

# Built on a Foundation of Sand

## Fixing New York State's Foundation Aid Formula to Provide Adequate Education to All



Bruce D. Baker, University of Miami

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### Introduction

In 2007, in response to years of litigation, New York State adopted the Foundation Aid Formula, a significant overhaul of the state's school finance system intended to provide all children with a constitutionally adequate education. An education defined by the state's courts as a meaningful high school education.<sup>1</sup> Unfortunately, from the outset, that formula was:

- ... built on weak analyses - a foundation of sand - that failed to accurately measure the costs of providing all children, especially those in higher poverty communities, with equal opportunity to obtain a meaningful high school education;
- ... never appropriately calibrated over time to account accurately for increased costs, including the costs associated with increased outcome goals and standards;
- ... never fully funded, with districts serving the highest need student populations having the largest shortfalls in funding with respect to what the formula demanded, on top of the fact that the formula calculations themselves were least sufficient for these same districts and children.

This policy brief provides a summary of these problems and guidance on the path forward toward a constitutionally adequate school funding system for all of New York State's children. The methods originally used for creating the state school finance system were inadequate for determining the basic cost of education in the state, but even worse, involved no actual analyses for determining the differences in costs to achieve common outcomes for children with greater educational needs.

I review this process and its shortcomings in Section 2.0. In Section 3.0 I show how, from the mid-2000s to the early 2010s, New York State significantly raised outcome expectations but never adapted the foundation aid formula to these higher goals. In Section 4.0 I provide guidance on the design and goals of state school finance systems and on setting outcome standards for New York State's children. Then, I provide comparisons between the present foundation aid formula and cost estimates for low and high standards from a National Education Cost Model developed as part of the School Finance Indicators Database.<sup>2</sup>

While the state high court accepted this formula as *good enough* in the moment (2006),<sup>3</sup> it never really was, especially in high need settings. As such, fully funding the existing formula will not meet the needs of all the state's children. A fully funded inadequate formula is still inadequate. The legislature should now do the right thing – identify the costs of providing all the state's children equal opportunity to attain adequate outcomes, and build a state school funding system around those costs – whether or not they are ordered to by the state's high court.

## NY Foundation Aid, CFE & Sound Basic Education

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 in response to the high court's order in Campaign for Fiscal Equity.<sup>4</sup> 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;
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.

The state high court in 2006, accepted this foundation formula as reasonable.<sup>5</sup> Even at that time, the approach used by NYSED and proposed by Standard & Poors (in a 2004 report)<sup>6</sup> was well understood by academic researchers to be insufficient for determining education costs and highly vulnerable to political manipulation – an easy way to create a low-balled estimate.<sup>7</sup>

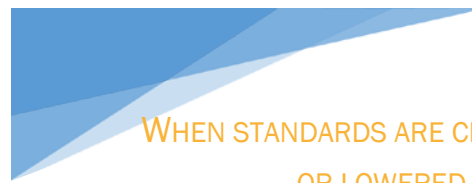
Additionally, the approach of taking the average spending of districts that meet a specific performance threshold provides no opportunity to calculate how much more money would be needed under different circumstances with different children to meet those same outcome targets.<sup>8</sup> Over the past nearly 20 years since Standard & Poors proposed this method to guide foundation aid, the method has been largely disregarded for cost analysis, and other more rigorous methods have been used with increased frequency across states<sup>9</sup> and in academic literature.<sup>10</sup>

Even if the average spending of districts meeting performance thresholds could be considered adequate for districts serving students with those same characteristics in regions with similar labor costs, there was never any empirical basis behind the additional costs, or weights, applied in the pupil need index used for adjusting funding based on student characteristics. Those adjustments were simply made up,

never sufficient and do not represent the additional costs to provide children of different needs, individually or collectively, with equal opportunity to achieve the stated outcome goals.

## Outcome Standards were Raised

In the years since the foundation aid formula was adopted, the state has increased the outcome expectations on students. Put simply, higher outcomes cost more to achieve than lower outcomes, all else equal. Further, setting higher outcome standards may affect the additional costs to achieve those standards for different populations and in different settings. Not only may the average costs to achieve higher outcomes be higher, but so too may be the additional costs with respect to student needs. When standards are changed, raised or lowered, broadened or narrowed, updated cost analyses are required to determine the per pupil costs in each setting for different student populations to achieve desired outcomes. New York State has not done this since 2012, despite the fact that law itself mandated recalibration every three years.<sup>11</sup>



WHEN STANDARDS ARE CHANGED, RAISED  
OR LOWERED, BROADENED OR  
NARROWED, UPDATED COST ANALYSES  
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PUPIL COSTS IN EACH SETTING FOR  
DIFFERENT STUDENT POPULATIONS TO  
ACHIEVE DESIRED OUTCOMES.

