09 Foundation Aid (per DCAADM)	2009-10 Foundation Aid (per DCAADM)	2010-11 Foundation Aid (per DCAADM)		Actual 2012-13 (per DCAADM)	Actual 2013-14 (per DCAADM)	GAP 2013-14 (per DCAADM)
Jamestown	$6,502	$7,258	$8,504	$9,680	$10,359		$7,380	$7,687	**$2,672**
Kingston	$4,467	$4,834	$5,563	$6,151	$6,654		$4,401	$4,684	**$1,970**
Mt. Vernon	$6,035	$6,359	$7,388	$7,904	$8,203		$5,727	$5,940	**$2,262**
Newburgh	$6,123	$6,952	$8,487	$10,098	$11,035		$7,103	$7,373	**$3,662**
Niagara Falls	$7,384	$8,076	$9,451	$10,719	$11,602		$8,420	$8,792	**$2,810**
Port Jervis	$6,155	$6,828	$7,872	$9,025	$10,028		$7,199	$7,451	**$2,577**
Poughkeepsie	$8,215	$9,005	$10,443	$12,066	$12,808		$9,482	$9,820	**$2,988**
Utica	$5,967	$6,939	$8,328	$9,592	$10,115		$6,877	$7,119	**$2,997**

[1] Worksheet provided by New York State Division of Budget, 2007-08

[2] (Foundation Aid [DBSAA1, 3-29-12, E(FA0197) 00 2012-13 FOUNDATION AID] + GEA [AA(FL0026) 00 2012-13 GAP ELIM ADJUST ON BT1213] + GEA Partial Restoration [AB(FL0027) 00 2012-13 GAP ELIMINATION ADJMT RESTORATION])

[3] (Foundation Aid [DBSAA1, 03/26/13, E(FA0197) 00 2013-14 FOUNDATION AID] + GEA [AA(FA0186) 00 2012-13 GAP ELIMINATION ADJUSTMENT (SA1213)] + GEA Partial Restoration [AB(FA0187) 00 2013-14 GEA RESTORATION])

1.3 Persistent *State Aid Gaps*

By design and empirical underpinnings of the state aid formula, the current "adequacy" target (according to the foundation aid formula) is the fully phased in adequacy target per (selected) aidable pupil unit, or, as laid out above:

PNI x RCI x Base = State Prescribed Adequacy Target[14]

This formula adequacy target represents what the state itself adopted as the quantification of its own constitutional obligation to provide for a sound basic education. Later in this brief, I challenge the validity of this target, but for purposes of this section, it is appropriate to consider this figure as the state's own definition of its constitutional obligation.

The state aid per pupil (TAFPU) to reach that state prescribed adequacy target is then:

Adj. Foundation per Pupil – Local Contribution per Pupil = State Share per Pupil

And the total state aid to be received, if the formula was both fully phased in and fully funded is:

State Share per Pupil x TAFPU = Foundation Aid [before phase in]

Where "phase in" refers to the fact that the foundation formula is intended to scale toward full adequacy funding over three year periods (originally, four years reaching the target in 2011). Phase in, as referred to in this case, is a reduction to the target funding, representing the progress toward fully phased in funding to be made in the coming year. In the following analyses, and as represented above, I compare current funding against foundation aid before this reduction (phase in) is applied.

Thus, the extent of underfunding is:

State Aid to Reach Adequacy Target – Actual Foundation Formula Funding (after all adjustments) = Underfunding

The underfunding of the foundation formula results from two specific calculations. First, instead of actually basing foundation aid on the above calculations – that is, the actual formula – aid is simply frozen[15] (or proportionately marginally increased) relative to prior year total (not

[14] DBSAD1, 3-29-12, P(OP0002) 02 ADJUSTED FOUNDATION AMT/PUPIL
[15] DBSAA1, 3-29-12, E(FA0197) 00 2012-13 FOUNDATION AID

per pupil) aid. Then, in a two-step calculation, aid is reduced using the Gap Elimination Adjustment and then partially restored for most districts.[16]

For example, for the city of Utica:

$$\$10{,}944_{\text{Foundation aid per TAFPU}} \times 11{,}830_{\text{TAFPU}} = \$129{,}465{,}746_{\text{Foundation Aid (before phase in)}}$$

But, as noted in Table 3, estimated actual (frozen) foundation aid is:

Estimate for 2012-13 = $72,198,981

So the preliminary foundation aid funding gap for Utica is:

$$\$129{,}465{,}746_{\text{Foundation Aid (before phase in)}} - \$72{,}198{,}981_{\text{Aid Based on Prior Year}} = \$57{,}266{,}765_{\text{Preliminary Aid Gap}}$$

But this is the gap before applying the Gap Elimination Adjustment. The deceptively named Gap Elimination Adjustment (or GEA) is really just a cut to state aid, which on average, falls more heavily on districts more dependent on state aid, or higher need districts. In 2012-13 the initially proposed GEA was worse than the finally adopted GEA, due to a partial restoration of the cut (for most districts). But, the GEA partial restoration is not an aid increase, by any stretch. Rather, it's merely a small reduction to a large cut.

The real gap for Utica is, therefore, as follows:

$$\$72{,}198{,}981_{\text{Aid Based on Prior Year}} - \$4{,}989{,}172_{\text{GEA}} + \$0_{\text{GEA Partial Restoration}} = \$67{,}209{,}809_{\text{Actual Aid}}$$

So:

$$\$129{,}465{,}746_{\text{Foundation Aid (before phase in)}} - \$67{,}209{,}809_{\text{Actual Aid}} = \$62{,}255{,}937_{\text{Actual GAP}}$$

In Table 4, we see that Utica actually receives only about half of the total state aid it should receive if the formula was funded. Other small city districts face similar shortfalls, with Utica also receiving about half of the state aid estimated as needed under the state foundation aid formula.

Table 5 provides an alternative, per pupil calculation of the degree of state aid underfunding across Small City districts and New York City. First, I determine the Aid Gap per Aidable Foundation Pupil Unit – the weighted pupil count used in the formula. But this count includes weightings for children with disabilities, and is not the best representation of actual enrolled students in the district. As an alternative I calculate the foundation aid gap per

[16] DBSAA1, 3-29-12, GEA [AA(FL0026) 00 2012-13 GAP ELIM ADJUST ON BT1213] + GEA Partial Restoration [AB(FL0027) 00 2012-13 GAP ELIMINATION ADJMT RESTORATION])

Duplicated Combined Adjusted Average Daily Membership, or DCAADM[17] which is commonly used in the state fiscal profiles files for calculating per pupil amounts. Small city foundation aid gaps per DCAADM range from around $2,500 to over $6,000.

[17] Duplicated CAADM. This item (Duplicated Combined Adjusted Average Daily Membership or DCAADM) is the pupil count used to calculate per pupil amounts for the revenue items and expenditure categories. The pupil count is based on data from State aid worksheets and Basic Educational Data System forms. This pupil count is the best count of the number of students receiving their educational program at district expense. DCAADM includes the average daily membership (ADM) of students enrolled in district programs (including half-day kindergarten pupils weighted at 0.5); plus equivalent secondary attendance of students under 21 years of age who are not on a regular day school register plus pupils with disabilities attending Boards of Cooperative Educational Services (BOCES) full time plus pupils with disabilities in approved private school programs including State schools at Rome and Batavia plus resident students for whom the district pays tuition to another school district plus incarcerated youth. Beginning with the 1999-2000 school year, pupils resident to the district but attending a charter school are included. Beginning with the 2007-08 school year, students attending full-day Pre-K are weighted at 1.0, 1/2 day Pre-K weighted at 0.5. Since residents attending other districts were also included in the CAADM count of the receiving district, this pupil count is a duplicated count. The State total consists of the sum of the rounded pupil counts of each school district. Data Source: State Aid Suspense File. See: http://www.oms.nysed.gov/faru/Profiles/18th/revisedAppendix.html

Table 4

Underfunding of State Foundation Aid Formula 2012-13

District	Foundation Aid per TAFPU[1]	Selected TAFPU[2]	Aid before Phase In [3] '000s	Foundation Aid[4] '000s	Foundation After GEA [5] '000s	GAP [6] '000s	Percent of Target [7]
JAMESTOWN	$10,531	5,707	$60,102	$40,986	$37,640	$22,462	37.4%
POUGHKEEPSIE	$11,125	5,436	$60,475	$47,811	$43,644	$16,831	27.8%
NEW YORK CITY	$7,142	1,252,595	$8,945,983	$6,233,952	$5,548,166	$3,397,818	38.0%
NIAGARA FALLS	$10,783	8,591	$92,639	$70,264	$64,161	$28,478	30.7%
UTICA	$10,944	11,830	$129,466	$72,199	$67,210	$62,256	48.1%
NEWBURGH	$10,154	13,062	$132,630	$94,606	$82,817	$49,813	37.6%
PORT JERVIS	$9,572	3,699	$35,406	$24,731	$21,862	$13,544	38.3%
KINGSTON	$5,922	8,369	$49,564	$39,400	$31,536	$18,028	36.4%
MOUNT VERNON	$7,066	10,771	$76,113	$62,949	$50,992	$25,120	33.0%

[1] File DBSAD1, 3-29-12, V(OP0069) 02 SELECTED FOUNDATION AID/PUPIL
[2] File DBSAD1, 3-29-12, M(OP0088) 00 SELECTED TAFPU
[3] File DBSAD1, 3-29-12, W(FA0001) 00 FOUNDATION AID BEFORE PHASE-IN
[4] File DBSAA1, 3-29-12, E(FA0197) 00 2012-13 FOUNDATION AID
[5] (Foundation Aid [DBSAA1, 3-29-12, E(FA0197) 00 2012-13 FOUNDATION AID] + GEA [AA(FL0026) 00 2012-13 GAP ELIM ADJUST ON BT1213] + GEA Partial Restoration [AB(FL0027) 00 2012-13 GAP ELIMINATION ADJMT RESTORATION])
[6] Difference between Aid Before Phase-in & Actual Foundation After GEA
[7] Gap as a percent of Aid Before Phase-in

Table 5

Per Pupil Gaps in Funding due to Underfunding of Foundation Aid Formula 2012-13

District	DCAADM[1]	Selected TAFPU[2]	RCI[3]	PNI[4]	Adj. Foundation per Pupil [5] [Target]	Calculated Foundation Aid per TAFPU[6]	Actual Foundation (after GEA) per TAFPU[7]	GAP (per TAFPU)[8]	GAP per DCAADM[9]
JAMESTOWN	5,100	5,707	1.09	1.63	$11,701	$10,531	$6,595	-$3,936	-$4,404
POUGHKEEPSIE	4,603	5,436	1.31	1.77	$15,304	$11,125	$8,029	-$3,096	-$3,656
NEW YORK CITY	1,057,158	1,252,595	1.43	1.79	$16,765	$7,142	$4,429	-$2,713	-$3,214
NIAGARA FALLS	7,620	8,591	1.09	1.67	$11,981	$10,783	$7,468	-$3,315	-$3,737
UTICA	9,773	11,830	1.00	1.85	$12,160	$10,944	$5,681	-$5,263	-$6,370
NEWBURGH	11,659	13,062	1.31	1.65	$14,240	$10,154	$6,340	-$3,814	-$4,273
PORT JERVIS	3,037	3,699	1.31	1.48	$12,831	$9,572	$5,910	-$3,661	-$4,460
KINGSTON	7,166	8,369	1.31	1.43	$12,390	$5,922	$3,768	-$2,154	-$2,516
MOUNT VERNON	8,904	10,771	1.31	1.62	$14,041	$7,066	$4,734	-$2,332	-$2,821

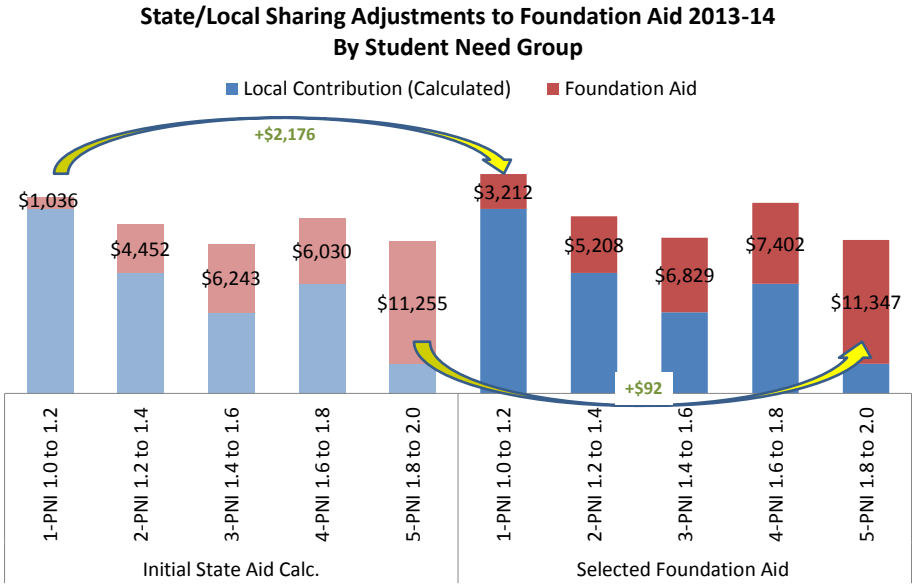
[1]NYSED FARU District Fiscal Profiles (http://www.oms.nysed.gov/faru/Profiles/profiles_cover.html) 2010-11
[2]File DBSAD1, 3-29-12, M(OP0088) 00 SELECTED TAFPU
[3]File DBSAD1, 3-29-12, N(MI0123) 03 REGIONAL COST INDEX (RCI)
[4] File DBSAD1, 3-29-12, O(PC0409) 05 PNI = 1 + EN%, MIN 1; MAX 2
[5] File DBSAD1, 3-29-12, P(OP0002) 02 ADJUSTED FOUNDATION AMT/PUPIL
[6] File DBSAD1, 3-29-12, V(OP0069) 02 SELECTED FOUNDATION AID/PUPIL
[7] (Foundation Aid [DBSAA1, 3-29-12, E(FA0197) 00 2012-13 FOUNDATION AID] + GEA [AA(FL0026) 00 2012-13 GAP ELIM ADJUST ON BT1213] + GEA Partial Restoration [AB(FL0027) 00 2012-13 GAP ELIMINATION ADJMT RESTORATION]) / M(OP0088) 00 SELECTED TAFPU
[8]Difference between Calculated Foundation Aid per TAFPU and Actual (after GEA & Partial Restoration)
[9]Foundation Aid Gap per TAFPU x Selected TAFPU / DCAADM

The 2013-14 budget passed in spring 2013 provided some additional aid to school districts including small city districts. High need districts may expect to receive around $200 to $400 per pupil. Further, higher need districts can expect to receive on average, larger increases than lower need increases. But, in the highest need districts, there remain gaps in state aid relative to the state's own *sound basic state aid target* of nearly $4,000 per pupil. That is, the additional funding for 2013-14 was less than 10% of the remaining shortfall. If the *state aid target* was to stay constant, it would still take 10 more years at the current rate of increase in order to close the gap. During that time, a cohort of first graders would be making their way to their junior year in high school. Even worse, ten years from now, that which was estimated to provide a *sound basic education* in the current year will be far from adequate. That is, the state is chasing a moving target, but falling further and further behind each year.

To reiterate an important previous caveat, while lower need, higher wealth districts on average also face state aid gaps, many of these districts could, with equitable local effort spend as much of not more than needed to achieve sound basic spending levels. And many, in fact do. But, some of these districts have state aid shortfalls because of the numerous political tradeoffs remaining in the state aid formula. Figure 1 displays the distribution of tradeoffs within the foundation aid formula (setting aside other aid programs like STAR). The left hand side of Figure 1 shows the aid that would be received, per pupil by need group, if the state allocated aid based on the initial determination of required local contribution and spending targets. The right hand side of Figure 1 shows the calculated aid after including adjustments to state sharing ratios and including minimum aid for the wealthiest districts.

On average, these adjustments boost aid targets for the lowest need districts by over $2,000 per pupil, while upwardly adjusting per pupil aid targets for high need districts by only $92 per pupil.

Figure 1



Note: Local contribution is the per pupil (aidable pupil unit) local contribution estimated in state aid run worksheets (March 26, 2013). Initial State Aid is the calculation of state aid (per aidable pupil unit) prior to application of alternative aid sharing ratio and/or minimum aid. Selected Foundation aid is foundation aid after adjustments for state/local share, including minimum aid.

Figure 2 shows the per pupil aid increases for 2013-14 across districts by pupil need index and specifically for small city school districts. Indeed, the aid increases are systematically greater for higher need districts, but as shown in Figure 2, those increases are far from sufficient to put a dent in existing state aid gaps. Aid increases for some of the highest need small cities, such as Utica, are particularly inadequate.

Figure 2

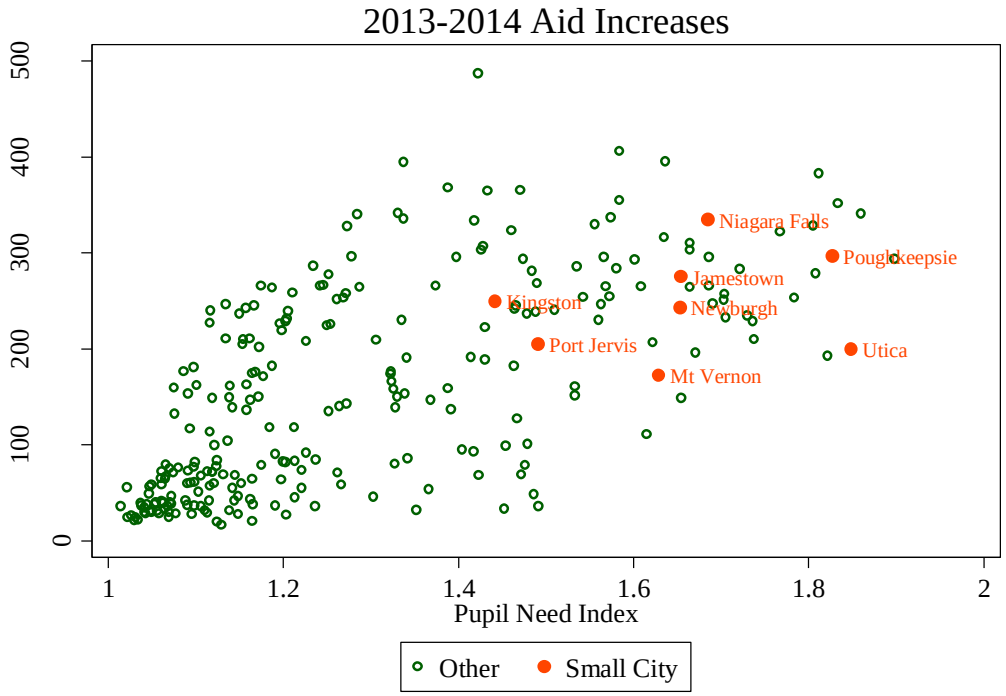


Table 6 shows that while Utica has an estimated state aid target for meeting its sound basic spending target of about $133.9 million, Utica will actually receive – after GEA & restoration – about $69.5 million, a far cry from full funding of the state's own estimated obligation. In many cases, despite increases in per pupil funding, per pupil shortfalls actually increase. That is, the sound basic spending targets continue to outpace funding increases, meaning that even if the current pace of funding increases were maintained, the state would continue falling further and further behind its own underestimated targets.

Table 6

Effects of 2013-14 State Aid Increases

District	*Selected TAFPU 2013-14*[1]	*DCAADM 2011*[2]	*Adj. Foundation 2013-14 (per TAFPU)* [3]	*Foundation Aid before Phase In 2013-14 ('000s)* [4]	*Foundation Before GEA 2013-14 ('000s)* [5]	*ACTUAL Foundation after GEA 2013-14 ('000s)* [6]	*Shortfall per TAFPU* [7]	*Shortfall per DCAADM* [8]	*Shortfall Percent* [9]
JAMESTOWN	5,688	5,100	$11,756	$62,553	$41,110	$39,203	$4,105	$4,579	37.3%
POUGHKEEPSIE	5,248	4,603	$15,640	$64,552	$47,955	$45,200	$3,688	$4,204	30.0%
NIAGARA FALLS	8,472	7,620	$11,977	$91,665	$70,475	$66,996	$2,912	$3,237	26.9%
UTICA	11,832	9,773	$12,046	$133,951	$72,413	$69,569	$5,441	$6,588	48.1%
NEWBURGH	12,933	11,659	$14,151	$142,035	$94,880	$85,959	$4,336	$4,810	39.5%
PORT JERVIS	3,738	3,037	$12,764	$38,138	$24,805	$22,629	$4,149	$5,107	40.7%
KINGSTON	8,142	7,166	$12,345	$47,742	$39,518	$33,567	$1,741	$1,978	29.7%
MOUNT VERNON	11,041	8,904	$13,945	$90,591	$63,138	$52,894	$3,414	$4,234	41.6%

[1] File DBSAD1 M(OP0088) 00 SELECTED TAFPU 03/26/13
[2] NYSED FARU District Fiscal Profiles (http://www.oms.nysed.gov/faru/Profiles/profiles_cover.html) 2010-11
[3] File DBSAD1 P(OP0002) 02 ADJUSTED FOUNDATION AMT/PUPIL 03/26/13
[4] File DBSAD1 W(FA0001) 00 FOUNDATION AID BEFORE PHASE-IN 03/26/13
[5] File DBSAA1 E(FA0197) 00 2013-14 FOUNDATION AID 03/26/13
[6] (Foundation Aid [DBSAA1, 03/26/13, E(FA0197) 00 2013-14 FOUNDATION AID] + GEA [AA(FA0186) 00 2012-13 GAP ELIMINATION ADJUSTMENT (SA1213)] + GEA Partial Restoration [AB(FA0187) 00 2013-14 GEA RESTORATION])
[7] Shortfall per TAFPU = (Foundation Aid before Phase In – Foundation After GEA) / TAFPU
[8] Shortfall per DCAADM = (Foundation Aid before Phase In – Foundation After GEA) / DCAADM
[9] Shortfall Percent = (Foundation Aid before Phase In – Foundation After GEA) / Foundation Aid before Phase In

1.4 Gaps between Current Spending & *Sound, Basic Spending Targets*

Here, I compare districts' actual spending per pupil to the *sound basic spending targets* established by the foundation aid formula. Due to the massive shortfalls in state aid, many districts have attempted to make up a portion of the difference by increasing local tax effort – raising more than would be required under the aid formula to achieve their sound, basic spending targets. Yet, in the case of small city school districts, they mostly continue to fall well short of those targets.

