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ABSTRACT
                   New York State provides aid to local schools in a way that
is unfair to the neediest school districts with high educational needs or low
property wealth. Proposed in this policy brief is a new formula for state aid
based on a comprehensive educational cost index and a school performance
index that reflects an average passing rate on the new English and math high
school Regents tests. The cost index, derived from a regression analysis of
the determinants of district spending per pupil in 1999, is similar to one
used by Massachusetts. It determines the impact of one variable on spending,
holding other variables constant. It takes several steps to separate cost
factors outside a school district's control from those due to inefficiency.
The first component, teacher wage-cost variation, allows the wage-cost index
to control for teacher quality and account for both competition from the
private sector and for the harshness of the classroom conditions. The second
component is the cost of at-risk students, who are defined as those from a
poor family, those with limited English proficiency, or those with a severe
handicap. A foundation program based on the cost index would need to make up
the difference between the spending required to meet the minimum performance
and the revenue raised at the minimum allowable tax effort. The plan will
require a minimum local tax effort provision. Aid to larger cities would
increase significantly, and aid to rural and suburban districts would
decrease dramatically, more closely approximating differences in teacher pay
and number of at-risk students. (RJK)

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Policy Brief

Fixing New York's
State Education Aid Dinosaur: A Proposal

John Yinger

No. 21/2001

John Yinger is Trustee Professor of Public Administration and Economics, Associate Director for Metropolitan Studies of the Center for Policy Research, and Director of the Education Finance and Accountability Program (EFAP), Maxwell School of Syracuse University. The proposal in this policy brief was first presented at the Educational Priorities Panel's forum "Getting It Right with Regional Cost Indexes," April 3rd, 2001, Albany, New York. This policy brief is a revised and expanded version of Professor Yinger's remarks at that forum. The title draws on a remark by Governor George Pataki, who called the state aid system a "dinosaur" when offering his own proposals for reform.

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Policy Brief

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Introduction

New York State provides aid to local schools through a confusing maze
of aid programs that are, according to many commentators, unfair to the
neediest school districts, often defined as those with many students
who are poor or otherwise "at risk." For example, New York City,
which, by any measure, is one of the neediest districts, currently
receives less aid per pupil than the average district in the state. On
January 9, 2001, in the case of *Campaign for Fiscal Equity vs. State of
New York* (719 N.Y.S2d 475, 150 Ed. Law Rep. 834), the New York
State Supreme Court brought new salience to this issue. In a strongly
worded opinion, Justice Leland DeGrasse ruled that the current
educational aid system violates the state's constitutional requirement to
provide a "sound basic education" and needs to be reformed.[1] Among
other things, Justice DeGrasse labeled the failure to account for the
needs of at-risk students "one of the great failings of the State school
financing system" and declared that "New York City does not receive
State aid commensurate with the needs of its students."

This policy brief proposes a new formula for distributing educational
aid in New York State, a formula designed to direct aid to the districts
that, through no fault of their own, are in the greatest need of
assistance. High-need districts are those with high educational costs or
low property wealth. This policy brief begins by explaining why the
cost of education varies from one school district to the next. It then
shows how variation in the cost of education across districts can be
incorporated into a state education aid program that brings all districts
up to some minimally adequate performance level. This approach is
applied to New York State. Specifically, I propose a new education aid
formula for New York State that would bring all school districts up to
an adequate performance defined with reference to the new Regents

graduation standards. This policy brief also explores various ways to share the cost of this program between school districts and the state.

The issue of educational costs is not a new one in New York State. One of the current state aid programs, Extraordinary Needs Aid, adjusts for the costs associated with at-risk students. However, Extraordinary Needs Aid accounts for only 5 percent of the state aid budget and its cost adjustment is ad hoc and incomplete. Another program, Excess Cost Aid, which accounts for another 14 percent of the state aid budget, reimburses school districts for some of their spending on students who have special needs, but this reimbursement is not based on any estimate of educational costs that are outside a district's control. Educational costs should be estimated systematically and considered in all aid programs.

This focus on educational costs is consistent with the requirements imposed by the New York State Supreme Court in *CFE vs. New York State*. Specifically, Justice DeGrasse required the State of New York to ascertain, "to the extent possible, the actual costs of providing a sound basic education in districts around the State" and to design reforms

1. ensuring that every school district has the resources necessary for providing the opportunity for a sound basic education,

2. taking into account variations in local costs.

The proposal offered in this brief provides one way to meet these requirements.

Defining and Estimating Educational Costs

A school district's educational cost is the amount it must spend per pupil to obtain a given level of student performance, based on factors outside its control.

Educational cost is analogous to a cost of living. Just as households in some locations must pay more than other households to obtain the same goods and services, some school districts must pay more than others to obtain the same level of student performance.[2]

Educational costs need to be considered in state aid formulas. The state creates school districts that face widely different educational costs. Just as Social Security compensates recipients when the cost of living goes

up, state aid programs should compensate school districts that face higher costs through no fault of their own. Otherwise, students who find themselves in high-cost districts will face poorer funding—and poorer educational opportunities—than students in other districts.[3]

How to Estimate Educational Costs

The key problem, of course, is that a school district's spending, which is easy to observe, is not the same thing as its cost, which cannot be observed directly. Spending is influenced by cost, but it also reflects factors over which a district has control, such as the quality of the schools and managerial efficiency. The state should not compensate a school district for high spending, only for external factors that push up its educational costs.