Table 1 shows the shift in outcome standards that occurred in New York State between 2005 and 2013 based on a report produced by the National Center for Education Statistics. Table 1 shows proficiency cut scores from New York State's assessments re-expressed as scale scores on the National Assessment of Educational Progress (NAEP). That is, what would be the equivalent NAEP score for a passing score on the NY tests? These test score equivalents are from a series of reports prepared by the National Center for Education Statistics intended to compare the rigor of state assessments and standards by matching them to a common scale.

Back in 2005, a NAEP score of 207 would match the passing score on the NY tests used at that time. The same was true on grade 4 math. For grade 8 reading, the matched cut score was 268, and for grade 8 math, 275. By 2013, those standards had been raised considerably with the adoption of new tests and cut scores. By 2019, the 8<sup>th</sup> grade reading proficiency score had reverted to earlier levels, but the standards for fourth grade remain much higher than they were at the time the foundation aid formula was established.

A second reason for presenting this table is to foreshadow setting goals and standards for estimating costs later in this report. New York's current proficiency cut scores are similar to national average NAEP scores and similar to the state's own average scores. But, New York, like many other states professes to shoot for a much higher standard, one in which all children should be college and career ready.<sup>12</sup> As will be shown later, Massachusetts (and New Jersey) average test scores are much closer to scores on assessments designed to measure college and career readiness.<sup>13</sup>

Table 1

*New York's Outcome Standards Have Become More Challenging*

		NEW YORK NAEP 2005 EQUIVALENT[1]	NEW YORK NAEP 2013 EQUIVALENT[2]	NEW YORK NAEP 2019 EQUIVALENT[3]	NATIONAL AVERAGE NAEP SCALE SCORE 2019	NEW YORK MEAN NAEP SCALE SCORES 2019	MASSACHUSETTS MEAN NAEP SCALE SCORES 2019
READING	4th	207	243	227	220	220	231
	8th	268	282	268	263	262	273
MATH	4th	207	251	239	241	237	247
	8th	275	304		282	280	294

[1] National Center for Education Statistics (2007). *Mapping 2005 State Proficiency Standards Onto the NAEP Scales* (NCES 2007-482). U.S. Department of Education, National Center for Education Statistics, Washington, D.C.: U.S. Government Printing Office.

<https://nces.ed.gov/nationsreportcard/pubs/studies/2007482.asp>

[2] Bandeira de Mello, V. (2011). *Mapping State Proficiency Standards Onto the NAEP Scales: Variation and Change in State Standards for Reading and Mathematics, 2005–2009* (NCES 2011-458). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, Washington, DC: Government Printing Office.

<https://nces.ed.gov/nationsreportcard/pdf/studies/2011458.pdf>

[3] Ji, C.S., Rahman, T., and Yee, D.S. (2021). *Mapping State Proficiency Standards Onto the NAEP Scales: Results From the 2019 NAEP Reading and Mathematics Assessments* (NCES 2021-036). U.S. Department of Education. Washington, DC: Institute of Education Sciences, National Center for Education Statistics. <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2021036>

It's important to understand that if the average child scores at the point of proficiency, about half fall below that. The national standard deviation around the mean score of 220 for grade 4 reading was 39 points. This would mean that about 16% of students fall below a score of 181, which is below the average 2019 score of students from low-income families in Alabama (199). As such, to raise students at the lower end of the distribution to adequate outcomes we must shoot for an average performance level that is much higher than that minimum standard.

## Toward a Constitutional Adequate Funding Model for New York

The primary objective of state and local financing of public schools and districts is to provide the funding needed to support the programs and services so that all children, regardless of where they live and attend school have equal opportunity to strive for and achieve common, adequate outcome goals. These days, those outcome goals are often expressed in terms of college and career readiness. The goal is to provide sufficient funding – combined across revenue sources – so that all children have equal opportunity to become college and career ready.

To accomplish this goal, state school finance formulas must do two things simultaneously:

**Account for differences in the costs of achieving equal educational opportunity across schools, districts, and the children they serve.** Cost refers to the amount of money a school district needs to meet a certain educational goal, such as a particular average score on a standardized test. Costs vary because student populations vary (e.g., some districts serve larger shares of disadvantaged students than others) and because the economic and social characteristics of school districts vary (e.g., some districts are located in labor markets with higher costs of living than others). School funding formulas attempt to account for these differences by driving additional funding to districts with higher costs.