Table 7 compares the aggregate sound basic spending shortfalls for small city plaintiffs' districts. General Education Instructional Spending and enrollments are drawn from each district's 2011 NYSED Fiscal Accountability Supplement. Additional years of GEIE (2011-12 & 2012-13) were provided by districts. Spending Targets are drawn for each district from the annual final adopted state aid runs for 2009-10 to 2012-13. The spending gap is simply the difference between the sound basic spending target as defined by the foundation aid formula, and the current level of relevant spending:

Spending Gap = Sound Basic Spending Target – General Education Instructional Spending

Put simply, just as the state aid shortfalls for small city plaintiffs' districts are huge, so too are their sound basic spending gaps. These districts fall 20 to 40% below their aggregate target, and $3,500 to over $7,000 per pupil below their target.

Table 7

Gaps between Estimated Need (Foundation Target) & Current Spending with Updated Estimates

	Mt Vernon	Jamestown	Kingston	Newburgh	Niagara Falls	Port Jervis	Poughkeepsie	Utica
GEIE 2010-11 [1]	$99,586,646	$42,023,068	$75,022,350	$146,605,737	$72,055,901	$29,725,266	$51,742,546	$85,643,602
GE Pupils [1]	8,555	4,893	6,908	11,137	7,093	2,904	4,421	9,317
GE per Pupil 2010-11 [1]	$11,641	$8,588	$10,860	$13,164	$10,159	$10,236	$11,704	$9,192
Estimated GEIE 2011-12 [3]	$104,210,467	$43,151,874	$81,417,374	$144,431,834	NA	$30,392,605	NA	$88,783,606
Estimated GEIE 2012-13 [3]	$106,843,243	$43,152,261	$82,378,942	$144,524,639		$30,910,455		$81,337,424
Target '10 [2]	$129,153,016	$60,147,208	$93,811,095	$171,292,327	$91,628,071	$40,328,634	$79,130,325	$114,804,787
Target '11 [2]	$137,365,472	$63,971,838	$99,776,287	$182,184,270	$97,454,443	$42,893,023	$84,161,956	$122,104,790
Target '12 [2]	$147,982,225	$67,639,825	$105,001,390	$188,631,343	$105,824,918	$46,989,853	$85,579,750	$137,260,094
Target '13 [2]	$151,238,735	$66,779,947	$103,690,906	$186,004,839	$102,932,036	$47,461,277	$83,190,533	$143,850,907
Gap 2009-2010	$29,566,370	$18,124,140	$18,788,745	$24,686,590	$19,572,170	$10,603,368	$27,387,779	$29,161,185
Gap 2010-2011	$37,778,826	$21,948,770	$24,753,937	$35,578,533	$25,398,542	$13,167,757	$32,419,410	$36,461,188
Gap 2011-2012	$43,771,758	$24,487,951	$23,584,016	$44,199,509	$105,824,918	$16,597,248	$85,579,750	$48,476,488
Gap 2012-2013	$44,395,492	$23,627,686	$21,311,964	$41,480,200	$102,932,036	$16,550,822	$83,190,533	$62,513,483
Gap per Pupil 2010-11	$4,416	$4,486	$3,583	$3,195	$3,581	$4,534	$7,333	$3,913
Gap Percent (of target) 2010-11	28%	34%	25%	20%	26%	31%	39%	30%

[1] NYSED Fiscal Accountability Supplements
[2] Target = Base x PNI x RCI x TAFPU [for each given year, based on final adopted state aid runs, File DBSAD1]
[3] As provided by districts

1.5 Tax Effort and State Aid Shortfalls

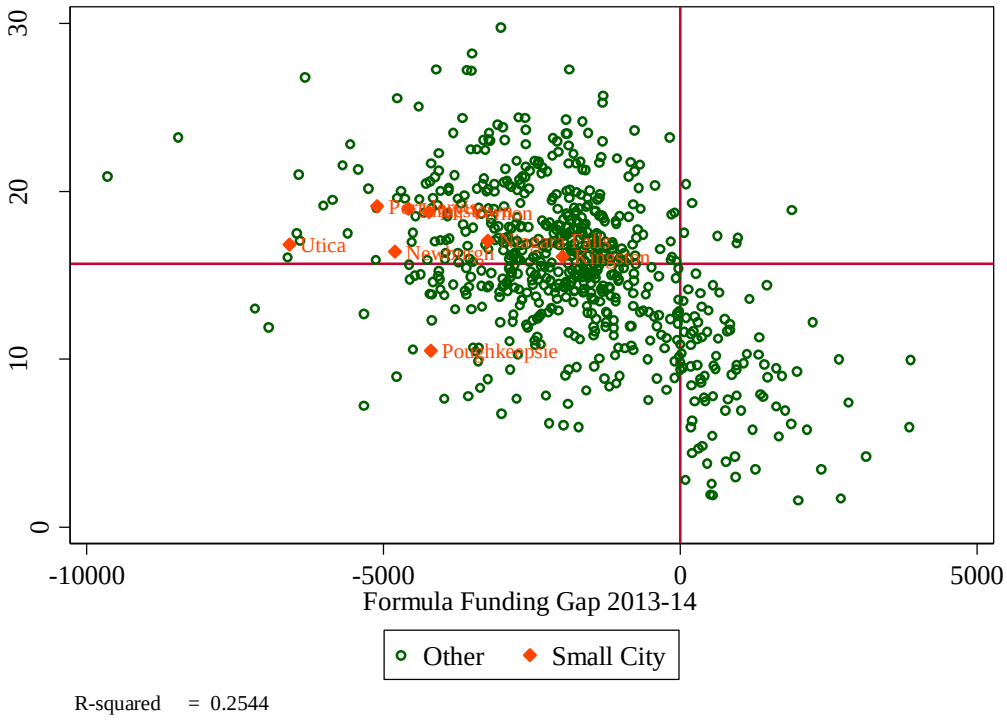
Figure 3 compares aid formula gaps with districts' local effort rates, a measure of local revenue raised as a share of taxable property wealth. [18] One might expect, for example, that districts with high costs, including greater student needs, when faced with substantial aid shortfalls would attempt to the extent practicable to offset those aid shortfalls by increasing their local effort. One might also expect that because many of these communities have relatively weak local tax base (a low value in the denominator of the tax effort measure) that even modest attempts to increase local revenue might lead to significant increases in local effort.

Figure 3 validates that districts with greater shortfalls in state aid relative to the state's own state aid targets tend to be levying higher local effort. Most districts at or above their state aid targets are levying below average local effort [but these districts represent a relatively small share of all students]. Meanwhile, large shares of districts that are substantially underfunded with respect to the state's own targets, are levying local effort above the state average. Most small city districts are levying tax effort above the state average, likely in a last ditch attempt to stay afloat.

[18] The local effort rate is similar to but different from the property tax; the local effort rate calculation includes all sources of local revenue. The State average local effort rate decreased slightly statewide (from $15.10 per thousand to $14.62 per thousand) from 2006-07 to 2010-11. As noted earlier, a major purpose of the STAR program is to replace local dollars with state dollars. Increases in property values will also allow a district to generate local revenue at a lower effort rate.
http://www.oms.nysed.gov/faru/PDFDocuments/FiscalProfileofNewYorkStateSchoolDistricts_draft24.pdf

Figure 3

Relationship between local effort and State Aid gaps



Notably, recently adopted limits to levy increases, coupled with their already high effort, will constrain these districts' in the coming years, limiting their ability to close the persistent gap between their current spending and the state's own aid targets. State imposed caps alone may prohibit many districts from reaching the targets established by the state as providing minimally for sound basic education.

Table 8 summarizes the Local Effort Rates for small city districts over a four year time frame.

Table 8

Local Effort Rates of Small Cities over Time

District	2008	2009	2010	2011
Jamestown	19.15	18.26	17.99	18.96
Kingston	15.53	14.54	15.24	16.12
Mt. Vernon	15.07	14.33	17.60	18.76
Newburgh	17.25	16.13	16.53	16.41
Niagara Falls	19.20	18.04	16.78	17.07
Port Jervis	18.54	17.05	18.63	19.13
Poughkeepsie	9.09	9.33	10.30	10.51
Utica	19.26	20.63	15.01	16.84
Average	16.17	15.42	15.09	15.70

Data Source: NYSED Fiscal Profiles (LOCAL REVENUE EFFORT RATE (LOCAL REVENUES DIVIDED BY PROPERTY VALUE))

1.6 Increasing Needs

Figure 4 and Figure 5 reveal recent demographic changes in small city plaintiffs' districts. While Mt. Vernon shows declining shares of low income children, others, most notably, Niagara Falls, Poughkeepsie and Utica show increases in shares of low income children. Figure 7 shows that rates of English Language Learners in Poughkeepsie and Utica are also on the rise.

Increasing student needs are particularly problematic for these districts under current and recent school funding formula constraints. Aid freezes based on prior year enrollments fail to adjust to these needs and levy caps based on aggregate local revenue fail to provide the opportunity to offset the losses in state aid exacerbated by the increases in student needs.

Figure 4

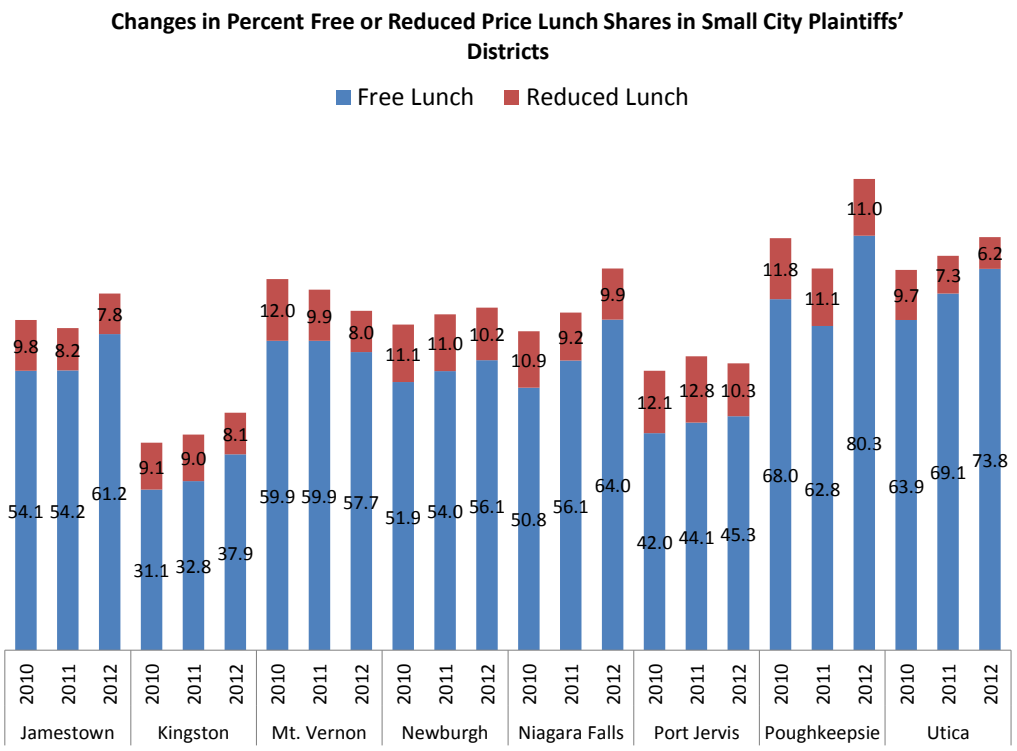
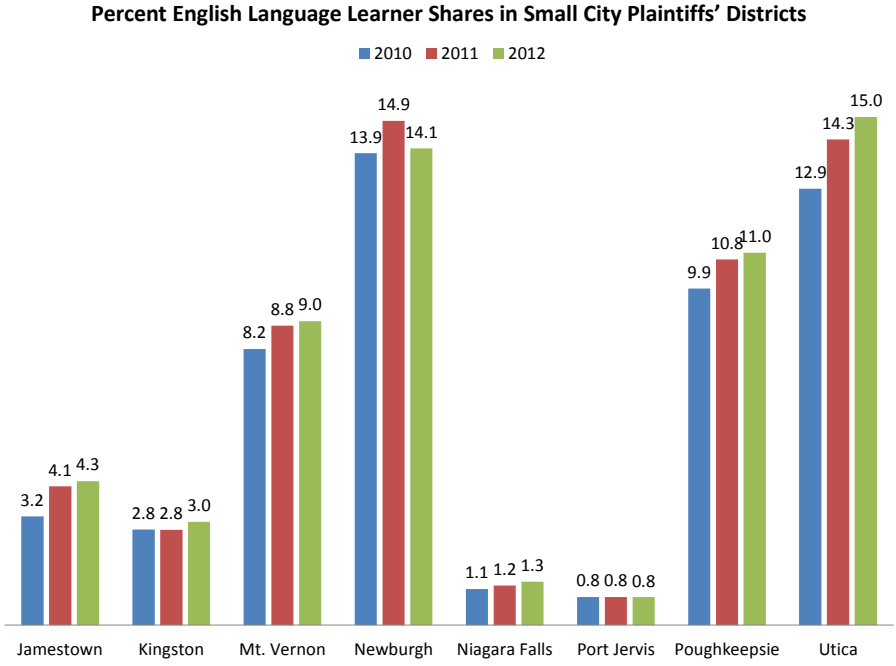


Figure 5



2.0 Inadequate Programs and Services

In this section, I explore the consequences of inadequate funding, state aid shortfalls and spending gaps in terms of the adequacy of programs and services provided. Analyses in this section show that:

1. Significant shares of elementary grade students attending small city districts are in class sizes of greater than 20 students, with many in classes having greater than 23 students.
2. Small city districts, and Utica and Poughkeepsie in particular, have higher shares of teachers not holding permanent certification than *successful low spending districts* in their same labor markets.
3. Small City school districts have far fewer teacher assignments to small group and individual instruction in choral and instrumental music than do successful low spending districts in the same labor markets.
4. Small City school districts have far fewer teacher assignments to world languages, especially advanced and AP assignments, than do successful low spending districts in the same labor markets.
5. Small City school districts have far fewer teacher assignments to AP courses in Math, English, Social Studies and Science than do successful low spending districts in the same labor markets.

In this section, I provide a cursory analysis, using available data, of the disparities in key inputs in small city districts. Specifically, this section builds on recent work by Michael Rebell and colleagues at Columbia University who have explored, for selected New York State districts disparities in what they refer to as "essential resources," drawing largely on language from previous state court determinations in Campaign for Fiscal Equity v. State. Essential resources are those schooling inputs specifically identified by the court as required for the provision of a sound basic education. Here, using benchmarks provided in reports by Rebell and colleagues, I explore the following:

- Class Sizes
- Teacher Qualifications
- Distribution of Teacher Assignments to Curricular & Co-Curricular Opportunities

With respect to small city school districts, I find:

- Significant shares of elementary grade students attending small city districts are in class sizes of greater than 20 students, with many in classes having greater than 23 students.

- Small city districts, and Utica and Poughkeepsie in particular, have higher shares of teachers not holding permanent certification than *successful low spending districts* in their same labor markets.
- Small City school districts have far fewer teacher assignments to small group and individual instruction in choral and instrumental music than do successful low spending districts in the same labor markets.
- Small City school districts have far fewer teacher assignments to world languages, especially advanced and AP assignments, than do successful low spending districts in the same labor markets.
- Small City school districts have far fewer teacher assignments to AP courses in Math, English, Social Studies and Science than do successful low spending districts in the same labor markets.

Notably, these findings do not reflect even more recent cuts to school staff. Data on class sizes used herein run through 2011-12, as reported on 2012 NYSED school report cards and data on staffing depth and breadth run only through 2009-10.

2.1 Class Sizes

One can expect disparities in funding of the magnitude addressed herein to be reflected in programs and services provided. That is, what those dollars buy or in their absence, what they can't buy. Schooling is a labor intensive industry. A sizeable share of education spending is allocated to balancing staffing quantities and qualities. Specifically, a central tradeoff in the resource allocation equation is the balance between maintenance of competitive wages for certified staff in order to recruit and retain high quality staff and achieving desired staffing ratios which are driven by class size preferences.

In Campaign for Fiscal Equity v. State, the Court of Appeals addressed specific resources that should be available in all schools in order to meet the *sound basic education* requirement. In a recent series of reports C.F.E. attorney Michael Rebell and colleagues evaluated what they referred to as *essential resources,* drawing on language from the Court of Appeals. Specifically pertaining to class sizes, Rebell and colleagues explain:

> *… the Court of Appeals has indicated that classes of about the sizes listed below are appropriate and that larger class sizes may lead to unsatisfactory results. For schools and classes with large concentrations of students below grade level, and for AIS and RTI services, smaller class sizes may be necessary.*

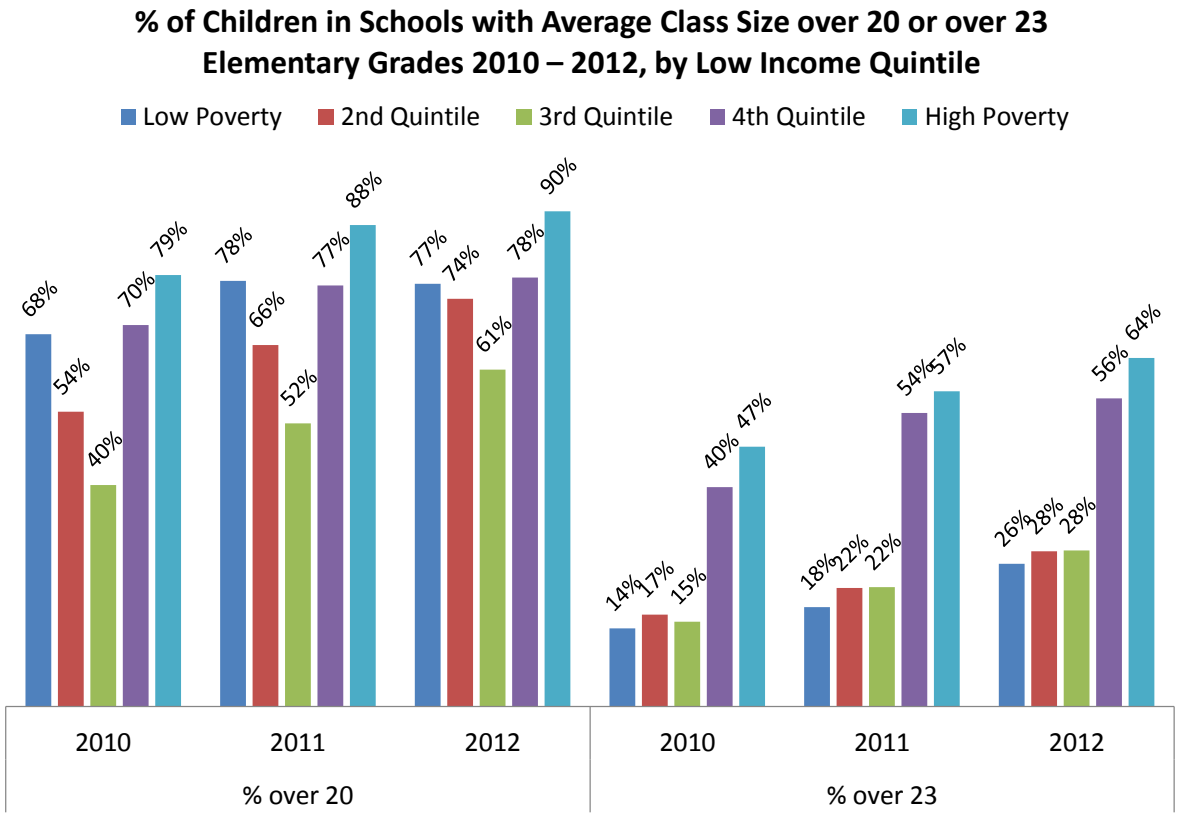
a. *Kindergarten-grade 3: 20 students*
b. *Grades 4-6: 21-23 students*
c. *Middle and High School: 21-23 students (p 13-14)*[19]

Figure 6 and Figure 7 explore the percent of children attending schools with average class sizes above these thresholds at the elementary level and in 8th grade and how those shares have grown in recent years.

In Figure 6 we see that in schools with the highest shares of low income children, the percent of children in schools with average class sizes over 20 is highest. That percent grows from 79% in 2010 to over 90% in 2012. More striking are the differences in shares of children attending schools with average class sizes above the upper bound suggested by Rebell and colleagues – 23 students. Only about 15 to 17% of children in schools with low concentrations of low income children had average class sizes above 23. But, the majority of children in high poverty schools attend schools that have average class sizes over 23. These shares have grown each year since 2010.