The great challenge facing any effort to measure educational cost, therefore, is to distinguish a situation in which a district's spending is high because of the choices it makes and a situation in which a district's spending is high because of cost factors outside its control. This cannot be done without a statistical procedure that determines the impact of one variable on spending, holding other variables constant. The statistical procedures needed to study educational costs are well known to scholars. These procedures also have been used in aid formulas; for example, Massachusetts has relied on an aid formula derived from a statistical analysis of education costs.[4]

Wage Costs

The first component of educational costs is wage costs: some districts must pay more than other districts to hire teachers of equal quality. The salary needed to attract teachers away from the private sector is higher in some districts (particularly those in large metropolitan areas) than in others. The salary needed to compensate teachers for working in a school with more at-risk students is higher in some districts (particularly central cities) than in others.

It is important to note that wage cost variation within a region (the second point above) is just as important as variation across regions (the first point). Wage costs are much higher in New York City than in its suburbs, for example. An index used in several proposals, including one by the Midstate School Finance Consortium, has a lower value for New York City than for some of its suburbs and places wage costs in New York City just 4 percent above the state average. These results are

simply not credible.[5] No aid formula should be based on the absurd claim that most teachers would accept jobs in the New York City schools for a mere 4 percent premium over the average salary in the state. A more reasonable index, which still does not account for wage variation within a region, is provided by the New York State Board of Regents (2000). This index places wage costs in New York City and Long Island 52 percent above the state average.

The importance of teacher wage cost variation, both between and within regions, was clearly stated by Justice LaGrasse in *CFE v. New York.* Specifically, he pointed out that

> New York City competes in a common labor market for teachers and other college-educated individuals with Westchester, Nassau, Suffolk, Rockland, and, to a lesser extent, Orange and Putnam counties. New York City is at a competitive disadvantage in this labor market, principally because New York City School teachers make substantially less and generally labor under more difficult working conditions than their suburban counterparts.

Table 1. Educational Wage Cost Index, New York State School Districts, 1999	
Region and Type of District	Estimated Cost Index (Average District = 100)
Downstate Suburbs	109
Downstate Small Cities	116
Yonkers	132
New York City	152
Upstate Rural Districts	93
Upstate Suburbs	99
Upstate Small Cities	103
The Big Three	124

Source: Author's calculations, based on data for 145,651 full-time teachers in New York State in 1999; see Appendix Table 1.

Using data for almost 150,000 full-time teachers in New York State in 1999, I have estimated a wage cost index that controls for teacher quality and accounts for competition from the private sector and for the harshness of the classroom environment (see Table 1).[6] I find that wage costs vary significantly across districts, with higher wages downstate than upstate and much higher wages in cities than in suburbs. According to my index, wage costs are 52 percent above the state average in New York City, but only 9 percent above the state average in the typical New York City suburb.

Costs Associated with At-Risk Students

The second component of education costs, which has been recognized for many decades by scholars and policy makers, reflects the extra expenses needed to educate "at-risk" students. Dozens of academic studies have demonstrated that school districts containing a high concentration of students from poor or single-parent families, with limited English proficiency, or with severe disabilities must pay more than other districts to obtain the same level of student performance.[7] Ferguson and Ladd (1996) show, for example, that students who move tend to come from poor families, and that, all else equal, students in classrooms experiencing high student mobility during the school year do not perform as well as students in more stable classrooms.

These costs go beyond wage costs. Schools with a relatively high concentration of at-risk students must hire more teachers (and more professional staff) than other schools to obtain the same level of student performance. Teachers may need to spend more time with at-risk students, for example, and schools may need to provide additional personnel to deal with health or other problems that at-risk students are more likely to have.

The relatively high cost of educating at-risk students is exactly what Justice DeGrasse was talking about in his opinion concerning *CFE v. New York*. If New York State wants to comply with the court's mandate, it must account for the high cost of at-risk students. In my view, the only way to account for these costs is with the help of a statistical procedure.

A Comprehensive Cost Index for New York State

I have estimated a new comprehensive education cost index for school districts in New York State. This index, which provides my best estimates of educational costs in New York State based on currently available data, summarizes the impact on educational costs of labor market conditions and of at-risk students.[8] For the purposes of this index, at-risk students are defined as those from a poor family, with limited English proficiency, or with a severe handicap.

This index is based on a regression analysis of the determinants of district spending per pupil in 1999. This analysis takes several steps to separate cost factors, which are outside a school district's control, from quality choices and managerial efficiency, which reflect choices made

by the district. First, it controls for school performance, as measured by an index that considers elementary and high-school passing rates on various tests. This index is discussed in more detail below. Second, it focuses on instructional spending, so that the cost index will not reflect variation in spending on school administration, where managerial inefficiency is particularly likely to arise.[9] Third, it controls for key determinants of school district efficiency.[10]

According to my index, educational costs vary widely from one school district to the next (see Table 2).[11] In New York City and Yonkers, the index is over 200, which indicates that the per pupil cost of education in those districts is over twice as high as the state average. The average cost index for the upstate big three, Buffalo, Rochester, and Syracuse, is also very high, namely, 163. Downstate small cities have the next highest average cost index, 142, while downstate suburbs and upstate small cities both come in at 112. Rural districts and upstate suburbs both have average indexes below 100, which means that their educational costs per pupil are below the state average.