**Account for differences in fiscal capacity, or the ability of local public school districts to pay for the cost of educating their students.** In many states, school districts rely heavily on local property taxes to raise revenues. This advantages wealthier communities: because their property values are higher, they can tax themselves at lower rates. School funding formulas attempt to account for this difference by driving more funding to districts with less capacity to raise local revenues and meet their students' needs.

A well-designed state school finance system begins by setting a need- and cost-adjusted target level of funding for each local public school district – referred to as a “foundation level” of funding – to provide an equal opportunity for their students. For example, the foundation level might be calculated through the following steps:

1. Setting a basic funding level, which is the minimum cost of achieving the desired outcomes—i.e., that for a student with no exceptional educational needs (e.g., no economic disadvantage, native English speaker, not a special education student, etc.).
2. Applying weights to address the different costs associated with achieving a common set of outcome goals across different settings and with different children (e.g., a student who is an English language learner might have their basic funding level increased by a given percentage).

The ideal school funding system, in other words, sets its foundation levels so that all school districts have the resources they need to provide an adequate education for all students. The design process starts with identifying the relevant outcome standards. One cannot estimate the costs (and cost differences) associated with achieving some common outcome standard absent that standard or measures of it.<sup>14</sup>

### Setting Standards & Estimating Costs

Figure 1 shows the past several years of NAEP average scores for New York State students, alongside those of New Jersey and Massachusetts and compared against proficiency benchmarks on the Partnership for Assessment of Readiness for College and Careers (PARCC) test and on NAEP. New York State students have long fallen well below those of Massachusetts and New Jersey and the college and career readiness standard set by PARCC. New York State students' performance did not improve during the 2000s like those of New Jersey and Massachusetts. For the last several cycles (every two years) of NAEP assessments, Massachusetts students in particular have achieved roughly the college and career readiness standard set for PARCC. This again, is the average student in Massachusetts, such that we can expect about half of students even in Massachusetts to fall below this goal.

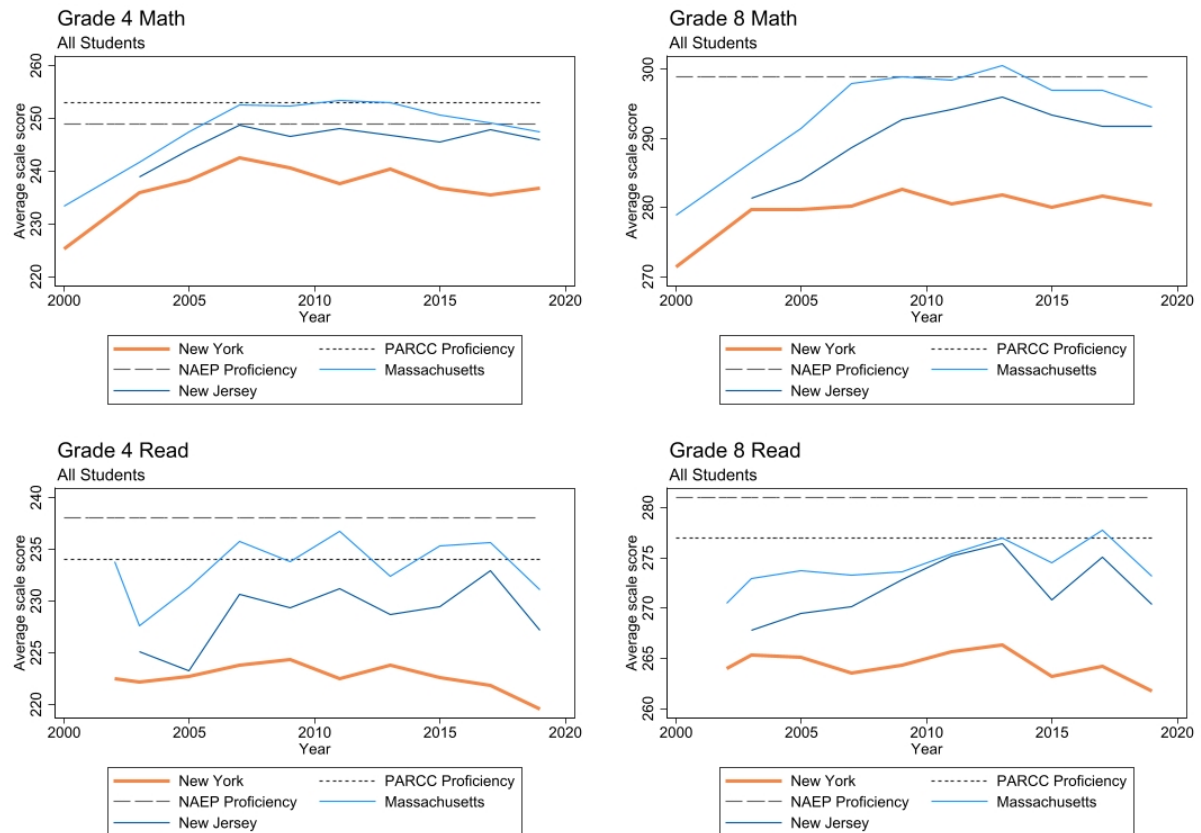
In order for a school funding system to provide equal opportunity, it must set adequate funding levels for each district, where those levels are contingent on outcome expectations. New York State must shoot higher than its current position. In fact, shooting for outcomes in line with those achieved in Massachusetts would be more consistent with the stated expectations in existing New York State policies: College and career readiness.