[19] http://www.equitycampaign.org/i/a/document/25757_EssentialResourcesfinal2_6_13.pdf

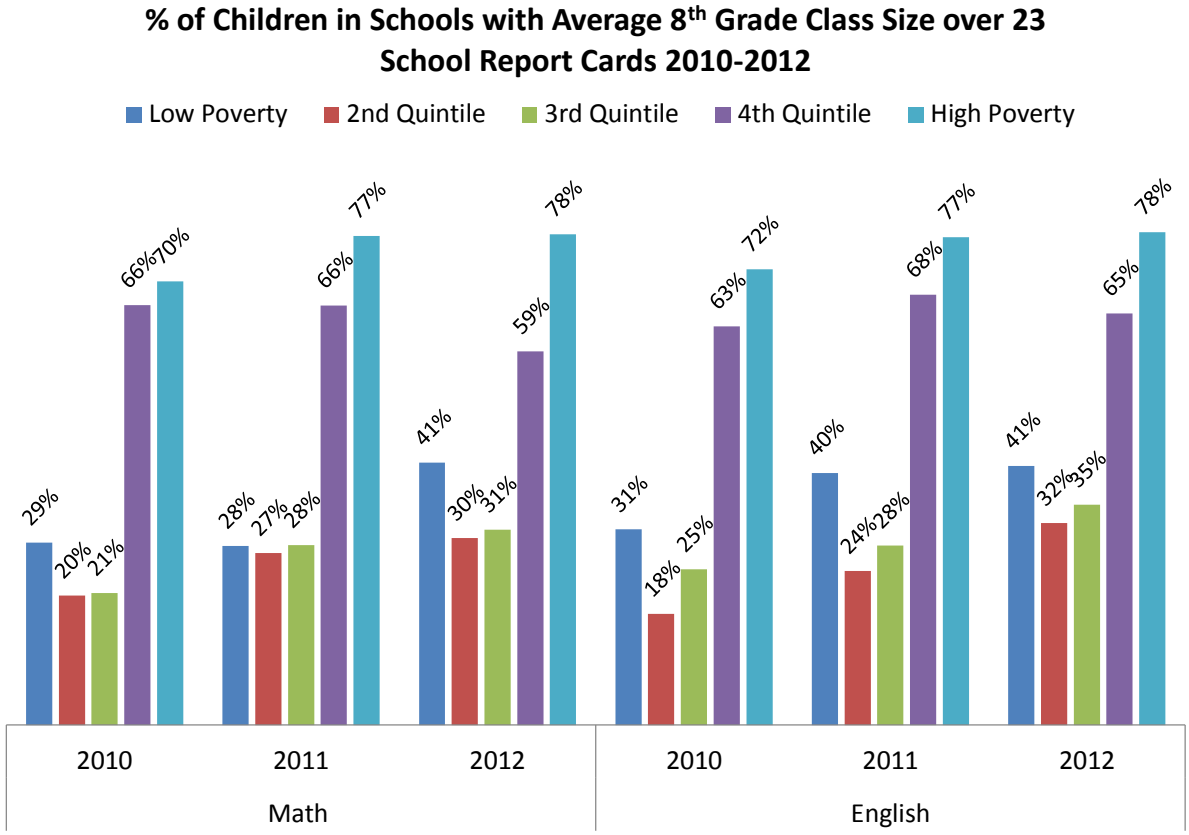
Figure 6



Note: Average Class Sizes based on enrollment weighted school level data drawn from the 2011-12 NYSED School Report Cards database. Approximately 1,000 schools per quintile (quintiles by school, not enrollment weighted).

Figure 7 addresses 8th grade class sizes in English and Math, and focuses on the 23 threshold, or the upper bound of appropriate middle school class size. Most striking is that the percent of children attending schools with average class sizes above 23 is much higher – more than three times as high – in high poverty than in low poverty schools. The vast majority of 8th graders in high poverty schools attend schools where average 8th grade math or English classes are greater than 23 students, a large share of which are in New York City. But, in most cases, 1/3 or fewer among children in low poverty schools attend schools where average class sizes exceed 23 students.

Figure 7

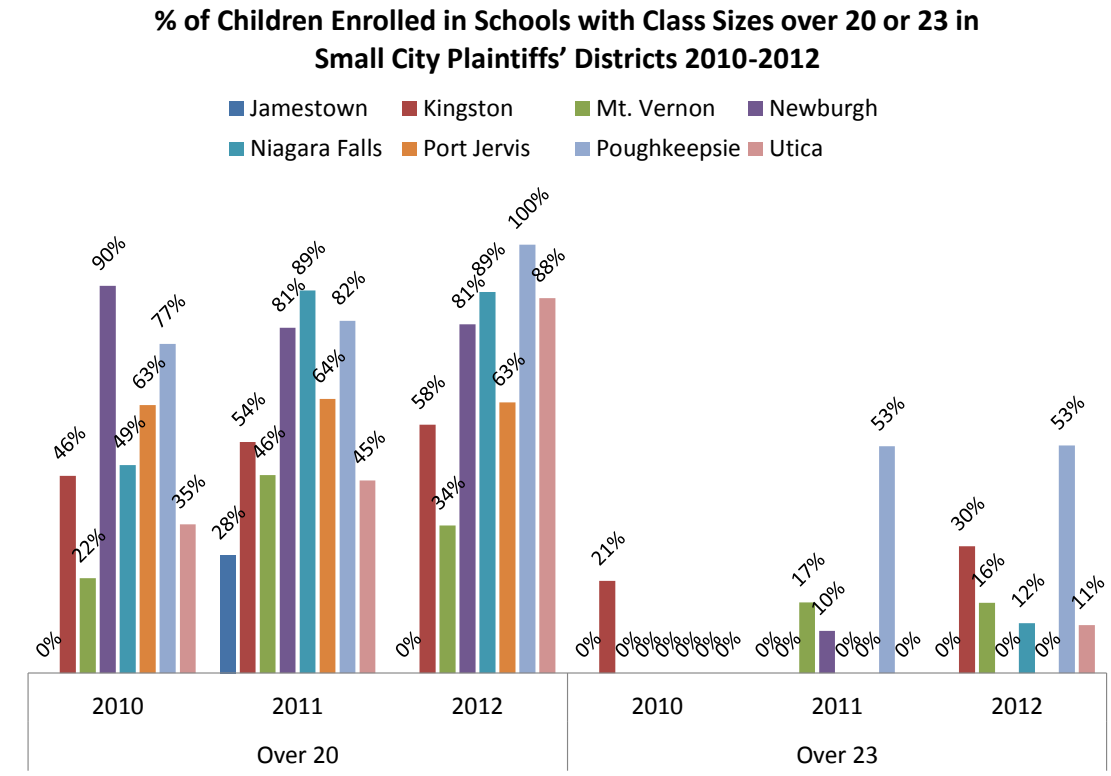


Note: Average Class Sizes based on enrollment weighted school level data drawn from the 2011-12 NYSED School Report Cards database. Approximately 1,000 schools per quintile (quintiles by school, not enrollment weighted).

Figure 8 uses 2012 school report card data to evaluate the elementary (Common Branch) class sizes in small city plaintiffs' school districts. In Mount Vernon, more than half of the elementary students are in classes with over 20 students. Only Jamestown and Mt. Vernon have the majority of lower grades students in classes with fewer than 20 students. In Poughkeepsie, the majority of children are in class sizes of greater than 23.

Figure 8

Elementary Class Sizes in Small City Plaintiffs' Districts



Note: Average Class Sizes based on enrollment weighted school level data drawn from the 2011-12 NYSED School Report Cards database. Approximately 1,000 schools per quintile (quintiles by school, not enrollment weighted).

In years since the C.F.E. decision, there has emerged increased skepticism of the cost effectiveness of class size reduction as a strategy for achieving more adequate educational outcomes.[20] This skepticism rests on a) claims that existing literature supporting positive effects of class size reduction is largely built on a single high quality randomized trial, b) arguments that studies of the policy effects of class size reduction in California and Florida led to unintended consequences regarding the distribution of teaching quality, and c) claims that class size reduction is simply more expensive than other routes to achieving comparable outcome gains. In a report released in 2012, I explain:

> While it's certainly plausible that other uses of the same money might be equally or even more effective, there is little evidence to support this. For example, while we are quite confident that higher teacher salaries may lead to increases in the quality of applicants to the teaching profession and increases in

[20] Chingos, M. M. (2012). Class Size and Student Outcomes: Research and Policy Implications. *Journal of Policy Analysis and Management*.

> student outcomes, we do not know whether the same money spent toward salary increases would achieve better or worse outcomes if it were spent toward class size reduction. Indeed, some have raised concerns that large scale-class size reductions can lead to unintended labor market consequences that offset some of the gains attributable to class size reduction (such as the inability to recruit enough fully qualified teachers).[21] And many, over time, have argued the need for more precise cost/benefit analysis. [22] Still, the preponderance of existing evidence suggests that the additional resources expended on class size reductions do result in positive effects.[23] (Baker, 2012)

Perhaps more importantly, there is little if any evidence that raising class sizes to 25 or 30 students per class in elementary or middle grades, in high poverty districts causes no harm. Most reviews of class size effects quibble over class size reductions from 23 students down toward 15 per class (range addressed in Tennessee STAR study). In particular, there exists no evidence that achievement gaps can be effectively mitigated where children in higher poverty settings are subjected to class sizes of 25 or more, while children in lower poverty settings are provided much smaller classes. Consider also that for a teacher covering 6 sections of a particular subject, moving from 30 children per class to 20 would lead to a total reduction of student load of 60 students. That's 60 fewer assignments, quizzes, tests to grade each time. Even with only one graded assignment per week, at 5 minutes per assignment, this difference in total load amounts to 5 hours per week.

---

[21] Jepsen, C., Rivkin, S. (2002) What is the Tradeoff Between Smaller Classes and Teacher Quality? NBER Working Paper # 9205, Cambridge, MA. http://www.nber.org/papers/w9205

"The results show that, all else equal, smaller classes raise third-grade mathematics and reading achievement, particularly for lower-income students. However, the expansion of the teaching force required to staff the additional classrooms appears to have led to a deterioration in average teacher quality in schools serving a predominantly black student body. This deterioration partially or, in some cases, fully offset the benefits of smaller classes, demonstrating the importance of considering all implications of any policy change." p. 1

For further discussion of the complexities of evaluating class size reduction in a dynamic policy context, see:

David Sims, "A Strategic Response to Class Size Reduction: Combination Classes and Student Achievement in California," *Journal of Policy Analysis and Management*, 27(3) (2008): 457–478

David Sims, "Crowding Peter to Educate Paul: Lessons from a Class Size Reduction Externality," *Economics of Education Review*, 28 (2009): 465–473.

Matthew M. Chingos, "The Impact of a Universal Class-Size Reduction Policy: Evidence from Florida's Statewide Mandate," Program on Education Policy and Governance Working Paper 10-03 (2010).

[22] Ehrenberg, R.G., Brewer, D., Gamoran, A., Willms, J.D. (2001) Class Size and Student Achievement. Psychological Science in the Public Interest 2 (1) 1-30

[23] Baker, B. D. (2012). Revisiting the Age-Old Question: Does Money Matter in Education?. *Albert Shanker Institute*.

2.2 Teachers' Qualifications

Here, I explore the certification status of teachers in small city plaintiffs' districts. Specifically, I focus on shares of teachers holding permanent teacher certification in their main assignment. According to Rebell and colleagues, to meet constitutional requirements, every school must have:

> *A sufficient number of certified teachers who are adequately trained to provide suitable instruction based on current state standards in the core areas of English language arts, mathematics, science and social studies for all students, including students performing below grade-level proficiency. (p. 6)*[24]

Unlike class size requirements, there is no specific benchmark provided for what constitutes a sufficient number or share of teachers with specific qualifications. In Table 9, I compare teachers in small city districts to districts identified as "**successful**" and "**low spending**" in the 2012 successful districts update. I include only those low spending successful districts that are in the same core based statistical areas as the small city districts.

First, I tally the Full Time Equivalent staffing based on 2008-09 and 2009-10 NYSED Personnel Master File (PMF) data. PMF data identify each teacher by their various assignments and provide an FTE indicator for each assignment, where 100% time is assigned an FTE of 1000. Here, each 1000 FTE is counted as 1.0 (by weighting the calculations). In Jamestown, the Hudson Valley (Poughkeepsie, Newburgh & Port Jervis) and in Utica in particular, small city districts have higher shares of teachers holding non-permanent certification, the majority of which are newer teachers on provisional certificates.

[24] http://www.equitycampaign.org/i/a/document/25757_EssentialResourcesfinal2_6_13.pdf

Table 9

District Group	Total FTE Certified Staff[2] 2009	Total FTE Certified Staff[2] 2010	Enrollment (DCAADM)[3] 2009	Enrollment (DCAADM)[3] 2010	Certified FTE/ 1,000 Pupils 2009	Certified FTE/ 1,000 Pupils 2010	FTE with Non-Permanent Certification[4] 2009	FTE with Non-Permanent Certification[4] 2010	% Non-Permanent 2009	% Non-Permanent 2010	PNI[5]
Successful, Low Spending in CBSA[1]											
Buffalo	7,310	7,216	82,472	81,015	89	89	1,040	881	14.2%	12.2%	1.28
Jamestown	1,090	1,063	10,686	10,375	102	102	184	167	16.9%	15.7%	1.53
Kingston	861	857	9,918	9,835	87	87	148	145	17.2%	16.9%	1.23
New York City	11,126	10,981	132,218	131,712	84	83	1,713	1,456	15.4%	13.3%	1.24
Poughkeepsie-Newburgh	5,441	5,358	68,433	68,122	80	79	979	814	18.0%	15.2%	1.17
Utica-Rome, NY	1,445	1,517	17,208	16,789	84	90	243	252	16.8%	16.6%	1.48
Small City Districts											
Niagara Falls CSD	598	588	7,981	7,884	75	75	48	46	8.0%	7.9%	1.67
Jamestown CSD	531	538	5,162	5,181	103	104	93	95	**17.4%**	**17.6%**	1.63
Kingston CSD	642	637	7,423	7,441	87	86	76	59	11.9%	9.3%	1.43
Mount Vernon CSD	789	787	8,923	8,970	88	88	103	83	13.1%	10.6%	1.62
Poughkeepsie/ Newburgh/ Port Jervis (combined)	1,784	1,730	20,385	19,908	88	87	353	284	**19.8%**	**16.4%**	1.65
Poughkeepsie	410	412	4,802	4,667	85	88	79	73	**19.3%**	**17.7%**	1.77
Newburgh	1,102	1,043	12,343	12,031	89	87	219	157	**19.9%**	**15.1%**	1.65
Port Jervis	273	274	32,40	3,210	84	85	56	54	**20.5%**	**19.7%**	1.48
Utica CSD	728	873	9,420	9,668	77	90	174	204	**23.9%**	**23.3%**	1.85

[1] Includes districts identified as "successful" and "low spending" (2012 Update) located in the same core based statistical areas (www.nces.ed.gov/ccd/bat) as small city school districts.

[2] Summed count of certified staff, weighted by FTE (converted to 1/100, where 100%=1.0 FTE) from NYSED Personnel Master File 2008-09 & 2009-10.

[3] Enrollment is Duplicated Combined Adjusted Average Daily Membership (DCAADM) from NYSED Fiscal Profiles 2008-09 and 2009-10

[4] Summed count of certified staff, weighted by FTE (converted to 1/100, where 100%=1.0 FTE) who do not hold a permanent teacher certificate in the assigned teaching field. NYSED Personnel Master File 2009-09 & 2009-10. Includes "assignment certification codes: 0 = None, 1 = Temporary, 2 = Cert. Of Qualification, 3 = 5 year provisional[25]

[5] Pupil Need Index for 2012

[25] http://www.highered.nysed.gov/tcert/certificate/typesofcerts.html

2.3 Curricular Breadth & Depth

I conclude with a series of summaries of certificated staff assigned to specific curricular areas. Rebell and colleagues note that to meet essential resource requirements, schools must provide:

A sufficient number of certified, adequately trained teachers, with expertise in:

A. *The arts (visual art, music, drama, dance and theatre)*
B. *Career development and occupational studies*
C. *Health education*
D. *Physical education*
E. *Family and consumer science/home and career skills (middle schools)*
F. *Technology education (middle and high schools)*
G. *Languages other than English (middle and high schools) (p. 6)*[26]

A significant body of research validates the importance of access to deep and broad curricular opportunities for gaining access to and succeeding in postsecondary education. Lack of depth and breadth of high school curricular offerings may compromise both readiness and equality of access, but may not be revealed through measures of tested student outcomes on state assessments. Regarding access, Killgore (2009) explains the importance of high school students' academic and non-academic qualifications for acceptance to selective colleges. With regard to non-academic merit, Killgore explains: "Nonacademic merit becomes important to admissions officers at elite colleges because it offers them additional criteria to distinguish the best from among their large pool of applicants who are highly qualified in academic terms. Nonacademic merit consists of extracurricular involvement, such as sports, artistic activities, student organizations, and volunteerism."(p. 471) Regarding readiness, a substantial body of research points to a positive relationship between highest level of math course taken in high school and persistence in college. More recently, Long, Iatarola and Conger (2009) find: "Using data on students in Florida public postsecondary institutions, we find that differences among college-going students in the highest math course taken explain 28–35 percent of black, Hispanic, and poverty gaps in readiness and over three-quarters of the Asian advantage."

The next several tables use personnel data from 2008-09 and 2009-10 to explore the ratios of staff assigned to specific curricular areas in small city school districts. Again, there are no specific benchmarks laid out in the essential resources framework provided by Rebell and colleagues. But, based on the state's own definitions of successful and efficient school districts,

[26] http://www.equitycampaign.org/i/a/document/25757_EssentialResourcesfinal2_6_13.pdf

a logical comparison basis is those districts that have "adequate outcomes" and are in the lower half spending districts in the same labor markets as the small city districts under investigation.

Michael Rebell and colleagues also note the C.F.E. court's prior emphasis on access to advanced placement or international baccalaureate courses:

> Sufficient advanced, honors, college-level, and Advanced Placement and/or International Baccalaureate courses to provide all students a meaningful opportunity to compete for admission to competitive colleges.(p. 10) [27]

Table 10 provides a walkthrough of calculations of disparity ratios between small city plaintiffs' districts and surrounding "successful low spending" districts in their same labor market. As in the previous analysis, the first step is to determine the number of FTE teachers and the number of students per district and per the sum of surrounding successful low spending districts. With these figures, we can generate an estimate of the FTE teachers in any given assignment per 1,000 pupils in the district. For an assignment such as "Calculus" as illustrated below, that number will be relatively small – in this case only about .1 FTE teachers per 1,000 pupils in successful low spending districts. But, that number is even lower in small city districts. The disparity ratio is determined by taking the FTE teachers per 1,000 pupils in successful low spending districts and dividing it by the FTE teachers per 1,000 pupils in small city plaintiffs' districts. Here, we see that in Niagara Falls, the comparison districts have more than twice as many Calculus assignments per 1,000 than in Niagara Falls City. For Mt. Vernon, surrounding successful low spenders have more than 3x as many Calculus teachers per 1,000. It may be assumed that the staffing assignments of those districts identified as *efficiently successful* represent reasonable targets.

[27] http://www.equitycampaign.org/i/a/document/25757_EssentialResourcesfinal2_6_13.pdf

Table 10

	FTE Assigned Teachers (2yr) to Calculus			2yr Enrollment Sum			FTE Teachers / 1,000 Students			
Small City District(s)	*Small City*	*SS in Metro*		*Small City*	*SS in Metro*		*Small City*	*SS in Metro*		**Disparity**
Niagara Falls CSD	0.58	12.53		15,865	163,487		0.037	0.077		2.08
Jamestown CSD	0.75	1.61		10,343	21,061		0.073	0.076		1.05
Kingston CSD	0.90	2.10		14,864	19,753		0.061	0.106		1.76
Mount Vernon CSD	0.60	26.76		17,893	263,930		0.034	0.101		3.02
Poughkeepsie/Newburgh/Port Jervis [Breakout in Appendix C]	1.70	14.01		40,293	136,555		0.042	0.103		2.43
Utica CSD	1.00	4.18		19,088	33,997		0.052	0.123		2.35

Table 11 reveals the staffing ratios for various levels of math courses. *Efficiently Successful* districts are able to allocate more than twice the number of teachers (per 1,000 pupils) to AP **math** courses and still have higher pupil to teacher ratios across other math assignments.

Table 11

Subject Area	Niagara Falls	Jamestown	Kingston	Mt. Vernon	Hudson Valley	Utica	Average
AP/College Other Math	6.34	2.3	0.56	N/A	1.23	N/A	2.50
Math Other Upper Level	2.05	2.98	1.53	3.12	1.99	3.87	2.45
AP/College Calculus	2.08	1.05	1.76	3.02	2.43	2.35	1.97
Math Remedial	13.19	0.44	10.44	2.28	1.13	15.57	1.86
Math Regents B	1.66	0.77	1.29	9.13	1.90	9.99	1.81
Math Regents A	1.92	1.8	N/A	N/A	0.60	1.37	1.79
Math Elective	0.49	3.59	4.24	1.37	1.41	6.61	1.77
Math Other Algebra 2/Trig	1.42	N/A	2.48	0.7	1.16	2.11	1.68
Math Other	N/A	N/A	1.4	1.08	1.13	5.6	1.65
Math Elem-Middle	1.54	0.66	0.96	1.87	0.95	1.56	1.07
Math Other Algebra/Geometry	1.14	1.01	1.13	0.82	0.81	1.3	1.02

Disparity ratios created by dividing sum of FTE/1,000 pupils from "successful low spending districts" in same core based statistical area by sum of FTE/1,000 pupils for small city district(s).