Table 2. Comprehensive Educational Cost Index, New York State School Districts, 1999	
Region and Type of District	**Estimated Cost Index (Average District = 100)**
Downstate Suburbs	112
Downstate Small Cities	142
Yonkers	239
New York City	267
Upstate Rural Districts	95
Upstate Suburbs	93
Upstate Small Cities	112
The Big Three	163

Source: Author's calculations, based on data for 633 school districts in New York State in 1999; see Appendix Table 2.

Although the regression on which these results are based performs well, this index is not, of course, the final word on the subject.[12] There are still some major gaps in the available data.[13] Moreover, scholars disagree about the right way to handle several technical issues that arise in estimating an educational cost index.[14] Nevertheless, this index is based on a well-known procedure and is broadly consistent with previous scholarly work on the topic. The debate should now focus on the best way to refine an educational cost index, not on whether estimating such an index is possible.

Educational Costs and State Aid Formulas

Most states now use some form of a foundation aid formula, an approach designed to ensure a minimum spending per pupil in every district (Gold et al. 1995). The basic idea of this approach is for the state to make up the difference between this minimum spending level and the amount each district can raise at a certain minimum tax effort. This approach can easily be extended to consider educational costs.[15] Specifically, cost indexes can be directly incorporated into the state aid formula so that all districts are brought up to a minimum performance level, not a minimum spending level. Districts with higher costs obviously will have to spend more to meet this minimum performance.

Bringing costs into a foundation formula is particularly important when a state is attempting to impose higher standards on all school districts, which is the case in New York. Districts with high costs cannot be expected to meet new, higher standards if they do not have the resources they need to meet them. To put it another way, expecting high-cost districts to meet higher standards without giving them the necessary resources is profoundly unfair and a recipe for failure.[16]

To implement a cost-adjusted foundation aid formula, state policy makers must decide (1) what performance level is adequate and (2) how the burden of attaining it should be divided between state and local governments.

Defining Adequate Performance

In order to define a performance standard, policy makers must choose a way to measure performance and then select a level of performance that is deemed to be adequate. A typical performance measure is based on student test scores. One such measure, on which my proposal draws, is the share of students receiving a passing grade on the new English and math high school Regents tests. With this measure, a district is said to achieve an adequate performance if a certain share, say 80 percent, of students achieve this grade. A cost-based foundation aid formula recognizes that the cost of attaining this adequate performance level varies across districts because educational costs are higher in some districts than others. Moreover, the higher the adequate performance level, the most expensive the aid program.

Dividing the Burden between State and Local Governments

As noted earlier, a standard foundation aid program requires all districts to make a contribution themselves in the form of a minimum local tax effort. One survey conducted in 1994 found 22 states, not including New York, with foundation programs that required a minimum local effort (Gold et al. 1995). Without this minimum-effort provision, school districts can set their tax rates so low that they do not reach the adequate performance level, even with generous state aid. Over the last several years, for example, the City of Syracuse has steadily cut its property tax rate as its state aid has increased (Duncombe 2001). As a result, an aid program without this provision is not really a "foundation" program because it does not ensure that enough money is raised to fund the minimum adequate performance level in every district.

A cost-based foundation program makes up the difference between the spending required to meet the minimum performance and the revenue raised at the minimum allowable local tax effort. To put it another way, once the state aid budget has been set, it is possible to determine the local tax effort that is required to meet the educational adequacy standard selected by policy makers. The higher the state aid budget, the lower the minimum allowable local tax effort can be.

A Cost-Based State Aid Proposal

I propose a cost-based foundation aid plan based on my comprehensive educational cost index (Table 2) and an adequate education defined as the 1999 statewide average value for my school performance index, which reflects the Regents new graduation requirements.[17] Note that "adequate" is defined by the average passing rate on the new Regents exams, not the more demanding (and more costly!) target of a 100 percent passing rate. Even in the highest performing districts, some students do not pass these tests.[18] For example, the average suburb, downstate or upstate, has a passing rate between 76 and 80 percent on the English and math Regents tests. In contrast, New York City has a passing rate of about 35 percent on both tests. The aid formula is designed to bring New York City and other low-performing districts up to the statewide average.

This plan calls for the implementation of a minimum-local-tax-effort provision in New York State. The impact of the plan on local tax effort

depends on the state aid budget. I begin with the current state aid budget less building aid, transportation aid, and BOCES aid, which results in an aid budget of $10.69 billion.[19] At this budget level, the required minimum local tax effort would have to be three and one-half times as high as the current average local tax effort; that is, low-performing school districts would have to come up with most of the funds themselves (see Table 3). Adding $10 billion to the current budget would bring the required minimum local tax effort down to about 25 percent above the current average local tax effort.

Table 3. Minimum Allowable Local Tax Effort in a Cost-Based Foundation Aid Program with Various State Aid Budgets

State Aid Budget	Minimum Allowable Local Tax Effort (as Share of Property Tax Base)
$10.69 billion (=current amount)	4.00%
$13.19 billion (=current amount + $2.5 billion)	3.34%
$15.69 billion (=current amount + $5 billion)	2.71%
$20.69 billion (=current amount + $10 billion)	1.45%

Note: The current average local tax effort is 1.125%; this equals local tax revenue (from all taxes) for instructional purposes divided by the local property tax base.