Each district serves a unique student population and does so under a unique set of conditions – from large urban centers to remote rural spaces, from schools serving large shares of low income and minority students to schools in affluent sprawling suburbs. These varying conditions and student populations create

vastly different costs for districts, even when working to achieve common outcome goals. New York's Foundation Aid formula acknowledges as much, but does not provide any empirical basis for the cost differences assigned. For illustrative purposes here, I turn to related work by my colleagues and I in which we develop a National Education Cost Model (NECM).<sup>15</sup>

Figure 1.

### NAEP Scale Scores in New York, New Jersey and Massachusetts Compared with College and Career Readiness Benchmarks



By definition, Cost is the amount of funding necessary for a school district to meet a stated educational outcome. The NEMC estimates this cost by using a national database of school district finance data in combination with data on student and district characteristics.<sup>16</sup> These data are matched with outcome data: specifically, test scores in reading and math for students in grades 3 to 8 that have been statistically transformed to make them comparable across all states.<sup>17</sup> The model determines how student population characteristics (percentage in poverty, percentage of English Language Learners, percentage of Students With Disabilities, etc.) and district characteristics (relative wage costs, enrollment size, grade level enrollments, etc.) affect student outcomes, and how much funding is needed to reach a specified goal given these variations.<sup>18</sup>



The goal in our national reports using the cost model is relatively modest: national average outcomes in reading and math. Because this goal is based on an average, many students will, by definition, not achieve it. This outcome standard can, of course, be raised or lowered; however, changes in the outcome would necessarily change the amount of spending necessary to achieve that outcome. Here, I include costs associated with striving for a higher outcome – specifically average scores of students in Massachusetts.

### Comparing Foundation Aid to Sound Basic Spending Targets

Here I compare foundation funding (Adjusted Foundation Amount) per pupil in New York State with cost estimates for achieving a) national average and b) Massachusetts average outcomes in reading and math for students in grades 3 to 8. Figure 2 includes districts with 5000 or more pupils (removing the higher costs, and visual scatter of small districts), but excluding New York City, and compares on the left-hand side, the relationship between pupil needs and costs and on the right-hand side, district level estimates of costs compared to district level foundation formula targets.

The predicted cost targets here are for fiscal year 2019, whereas the foundation formula targets are for fiscal year 2023. As such, these cost targets are even lower (conservative targets) than they likely should be for these comparisons.

The current foundation aid formula provides only slightly more funding per pupil for the districts serving the highest need populations than districts serving the lowest need populations. The slope of the gray line is relatively flat and again, was not based on any empirical analysis. To achieve a low outcome goal, the foundation funding is sufficient for the lowest need districts. These districts already far exceed national average outcomes and thus, obviously have sufficient funding to do so. But even for this low outcome goal, the highest need districts fall short in New York, several thousand dollars per pupil short!

If we wish to shoot for a more legitimate college and career readiness target, for the average student, the slope with respect to need is much greater and the overall level of funding needed is also much greater. The highest need districts in this case, likely need closer to \$40,000 or \$50,000 per pupil to strive for Massachusetts average outcomes.

While this seems like an astronomical number, keep in mind that tuition levels for elite New York City private day schools, which serve few to no students with disabilities or from disadvantaged backgrounds, presently hover around \$60,000 per year, for a shorter school year and not even covering full costs per pupil. That's simply what human resource intensive instruction costs, even without special needs attached. As such, perhaps it's entirely reasonable that per pupil costs to achieve high standards in very high poverty settings in high-cost labor markets in New York approach similar levels.