Summed count of certified staff, weighted by FTE (converted to 1/100, where 100%=1.0 FTE) from NYSED Personnel Master File 2008-09 & 2009-10, divided by District Duplicated Combined Adjusted Average Daily Membership (DCAADM) for 2008-09 & 2009-10 from NYSED Fiscal Profiles (Fiscal Analysis and Research Unit)

"Successful, low spending districts" Includes districts identified as "successful" and "low spending" (2012 Update) located in the same core based statistical areas (www.nces.ed.gov/ccd/bat) as small city school districts.

Note that these tables include many cells indicating N/A, or not available. The N/A may occur either because other districts or the small city district had no teachers in this particular assignment area. The more common finding was that small cities had no teachers in the given assignment. In such cases, the disparity ratio is, in fact infinity. Notably, however, most of these assignments are areas to which very few teachers overall are assigned.

Low spending successful districts are able to assign larger shares to AP English. But for middle level **English**, successful low spending districts have higher assignment rates to most levels of English instruction. AP courses lean heavily disparately in favor of low spending successful districts when compared with small city plaintiffs' districts in the same labor markets.

Table 12

Subject Area	Niagara Falls	Jamestown	Kingston	Mt. Vernon	Hudson Valley	Utica	Average
AP/College English	0.95	1.52	4.7	2.36	2.88	N/A	2.19
English Elective	22.03	1.27	1.13	2.54	2.3	1.24	1.70
Speaking/Communications	7.49	1.68	0.67	4.04	1.24	4.7	1.61
English General/Other	19	2.26	18.95	2.07	0.97	0.39	1.57
English 11-12	1.25	2.17	1.18	0.89	0.81	1.77	1.22
English 9-10	1.33	1.19	1.15	0.9	0.91	1.75	1.16
Reading Support	N/A	0.49	0.66	1.26	1.01	5.59	1.07
ELA Middle	1.24	0.78	1.02	0.92	0.89	1.22	0.98
AP/College Literature	N/A	N/A	0	N/A	0	N/A	0.46

Disparity ratios created by dividing sum of FTE/1,000 pupils from "successful low spending districts" in same core based statistical area by sum of FTE/1,000 pupils for small city district(s).
Summed count of certified staff, weighted by FTE (converted to 1/100, where 100%=1.0 FTE) from NYSED Personnel Master File 2008-09 & 2009-10, divided by District Duplicated Combined Adjusted Average Daily Membership (DCAADM) for 2008-09 & 2009-10 from NYSED Fiscal Profiles (Fiscal Analysis and Research Unit)
"Successful, low spending districts" Includes districts identified as "successful" and "low spending" (2012 Update) located in the same core based statistical areas (www.nces.ed.gov/ccd/bat) as small city school districts.

Across most **science** assignments, low spending successful districts have more teachers assigned per 1,000 students than do small city districts.

Table 13

Subject Area	Niagara Falls	Jamestown	Kingston	Mt. Vernon	Hudson Valley	Utica	Average
Physics General	2.75	5.14	1.33	2.63	3.82	2.83	2.64
Science HS Other	N/A	N/A	1.03	N/A	1.92	N/A	2.63
AP/College Physics	N/A	1.62	2.26	N/A	0.77	0.91	2.10
AP/ College Biology/ Life Science	2.15	1.2	1.73	2.92	1.97	3.6	1.97
Chemistry General	1.96	1.62	1.4	2.63	1.82	1.88	1.83
Physics Other	N/A	0.64	0	N/A	1.97	N/A	1.52
Science Elem-Middle	1.6	1.21	0.96	1.94	1.03	1.73	1.31
Science Other	1.36	1.02	1.27	1.43	1	1.43	1.23
Chemistry Other	N/A	0.25	0.6	N/A	0.72	2.57	1.18
AP/College Chemistry	3.04	0.64	0.38	N/A	0.93	1.2	1.11
Biology General	1.29	1.31	1.12	0.64	0.92	1.32	1.04
Biology Elective	1.22	2.1	0.9	1.33	0.43	0.57	1.01

Disparity ratios created by dividing sum of FTE/1,000 pupils from "successful low spending districts" in same core based statistical area by sum of FTE/1,000 pupils for small city district(s).
Summed count of certified staff, weighted by FTE (converted to 1/100, where 100%=1.0 FTE) from NYSED Personnel Master File 2008-09 & 2009-10, divided by District Duplicated Combined Adjusted Average Daily Membership (DCAADM) for 2008-09 & 2009-10 from NYSED Fiscal Profiles (Fiscal Analysis and Research Unit)
"Successful, low spending districts" Includes districts identified as "successful" and "low spending" (2012 Update) located in the same core based statistical areas (www.nces.ed.gov/ccd/bat) as small city school districts.

Likewise, in Social Studies, *efficiently successful* surrounding districts tend to have more assigned FTE teachers per 1,000 pupils.

Table 14

Subject Area	Niagara Falls	Jamestown	Kingston	Mt. Vernon	Hudson Valley	Utica	Average
Social studies Remedial	0.62	2.34	4.43	N/A	10.75	0.28	2.00
AP/College History	N/A	N/A	N/A	1.04	N/A	3.14	1.84
Social Studies Elective	1.89	1.28	2.04	1.39	1.44	1.92	1.59
AP/College Social Studies	1.55	0.69	1.8	2.88	1.41	2.1	1.51
Humanities Other	2.64	19.42	0.96	1.23	1.06	0.56	1.25
Social Studies Genera	1.46	1.23	1.25	0.86	1.05	1.3	1.17
Social Studies Elem-M	1.44	0.78	1.03	1.67	1.13	1.28	1.13

Disparity ratios created by dividing sum of FTE/1,000 pupils from "successful low spending districts" in same core based statistical area by sum of FTE/1,000 pupils for small city district(s).
Summed count of certified staff, weighted by FTE (converted to 1/100, where 100%=1.0 FTE) from NYSED Personnel Master File 2008-09 & 2009-10, divided by District Duplicated Combined Adjusted Average Daily Membership (DCAADM) for 2008-09 & 2009-10 from NYSED Fiscal Profiles (Fiscal Analysis and Research Unit)
"Successful, low spending districts" Includes districts identified as "successful" and "low spending" (2012 Update) located in the same core based statistical areas (www.nces.ed.gov/ccd/bat) as small city school districts.

Table 15 reveals particularly large and systematic disparities in teacher assignments to foreign languages, especially to advanced levels. Successful low spending districts assign more than twice as many teachers per 1,000 pupils to AP and other upper level French, AP Spanish and other upper level languages. Only intro and general Spanish assignments are heavier in small city districts, which also have a larger share of students whose first language is Spanish.

Table 15

Subject Area	Niagara Falls	Jamestown	Kingston	Mt. Vernon	Hudson Valley	Utica	Average
French Upper	2.83	N/A	1.8	5.03	1.28	3.9	3.19
AP/College French	N/A	N/A	0.94	N/A	2.82	N/A	3.11
French Lower	N/A	N/A	1.71	3.09	0.98	3.17	2.68
Spanish Upper	1.42	1.59	2.07	2.04	1.63	2.16	1.77
AP/College Other Lang	N/A	N/A	0.38	N/A	N/A	0	1.71
Other Lang Upper	N/A	N/A	0.98	N/A	1.15	0	1.62
French Intro	8.82	1.19	1.4	1.06	0.83	2.07	1.60
AP/College Spanish	1.97	0.56	1.59	3.51	2.5	3.6	1.57
Other Language General/Other	N/A	N/A	N/A	N/A	0.3	N/A	1.36
Other Lang Intro	N/A	0	0.68	N/A	1.06	0	1.27
Other Lang Lower	N/A	N/A	0	N/A	1.15	0	1.12
Spanish Lower	1.73	1.16	1.08	0.81	0.79	1	1.04
Spanish General/Other	N/A	N/A	N/A	0.78	0.27	N/A	0.95
Spanish Intro	0.77	0.99	1.68	0.54	0.99	1.1	0.93
French General/Other	0.11	N/A	N/A	N/A	N/A	N/A	0.75
Languages Other	N/A	0	N/A	0.37	0.28	N/A	0.43

Disparity ratios created by dividing sum of FTE/1,000 pupils from "successful low spending districts" in same core based statistical area by sum of FTE/1,000 pupils for small city district(s).

Summed count of certified staff, weighted by FTE (converted to 1/100, where 100%=1.0 FTE) from NYSED Personnel Master File 2008-09 & 2009-10, divided by District Duplicated Combined Adjusted Average Daily Membership (DCAADM) for 2008-09 & 2009-10 from NYSED Fiscal Profiles (Fiscal Analysis and Research Unit)

"Successful, low spending districts" Includes districts identified as "successful" and "low spending" (2012 Update) located in the same core based statistical areas (www.nces.ed.gov/ccd/bat) as small city school districts.

Table 16 reveals disparities in Music and the Arts.

Table 16

Subject Area	Niagara Falls	Jamestown	Kingston	Mt. Vernon	Hudson Valley	Utica	Average
Music Instrumental Lessons	N/A	1.54	0.8	12.47	1.55	1.65	1.86
AP/College Art	2.07	0.17	1.23	4.11	2.67	N/A	1.62
Music Choral Groups	0.62	5.51	1.51	4.51	1.69	1.37	1.53
Music Choral Lessons	N/A	0.63	0.53	7.93	0.86	6.6	1.52
Art (Visual) Elective	1.62	1.51	1.08	1.75	1.01	1.8	1.39
Music Instrumental Groups	1.2	0.88	1.03	2.83	1.05	1.4	1.22
Music Elem-Middle	4.87	1.1	1.08	0.81	0.82	1.13	1.15
Music Electives	7.03	1.8	0.98	0.35	0.89	1.21	1.11
Art Elem-Middle	1.76	1.16	0.95	0.85	0.9	1.02	1.07
Art Other	0.31	4.05	2.36	1.38	1.02	0.6	0.98
Film/Theater/Dance	N/A	0.07	N/A	3.07	0.21	0.33	0.78
AP/College Music	0.52	N/A	0	0.54	N/A	N/A	0.67
Music Other	N/A	1.47	0.19	1.15	0.23	0.15	0.50

Disparity ratios created by dividing sum of FTE/1,000 pupils from "successful low spending districts" in same core based statistical area by sum of FTE/1,000 pupils for small city district(s).

Summed count of certified staff, weighted by FTE (converted to 1/100, where 100%=1.0 FTE) from NYSED Personnel Master File 2008-09 & 2009-10, divided by District Duplicated Combined Adjusted Average Daily Membership (DCAADM) for 2008-09 & 2009-10 from NYSED Fiscal Profiles (Fiscal Analysis and Research Unit)

"Successful, low spending districts" Includes districts identified as "successful" and "low spending" (2012 Update) located in the same core based statistical areas (www.nces.ed.gov/ccd/bat) as small city school districts.

Table 17 does show more positions in building administration and support in small city districts, but far fewer department chairs, directors and assistant directors. Small city districts do have more "supervisors." Increased building level administration may be partially explained by increased security and disciplinary issues associated with higher need, more urban districts and additional administrative compliance burdens associated with increased Title I and Special Education Programs.[28]

[28] Baker, B. D. (2003). State policy influences on the internal allocation of school district resources: Evidence from the common core of data. *Journal of Education Finance*, 1-24.

Table 17

Subject Area	Niagara Falls	Jamestown	Kingston	Mt. Vernon	Hudson Valley	Utica	Average
Chairperson/Content Area	0.56	3.07	N/A	3.82	1.24	1.79	1.55
Central Admin	2.85	1.32	1.53	0.93	0.8	0.99	1.22
Director	3.53	0.43	2.45	2.94	1.04	1.12	1.11
Supervisor	6.6	N/A	0	N/A	0.99	0.31	1.11
Asst. Director/Content	N/A	N/A	N/A	1.3	0.09	N/A	1.09
Building Admin. & Support	0.4	0.9	0.84	0.66	0.82	0.78	0.69

Disparity ratios created by dividing sum of FTE/1,000 pupils from "successful low spending districts" in same core based statistical area by sum of FTE/1,000 pupils for small city district(s).

Summed count of certified staff, weighted by FTE (converted to 1/100, where 100%=1.0 FTE) from NYSED Personnel Master File 2008-09 & 2009-10, divided by District Duplicated Combined Adjusted Average Daily Membership (DCAADM) for 2008-09 & 2009-10 from NYSED Fiscal Profiles (Fiscal Analysis and Research Unit)

"Successful, low spending districts" Includes districts identified as "successful" and "low spending" (2012 Update) located in the same core based statistical areas (www.nces.ed.gov/ccd/bat) as small city school districts.

Finally, Appendix B addresses other positions, including those concentrated at the elementary level. Small City districts do appear to leverage staffing, to the extent possible, to elementary classrooms, maintaining a slight edge over successful low spending districts in FTE per 1,000 pupils and a larger edge on allocation to kindergarten. Successful low spending districts, however, have far more staff allocated to gifted and talented programming.

Small city district allocations to elementary classrooms and kindergarten make sense. Maintenance of reasonable class sizes at these grade levels is important, particularly in high poverty settings. As I showed earlier in this section, class sizes in these districts are far from consistently sufficiently small, with significant shares of students in larger than appropriate classes. Small city and all other districts should be provided sufficient resources such that they can both maintain reasonable lower grade class sizes and provide teachers for advanced level courses at the secondary level. In fact, sufficient resources should be available at the lower levels such that more students can be prepared for advanced upper level courses, for which there should also be sufficient staffing resources. The preceding several tables reveal significant gaps in this regard.

3.0 Consequences of Inadequate Funding

Finally, in this section, I discuss the current outcomes of districts facing substantive spending gaps, the relationship between *sound basic spending gaps* and various outcome measures and the position of children in small city plaintiffs' school districts in this mix. In Section 3.1 and 3.2, I show that:

1. Statewide, schools identified as being in the bottom 5% (labeled Priority) are in districts with the largest state aid gaps.
2. Overall, focus districts, focus schools and priority schools are in districts with larger state aid gaps than districts that are home to schools in good standing under the state's newly adopted accountability scheme.
3. Schools in districts with larger spending gaps have systematically lower 8th grade math proficiency rates and nearly all schools in small city districts fall below the 80% proficiency level on 8th grade math in 2011.
4. These disparities persist, and even strengthen, when evaluating 2013 assessment outcomes.

3.1 Waivers, Sanctions & Funding Gaps[29]

In 2012, New York State, along with several other states chose to participate in the U.S. Secretary of Education's *Elementary and Secondary Education Act* "regulatory flexibility initiative" casually referred to as the NCLB Waiver program. As framed by the U.S. Department of Education, "This flexibility rewards States that are showing the courage to raise their expectations in their academic standards."[30]

Like its immediate predecessor *Race to the Top,* the NCLB Waiver program was characterized as an opportunity for states to propose "innovative" reform strategies for improving low performing schools. But also like its predecessor, the NCLB Waiver program prescribes with a high degree of precision those "innovations" that must be included on a state's application to qualify for a waiver. In many respects, the entire program is suspect, beginning with the fact that the program involves the U.S. Secretary of Education unilaterally permitting states to sidestep existing Federal Statute (NCLB). Additionally, the prescriptive and coercive approach has backed most states into adopting strikingly similar *innovations,* including

[29] http://www.p12.nysed.gov/accountability/ESEADesignations.html
[30] http://www.p12.nysed.gov/esea-waiver/

nearly identical schemes for identifying and classifying local public school districts to be subjected to federally approved "turnaround" models.

Like other states with approved NCLB waivers, New York has adopted a modified performance classification scheme to identify those schools and districts subject to the most immediate interventions.

> Using 2010-11 school year results, NYSED will identify as Priority Schools the lowest achieving district and public charter schools in the state based on combined ELA and math assessment results or graduation rate for the "all students" group, if these schools are not demonstrating progress in improving student results. The Department will identify any district with at least one Priority School as a Focus District. If a district is among those with the lowest achieving subgroups in ELA and mathematics combined or for graduation rate and is not showing improvement, the district will also be identified as a Focus District. These districts in turn will be required to identify, at a minimum, a specified number of schools as Focus Schools.[31]

Under this model, the state assumes no blame for a district's or school's "failure" to achieve measured outcome goals, but grants itself additional authority to impose significant structural, programmatic and staffing changes. By design of this system, the fault lies with district and school management and operations and the quality of teachers delivering the curriculum. Schools identified as priority schools and districts identified as focus districts are unlikely to receive substantive additional financial resources from the state but will face additional accountability and potential restructuring requirements.

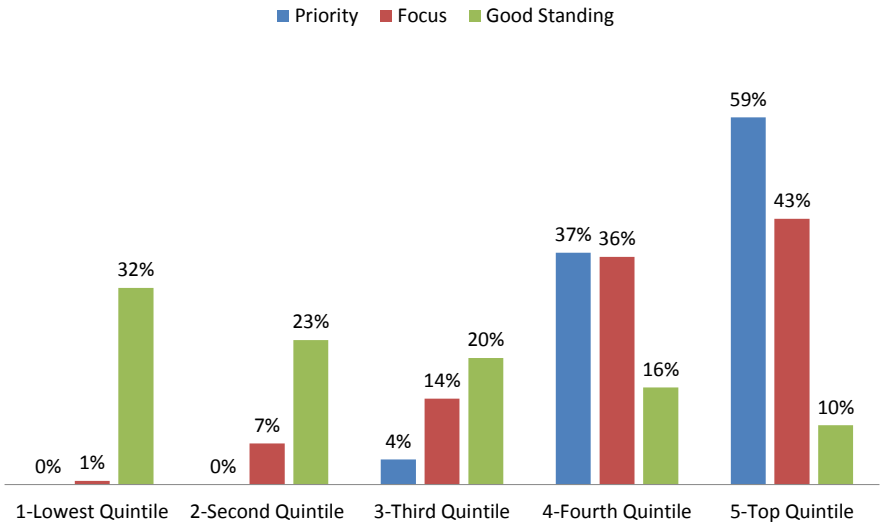
Figure 9 addresses the distribution of children, by low income quintile, across schools falling into different accountability classifications under the new system. For example, Figure 9 shows that for Priority schools, 59% (weighted by enrollment) are schools in the highest quintile of low income concentration. 37% are schools in the next highest quintile of low income concentration (See appendix for school listings).

No priority schools have low concentrations of low income children (are in the bottom 40%). Patterns are similar though somewhat less striking for focus schools. Focus schools tend to fall in the higher quintiles of low income concentration. By contrast, those schools in "good standing" tend to be in the lower poverty quintiles. In other words, low income enrollment concentrations remain a substantial predictor of waiver classification status.

[31] http://www.p12.nysed.gov/esea-waiver/field-memo.pdf

Figure 9

School Accountability Status by Low Income Concentration Quintile
Percent of Children Attending Schools by Status



Note: Based on enrollment weighted school level data drawn from the 2010-11 NYSED School Report Cards database, linked with NYSED NCLB Waiver school level ratings. Approximately 1,000 schools per quintile (quintiles by school, not enrollment weighted).

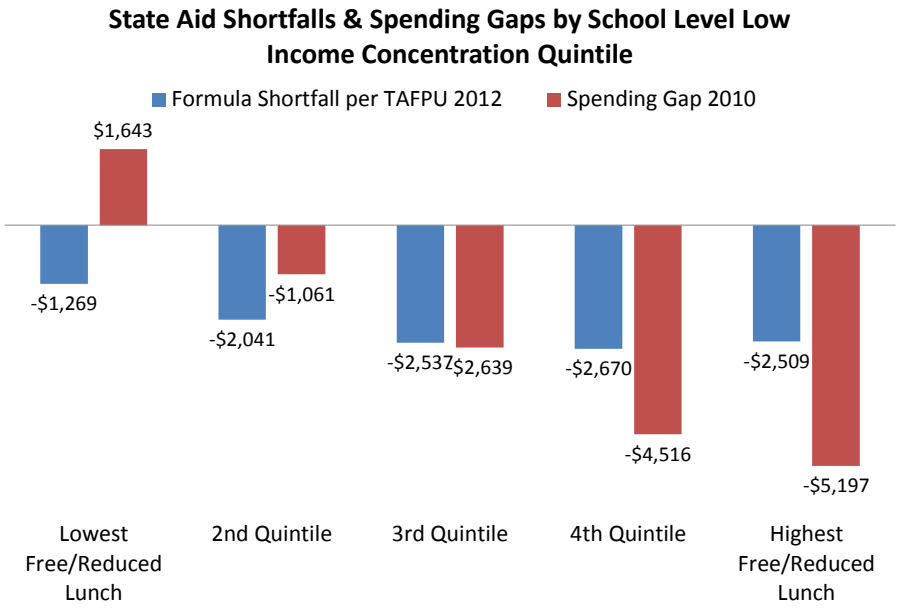
Figure 10 points more directly toward state policy and responsibility. Figure 10 presents the gap between actual *General Education Expenditures per Pupil*[32] compared with the *Sound Basic Spending Targets*[33] derived from the foundation aid formula, and also presents the average state aid shortfalls by low income quintile. That is, how much less per pupil do districts spend than the state estimates that they need to spend in order to achieve constitutionally adequate outcomes?

Notably, Good Standing here does not mean "successful" as discussed elsewhere in this report. The classifications might best be characterized as arbitrary distinctions crafted by wholly inappropriate perversion of assessment data, with the intent to achieve a politically desirable distribution of winners and losers.

[32] General Education Instructional Spending per General Education Pupil (2012 Successful Schools Estimates), generated by 3 year average from 2009-2011.

[33] Based on the 2010 (mid-year of three year spending range) foundation aid formula funding target, expressed per pupil (using the average student count for the three year period from the 2012 Successful Schools Estimates file).