Source: Author's calculations. The current aid budget equals total state aid in 1999 less building aid, excess cost aid, transportation aid, and BOCES aid; the minimum allowable local tax effort is the local effort required to bring all districts up to the current average for the performance index in Appendix Part 3; see Appendix Part 4.

Because educational costs vary so much across districts and because current aid programs virtually ignore this variation, my proposed plan would dramatically change the distribution of state aid (see Tables 4 and 5). Regardless of the state aid budget, aid to the big-five districts (Buffalo, New York City, Rochester, Syracuse, and Yonkers) would increase significantly, and aid to suburbs and rural districts would decrease dramatically. Indeed, most suburbs and many rural districts would not receive any basic operating aid under this plan, even with a large state budget (although they would still receive building aid, transportation aid, and BOCES aid). Aid to small cities would not change as much, but it also declines unless the state aid budget increases dramatically.

Table 4. Cost-Based Foundation Aid per Pupil with Various State Aid Budgets (dollars)				
		Average Cost-Based Foundation Aid per Pupil		
Region and Type of District	Current Average Aid per Pupil	Current Budget ($8.73 billion)	Current Budget Plus $5 billion	Current Budget Plus $10 billion
Downstate Suburbs	2,376	263	499	750
Downstate Small Cities	3,131	145	965	1,885
Yonkers	3,260	4,394	8,612	12,742
New York City	4,057	8,739	12,218	15,626
Upstate Rural Districts	4,776	615	1,588	2,646
Upstate Suburbs	3,722	283	964	1,710
Upstate Small Cities	4,686	1,199	2,821	4,490
The Big Three	5,934	6,160	8,013	9,828

Note: Current aid amounts and the current aid budget are based on total state aid less building aid, excess cost aid, transportation aid, and BOCES aid; the averages include districts that receive no aid.

Source: Author's calculations, based on the cost index in Table 2 and the formula in Appendix Part 3.

Table 5. Share of Districts Receiving Cost-Based Foundation Aid with Various State Aid Budgets (percent)				
	Share of	Share of Districts Receiving Cost-Based Foundation Aid		
Region and Type of District	Districts Now Receiving Aid	Current Budget ($8.7 billion)	Current Budget Plus $5 billion	Current Budget Plus $10 billion
Downstate Suburbs	100.00	6.57	7.30	7.30
Downstate Small Cities	100.00	14.29	28.57	28.57
Yonkers	100.00	100.00	100.00	100.00
New York City	100.00	100.00	100.00	100.00
Upstate Rural Districts	100.00	38.42	55.67	55.67
Upstate Suburbs	100.00	22.75	37.34	37.34
Upstate Small Cities	100.00	59.18	75.51	75.51
The Big Three	100.00	100.00	100.00	100.00

Note: Current aid amounts and the current aid budget are based on total state aid less building aid, excess cost aid, transportation aid, and BOCES aid.

Source: Author's calculations, based on the index in Table 2 and the formula in Appendix Part 3.

Conclusions

Educational costs clearly depend on local labor market conditions and the presence of at-risk students—factors that are outside the control of local school officials. Ad hoc procedures, such as those used in current state aid programs in New York, cannot provide accurate measures of educational costs. Regional cost indexes, which fail to recognize the extensive variation in educational costs within a region, also are seriously deficient.

Educational cost indexes can be estimated with well-known statistical procedures and available data (although better data would allow them to be refined further). My estimates show that educational costs vary widely across the state, with particularly high costs in the big-five school districts. Because they do not adequately account for these cost differences, current state educational aid programs severely shortchange students in needy school districts.

I propose a new state aid program that recognizes these cost differences and brings all districts up to the average current performance on the new Regents standards. This program requires some combination of a large increase in state funding, a substantial redistribution of state aid toward needy districts, and a required minimum local tax effort. Without a large increase in state aid, this target can be achieved only by setting a required minimum local tax effort that is far above the current effort of most districts and by eliminating basic operating aid for all but the neediest districts. Even with a doubling of state operating aid, this target cannot be achieved without setting a minimum local tax effort that is above the current average and eliminating basic operating aid for some districts with relatively low needs.

Higher funding for needy districts does not guarantee better student performance there, but no district can reach a high student performance level without the funds to attract good teachers and to pay for the added expenses of its at-risk students. The best approach is to make sure every district has the funding it needs to provide a quality education and then to help all districts identify best practices and hold them accountable. for the results. Anything less would perpetuate a system that unfairly penalizes students in the state's large cities and other needy school districts.

Endnotes

1. Because the Supreme Court is not the highest court in New York State, this opinion is probably not the last word on the subject. Governor George Pataki has stated his intention to appeal Justice DeGrasse's decision.

2. A more detailed discussion of these concepts can be found in Duncombe and Yinger (1999). See also, Downes and Pogue (1994) and Reschovsky and Imazeki (1998).

3. The link between costs and aid is discussed in more detail in Ladd and Yinger (1994), Duncombe and Yinger (1998b), and Reschovsky and Imazeki (1998).