Figure 2

NECM Cost Estimates vs. Foundation Formula Funding

Figure 2a

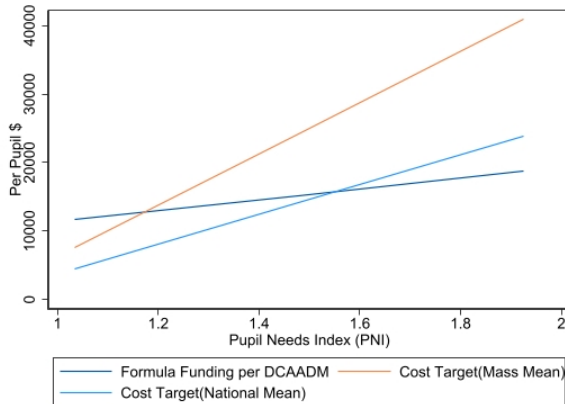
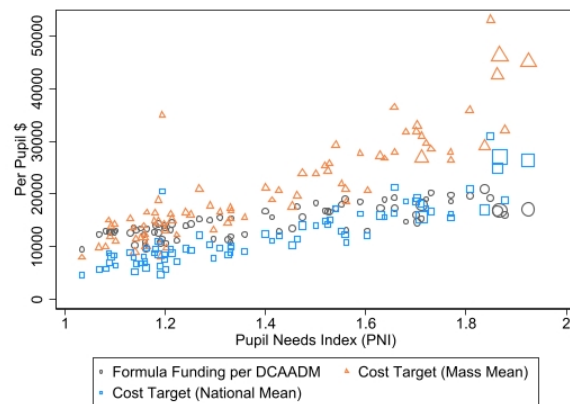


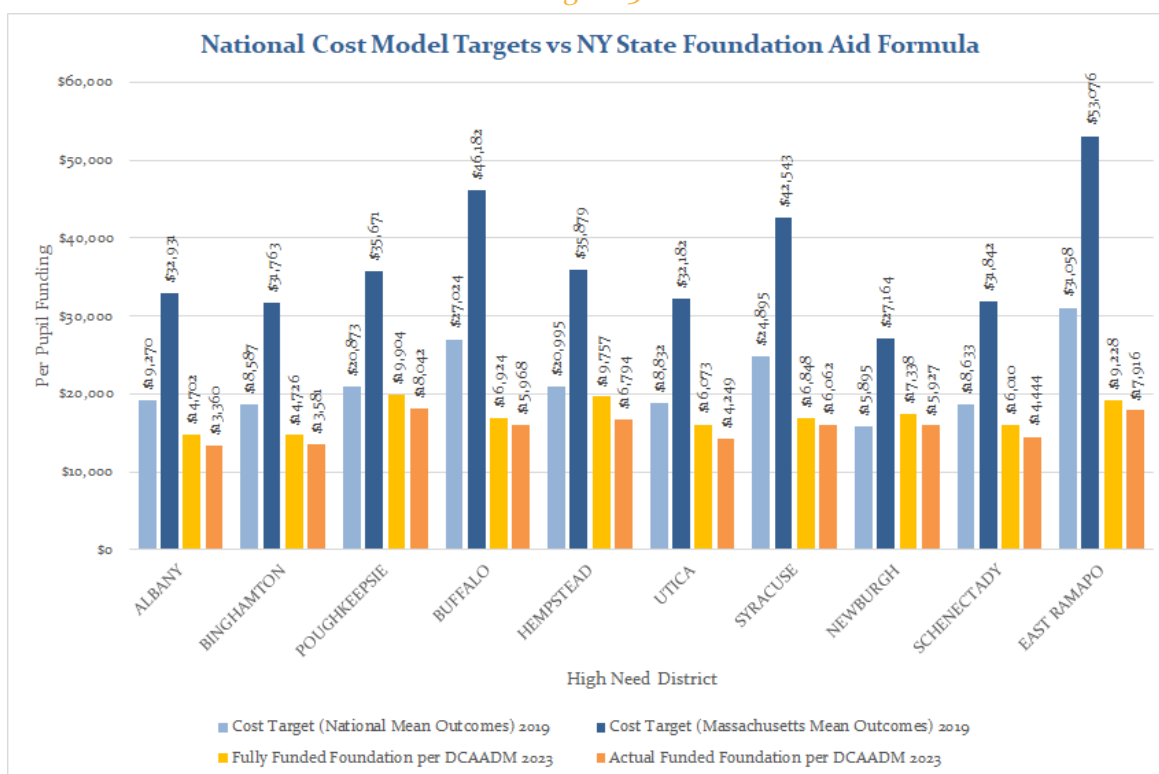
Figure 2b



What's shown in Figure 2 is how fully funded foundation formula targets compare with cost estimates (from 4 years prior). Of course, the state has never fully funded those foundation formula targets. Figure 3 focuses on a set of high need districts, and reports cost targets for both low and high outcome goals (fy19), alongside the fy23 foundation formula targets and the actual funding levels of the foundation formula. So, for example, the NECM estimates the per pupil cost of national average outcomes in Albany to be \$19,270 in fy19 and cost of higher average outcomes to be \$32,931. The foundation aid formula estimates Albany's cost of 80% proficiency on current assessments as \$14,702 but legislature and governor then fund Albany at \$13,360. So, by the state's own lowball cost estimate, Albany is funded at \$1,342 less than needed. Compared to the cost of achieving national average outcomes, Albany is funded nearly \$6,000 per pupil under cost and with respect to the costs of higher outcomes, Albany would require more than double the funding provided under a fully funded foundation aid formula.