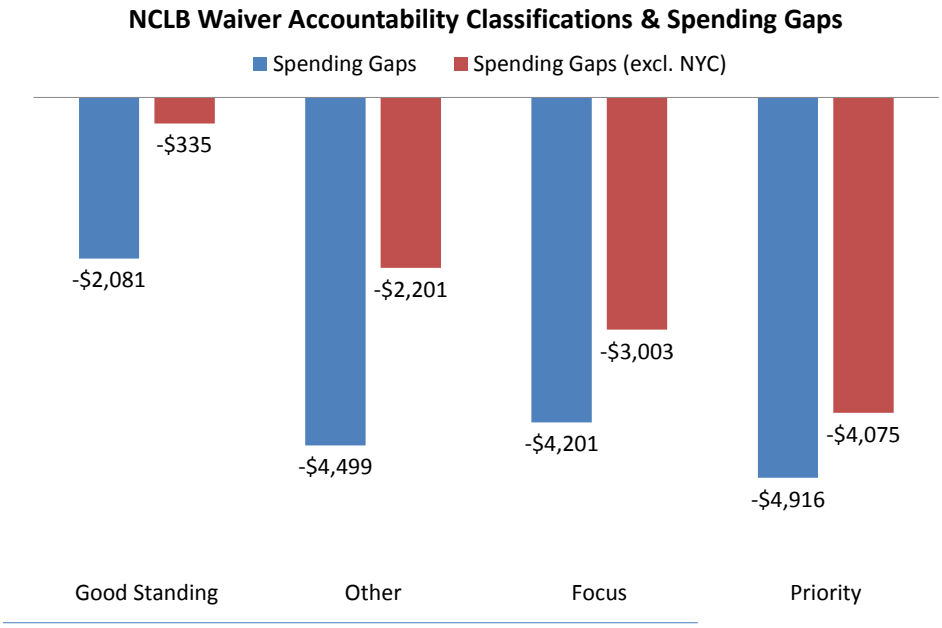
Figure 10



Note: Based on enrollment weighted school level data, linked to district level financial data. Formula shortfall is difference between actual foundation aid 2011-12 and fully phased in, fully funded foundation aid. General education instructional spending gap is the difference between general education expenditures per pupil (2009-11) and adj. foundation level (state & local revenue target) for 2010.

Figure 11 links the two above concepts, showing the spending gaps per pupil by accountability classification. Of particular note in Figure 13 is how the spending gaps vary by waiver classification. Those districts that are home to schools "in good standing" face spending gaps, on average. But, many districts in this category do spend more than state estimates for sound basic spending targets. Meanwhile, districts that are home to focus schools and in particular priority schools face substantial sound basic spending gaps.

Figure 11



Note: Based on enrollment weighted school level data drawn from the 2011-12 NYSED School Report Cards database, linked with NYSED NCLB Waiver school level ratings. Spending gaps calculated at district level, using NYSED 2012 Successful Schools update figure for GEIE (based on prior three years) and Foundation Formula Target for 2010.

Though unlikely to be a successful strategy with the state as arbiter, districts so severely underfunded by the state and serving high need student populations should push back against the state on the following basis:

> Districts with schools that have been preliminarily identified as Priority Schools, as well as preliminarily identified charter schools, that believe that there are extenuating or extraordinary circumstances that should cause the school to not be so identified may petition the Commissioner to have a school removed from Priority status. These petitions will be due two weeks from the date of notification that a school has been preliminarily identified as a Priority School. (p. 6) [34]

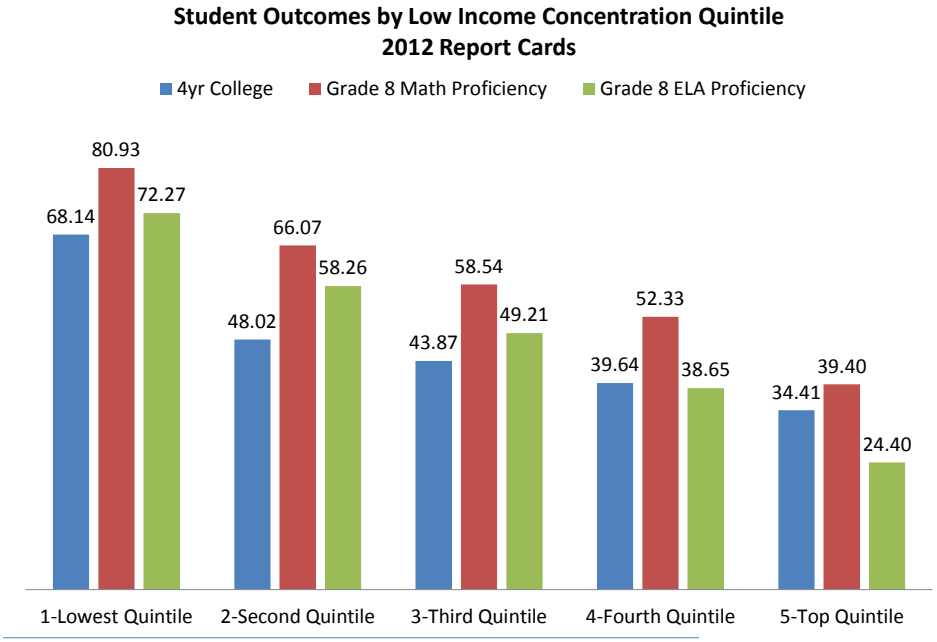
That is, it might be a logical strategy to use the state's own dramatic underfunding of the state's own estimate of adequate funding as basis for arguing extenuating circumstances. Until the state at the very least meets its own minimum funding obligation, the state should have little authority to force additional requirements, structural changes or draconian interventions on these districts. The state must accept at least partial blame for current conditions, if not the lion's share.

[34] http://www.p12.nysed.gov/esea-waiver/field-memo.pdf

3.2 Other Outcomes

The next several figures explore the relationship between funding gaps and outcome measures. Figure 12 summarizes average outcomes across three measures by low income concentration quintile. In blue bars, we have the percent of children headed to either in-state or out-of-state four-year colleges. That percent declines precipitously from schools with lower concentrations of low income children to schools with higher concentrations of low income children. The case is similar for the two other outcome measures reported in Figure 12 – Grade 8 math and English Language Arts proficiency rates. Whereas 81% of children in the lowest poverty schools are proficient (level 3 or 4) on 8th grade math assessments, only 39.4% are proficient in the highest poverty quintile. Disparities are similar for English Language arts, ranging from 72% in low poverty schools to only 24% in higher poverty schools.

Figure 12

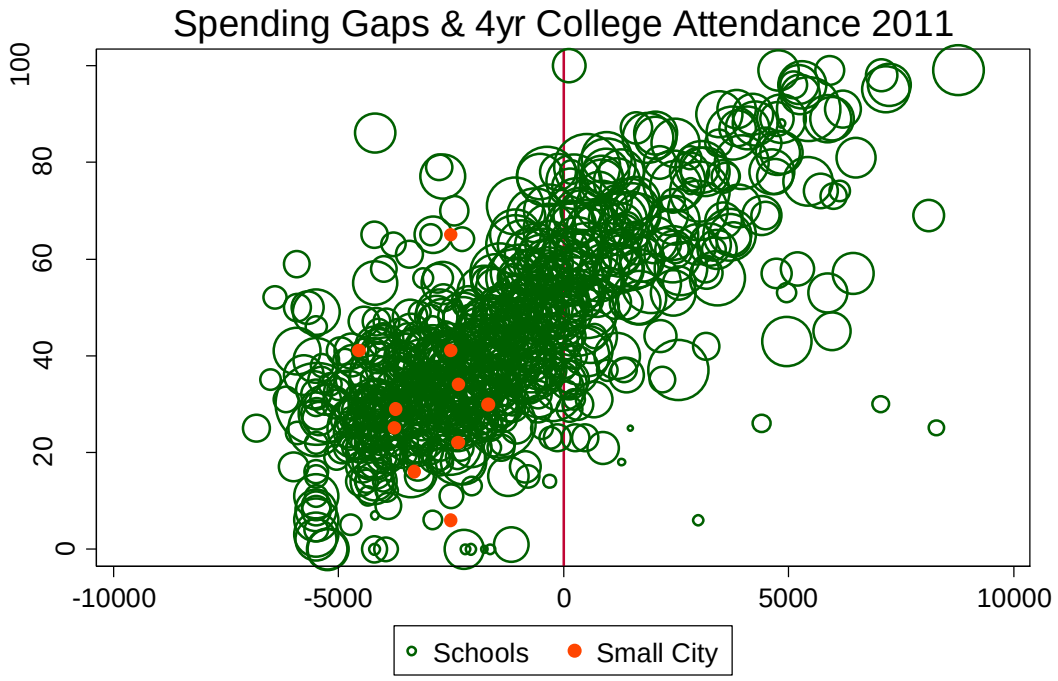


Note: Based on enrollment weighted school level data drawn from the 2010-11 NYSED School Report Cards database. Approximately 1,000 schools per quintile (quintiles by school, not enrollment weighted).

Figure 15 shows the relationship between Sound Basic Spending Gaps and 4yr college attendance using 2012 report card data. Schools in small city districts are indicated with an orange dot. Circles each represent a school reporting college attendance data (running through grade 12). Circle size represents enrollment size of the schools. New York City schools are excluded from this analysis. Spending gaps between formula targets and current GEIE are on the horizontal axis and four year college attendance rates are on the vertical axis. Figure 13 shows a relatively strong, positive relationship between the two. Districts with more adequate

funding also tend to have higher rates of college attendance. Notably, this relationship exists to an extent because districts with more adequate spending levels in New York State are also those districts with substantively less needy students. However, as indicated in Table 18 at the end of this subsection, the relationship between spending gaps and outcomes remains statistically significant and of relevant magnitude even when controlling for student population characteristics. For example, a reduction of spending gap by $1,000 per pupil is associated with an increase in four year college attendance rates of over 3.35%.

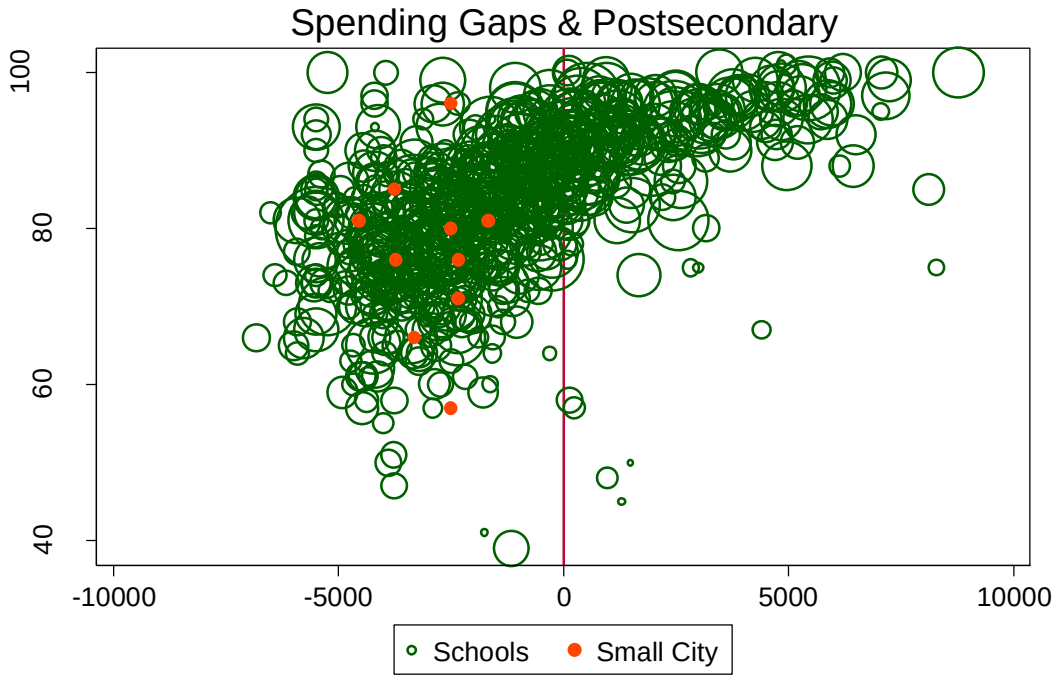
Figure 13



R-squared=0.5659 excl. NYC | *Spending Gap is difference between formula target 2010 & GEIE 2009-2011

Figure 14 shows the relationship between all postsecondary attendance and spending gaps. This relationship is less strong than the previous primarily because there exists less overall variation in total postsecondary attendance. However, the relationship remains significant. Table 18 shows that a difference in spending gap of $1,000 per pupil is associated with greater than 1% increase in postsecondary attendance.

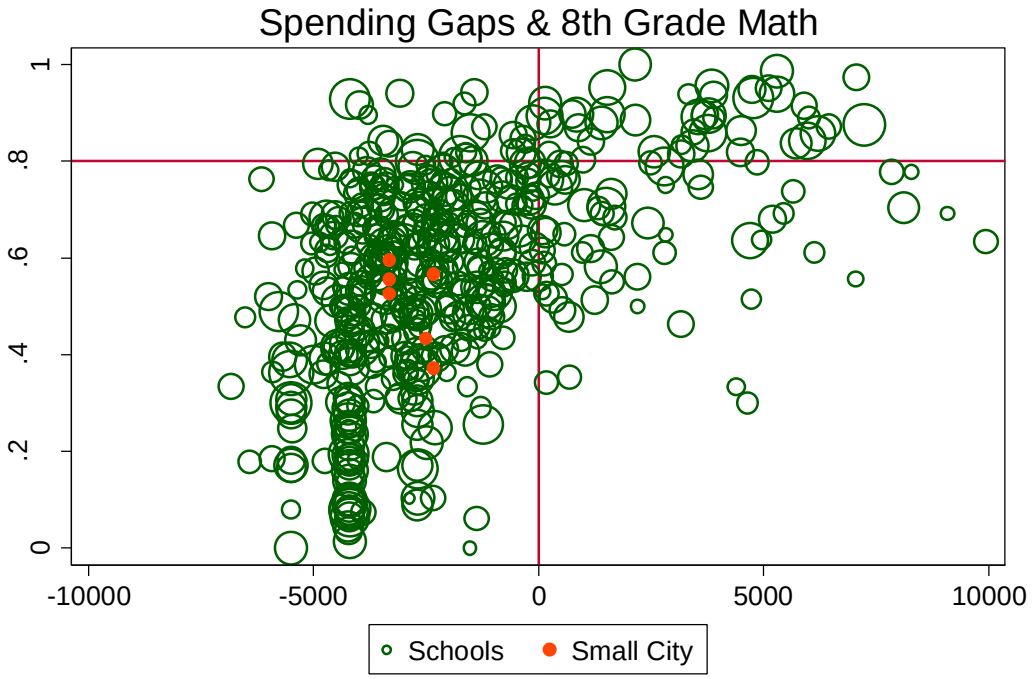
Figure 14



R-squared=0.3333 excl. NYC | *Spending Gap is difference between formula target 2010 & GEIE 2009-2011

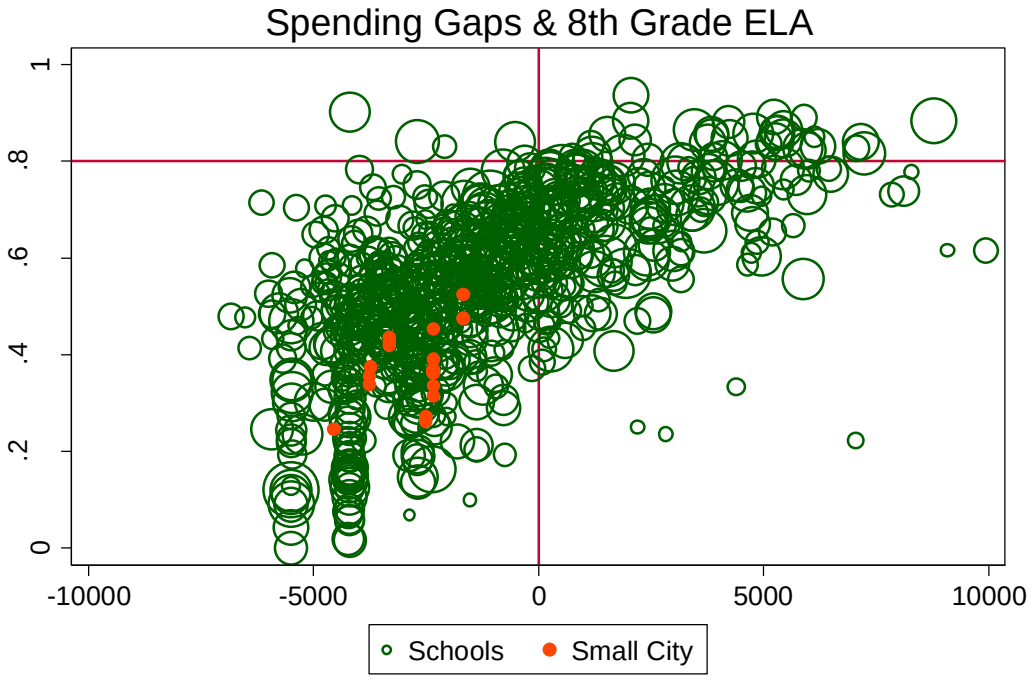
Finally, figures 16 and 17 address spending gaps with respect to state assessment scores, or more precisely, shares of children achieving level 3 or 4 on 8th grade exams. For these graphs, I have inserted a horizontal marker at 80% - the level used in the state's successful schools analysis to indicate adequate outcomes. Again, spending gaps are associated with outcomes, such that schools in districts with greater spending gaps continue to have lower outcomes. And again, the spending gap to outcome relationship remains statistically significant even after controlling for student characteristics (Table 18). In each case, a $1,000 reduction in spending gap is associated with a 1.2 to 1.4% increase in the percent of children scoring level 3 or 4 on state assessments.

Figure 15



R-squared=0.2840 excl. NYC | *Spending Gap is difference between formula target 2010 & GEIE 2009-2011

Figure 16



R-squared=0.4375 excl. NYC | *Spending Gap is difference between formula target 2010 & GEIE 2009-2011

Table 18

	4 Year College			Postsecondary All			Math 8			ELA 8		
	Coef.	*SE*		*Coef.*	*SE*		*Coef.*	*SE*		*Coef.*	*SE*	
Spending Gap (000s)	**3.348**	**0.153**	*	**1.093**	**0.106**	*	**1.226**	**0.184**	*	**1.408**	**0.109**	*
Student Needs	-0.239	0.026										
% Free Lunch	-1.048	0.090	*	-0.074	0.018	*	-0.653	0.027	*	-0.549	0.016	*
% Reduced Lunch	-0.065	0.080	*	-0.687	0.062	*	0.191	0.101		-0.040	0.059	
% ELL	-0.065	0.080		-0.125	0.055	*	-0.025	0.066		-0.134	0.043	*
Year												
2010												
2011	0.287	0.591		-0.512	0.408		-2.124	0.854	*	4.552	0.453	*
Constant	62.408	0.724	*	92.522	0.500	*	80.525	1.244	*	68.861	0.554	*
R-Squared		0.667			0.414			0.615			0.759	

[1] Spending Gap is the gap between GEIE 2009-11 and Foundation Target for 2010, expressed in thousands of dollars
[2] Regression models weighted for school level enrollment
[3] Excludes NYC schools and schools enrolling fewer than 300 students
*p<.05

Table 18 provides a multiple regression analysis which asks the question – to what extent are spending gaps associated with outcomes, among schools with similar percentages of low income or non-English speaking children, in the same year. In other words, are the spending gap to outcome relationships displayed in previous figures merely a function of the relationships between outcome gaps and student population characteristics, and spending gaps and student characteristics? Table 18 shows that in each case, for each outcome measure, outcome gaps are associated with spending gaps, even among districts with similar student needs. A$1,000 reduction in spending gap is associated with a 3.3% increase in 4yr college attendance, 1.1% increase in postsecondary attendance, 1.2% increase in 8th grade math scores and 1.4% increase in 8th grade ELA scores.