4. For a discussion of this program, see Bradbury et al. (1984).

5. The index used in the Midstate proposal has serious limitations. See Part 1 of the Appendix.

6. Cost index results for each school district are presented in Appendix Table 6.

7. See, for example, Duncombe and Yinger (1999) and the studies cited therein. For an insightful practitioner's look at the same issues, see Kingon (2001).

8. A recent report on proposed educational cost indexes for New York State, Widerquist (2001), cites an earlier educational cost index that I prepared with my colleague William Duncombe (in Duncombe and Yinger, forthcoming). The index in this policy brief improves on the earlier Duncombe/Yinger index in two important ways: First, it is based on much more current data: 1999 instead of 1991. Second, it shows the cost of obtaining an adequate education, with reference to the new Regents graduation requirements. The previous index was based on the passing rates for more advanced exams.

9. Leaving out administration does not make a lot of difference, however; a regression based on operating spending per pupil yields very similar results.

10. In particular, the regression controls for the ratio of income to property value, a measure of the share of taxes paid by voters, and for the difference between a district's aid per capita and the aid received by similar districts. Previous studies (Duncombe and Yinger forthcoming, 1998a), have found that these variables have a significant impact on school district efficiency.

11. Index values for individual school districts are presented in Appendix Table 6.

12. Specifically, the estimated coefficients in this regression all have the expected signs and virtually all are statistically significant. See Appendix Table 2.

13. For example, teachers' test scores, which are not now publicly available, would improve the controls for teacher quality in the estimation of the wage cost index.

14. See the studies cited in the references.

15. See Ladd and Yinger (1984), Duncombe and Yinger (1998b), and Reschovsky and Imazeki (1998).

16. For more on this issue, see Duncombe and Yinger (1998a, 1999, 2000) and Ladd et al. (1999).

17. This performance index, which is also used in the regression analysis in Appendix Table 2, is defined in detail in Appendix Part 3.

18. These are the shares of students entering in 1996 who have reached the passing level by the end of their junior year in 1999. Thus, the final passing rates, at the end of their senior year, could be higher.

19. Building aid, transportation aid, and BOCES aid involve different cost issues than basic operating spending for schools, and therefore are left out of my basic aid formula. Under my proposal, all districts would retain the funds they now receive under these three programs. In the future, the state could bring more careful cost adjustments into these formulas as well.

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Appendix

Part 1. Problems with the Index in the Midstate Proposal

The index used in the Midstate proposal is based on Chambers (1997, 1998). It relies on 1993-94 data that are available on the National Center for Education Statistics Web site <http://www.nces.ed.gov>.

Two aspects of this index are troubling. First, the index in the Midstate proposal contains an error, namely, that it uses use pupil-weighted

average costs as a base instead of costs in the average district. As in Appendix Part 4, this index is used to determine how much more a district must spend than the average district to obtain the same performance. As a result, spending on the average pupil is not relevant and the Midstate cost index is not consistent with the Midstate aid formula. Without this error, the index value for New York City would be 112 instead of 104.

Second, the regression analysis on which the Chambers index is based has four serious limitations. (1) The data, which come from 1993-1994, are out of date. (2) The estimated coefficients are based on national relationships, not relationships in New York State. (3) The regression does not directly control for private wages, and therefore yields biased results. (4) The regression includes only two variables related to a district's classroom environment, district enrollment and the share of students who belong to a minority group. As a result, most across-district variation in the classroom environment is omitted from the index. Moreover, minority composition is not a legitimate cost variable and I do not include it in my index. The Chambers approach also combines teacher cost information with ad hoc adjustments for energy and other input costs to obtain a cost-of-education index.

Part 2. Regression Results

Appendix Tables 1 and 2 present the regressions on which the educational wage cost index and the comprehensive educational cost index, respectively, are based. In both cases, the cost index is calculated in three steps. First, for each school district, the value of each cost variable is multiplied by its regression coefficient. Second, these products are summed across cost variables. Third, this sum is divided by the sum in the average district and multiplied by 100. An index of 200 indicates that a district has educational costs that are twice as high as those in the average district.

Appendix Table 1. Wage Cost Regression Results				
Variable	Parameter Estimate	Standard Error	t-Statistic	Significance Level
Intercept	5.790	0.056	102.60	<0.0001
Cost Variables				
Professional Wages in County	0.204	0.003	67.78	<0.0001
Share of Students with Severe Handicap	0.547	0.027	19.97	<0.0001
Share of Students with Limited English Proficiency	0.005	0.000	25.65	<0.0001
District Enrollment	0.030	0.001	43.52	<0.0001
Variables to Control for Teacher Quality				
Experience (log)	0.156	0.001	268.95	<0.0001
Graduate Degree	0.045	0.001	38.62	<0.0001
Math/Science Teacher	0.021	0.001	14.67	<0.0001
Has Tenure	0.186	0.001	133.12	<0.0001
District Poverty	-0.265	0.007	-37.02	<0.0001
County Juvenile Crime Rate	-90.686	0.744	-121.83	<0.0001
Income per Pupil (log)	0.050	0.002	20.34	<0.0001
Property Value per Pupil (log)	0.105	0.002	46.26	<0.0001
Note: The dependent variable is the log of annual salary.				
Source: Author's calculations, based on data for 145,651 full-time teachers in New York State in 1999.				