Figure 3



## The Path Forward

As we emerge from the COVID pandemic and look to the future of public schooling in New York State, now is the time to get it right - time for the legislature and Governor to a) pursue the empirical evidence needed to better understand the costs of providing all the state's children with equal opportunity to strive for high outcomes – and be college and career ready, and b) act on that evidence to overhaul or replace the state foundation aid formula.

In recent years, the technologies, methods and data for estimating education costs have improved vastly and have been used increasingly to advise, inform and reform state school funding policies. In 2017, Kansas Legislators contracted WestEd and Lori Taylor of Texas A&M to estimate an updated cost model, based on new outcome standards in order to revise their weighted foundation aid formula as ordered by the state courts.<sup>19</sup> Kansas had used similar, rigorous statistical methods a decade earlier, ahead of other states.<sup>20</sup> In 2018, Vermont legislators contracted the American Institutes for Research (AIR) in collaboration with the University of Vermont to use similar methods to guide reforms of their pupil need weights.<sup>21</sup> While COVID slowed the process, in the spring of 2022, the Vermont legislature and governor adopted reforms to the weighting system guided by those findings.<sup>22</sup> In 2020, the New Hampshire Commission on School Funding worked with the same researchers to estimate models of the costs to achieve that state's desired outcome goals, but has not yet acted on the report findings.<sup>23</sup> Finally, Texas

has recently engaged in similar analyses to better understand the costs to achieve equitable persistence and completion rates across their community college system.<sup>24</sup>

An added benefit of studies relying on available current and historical data to estimate models of costs and cost variation is that they can also generally be completed in well under a year and at much lower expense (and with greater validity) than other approaches to “cost” analysis. In combination with other methods, deeper insights can be generated. Additionally, the size of the state, number of districts, geographic, demographic and economic diversity of the state do not make the analyses more complicated or costly. Rather, they enable the researchers to better capture cost variation across settings and children. And these studies can be easily updated as new data become available, without substantial additional cost.

In the coming legislative session and governor’s budget proposal, funds should be set aside and language drafted to pursue a study which:

- Estimates via the most rigorous available methods, the costs per pupil for all New York children, wherever they reside or attend school, to strive for common, high, college and career readiness outcomes;
- Provides specific guidance on the translation of those cost estimates into a state school finance system for ensuring that all children in the state, wherever they reside or attend school, to strive for common, high, college and career readiness outcomes.

That guidance may, in fact, go to the extent of simulating a new formula or revised foundation aid formula to achieve these goals, as has been done in Vermont, New Hampshire and for Texas Community Colleges. While it is critically important to get the cost estimates right in the first part, it is equally important that those cost estimates are validly translated to and implemented in policy. Then, perhaps most importantly, fully funded, something that was never accomplished with the current formula.

## End Notes

- <sup>1</sup> Fiscal Equity v. State of NY, 801 NE 2d 326 - NY: Court of Appeals 2003
- <sup>2</sup> Baker, B.D., Di Carlo, M., Weber, M. (2022) The Adequacy and Fairness of State School Finance Systems: Fifth Edition. Washington, DC. [https://www.schoolfinancedata.org/wp-content/uploads/2022/12/SFID2023\\_annualreport.pdf](https://www.schoolfinancedata.org/wp-content/uploads/2022/12/SFID2023_annualreport.pdf)
- <sup>3</sup> Campaign v. State of New York, 861 N.E.2d 50, 8 N.Y.3d 14, 828 N.Y.S.2d 235 (2006).
- <sup>4</sup> Fiscal Equity v. State of NY, 801 N.E.2d 326, 100 N.Y.2d 893, 769 N.Y.S.2d 106 (2003).
- <sup>5</sup> Campaign v. State of New York, 861 N.E.2d 50, 8 N.Y.3d 14, 828 N.Y.S.2d 235 (2006).
- <sup>6</sup> Zarb Commission. (2004). Resource Adequacy Study for the New York State Commission on Education Reform. New York: Standard and Poors School Evaluation Services.
- <sup>7</sup> Taylor, L. L., Baker, B. D., & Vedlitz, A. (2005). Measuring educational adequacy in public schools. The Bush School of Government & Public Service, Texas A&M University.
- <sup>8</sup>As I explain in my 2018 book:  