Figure 17

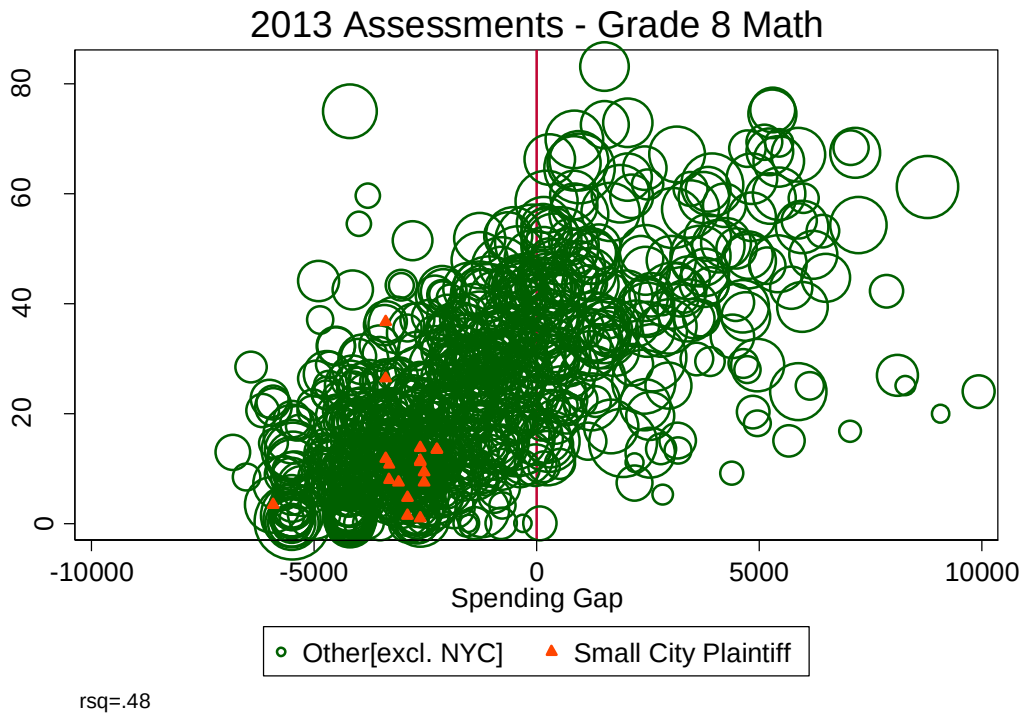
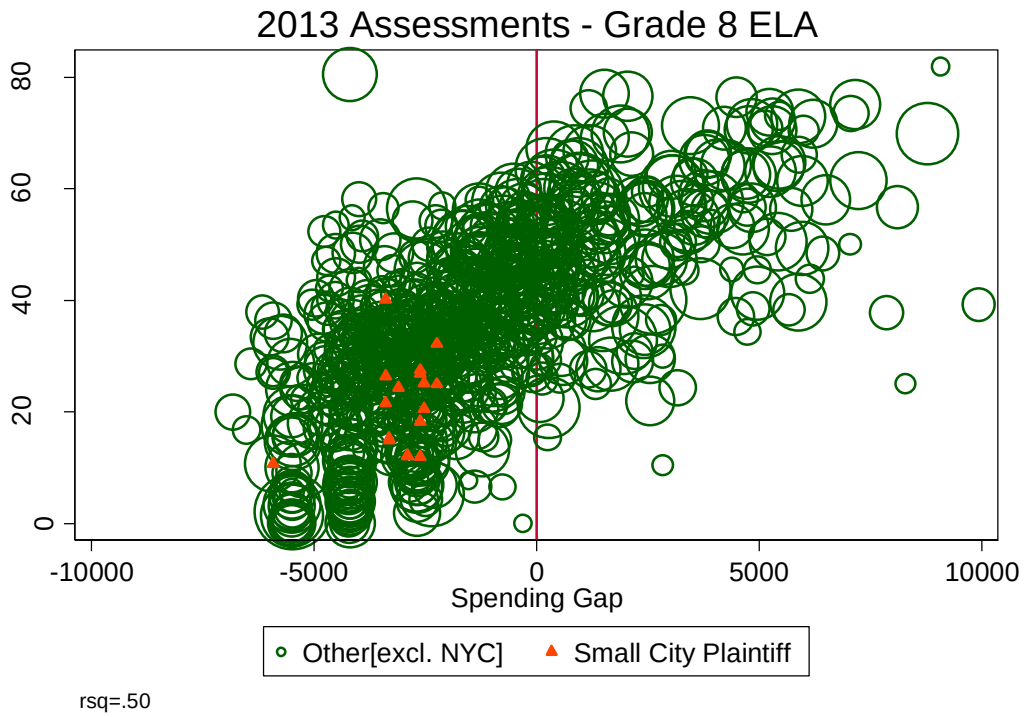


Figure 17 shows the relationship between spending gaps (2011) and 2013 assessment results, the first batch of "common core" assessments. Here, the strength of the relationship between spending gaps and Grade 8 math outcomes has actually increased over prior assessment results, likely because the outcome distribution has been spread more widely. That is the gaps are bigger and there is no compression at the top of the distribution. Thus, the variance in outcomes explained by funding gaps is substantively larger than on prior assessments. Figure 18 reveals a similar finding for ELA in grade 8.

Figure 18



4.0 The Conceptual & Empirical Failure of Successful Schools Calculations

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 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.

4.1 Operationalizing *Educational Adequacy*

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*.[35]

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." [36]

> *…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)[37]

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 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.[38] 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).

---

[35] http://www.oms.nysed.gov/faru/PDFDocuments/Primer11-12D.pdf
[36] http://www.oms.nysed.gov/faru/documents/technical_final.doc

[37] http://www.oms.nysed.gov/faru/PDFDocuments/technical_2009.pdf
[38] http://nces.ed.gov/nationsreportcard/statecomparisons/Default.aspx

4.2 Mismeasurement of Outcome Standards

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. As a result, the tested standard had drifted from the constitutional standard. 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."*[39]

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 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).

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

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%.

Additional years of data provide 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 19 shows the rates of children scoring at level 3 or 4 in 2009 and again in 2010. 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 50% 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 19

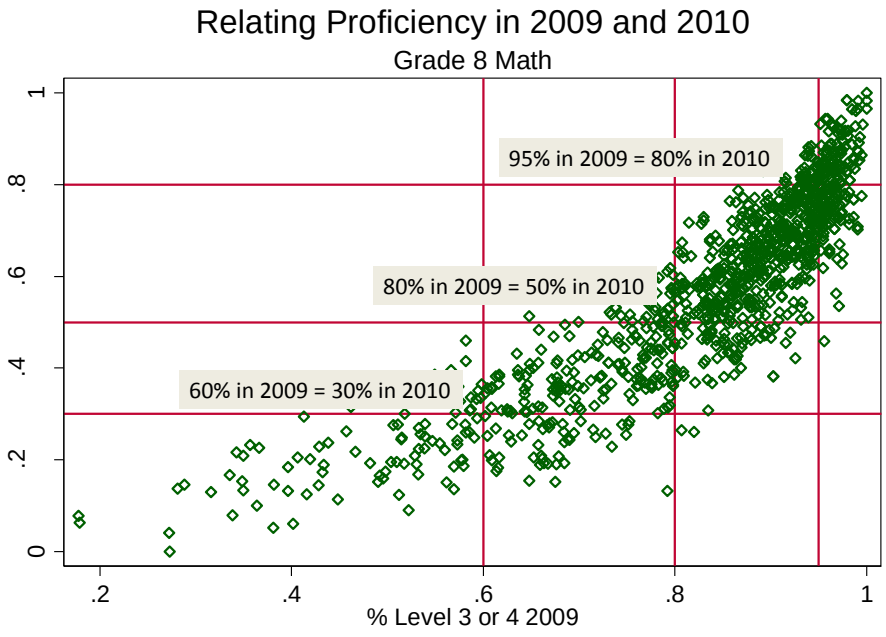
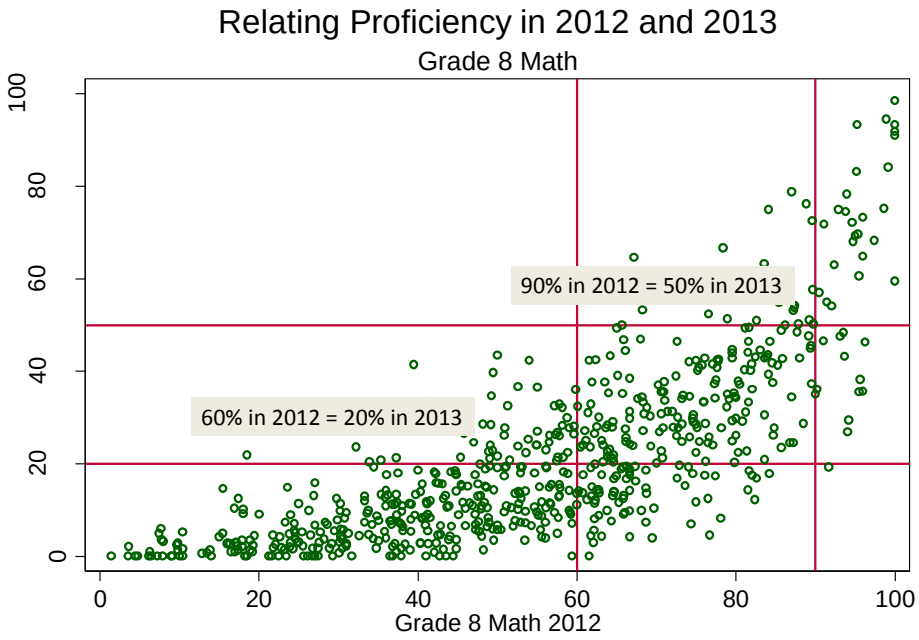


Figure 20 shows the resulting shift of the change in assessments from 2012 to 2013, also for 8th grade math. Again, I've applied ballpark cutpoint comparisons. Here, a school where 60% were proficient in 2012 was likely to have 20% proficient in 2013. A school where 90% were proficient in 2012 was likely to have 50% proficient in 2013.

One might argue that the 2013 assessments while new and evolving are the product of more thoughtful consideration of what it takes for New York State children to be truly college ready, whereas previous assessments were less clearly linked. The procedure that led to assignment of cutpoints for proficiency for the updated assessment was similar to that employed by Koretz for the evaluation of prior assessments and the resulting 2010 adjustments shown above. If the 2013 assessments do more accurately represent the standard for college readiness, it is quite likely that the cost of achieving that standard is much higher than previously estimated. Notably, only a handful of schools surpass the 80% threshold on math proficiency for the 2013 assessments.

Figure 20



4.3 Empirical Failure of the Successful Schools Model

Problems with New York State's outcome measures alone might thwart any reasonable attempt to determine the costs across different settings of achieving those outcomes. That is, if

a sufficiently rigorous method was used. For example, as standards drifted downward, one would expect to find it cheaper to achieve those standards, all else equal. But while the cost of achieving those standards might be less, it may be because the standards are not in fact constitutionally adequate. Thus, the cost estimate derived from them does not represent the cost of meeting the constitutional standards. But to begin to address these questions, one must be applying reasonably rigorous methods to sufficiently vetted, high quality data and measures.

The chosen methods and data 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 successful schools method asserts that the average spending of a subset of school districts that happen to present test scores above a specific level should be sufficient spending for other districts to achieve at least the same level of outcomes. As applied in New York, the lower spending districts that achieve those standards are assumed to present the level of spending needed to efficiently achieve those outcomes. The method recognizes that districts in certain regions or serving certain children may face higher costs to achieve the same outcomes. But the higher costs – specifically pertaining to children's needs – are addressed only by adoption of an arbitrary adjustment factor and not by evaluating districts serving children with specific characteristics that do achieve comparable outcomes.

Several important decisions are involved in the methodologically loose structure of a successful school districts analysis. Among these decisions are:

a) Selecting the relevant expenditure measure
b) Determining steps & methods for identifying a representative distribution of "successful" districts
c) Selecting appropriate adjustments for student need related costs, regional labor cost variation and other "cost" factors outside of control of local school officials.

In an analysis intended to inform design of a state aid formula – specifically to set an "adequacy" cost figure – one must choose a spending measure that includes the same mix of programs and services that are intended to be paid for with foundation (adequacy) funding. If the funding formula "adequacy" cost figure is intended to cover current operating expenditures per pupil, then one should use for their cost analysis, a compatible measure of current operating expenditures per pupil. If one were, for example to calculate costs based on a spending measure that did not include spending on special education programs or transportation, and then use the findings to establish a new funding formula, without adding

back in the costs of providing special education services or transportation, the formula would fall short of meeting actual funding needs.

It is also important that analyses account appropriately for the value of the education dollar over time. Cost analyses typically involve retrospective data, but are intended to influence future policies, creating a significant time difference between the spending data used to inform policy and adoption of the policy. A consumer price index (CPI) is unhelpful for adjusting past spending to reflect future costs, unless we are considering how many loaves of bread or gallons of gas can be purchased with the education dollar.

But we are not mainly purchasing loaves of bread or gallons of gas with that dollar. We are attempting to purchase educational outcomes, a far more complex endeavor. Changes in education costs are driven by a combination of a) the need to pay competitive wages [relative to other career alternatives] to maintain the quality of entrants to the teaching profession, b) changes in the demography of the student population that may affect the costs of achieving constant outcomes and c) changes, if any, in the desired outcomes. Achieving higher outcomes costs more, and achieving lower outcomes costs less, all else equal. Competitive wage growth alone has historically outpaced consumer price indices.

In a state with the demographic and economic diversity of New York, any pool of successful districts used for informing the design of school finance policy must be sufficiently representative. Among other factors, geographic representation is critical given the substantial variation in regional labor costs from Albany to Buffalo, or from Pocantico Hills to Plattsburgh. It would make little sense, for example, to derive a statewide base cost of adequate schooling from a sample of districts largely concentrated in upstate and western New York, given that the largest share of students in the state are concentrated in downstate, New York City and Long Island.

Finally, it is wholly insufficient to rely on factors to adjust for the costs of meeting the same outcome standards in different settings with different children, by drawing those factors from: a) a loose and/or incomplete reading and application of literature on costs, derived from unlike schooling contexts (states, regions), b) adopted policies (rather than actual costs) used in other states or the current state (New York), or c) thin air. Analysis of marginal spending differences associated with marginal outcome differences for different student populations and in different schooling settings, in the state in question can provide far more accurate estimates.

The steps of the New York State Successful Schools analysis are as follows.

Step 1: Adj GE Exp = GE Exp 2006-08 /RCI

Step 2: Adj. Pupils = GE Pupils 2006-08 + FRPL x GE Pupils 2006-08

Step 3: Adj. GE Exp per Adj. Pupils = Adj GE Exp/ Adj. Pupils

Step 4: Identify those districts that a) "pass" and b) are in lower half of Adj GE Exp/ Adj. Pupils

Step 5: Take average of Adj GE Exp/ Adj. Pupils for those who make the cut

For the 2009 analysis, in Step 1, a spending figure called General Education Instructional Spending per Pupil is summed from 2006 to 2008. The General Education Instructional Expenditure figure – summed across 3 prior years – is then divided by the Regional Cost Index, intending to adjust the value of the spending figure for regional labor cost variation.

In Step 2, an adjusted pupil count is created by summing the actual, general education pupils and adding to them 1.0 additional pupil for each child qualified for free or reduced priced lunch. This adjusted pupil count is used to further deflate the spending figure, in theory to represent the cost per pupil if there were no children qualified for free or reduced priced lunch (as that weight is intended to be added back in through the PNI in the formula).

In Step 3, the adjusted General Education Instructional Expenditure (Adj. GEIE) per pupil figure is created by dividing the GEIE by the adjusted pupil count. Then, in Step 4 and 5, districts achieving the specified standard are identified, and the lower half Adj. GEIE districts are identified and the average of their expenditures is taken. This last step is called the "efficiency" filter and it is assumed that applying this filter creates a pool of districts that spend efficiently toward achieving the target outcomes (as opposed to merely excluding the majority of districts operating in higher cost regions of the state).

4.3.1 The "Efficiency Filter" Game

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.[40]

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. 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.[41]

Table 19 shows the distribution of districts excluded from final "adequacy" calculations as a result of applying the efficiency filter. In short, applying efficiency filter severely biases the underlying "cost/spending" estimates toward Western NY and Finger Lakes district spending, and away from the much higher spending levels of Hudson Valley, Long Island and NYC districts. While 75% of Hudson Valley districts are "successful" only 19% make it into the successful schools spending calculation. While 86% of Long Island/NYC districts are successful, only 26% make it into the spending calculation. Meanwhile, 60% of western New York districts make it

[40] http://cpr.maxwell.syr.edu/efap/CFE_Articles/Amicus_brief.pdf

[41] http://www.cfequity.org/pdfs/resources/11.20.06CourtRuling-NYSLRB.pdf

into the spending calculation. The imbalance of representation in the spending calculation leads to severe downward bias in the successful schools spending estimate.

Table 20 shows updated figures based on the 2012 Successful District and Low Spending Successful district calculations. Table 20 reveals that the same problem of under-representation of downstate districts persists. The distribution remains heavily biased toward districts operating in low cost regions of the state and therefore the estimates of required spending remain biased and inappropriate.

Put bluntly, one cannot reasonably assert that the spending levels of relative low poverty districts that lie largely in the geographic space between Ithaca and Buffalo have any relevance to the costs of producing adequate educational outcomes in Mount Vernon, New York City or Poughkeepsie.

Table 19

Effects of Applying Efficiency Filter on Composition of 2009 Successful Schools Sample

Region	Regional Cost Index Region[1]	Total # Districts	Successful Districts [2]	Low Spending Successful Districts [3]	% Above Standard	% Low Spending Above Standard
North Country/ Mohawk Valley	1	117	86	42	74%	36%
Southern Tier	1.045	74	48	33	65%	45%
Western NY	1.091	80	63	48	79%	60%
Central NY	1.103	39	29	18	74%	46%
Capital District	1.124	72	49	24	68%	33%
Finger Lakes	1.141	70	61	42	87%	60%
Hudson Valley	1.314	100	75	19	75%	19%
Long Island/NYC	1.425	122	105	32	86%	26%

[1] Tabulated based on RCI as reported in DBSAD1, 3-29-12, N(MI0123) 03 REGIONAL COST INDEX (RCI), using data set with RCI merged into NYSED FARU District Fiscal Profiles (http://www.oms.nysed.gov/faru/Profiles/profiles_cover.html) 2007 to 2011

[2] Based on "successful district" classification as presented in Excel Workbook "cost_calcs.xls" used for 2009 Successful Schools Update analysis. Column X of "basedata" worksheet, "Passed"

[3] Based on "low spending district" classification as presented in Excel Workbook "cost_calcs.xls" used for 2009 Successful Schools Update analysis. Column Y of "basedata" worksheet, "YES"

Table 20

Effects of Applying Efficiency Filter on Composition of 2012 Successful Schools Sample

Region	Regional Cost Index Region[1]	Total # Districts	Successful Districts [2]	Low Spending Successful Districts [3]	% Above Standard	% Low Spending Above Standard
North Country/ Mohawk Valley	1	117	80	38	68%	32%
Southern Tier	1.045	74	42	25	57%	34%
Western NY	1.091	80	63	48	79%	60%
Central NY	1.103	39	24	10	62%	26%
Capital District	1.124	73	47	23	64%	32%
Finger Lakes	1.141	70	58	51	83%	73%
Hudson Valley	1.314	101	76	25	75%	25%
Long Island/NYC	1.425	122	101	25	83%	20%

[1] Tabulated based on RCI as reported in DBSAD1, 3-29-12, N(MI0123) 03 REGIONAL COST INDEX (RCI), using data set with RCI merged into NYSED FARU District Fiscal Profiles (http://www.oms.nysed.gov/faru/Profiles/profiles_cover.html) 2007 to 2011

[2] Based on "successful district" classification as presented in Excel Workbook used for 2012 Successful Schools Update analysis.

[3] Based on "low spending district" classification as presented in Excel Workbook used for 2012 Successful Schools Update analysis.

4.3.2 The "Instructional Spending" Bait & Switch

A second peculiar feature of the state's successful schools analysis is the choice of a pruned current operating expenditure figure. The figure is referred to as a three year average of *general education instructional expenditures*, where those general education instructional expenditures exclude expenditures for special education and include prorated shares of administrative expenses. Transportation and debt service expenses are also removed. As important as the choice of a *partial* operating expenditure figure is the choice to use a time lagged figure from 2006 to 2008 as basis for calculating required spending of successful districts in 2009, to be used for setting foundation levels after 2009, with similar issues applying to the updated 2012 analysis.

The steps in the per pupil spending calculation are as follows:

Step 1: General Education Instructional Expenditures (GEIE) = 2006 GEIE + 2007 GEIE + 2008 GEIE

Step 2: RCI Adj GEIE = $GEIE_{2006\text{-}2008}$ / 2009 RCI (regional cost index)

Step 3: Need Adj. Pupil $Count_{2006\text{-}2008}$ = 2006 General Ed Count + 2007 General Ed Count + 2008 General Ed Count + (%Free or Reduced Lunch x [2006 General Ed Count + 2007 General Ed Count + 2008 General Ed Count])

Step 4: Adj. GEIE per $Pupil_{2006\text{-}2008}$ = RCI Adj $GEIE_{2006\text{-}2008}$ / Need Adj. Pupil $Count_{2006\text{-}2008}$

That is, as discussed previously, general education instructional spending is summed across three lagged years (Step 1). It is then divided by the regional cost index (Step 2). A need adjusted pupil count is created (Step 3). Need adjusted spending is determined by dividing the RCI adjusted spending total by the need adjusted pupil count.

But, it is perhaps easiest to observe the shortcomings of the General Education Instructional Expenditures figure adopted for these analyses by looking at that figure without the RCI or Free/Reduced Lunch adjustment, and by RCI region.

Table 21 compares the unadjusted General Education Instructional Expenditures for 2006 to 2008 to the actual (also not adjusted for RCI or PNI) AOE per TAPU for 2009. Special education is effectively removed from both because special education weightings are embedded in TAPU for the AOE figure, and transportation and debt service expenditures are deducted from AOE calculations.[42] So, these figures should be comparable or at least close, if it

[42] See, for example, calculations for Utica in 2012-13, here: https://eservices.nysed.gov/publicsams/reports.do

is the case that general instructional spending is meant to generate a cost figure to be used in a foundation formula, to cover operating expenses. The lack of comparability is driven by selective other deductions from AOE that are considered not to be "core" expenditures. Those selective deductions have greater negative impact on spending calculations for districts in some regions than in others.

In most cases, the AOE/TAPU in 2009 is more than $1,000 per pupil higher than the previous three year average GEIE per pupil. In other words, the reductions achieved by using the GEIE figure are substantial – yet not validated as appropriate. In downstate and Long Island districts AOE is more than $3,000 per pupil greater, and it is ultimately AOE (less transportation and debt service) that is intended to be supported by the foundation aid program.

Even for the lower half spending of districts – applying the efficiency filter – average AOE in 2009 remains substantially higher than the average prior three years GEIE. Unadjusted GEIE for the Hudson Valley is under $8,300 for efficiency filtered successful districts. But unadjusted AEO is over $11,000 and likely a far more reasonable estimate of base spending for this region for 2009 (for this relatively low need subset of districts). In short, the lagged GEIE figure selected for determining foundation funding levels severely understates actual operating expenditures of the same districts and thus severely understates basic spending estimates arrived at through successful schools analysis.