Harsh classroom conditions increase the wage that a district must pay to attract teachers of a given quality. However, a district may choose not to respond to harsh conditions by raising wages but may instead keep its wages low and accept lower-quality teachers. In the wage equation, therefore, the coefficient of a variable measuring classroom conditions could be positive or negative. It will be positive if districts must pay higher wages to attract teachers, controlling for observable measures of teacher quality; it will be negative if districts respond to higher wage requirements by selecting teachers with poorer unobservable quality characteristics. As a result, I interpret a variable measuring classroom conditions as a cost variable only if its coefficient is positive.

In the general cost regression (Appendix Table 2), the variables measuring district enrollment could be interpreted as cost variables because they are largely outside a district's control. At least in principle, however, districts have access to policies, such as consolidation, that could alter their enrollment. As a result, enrollment is not considered to be a cost factor. According to the regression results, treating enrollment as a cost factor would raise the cost indexes for both small districts and large cities.

Appendix Table 2. Educational Cost Regression Results				
Variable	Parameter Estimate	Standard Error	t-Statistic	Significance Level
Intercept	1.064	1.730	0.61	0.539
School District Performance	1.872	0.389	4.82	<0.0001
Cost Variables				
Predicted Wage (log)	0.622	0.172	3.62	0.0003
Poverty Rate	0.640	0.233	2.74	0.006
Share of Students with Severe Handicap	2.484	1.334	1.86	0.063
Share of Students with Limited English Proficiency	0.041	0.005	8.37	<0.0001
Variables to Account for School District Efficiency and Other Factors				
Ratio of Income to Property Value	-0.327	0.083	-3.91	0.0001
Difference between Aid and Aid in Reference Districts	1.157	0.341	3.40	0.0007
Enrollment				
1,000 - 2,000	-0.086	0.025	-3.41	0.0007
2,000 - 3,000	-0.092	0.032	-2.88	0.004
3,000 - 4,000	-0.103	0.037	-2.78	0.006
4,000 - 5,000	-0.130	0.044	-2.97	0.003
5,000 - 10,000	-0.096	0.051	-1.89	0.059
>10,000	0.009	0.112	0.08	0.933

Note: The dependent variable is the log of instructional spending per pupil; the equation is estimated with two-stage least squares, with school district performance endogenous. Various characteristics of adjacent school districts are used as instruments. District performance is defined in Appendix Part 3.

Source: Author's calculations, based on data for 633 school districts in New York State in 1999.

Part 3. Details of Aid Proposal

Definition of Student Performance

The definition of student performance used in this analysis is a composite of student test scores in fourth grade, eighth grade, and high school. This composite reflects 6 test scores in a district:

1. The percentage of students who achieved level 3 or level 4 on New York State's 4th grade English language arts test.

2. The percentage of students who achieved level 3 or level 4 on New York State's 4th grade math test.

3. The percentage of students who achieved level 3 or level 4 on New York State's 8th grade English language arts test.

4. The percentage of students who achieved level 3 or level 4 on New York State's 8th grade math test.

5.   The percentage of students who entered high school in 1996 who had achieved the minimum required score (65) or above on the new basic Regents English exam by the time they finished 11th grade in 1999. (Starting in 1999, passing this test was a requirement for graduation from high school.)

6.   The percentage of students who entered high school in 1996 who had achieved the minimum required score (65) or above on the basic Regents math exam by the time they finished 11th grade in 1999. (Starting in 2000, passing a test similar to this one was a requirement for graduation from high school.)

These six test-score measures were weighted to reflect the years of schooling to which they applied. Each measure was multiplied by the number of years of schooling to which it referred (4, 8, or 11). The weights were scaled so that they would add up to one.

Cost-Based Foundation Aid Formula

The formula for a cost-based foundation aid program is:

$$A_i = E\ (C_i) - t\ (V_i)$$

This formula can be used to derive the minimum local effort, t, for any state budget, B:

$$t = \frac{E = \sum_{i=1}^{D} N_i C_i - B}{\sum_{i=1}^{D} N_i V_i}$$

where

$A_i =$ aid per pupil in school district i

$E =$ per pupil spending required for adequate performance in a district with average costs (and average efficiency)

$C_i =$ educational cost index in district i (= 1 in average district)

$V_i =$ property tax base per pupil in district i

$N_i =$ number of pupils in district i

$D =$ number of school districts in the state

Part 4. Alternative Aid Program Based on Educational Wage Cost Index

The tables in this part of the appendix present an alternative aid program. This program uses the same formulas as the proposal in the text (see Part 3 above), but it differs from this proposal in the text in two ways. First, it is based on my educational wage cost index (see Table 1) instead of my comprehensive educational cost index (Table 2). Second, this program is based on a total aid budget of $8.73 billion, instead of $10.79 billion because it does not replace the current Excess Cost Aid programs.

Appendix Table 3. Minimum Allowable Local Tax Effort in a Foundation Aid Program Based on Educational Wage Costs Only with Various State Aid Budgets	
State Aid Budget	**Minimum Allowable Local Tax Effort (percent)**
$8.73 billion (=current amount)	2.56
$11.23 billion (=current amount + $2.5 billion)	2.09
$13.73 billion (=current amount + $5 billion)	1.61
$18.73 billion (=current amount + $10 billion)	0.66

Note: The current average local tax effort is 1.125%, which equals local tax revenue (from all taxes) for instructional purposes divided by the local property tax base. The current aid budget equals total state aid in 1999 less building aid, excess cost aid, transportation aid, and BOCES aid. The minimum allowable local tax effort is the local effort required to bring all districts up to the current average for the performance index in Appendix Part 3; see Appendix Part 4.