“The method is little more than a cost function without any controls for student characteristics, context, or input price variation and devoid of any sufficient controls for inefficiency or missing these controls altogether. Thus, in its usual application, Successful Schools analysis is of negligible use for determining costs.” (p. 125, Baker, 2018)

Baker, B. D. (2021). *Educational inequality and school finance: Why money matters for America's students*. Harvard Education Press.
- <sup>9</sup> Taylor, L., Willis, J., Berg-Jacobson, A., Jaquet, K., & Caparas, R. (2018). Estimating the costs associated with reaching student achievement expectations for Kansas public education students: A cost function approach. San Francisco, CA: WestEd.
- Duncombe, W., Yinger, J. (2006) Estimating the Costs of Meeting Student Performance Outcomes Adopted by the Kansas State Board of Education. Prepared for the Kansas Legislative Division of Post Audit
- Kolbe, T., Baker, B.D., Atchison, D., Levin, J. (2019) Pupil Weighting Factors Report. State of Vermont, House and Senate Committees on Education. <https://legislature.vermont.gov/assets/Legislative-Reports/edu-legislative-report-pupil-weighting-factors-2019.pdf>
- Baker, B.D., Atchison, D., Levin, J., Kearns, C. (2020) New Hampshire Commission to Study School Funding, Final Report: [https://carsey.unh.edu/sites/default/files/media/2020/09/20-12685\\_nh\\_final\\_report\\_version\\_v5\\_draft\\_1.pdf](https://carsey.unh.edu/sites/default/files/media/2020/09/20-12685_nh_final_report_version_v5_draft_1.pdf)
- <sup>10</sup> Kolbe, T., Baker, B. D., Atchison, D., Levin, J., & Harris, P. (2021). The additional cost of operating rural schools: Evidence from Vermont. AERA Open, 7, 2332858420988868.
- Zhao, B. (2022). Estimating the cost function of connecticut public K–12 education: implications for inequity and inadequacy in school spending. Education Economics, 1-32.
- Gronberg, T. J., Jansen, D. W., & Taylor, L. L. (2017). Are charters the best alternative? A cost frontier analysis of alternative education campuses in Texas. Southern Economic Journal, 83(3), 721-743.
- <sup>11</sup> See 2007 version of education law section 3602 (4).
- <sup>12</sup> <http://www.nysed.gov/content/new-york-state-common-core-learning-standards>
- <sup>13</sup> Baker, B.D., Atchison, D., Kearns, C., Levin, J. (2020) Setting Outcome Goals and Standards: From a Formal to Functional Definition of Adequacy. American Institutes for Research.

[https://carsey.unh.edu/sites/default/files/media/2020/06/20-11882\\_4\\_primer\\_adequacystandard\\_air\\_formatted\\_v5.pdf](https://carsey.unh.edu/sites/default/files/media/2020/06/20-11882_4_primer_adequacystandard_air_formatted_v5.pdf)

- <sup>14</sup> Duncombe, W., & Yinger, J. (1999). Performance standards and educational cost indexes: you can't have one without the other. *Equity and adequacy in education finance: Issues and perspectives*, 260, 261.
  - <sup>15</sup> Details of the NECM can be found here: Baker, B. D., Weber, M., & Srikanth, A. (2021). Informing Federal School Finance Policy with Empirical Evidence. *Journal of Education Finance*, 47(1), 1–25.
  - <sup>16</sup> SFID.
  - <sup>17</sup> SEDA.
  - <sup>18</sup> A problem with cost modeling in education finance is that outcomes and spending have a circular, or endogenous, relationship. Greater spending leads to better educational outcomes; however, better outcomes can lead to greater spending, as higher test scores can manifest in higher property values, increasing a community's tax capacity and, therefore, its ability to spend on its schools. The NECM draws on previous work in education cost modeling to address this problem through econometric methods. The result is a model that plausibly describes a causal relationship between spending and outcomes, which is the goal of our simulation.
- The spending targets produced by the NECM are estimates; there is no guarantee that a district spending at its target will reach the stated goal (national average test scores in math and reading for Grades 3 through 8). Districts certainly will have characteristics that are not captured by the model that affect spending, requiring them to spend more or less than the target to meet the object. Districts may also choose to spend revenues on legitimate educational programs that will not affect test scores (sports, the arts, counseling services, etc.). Further, some districts may, in fact, engage in practices that make them more fiscally efficient or inefficient than others.
- Despite these caveats, the spending targets we use herein are reasonable estimates, based on actual data, of the cost of achieving a basic level of equal educational opportunity across all school districts. As such, they are useful for our current goal: determining the adequacy of school spending for each state and district.
- <sup>19</sup> Taylor, L., Willis, J., Berg-Jacobson, A., Jaquet, K., & Caparas, R. (2018). Estimating the costs associated with reaching student achievement expectations for Kansas public education students: A cost function approach. San Francisco, CA: WestEd. Retrieved from <http://www.robblaw.com/PDFs/Taylor%20Kansas%20Adequacy%20Study%202018-03-18%20ND%20VERSION.pdf>
  - <sup>20</sup> Duncombe, W., Yinger, J. (2006) Estimating the Costs of Meeting Student Performance Outcomes Adopted by the Kansas State Board of Education. Prepared for the Kansas Legislative Division of Post Audit [https://www.maxwell.syr.edu/uploadedFiles/cpr/research/cpr\\_research\\_education\\_finance\\_policy/Kansas\\_Report.pdf](https://www.maxwell.syr.edu/uploadedFiles/cpr/research/cpr_research_education_finance_policy/Kansas_Report.pdf)
  - <sup>21</sup> Kolbe, T., Baker, B.D., Atchison, D., Levin, J. (2019) Pupil Weighting Factors Report. State of Vermont, House and Senate Committees on Education. <https://legislature.vermont.gov/assets/Legislative-Reports/edu-legislative-report-pupil-weighting-factors-2019.pdf>
- As stated in the report:
- Section 11 of Act 173 of 2018 requires the Agency of Education (AOE) to consider and make various recommendations for changes to the census grant funding model, changes or additions to the per pupil weighting factors used to allocate special education funding under the census grant model, and any additional methods for consideration.