Table 22 provides an update. Again, AOE is already a reduced expenditure figure concentrated on general operating expense. GEIE is further reduced focusing on "core" general instructional expense. Across regions, GEIE remains substantively below AOE and that gap is larger for Hudson Valley and Long Island/NYC regions, suggesting an even greater understating per pupil costs in these regions.

Table 21

Comparisons of General Expenditure Figure used in 2009 Successful Schools Analysis and Adjusted Operating Expense

	All Districts			Successful Districts [1]			Filtered Successful Districts [2]	
Region	*General Education Instructional Expenditure 3yr ('06-'08)*[3]	*Mean AOE/ TAPU '09* [4]		*General Education Instructional Expenditure 3yr ('06-'08)*	*Mean AOE/ TAPU '09*		*General Education Instructional Expenditure 3yr ('06-'08)*	*Mean AOE/ TAPU '09*
North Country/ Mohawk Valley	$8,313	$9,780		$8,247	$9,904		$7,589	$9,153
Southern Tier	$8,165	$9,995		$8,208	$10,097		$7,863	$9,665
Western NY	$7,990	$9,689		$7,654	$9,321		$7,576	$9,180
Central NY	$8,306	$10,203		$8,129	$10,090		$7,732	$9,685
Capital District	$8,141	$10,605		$7,948	$10,417		$7,444	$10,092
Finger Lakes	$7,914	$10,266		$7,958	$10,016		$7,663	$9,825
Hudson Valley	$10,558	$13,864		$10,552	$14,030		$8,277	$11,033
Long Island/NYC	$10,388	$12,820		$10,848	$14,763		$9,215	$12,821

[1] Based on "successful district" classification as presented in Excel Workbook "cost_calcs.xls" used for 2009 Successful Schools Update analysis. Column X of "basedata" worksheet, "Passed"

[2] Based on "low spending district" classification as presented in Excel Workbook "cost_calcs.xls" used for 2009 Successful Schools Update analysis. Column Y of "basedata" worksheet, "YES"

[3] General Expenditure (column Q of basedata worksheet) as presented in Excel Workbook "cost_calcs.xls" used for 2009 Successful Schools Update analysis divided by enrollment (not adjusted for low income students, column R of basedata worksheet). Expenditures and enrollments are cumulative from 2005-06 to 2007-08.

[4] File DBSAC1, 1-19-10 [preliminary run], M(WM0006) 00 2008-09 AOE/TAPU FOR EXP.[43]

[43] This pupil count is used with Approved Operating Expense to determine the expense per pupil of the district. It includes year prior to the base year average daily attendance and additional weightings for pupils with special educational needs, aidable summer pupils, dual enrollment, secondary pupils, and pupils with disabilities. See: https://stateaid.nysed.gov/publications/handbooks/handbook09.pdf

Table 22

Comparisons of General Expenditure Figure used in 2012 Successful Schools Analysis and Adjusted Operating Expense

	All Districts			Successful Districts [1]			Filtered Successful Districts [2]	
Region	*General Education Instructional Expenditure 3yr 2012 Update*[3]	*Mean AOE/ TAPU '11* [4]		*General Education Instructional Expenditure 3yr 2012 Update*[3]	*Mean AOE/ TAPU '11* [4]		*General Education Instructional Expenditure 3yr 2012 Update*[3]	*Mean AOE/ TAPU '11* [4]
North Country/ Mohawk Valley	$8,988	$10,287		$9,283	$10,995		$8,495	$10,079
Southern Tier	$9,162	$10,647		$9,182	$10,803		$8,756	$10,208
Western NY	$9,024	$10,408		$8,579	$10,107		$8,501	$9,971
Central NY	$9,251	$10,572		$9,040	$10,548		$8,623	$10,242
Capital District	$9,213	$11,085		$8,816	$10,865		$8,491	$10,389
Finger Lakes	$8,819	$10,674		$8,627	$10,577		$8,396	$10,240
Hudson Valley	$11,775	$14,436		$11,655	$14,791		$9,556	$11,950
Long Island/NYC	$11,939	$12,918		$12,286	$15,787		$10,497	$13,570

[1] Based on "successful district" classification as presented in Excel Workbook used for 2012 Successful Schools Update analysis.
[2] Based on "low spending district" classification as presented in Excel Workbook used for 2012 Successful Schools Update analysis.
[3] General Expenditure as presented in Excel Workbook used for 2012 Successful Schools Update analysis divided by enrollment (not adjusted for low income students).
[4] File DBSAC1, 3-29-12, M(WM0006) 00 2010-11 AOE/TAPU FOR EXP

Taken together with the efficiency filter, the choice of the substantially reduced spending figure is indicative of a manipulative process designed to produce the lowest possible spending estimate. The New York State Successful School Districts model is little more than a veiled attempt to make it appear that the state has employed a rational, empirical method for establishing foundation funding targets.

Once one has accomplished substantively deflating the base figure in a state school finance formula, all other features added on to that base become substantively deflated as well.

4.4 The Arbitrary Boundaries of the RCI: Consequences for Mt. Vernon

One final problem worthy of note is the arbitrary construction of the geographic boundaries of the Regional Cost Index. The regional cost index, or RCI as discussed throughout this report divides the state into geographic regions and then assigns a labor cost index for each region to be used in adjusting sound basic spending targets and thus state aid. Interestingly, the Regional Cost Index assigns lower Westchester County districts including those that border New York City, to the lower Hudson Valley region and thus an RCI of 1.314, or an upward adjustment to their spending target of 31.4%. But, immediately adjacent New York City schools, including those but a few streets away in the North Bronx receive a 42.5% adjustment. Clearly, these schools in these districts are competing for teachers and other school staff on the same labor market, even if those districts in Northern Westchester, Rockland and Putnam counties may not be.

Mount Vernon and other southernmost Westchester districts bear the brunt of this arbitrary distinction – a geographic delineation which runs in direct conflict with U.S. Census Bureau and National Center for Education Statistics geographic classifications. The National Center for Education Statistics *Education Comparable Wage Index* adopts a labor market definition based on U.S. Census Bureau Core Based Statistical Areas. [44] The NCES Education Comparable Wage Index assigns Mount Vernon to the same labor market as New York City [New York-Wayne-White Plains, NY-NJ Metropolitan Division].

The decision to apply the lower Hudson RCI toward the sound basic spending estimate for Mt. Vernon substantially reduces Mt. Vernon's spending target. Table 23 below revisits the sound basic spending gaps analysis presented previously in Table 7. Table 23 recalculates the sound basic spending targets for Mount Vernon using the New York City RCI (1.425) in place of

[44] Taylor, L. L., & Fowler, W. J. (2006). *A comparable wage approach to geographic cost adjustment*. National Center for Education Statistics, Education Finance Statistics Center.

the lower Hudson RCI (1.314). The higher and more appropriate RCI yields sound basic spending target increases for Mount Vernon of over $10 million each year. For 2010-11, the spending gap, originally $4,400 per pupil or just under 40%, is more accurately over $5,700 and 50%.

Table 23

	Mt Vernon	Mt Vernon Revised RCI
GEIE 2010-11 [1]	$99,586,646	$99,586,646
GE Pupils [1]	8,555	8,555
GE per Pupil 2010-11 [1]	$11,641	$11,641
GEIE 2011-12[3]	$104,210,467	$104,210,467
GEIE 2012-13[3]	$106,843,243	$106,843,243
Target '10 [2]	$129,153,016	$140,063,202
Target '11 [2]	$137,365,472	$148,969,405
Target '12 [2]	$147,982,225	$160,483,007
Target '13 [2]	$151,238,735	$164,014,610
Gap 2010-2011	$37,778,826	$49,382,759
GAP 2011-2012	$43,771,758	$56,272,539
GAP 2012-2013	$44,395,492	$57,171,367
Gap per Pupil 2010-11	$4,415.99	$5,772.39
Gap Percent (of target) 2010-11	38%	50%

[1] NYSED Fiscal Accountability Supplements
[2] Target = Base x PNI x RCI x TAFPU [for each given year, based on final adopted state aid runs, File DBSAD1]
[3] As provided by districts

It is possible that if the RCI was recalculated to include lower Westchester or all Westchester districts in the New York City/Long Island region, that the index would be slightly lower than 1.425, but that is certainly not a given or even likely. The resulting index would at least lie somewhere between 1.314 and 1.425, and most likely closer to 1.425 if we assume a gradient of labor costs from outer edge to weighted center of the labor markets.

4.5 Drawing on Alternative, More Rigorous Evidence

Here, I use cost estimates generated by a "cost function" model estimated by William Duncombe of Syracuse University (model details in Appendix A). The cost function 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 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.[45] Specifically, cost models estimated by William Duncombe and colleagues, applied to data from New York State have appeared in numerous peer reviewed journals,[46] including the article in which William Duncombe and John Yinger estimate the costs of meeting the needs of disadvantaged students.[47]

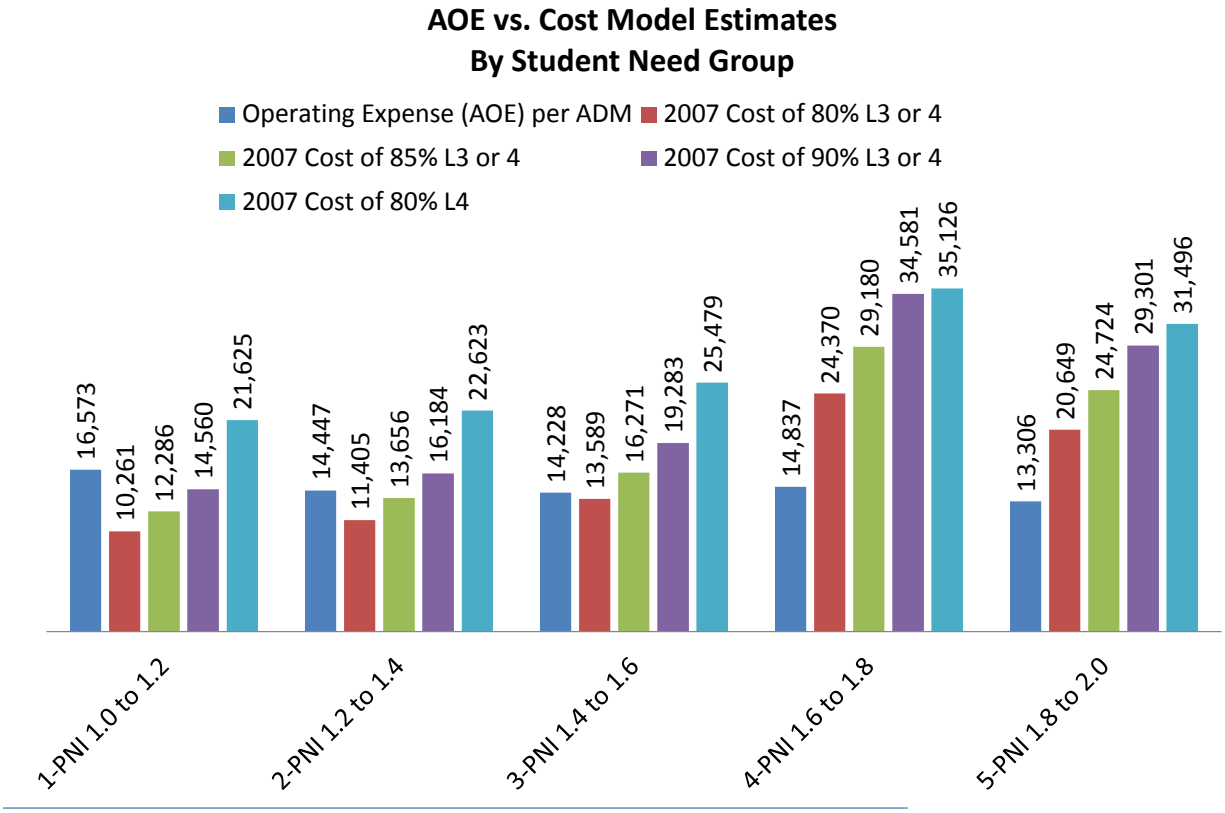
While now somewhat dated, the cost projections provided by William Duncombe continue to reveal that the state's highest need districts face the most significant shortfalls. Perhaps more importantly, these cost estimates, now six years after the fact, show that the per pupil costs of achieving either 80% students at level 4, or 90% at level 3 or higher, are much higher than the state's own estimates of costs produced by the successful schools analysis. These figures point to the need for more rigorous, updated analyses to be used to replace the state's current approach for determining funding targets.

[45] 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.

[46] Duncombe, W., Miner, J., & Ruggiero, J. (1995). Potential cost savings from school district consolidation: A case study of New York. Economics of Education Review, 14(3), 265-284. Duncombe, W., & Yinger, J. (1998). School finance reform: Aid formulas and equity objectives. National Tax Journal, 51, 239-262. Duncombe, W., & Yinger, J. (2007). Does school district consolidation cut costs?. Education Finance and Policy, 2(4), 341-375.

[47] Duncombe, W., & Yinger, J. (2005). How much more does a disadvantaged student cost?. Economics of Education Review, 24(5), 513-532.

Figure 21



Note: AOE is Adjusted Operating Expense per Pupil (DCAADM) for 2010-11. Cost targets based on education cost function model estimated by William Duncombe of Syracuse University, including estimates of the cost of achieving 90% students at level 3 or 4, and 80% students achieving level 4, in 2006-07.

Table 24 compares the approved operating expenses and foundation targets per pupil in average daily membership to the Duncombe cost estimates. Figures are expressed per DCAADM rather than TAPU (or TAFPU) for comparability with the Duncombe cost estimates which do reflect the additional per pupil spending associated with special education.

Table 24 compares the cost model targets for spending required to achieve 80% level 3 or 4 in 2007, or 85% level 3 or 4. While the foundation aid formula sets a target of just over $14,700 per DCAADM for Utica in 2013, cost model estimates range from $21,000 to over $26,000 in 2007. In most cases, cost model estimates for 2007 are substantially higher than either a) 2013 foundation target estimates derived from successful schools analysis or b) existing Approved Operating Expense per DCAADM for 2011.

Table 24

Comparison of General Expenditures, AOE & Model-based Cost Estimates

	Cost Model Estimates			*AOE per Pupil*				*Foundation Target / DCAADM 2013* [5]
District	*80% Level 3 or 4* [6]	*85% Level 3 or 4* [6]		*AOE /DCAADM 2008* [1]	*AOE / DCAADM 2009* [2]	*AOE / DCAADM 2010* [3]	*AOE / DCAADM 2011* [4]	
Jamestown	$16,786	$20,099		$10,370	$10,609	$10,659	$10,663	$13,094
Kingston	$14,782	$17,699		$13,962	$15,600	$15,097	$15,696	$14,470
Mt. Vernon	$16,859	$20,186		$17,543	$17,568	$18,237	$18,982	$16,985
Newburgh	$17,332	$20,753		$14,342	$15,545	$15,831	$17,133	$15,954
Niagara Fall	$18,003	$21,557		$11,000	$11,220	$11,385	$11,629	$13,508
Port Jervis	$13,887	$16,628		$13,221	$13,199	$14,961	$15,549	$15,628
Poughkeepsie	$24,732	$29,613		$13,479	$14,377	$14,965	$15,155	$18,073
Utica	$21,769	$26,065		$9,611	$9,983	$9,823	$10,233	$14,719

[1] File DBSAC1, 4-1-09, M(WM0006) 00 2007-08 AOE/ DCAADM [Fiscal Profiles]
[2] File DBSAC1, 1-19-10, M(WM0006) 00 2008-09 AOE/ DCAADM [Fiscal Profiles]
[3] File DBSAC1(3), 4-1-11, M(WM0006) 00 2009-10 AOE/ DCAADM [Fiscal Profiles]
[4] File DBSAC1, 3-29-12, M(WM0006) 00 2010-11 AOE/ DCAADM [Fiscal Profiles]
[5] File DBSAD1, 3-29-12, P(OP0002) 02 ADJUSTED FOUNDATION AMT/PUPIL [x selected TAFPU then divided by DCAADM]
[6] Cost estimate generated from Cost Function Model estimated by William Duncombe of Syracuse University. Cost predictions for Level 3 or 4 Performance levels based on Model 1 reported in Appendix A

Appendix A. Cost Model Estimates

Cost Model Estimates for New York State Districts (provided by William Duncombe)

		Model 1 Level 3 or 4				Model 2 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		

[1] Total spending without tuition, transportation, debt service and other undistributed expenses

[2] Estimated teacher salary for teachers with 1 to 5 years of experience, with average experience and average share with a graduate degree

[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

[4] Ratio of value of median residential value in each district divided by property values (with correction for STAR exemptions)

[5] State Aid share (total aid rate, excluding building and transportation)

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<.05, **p<.10

Appendix B. Combined Staffing Analysis

Subject Area	Niagara Falls	Jamestown	Kingston	Mt. Vernon	Hudson Valley	Utica	Average
French Upper	2.83	N/A	1.80	5.03	1.28	3.90	3.19
AP/College French	N/A	N/A	0.94	N/A	2.82	N/A	3.11
Interdisciplinary	N/A	N/A	N/A	N/A	0.19	N/A	2.96
French Lower	N/A	N/A	1.71	3.09	0.98	3.17	2.68
Physics General	2.75	5.14	1.33	2.63	3.82	2.83	2.64
Science HS Other	N/A	N/A	1.03	N/A	1.92	N/A	2.63
AP/College Other Math	6.34	2.30	0.56	N/A	1.23	N/A	2.50
Math Other Upper Level	2.05	2.98	1.53	3.12	1.99	3.87	2.45
AP/College English	0.95	1.52	4.70	2.36	2.88	N/A	2.19
AP/College Physics	N/A	1.62	2.26	N/A	0.77	0.91	2.10
Social studies Remedial	0.62	2.34	4.43	N/A	10.75	0.28	2.00
AP/ College Biology/ Life Science	2.15	1.20	1.73	2.92	1.97	3.60	1.97
AP/College Calculus	2.08	1.05	1.76	3.02	2.43	2.35	1.97
Industrial Arts	N/A	1.06	4.78	4.35	0.80	2.13	1.93
Music Instrumental Lessons	N/A	1.54	0.80	12.47	1.55	1.65	1.86
Math Remedial	13.19	0.44	10.44	2.28	1.13	15.57	1.86
AP/College History	N/A	N/A	N/A	1.04	N/A	3.14	1.84
Chemistry General	1.96	1.62	1.40	2.63	1.82	1.88	1.83
Math Regents B	1.66	0.77	1.29	9.13	1.90	9.99	1.81
AP/College Other	1.64	0.51	3.25	3.50	3.87	2.14	1.79
Math Regents A	1.92	1.80	N/A	N/A	0.60	1.37	1.79
Math Elective	0.49	3.59	4.24	1.37	1.41	6.61	1.77
Spanish Upper	1.42	1.59	2.07	2.04	1.63	2.16	1.77
Home Economics	5.01	4.51	2.51	N/A	0.52	1.23	1.71
AP/College Other Lang	N/A	N/A	0.38	N/A	N/A	0.00	1.71
English Elective	22.03	1.27	1.13	2.54	2.30	1.24	1.70
Math Other Algebra 2/Trig	1.42	N/A	2.48	0.70	1.16	2.11	1.68
Math Other	N/A	N/A	1.40	1.08	1.13	5.60	1.65
Other Lang Upper	N/A	N/A	0.98	N/A	1.15	0.00	1.62
AP/College Art	2.07	0.17	1.23	4.11	2.67	N/A	1.62
Computer	N/A	1.84	10.56	2.08	0.62	N/A	1.61
Speaking/Communications	7.49	1.68	0.67	4.04	1.24	4.70	1.61
French Intro	8.82	1.19	1.40	1.06	0.83	2.07	1.60
Social Studies Elective	1.89	1.28	2.04	1.39	1.44	1.92	1.59
English General/Other	19.00	2.26	18.95	2.07	0.97	0.39	1.57
AP/College Spanish	1.97	0.56	1.59	3.51	2.50	3.60	1.57
Chairperson/Content Area	0.56	3.07	N/A	3.82	1.24	1.79	1.55
Music Choral Groups	0.62	5.51	1.51	4.51	1.69	1.37	1.53
Music Choral Lessons	N/A	0.63	0.53	7.93	0.86	6.60	1.52
Physics Other	N/A	0.64	0.00	N/A	1.97	N/A	1.52
AP/College Social Studies	1.55	0.69	1.80	2.88	1.41	2.10	1.51
Art (Visual) Elective	1.62	1.51	1.08	1.75	1.01	1.80	1.39
Other Language General/Other	N/A	N/A	N/A	N/A	0.30	N/A	1.36