Source: Author's calculations.

These two differences are related. An aid program based on wage costs does not adjust for the fact that some districts must hire more teachers (of equal quality) than others in order to obtain the same student performance. For example, such an aid program does not account for the costs associated with students who have special needs. This is an important limitation. The current Excess Cost Aid programs are designed to pay the expenses associated with students who have special needs. These programs are retained in this alternative aid program because, to some degree, they offset the limitation in the aid program based on wage costs.

Appendix Table 4. Foundation Aid Per Pupil Based on Educational Wage Costs Only with Various State Aid Budgets (dollars)

Region and Type of District	Current Average Aid Per Pupil	Average Wage-Cost-Based Foundation Aid per Pupil		
		Current Budget ($8.73 billion)	Current Budget Plus $5 billion	Current Budget Plus $10 billion
Downstate Suburbs	2,376	441	934	1,427
Downstate Small Cities	3,131	826	1,516	2,205
Yonkers	3,260	2,007	5,103	8,198
New York City	4,057	5,077	7,631	10,185
Upstate Rural Districts	4,784	2,238	3,474	4,709
Upstate Suburbs	3,724	2,023	3,600	5,177
Upstate Small Cities	4,678	3,067	4,750	6,433
The Big Three	5,934	5,758	7,118	8,478

Note: Current aid amounts and the current aid budget are based on total state aid less building aid, transportation aid, and BOCES aid; the averages include districts that receive no aid.

Source: Author's calculations, based on the cost index in Table 1 and the formula in Appendix Part 3.

Appendix Table 5. Share of Districts Receiving Foundation Aid Based on Educational Wage Costs Only with Various State Aid Budgets (percent)

Region and Type of District	Share of Districts Now Receiving Aid	Share of Districts Receiving Foundation Aid Based on Educational Wage Costs Only		
		Current Budget ($8.7 billion)	Current Budget Plus $5 billion	Current Budget Plus $10 billion
Downstate Suburbs	100.00	20.44	20.44	20.44
Downstate Small Cities	100.00	28.57	28.57	28.57
Yonkers	100.00	100.00	100.00	100.00
New York City	100.00	100.00	100.00	100.00
Upstate Rural Districts	100.00	75.73	75.73	75.73
Upstate Suburbs	100.00	80.69	80.69	80.69
Upstate Small Cities	100.00	93.88	93.88	93.88
The Big Three	100.00	100.00	100.00	100.00

Note: Current aid amounts and the current aid budget are based on total state aid less building aid, transportation aid, and BOCES aid.

Source: Author's calculations, based on the index in Table 2 and the formula in Appendix Part 3.

This program also differs from the recent proposal by the Board of Regents (2000) because it uses a wage cost index for each district, not each region, and because it is makes use of a cost-based foundation aid formula with a minimum-local-tax-effort requirement.

Part 5. Cost Indexes for Individual School Districts

The following table presents the comprehensive cost index (summarized in Table 2) and the wage cost index (Table 1) for each of the school districts in my sample.

Appendix Table 6. Cost Indexes by School District		
District Name	Full Cost Index	Wage Cost Index
Addison	106.7	94.3
Adirondack	98.0	97.3
Afton	87.4	91.9
Akron	89.8	101.6
Albany	126.1	110.0
Albion	95.0	90.0
Alden	88.3	102.7
Alexander	84.6	85.1
Alexandria	86.0	94.1
Alfred-Almond	90.4	92.8
Allegany-Limestone	84.7	92.0
Altmar-Parish-Williamstown	95.5	97.8
Amherst	92.2	103.7
Amityville	132.6	˙107.0
Amsterdam	118.4	105.2
Andes	81.4	79.9
Andover	90.6	91.2
Ardsley	94.6	108.9
Argyle	89.9	88.2
Arkport	88.7	91.4
Arlington	95.1	108.4
Attica	86.0	92.2
Auburn	103.7	110.2
AuSable Valley	101.2	101.4
Averill Park	89.6	103.0
Avoca	97.4	92.4
Avon	83.4	92.5
Babylon	94.9	103.4
Bainbridge-Guilford	95.2	93.7
Baldwin	98.6	109.6
Baldwinsville	91.4	106.2
Ballston Spa	88.0	96.9
Barker	94.3	96.0
Batavia	89.7	88.3
Bath	95.9	96.3
Bay Shore	115.1	109.5
Bayport-Blue Point	90.1	103.6
Beacon	120.3	110.8
Beaver River	86.6	86.7
Bedford	134.2	117.1
Beekmantown	94.3	97.7
Belfast	93.7	90.2
Belleville-Henderson	104.3	92.8
Bemus Point	83.3	90.8
Berlin	96.6	102.5
Berne-Knox-Westerlo	103.2	103.9
Bethlehem	91.6	107.3
Bethpage	96.3	103.7
Binghamton	147.5	109.2
Blind Brook-Rye	101.4	108.4
Bolivar-Richburg	102.7	98.2
Bolton	95.7	95.2
Bradford	92.1	89.3
Brasher Falls	101.7	93.1