Section 11(d) of this act requires the agency to “contract with a contractor with expertise in Vermont’s education funding system to assist the Agency in producing the study required by this section.”

<sup>22</sup> <https://vtdigger.org/2022/05/23/gov-phil-scott-signs-bill-intended-to-make-vermonts-school-funding-system-fairer/>

<sup>23</sup> Baker, B.D., Atchison, D., Levin, J., Kearns, C. (2020) New Hampshire Commission to Study School Funding, Final Report:

[https://carsey.unh.edu/sites/default/files/media/2020/09/20-12685\\_nh\\_final\\_report\\_version\\_v5\\_draft\\_1.pdf](https://carsey.unh.edu/sites/default/files/media/2020/09/20-12685_nh_final_report_version_v5_draft_1.pdf)

As noted in the Commission’s final report:

Beginning May 12, 2020, following a competitive national selection process, the Commission contracted with the American Institutes for Research (AIR). AIR’s proposal emphasized the use of outcomes-based, correlational analyses to determine the cost of an equitable and adequate education. AIR’s scope of work was to identify and collect publicly available data, identify appropriate methods for evaluating education opportunities and outcomes in New Hampshire, apply accepted school finance methodologies to recommend remedies for disparities in education opportunities and outcomes, model recommended options, provide a report to the Commission, and consult additionally as necessary through the Commission’s deliberations.

[https://carsey.unh.edu/sites/default/files/media/2021/04/final\\_report\\_forcommission\\_v6\\_12012020\\_with\\_cover.pdf](https://carsey.unh.edu/sites/default/files/media/2021/04/final_report_forcommission_v6_12012020_with_cover.pdf)

<sup>24</sup> Levin, J., Baker, B., Lee, J., Atchison, D., & Kelchen, R. (2022). An Examination of the Costs of Texas Community Colleges. REL 2023-142. Appendixes. *Regional Educational Laboratory Southwest*.

## About Bruce D. Baker



Bruce Baker is Professor and Chair of the Department of Teaching and Learning. Professor Baker is widely recognized as the nation's leading scholar on the financing of public elementary and secondary education systems. His research spans public education finance and policy, postsecondary education finance and policy, teacher and administrator labor markets and education law. Professor Baker is author of two recent books from Harvard Education Press:

- School Finance and Education Equity, Lessons from Kansas (2021)
- Educational Inequality and School Finance, Why Money Matters for America's Students (2018)

In addition, Professor Baker has authored and coauthored a multitude of peer reviewed research articles and law review articles, as well as influential policy reports for organizations including the Economic Policy Institute, Learning Policy Institute and Center for American Progress. Professor Baker is Co-principal investigator on the creation of the School Finance Indicators Database, a resource used by researchers, advocates and policymakers across the country. Professor Baker has consulted with numerous state legislatures on the design and reform of their state school funding systems, including most recently Vermont, New Hampshire, Delaware and Virginia. He has also testified as an expert witness in state and federal constitutional litigation over the equity and adequacy of school funding in several states including Kansas, New York, New Jersey, Connecticut and most recently Arizona and Maryland. Professor Baker is a fellow of the National Education Policy Center and Learning Policy Institute.