Subject Area	Niagara Falls	Jamestown	Kingston	Mt. Vernon	Hudson Valley	Utica	Average
Science Elem-Middle	1.60	1.21	0.96	1.94	1.03	1.73	1.31
Business Ed	1.34	1.82	1.05	1.39	1.17	0.92	1.28
Other Lang Intro	N/A	0.00	0.68	N/A	1.06	0.00	1.27
Humanities Other	2.64	19.42	0.96	1.23	1.06	0.56	1.25
Science Other	1.36	1.02	1.27	1.43	1.00	1.43	1.23
English 11-12	1.25	2.17	1.18	0.89	0.81	1.77	1.22
Central Admin	2.85	1.32	1.53	0.93	0.80	0.99	1.22
Music Instrumental Gr	1.20	0.88	1.03	2.83	1.05	1.40	1.22
Chemistry Other	N/A	0.25	0.60	N/A	0.72	2.57	1.18
Social Studies Genera	1.46	1.23	1.25	0.86	1.05	1.30	1.17
English 9-10	1.33	1.19	1.15	0.90	0.91	1.75	1.16
Library/Media	3.08	1.09	0.87	1.01	0.84	1.31	1.16
Music Elem-Middle	4.87	1.10	1.08	0.81	0.82	1.13	1.15
Social Studies Elem-M	1.44	0.78	1.03	1.67	1.13	1.28	1.13
Other Lang Lower	N/A	N/A	0.00	N/A	1.15	0.00	1.12
Gifted Education	0.54	N/A	N/A	N/A	1.46	N/A	1.12
AP/College Chemistry	3.04	0.64	0.38	N/A	0.93	1.20	1.11
Director	3.53	0.43	2.45	2.94	1.04	1.12	1.11
Supervisor	6.60	N/A	0.00	N/A	0.99	0.31	1.11
Music Electives	7.03	1.80	0.98	0.35	0.89	1.21	1.11
Asst. Director/Content	N/A	N/A	N/A	1.30	0.09	N/A	1.09
Health & PE	1.26	0.92	0.98	1.04	1.02	1.45	1.08
Math Elem-Middle	1.54	0.66	0.96	1.87	0.95	1.56	1.07
Reading Support	N/A	0.49	0.66	1.26	1.01	5.59	1.07
Art Elem-Middle	1.76	1.16	0.95	0.85	0.90	1.02	1.07
Biology General	1.29	1.31	1.12	0.64	0.92	1.32	1.04
Spanish Lower	1.73	1.16	1.08	0.81	0.79	1.00	1.04
Math Other Algebra/Geometry	1.14	1.01	1.13	0.82	0.81	1.30	1.02
Biology Elective	1.22	2.10	0.90	1.33	0.43	0.57	1.01
Trades	1.61	0.72	0.91	1.29	0.75	1.25	1.00
ELA Middle	1.24	0.78	1.02	0.92	0.89	1.22	0.98
Art Other	0.31	4.05	2.36	1.38	1.02	0.60	0.98
Other Subject Areas	N/A	2.86	0.48	0.81	0.57	0.56	0.97
Spanish General/Other	N/A	N/A	N/A	0.78	0.27	N/A	0.95
Elem Classroom	1.06	1.00	0.96	0.76	0.90	0.96	0.93
Health Services	0.87	0.82	0.77	0.95	0.74	1.81	0.93
Spanish Intro	0.77	0.99	1.68	0.54	0.99	1.10	0.93
Counselor	1.02	0.88	0.87	0.83	1.17	0.87	0.93
Special Education	1.24	0.72	1.04	0.86	0.99	0.81	0.92
Kindergarten	0.75	0.89	0.83	0.71	0.67	1.13	0.82
Film/Theater/Dance	N/A	0.07	N/A	3.07	0.21	0.33	0.78
Work Study	N/A	0.24	1.18	N/A	0.24	0.30	0.76
French General/Other	0.11	N/A	N/A	N/A	N/A	N/A	0.75
Building Admin. & Support	0.40	0.90	0.84	0.66	0.82	0.78	0.69
AP/College Music	0.52	N/A	0.00	0.54	N/A	N/A	0.67
Music Other	N/A	1.47	0.19	1.15	0.23	0.15	0.50

Subject Area	Niagara Falls	Jamestown	Kingston	Mt. Vernon	Hudson Valley	Utica	Average
AP/College Literature	N/A	N/A	0.00	N/A	0.00	N/A	0.46
AP/College Computer	0.11	N/A	0.00	N/A	N/A	N/A	0.44
Languages Other	N/A	0.00	N/A	0.37	0.28	N/A	0.43
Special Ed/Content Area	2.08	0.80	0.44	0.41	2.43	0.06	0.34
Bilingual/ESL Ed	0.63	0.16	1.26	0.57	0.18	0.04	0.31

Disparity ratios created by dividing sum of FTE/1,000 pupils from "successful low spending districts" in same core based statistical area by sum of FTE/1,000 pupils for small city district(s).

Summed count of certified staff, weighted by FTE (converted to 1/100, where 100%=1.0 FTE) from NYSED Personnel Master File 2008-09 & 2009-10, divided by District Duplicated Combined Adjusted Average Daily Membership (DCAADM) for 2008-09 & 2009-10 from NYSED Fiscal Profiles (Fiscal Analysis and Research Unit)

"Successful, low spending districts" Includes districts identified as "successful" and "low spending" (2012 Update) located in the same core based statistical areas (www.nces.ed.gov/ccd/bat) as small city school districts.

Appendix C. Breakout of Hudson Valley Small City Staffing

Subject	Assignment	Poughkeepsie	Newburgh	Port Jervis	Combined
A	AP/College Art	N/A	1.61	N/A	2.67
A	AP/College Music	N/A	N/A	N/A	N/A
A	Art (Visual) Electives	1.04	1.00	1.02	1.01
A	Art Elem-Middle	0.83	0.86	1.35	0.90
A	Art Other	0.38	1.67	N/A	1.02
A	Film/Theater/Dance	N/A	0.13	1.46	0.21
A	Music Choral Groups	2.80	1.63	1.19	1.69
A	Music Choral Lessons	N/A	0.75	0.45	0.86
A	Music Electives	0.45	1.20	1.65	0.89
A	Music Elem-Middle	0.73	0.81	1.05	0.82
A	Music Instrumental Groups	0.90	1.09	1.19	1.05
A	Music Instrumental Lessons	2.13	1.43	1.41	1.55
A	Music Other	0.85	0.15	N/A	0.23
AD	Asst Director/Content Area	N/A	0.05	N/A	0.09
AD	Building Admin&Support	0.73	0.81	1.03	0.82
AD	Central Admin	0.55	1.05	0.68	0.80
AD	Chairperson/Content Area	1.36	4.19	0.33	1.24
AD	Director	2.05	0.84	1.27	1.04
AD	Library/Media	0.73	0.84	1.08	0.84
AD	Supervisor	0.23	N/A	N/A	0.99
E	AP/College English	N/A	4.96	0.71	2.88
E	ELA Middle	0.83	0.90	0.97	0.89
E	English 11-12	1.07	0.72	0.90	0.81
E	English 9-10	1.10	0.91	0.75	0.91
E	English Elective	0.98	4.21	3.09	2.30
E	English General/Other	0.66	1.52	0.57	0.97
EL	Elem Classroom	0.94	0.91	0.80	0.90
EL	Gifted Education	N/A	N/A	0.23	1.46
EL	kindergarten	0.68	0.65	0.74	0.67
H	AP/College History	N/A	N/A	N/A	N/A
H	AP/College Social Studies	2.61	1.14	1.78	1.41
H	Humanities Other	3.65	0.97	0.62	1.06
H	Social Studies Elective	1.11	1.57	1.67	1.44
H	Social Studies Elem-Middle	0.96	1.15	1.40	1.13
H	Social Studies General	1.06	1.09	0.90	1.05
H	Social studies Remedial	2.53	N/A	N/A	10.75
H	Speaking/Communications/Debate	3.16	1.13	0.80	1.24
L	AP/College French	0.99	5.11	N/A	2.82
L	AP/College Oth Lang	N/A	N/A	N/A	N/A
L	AP/College Spanish	2.05	5.29	0.93	2.50
L	French General/Other	N/A	N/A	N/A	N/A
L	French Intro	1.13	1.25	0.31	0.83
L	French Lower	2.77	0.89	0.62	0.98
L	French Upper	2.38	1.39	0.65	1.28
L	Languages Other	N/A	0.17	N/A	0.28

Subject	Assignment	Poughkeepsie	Newburgh	Port Jervis	Combined
L	Oth Lang General/Other	N/A	0.18	N/A	0.30
L	Oth Lang Intro	N/A	0.64	N/A	1.06
L	Oth Lang Lower	N/A	0.70	N/A	1.15
L	Oth Lang Upper	N/A	0.70	N/A	1.15
L	Spanish General/Other	N/A	0.16	N/A	0.27
L	Spanish Intro	1.08	1.01	0.82	0.99
L	Spanish Lower	0.78	0.67	2.53	0.79
L	Spanish Upper	1.85	1.46	2.14	1.63
M	AP/College Calculus	4.86	1.67	N/A	2.43
M	AP/College Computer	N/A	N/A	N/A	N/A
M	AP/College Other Math	N/A	1.24	0.49	1.23
M	Computer	5.26	0.38	0.11	0.32
M	Math Elective	0.49	2.57	N/A	1.41
M	Math Elem-Middle	0.79	0.96	1.29	0.95
M	Math Other	1.32	0.98	1.78	1.13
M	Math Other Alg 2/Trig	1.54	1.32	0.63	1.16
M	Math Other Alg/Geom	0.92	0.80	0.74	0.81
M	Math Other Upper Level	2.92	1.92	1.49	1.99
M	Math Regents A	0.16	3.20	N/A	0.60
M	Math Regents B	1.05	2.72	2.01	1.90
M	Math Remedial	0.50	2.03	1.38	1.13
OTH	AP/College Other	1.51	5.85	N/A	3.87
OTH	Business Ed	1.11	1.22	1.08	1.17
OTH	Counselor	1.18	1.30	N/A	1.51
OTH	Interdisciplinary	N/A	0.11	N/A	0.19
OTH	Other Subject Areas	0.51	0.47	14.67	0.57
PE	Health & PE	1.13	0.97	1.05	1.02
PE	Health Services	0.71	0.71	0.97	0.74
R	Bilingual/ESL Ed	0.27	0.14	0.96	0.18
R	Reading Support	0.68	1.01	3.36	1.01
R	Resource Teacher	N/A	N/A	N/A	N/A
S	AP/College Biology/Life Sci	1.94	1.76	3.87	1.97
S	AP/College Chemistry	N/A	0.56	N/A	0.93
S	AP/College Physics	N/A	0.46	N/A	0.77
S	Biology Elective	0.95	0.45	0.21	0.43
S	Biology General	0.93	0.87	1.15	0.92
S	Chemistry General	2.64	1.82	1.24	1.82
S	Chemistry Other	0.96	0.58	1.63	0.72
S	Physics General	2.12	6.12	3.08	3.82
S	Physics Other	0.90	2.46	N/A	1.97
S	Science Elem-Middle	1.03	0.94	1.54	1.03
S	Science HS Other	1.80	1.55	0.02	0.14
S	Science Other	1.14	0.96	N/A	1.19
SE	Special Ed/Content Area	N/A	1.47	N/A	2.43
SE	Special Education	0.71	1.23	0.84	0.99
V	Agriculture	N/A	N/A	N/A	N/A
V	Home Economics	0.77	0.46	0.53	0.52

Subject	Assignment	Poughkeepsie	Newburgh	Port Jervis	Combined
V	Industrial Arts	5.96	0.69	0.46	0.80
V	Trades	1.34	0.61	0.91	0.75
V	Work Study	N/A	0.24	0.10	0.24

Disparity ratios created by dividing sum of FTE/1,000 pupils from "successful low spending districts" in same core based statistical area by sum of FTE/1,000 pupils for small city district(s).

Summed count of certified staff, weighted by FTE (converted to 1/100, where 100%=1.0 FTE) from NYSED Personnel Master File 2008-09 & 2009-10, divided by District Duplicated Combined Adjusted Average Daily Membership (DCAADM) for 2008-09 & 2009-10 from NYSED Fiscal Profiles (Fiscal Analysis and Research Unit)

"Successful, low spending districts" Includes districts identified as "successful" and "low spending" (2012 Update) located in the same core based statistical areas (www.nces.ed.gov/ccd/bat) as small city school districts.

Appendix D. Accountability Status of Small City Plaintiff's Schools

District Name	BEDS	Name	2012-13 Accountability Status
JAMESTOWN CITY SD	061700010000	JAMESTOWN CITY SD	Focus District
JAMESTOWN CITY SD	061700010001	CARLYLE C RING ELEMENTARY SCHOOL	Focus
JAMESTOWN CITY SD	061700010007	MILTON J FLETCHER ELEMENTARY SCHOOL	Focus
JAMESTOWN CITY SD	061700010010	THOMAS JEFFERSON MIDDLE SCHOOL	Focus
JAMESTOWN CITY SD	061700010012	GEORGE WASHINGTON MIDDLE SCHOOL	Focus
JAMESTOWN CITY SD	061700010003	CLINTON V BUSH ELEMENTARY SCHOOL	Focus
JAMESTOWN CITY SD	061700010006	PERSELL MIDDLE SCHOOL	Focus
JAMESTOWN CITY SD	061700010009	SAMUEL G LOVE ELEMENTARY SCHOOL	Focus
JAMESTOWN CITY SD	061700010011	ABRAHAM LINCOLN ELEM SCHOOL	Focus
JAMESTOWN CITY SD	061700010013	JAMESTOWN HIGH SCHOOL	Focus
KINGSTON CITY SD	620600010002	SOPHIE FINN SCHOOL	Good Standing
KINGSTON CITY SD	620600010009	ANNA DEVINE SCHOOL	Good Standing
KINGSTON CITY SD	620600010015	E R CROSBY ELEMENTARY SCHOOL	Good Standing
KINGSTON CITY SD	620600010017	ROBERT R GRAVES SCHOOL	Good Standing
KINGSTON CITY SD	620600010026	ZENA ELEMENTARY SCHOOL	Good Standing
KINGSTON CITY SD	620600010000	KINGSTON CITY SD	Focus District
KINGSTON CITY SD	620600010011	CHAMBERS SCHOOL	Focus
KINGSTON CITY SD	620600010012	GEORGE WASHINGTON SCHOOL	Focus
KINGSTON CITY SD	620600010020	J WATSON BAILEY MIDDLE SCHOOL	Focus
KINGSTON CITY SD	620600010022	KINGSTON HIGH SCHOOL	Focus
KINGSTON CITY SD	620600010024	HARRY L EDSON SCHOOL	Focus
KINGSTON CITY SD	620600010025	M CLIFFORD MILLER MIDDLE SCHOOL	Focus
KINGSTON CITY SD	620600010013	ERNEST C MYER SCHOOL	Focus
KINGSTON CITY SD	620600010014	JOHN F KENNEDY SCHOOL	Focus
MT VERNON SCHOOL DISTRICT	660900010022	DAVIS MIDDLE SCHOOL	Priority
MT VERNON SCHOOL DISTRICT	660900010001	COLUMBUS SCHOOL AT THE FRANKO BLDG	Good Standing
MT VERNON SCHOOL DISTRICT	660900010004	HAMILTON SCHOOL	Good Standing
MT VERNON SCHOOL DISTRICT	660900010005	HOLMES SCHOOL	Good Standing
MT VERNON SCHOOL DISTRICT	660900010006	LINCOLN SCHOOL	Good Standing
MT VERNON SCHOOL DISTRICT	660900010008	CECIL H PARKER SCHOOL	Good Standing
MT VERNON SCHOOL DISTRICT	660900010009	PENNINGTON SCHOOL	Good Standing
MT VERNON SCHOOL DISTRICT	660900010011	TRAPHAGEN SCHOOL	Good Standing
MT VERNON SCHOOL DISTRICT	660900010025	NELSON MANDELA COMM HS-COLUMBUS BLDG	Good Standing
MT VERNON SCHOOL DISTRICT	660900010000	MT VERNON SCHOOL DISTRICT	Focus District
MT VERNON SCHOOL DISTRICT	660900010002	EDWARD WILLIAMS SCHOOL	Focus
MT VERNON SCHOOL DISTRICT	660900010007	LONGFELLOW SCHOOL	Focus
MT VERNON SCHOOL DISTRICT	660900010010	GRAHAM SCHOOL	Focus
MT VERNON SCHOOL DISTRICT	660900010014	GRIMES SCHOOL	Focus
MT VERNON SCHOOL DISTRICT	660900010023	LONGFELLOW MIDDLE SCHOOL	Focus
MT VERNON SCHOOL DISTRICT	660900010026	THORNTON HIGH SCHOOL	Focus
MT VERNON SCHOOL DISTRICT	660900010013	MT VERNON HIGH SCHOOL	Focus
NEWBURGH CITY SD	441600010020	TEMPLE HILL SCHOOL	Priority

District Name	BEDS	Name	2012-13 Accountability Status
NEWBURGH CITY SD	441600010000	NEWBURGH CITY SD	Focus District
NEWBURGH CITY SD	441600010003	HERITAGE MIDDLE SCHOOL	Focus
NEWBURGH CITY SD	441600010006	GAMS TECH MAGNET SCHOOL	Focus
NEWBURGH CITY SD	441600010009	HORIZON-ON-THE-HUDSON MAGNET SCHOOL	Focus
NEWBURGH CITY SD	441600010010	NEW WINDSOR SCHOOL	Focus
NEWBURGH CITY SD	441600010012	VAILS GATE HIGH TECH MAGNET SCHOOL	Focus
NEWBURGH CITY SD	441600010016	SOUTH MIDDLE SCHOOL	Focus
NEWBURGH CITY SD	441600010017	NEWBURGH FREE ACADEMY-MAIN CAMPUS	Focus
NEWBURGH CITY SD	441600010021	MEADOW HILL GLOBAL EXPLORATIONS MAGN	Focus
NEWBURGH CITY SD	441600010001	BALMVILLE SCHOOL	Focus
NEWBURGH CITY SD	441600010004	FOSTERTOWN ETC MAGNET SCHOOL	Focus
NEWBURGH CITY SD	441600010005	GARDNERTOWN FUNDAMENTAL MAGNET SCHOO	Focus
NIAGARA FALLS CITY SD	400800010010	SEVENTY NINTH STREET SCHOOL	Good Standing
NIAGARA FALLS CITY SD	400800010012	GERALDINE J MANN SCHOOL	Good Standing
NIAGARA FALLS CITY SD	400800010015	HENRY J KALFAS MAGNET SCHOOL	Good Standing
NIAGARA FALLS CITY SD	400800010020	HYDE PARK SCHOOL	Good Standing
NIAGARA FALLS CITY SD	400800010021	MAPLE AVENUE SCHOOL	Good Standing
NIAGARA FALLS CITY SD	400800010022	NIAGARA STREET SCHOOL	Good Standing
NIAGARA FALLS CITY SD	400800010031	HARRY F ABATE ELEMENTARY SCHOOL	Good Standing
NIAGARA FALLS CITY SD	400800010034	NIAGARA FALLS HIGH SCHOOL	Good Standing
NIAGARA FALLS CITY SD	400800010040	GASKILL PREPARATORY SCHOOL	Good Standing
NIAGARA FALLS CITY SD	400800010041	LASALLE PREPARATORY SCHOOL	Good Standing
NIAGARA FALLS CITY SD	400800010042	CATARACT ELEMENTARY SCHOOL	Good Standing
NIAGARA FALLS CITY SD	400800010000	NIAGARA FALLS CITY SD	Good Standing
PORT JERVIS CITY SD	441800050001	ANNA S KUHL ELEMENTARY SCHOOL	Good Standing
PORT JERVIS CITY SD	441800050002	N A HAMILTON BICENTENIAL SCHOOL	Good Standing
PORT JERVIS CITY SD	441800050005	PORT JERVIS MIDDLE SCHOOL	Good Standing
PORT JERVIS CITY SD	441800050006	PORT JERVIS SENIOR HIGH SCHOOL	Good Standing
PORT JERVIS CITY SD	441800050000	PORT JERVIS CITY SD	Good Standing
POUGHKEEPSIE CITY SD	131500010010	POUGHKEEPSIE HIGH SCHOOL	Priority
POUGHKEEPSIE CITY SD	131500010011	POUGHKEEPSIE MIDDLE SCHOOL	Priority
POUGHKEEPSIE CITY SD	131500010013	COLUMBUS SCHOOL	Good Standing
POUGHKEEPSIE CITY SD	131500010000	POUGHKEEPSIE CITY SD	Focus District
POUGHKEEPSIE CITY SD	131500010001	WARRING MAGNET ACAD OF SCI & TECH	Focus
POUGHKEEPSIE CITY SD	131500010003	GOV GEORGE CLINTON SCHOOL	Focus
POUGHKEEPSIE CITY SD	131500010006	G W KRIEGER SCHOOL	Focus
POUGHKEEPSIE CITY SD	131500010009	MORSE YOUNG MAGNET SCHOOL	Focus
UTICA CITY SD	412300010011	MARTIN LUTHER KING JR ELEM SCH	Priority
UTICA CITY SD	412300010003	ALBANY ELEMENTARY SCHOOL	Good Standing
UTICA CITY SD	412300010009	HUGH R JONES ELEMENTARY SCHOOL	Good Standing
UTICA CITY SD	412300010000	UTICA CITY SD	Focus District
UTICA CITY SD	412300010005	CHRISTOPHER COLUMBUS ELEM SCHOOL	Focus
UTICA CITY SD	412300010014	THOMAS JEFFERSON ELEMENTARY SCHOOL	Focus
UTICA CITY SD	412300010016	JOHN F HUGHES ELEMENTARY SCHOOL	Focus

District Name	BEDS	Name	2012-13 Accountability Status
UTICA CITY SD	412300010018	KERNAN ELEMENTARY SCHOOL	Focus
UTICA CITY SD	412300010022	JOHN F KENNEDY MIDDLE SCHOOL	Focus
UTICA CITY SD	412300010023	SENATOR JAMES H DONOVAN MIDDLE SCH	Focus
UTICA CITY SD	412300010024	THOMAS R PROCTOR HIGH SCHOOL	Focus
UTICA CITY SD	412300010006	GENERAL HERKIMER ELEMENTARY SCHOOL	Focus
UTICA CITY SD	412300010012	WATSON WILLIAMS ELEMENTARY SCHOOL	Focus