Appendix Table 6. Cost Indexes by School District		
District Name	Full Cost Index	Wage Cost Index
Brentwood	183.8	121.0
Brewster	96.1	105.8
Briarcliff Manor	96.1	107.9
Bridgehampton	110.7	95.6
Brighton	102.6	107.4
Broadalbin-Perth	88.0	92.9
Brockport	99.4	111.7
Brocton	99.9	99.3
Bronxville	90.8	106.8
Brookfield	104.8	90.6
Brookhaven-Comsewogue	99.4	108.4
Brunswick	88.2	100.6
Brushton-Moira	108.2	93.1
Buffalo	156.9	117.5
Burnt Hills	86.8	95.9
Byram Hills	86.6	102.4
Byron-Bergen	85.0	84.6
Cairo-Durham	90.9	92.2
Caledonia-Mumford	84.7	97.5
Cambridge	89.0	89.3
Camden	92.5	99.3
Campbell-Savona	93.7	93.9
Canajoharie	94.2	96.6
Canandaigua	87.7	91.5
Canaseraga	84.2	92.9
Canastota	86.3	95.7
Candor	96.9	99.3
Canisteo	98.3	95.9
Canton	95.6	97.4
Carle Place	122.7	108.4
Carmel	90.9	103.5
Carthage	99.0	100.5
Cassadaga Valley	99.1	94.2
Cato-Meridian	90.5	96.1
Catskill	97.1	94.5
Cattaraugus	89.3	90.2
Cazenovia	84.5	94.1
Central Islip	181.9	118.4
Center Moriche	103.7	104.1
Central Square	96.6	103.6
Chappaqua	96.1	110.9
Charlotte Valley	95.2	85.2
Chateaugay	91.7	91.6
Chatham	84.8	97.2
Chautauqua-Mayville	90.4	91.6
Chazy	90.2	92.1
Cheektowaga-Maryvale	92.2	105.4
Cheektowaga-Sloan	88.5	101.0
Cheektowaga	93.0	101.7
Chenango Forks	93.7	103.0
Chenango-Valley	86.1	99.7
Cherry Valley-Springfield	99.1	96.8
Chester	87.0	101.8
Chittenango	86.6	94.4

John Yinger

Appendix Table 6. Cost Indexes by School District		
District Name	Full Cost Index	Wage Cost Index
Churchville-Chili	94.9	107.6
Cincinnatus	106.4	102.2
Clarence	90.4	105.5
Clarkstown	106.6	114.7
Cleveland Hill	98.8	102.7
Clifton-Fine	93.4	90.2
Clinton	83.3	96.1
Clyde-Savannah	91.7	92.5
Clymer	87.9	90.3
Cobleskill-Richmondville	89.4	89.6
Cohoes	110.3	107.6
Cold Spring Harbor	84.5	101.2
Colton-Pierrepont	84.9	90.8
Commack	93.4	106.7
Connetquot	95.7	108.4
Cooperstown	88.5	94.2
Copake-Taconic	100.2	103.6
Copenhagen	82.0	86.0
Copiague	157.2	113.8
Corinth	94.6	93.6
Corning	90.7	98.8
Cornwall	87.0	103.4
Cortland	111.3	105.2
Coxsackie-Athens	86.2	93.0
Croton-Harmon	97.1	108.8
Crown Point	104.7	90.7
Cuba-Rushford	97.6	98.6
Dalton-Nunda	99.5	96.6
Dansville	94.9	96.1
De Ruyter	97.8	99.5
Deer Park	98.5	106.5
Delaware Valley		94.7
Delhi	88.7	86.4
Depew	89.9	104.4
Deposit	109.7	99.6
Dobbs Ferry	108.3	110.0
Dolgeville	100.8	97.8
Dover	95.4	104.3
Downsville	80.6	83.8
Dryden	101.1	104.9
Duanesburg	92.8	98.3
Dundee	99.0	95.6
Dunkirk	193.2	111.1
E. Aurora	89.2	101.3
E. Bloomfield	94.6	87.1
E. Greenbush	89.2	102.7
E. Hampton	123.0	106.3
E. Irondequoit	100.7	109.6
E. Islip	107.8	106.9
E. Meadow	103.2	111.4
E. Ramapo	149.9	117.8
E. Rochester	97.6	105.4
E. Rockaway	105.6	107.4
E. Syracuse-Minoa	91.2	105.3

Appendix Table 6. Cost Indexes by School District		
District Name	Full Cost Index	Wage Cost Index
E. Williston	106.1	105.9
Eastchester	103.4	104.8
Eastport	92.0	101.0
Eden	88.2	100.4
Edgemont	98.8	108.3
Edmeston	100.4	96.2
Edwards-Knox	99.7	91.5
Elba	79.9	83.0
Eldred	90.1	90.1
Elizabethtown-Lewis	92.8	90.0
Ellenville	149.9	105.8
Ellicottville	84.5	89.4
Elmira	104.8	99.3
Elmira Heights	86.1	94.2
Elmsford	127.2	110.2
Elwood	104.7	105.4
Evans-Brant	92.6	104.2
Fabius-Pompey	88.0	99.0
Fairport	94.6	110.2
Falconer	91.8	93.0
Fallsburg	120.4	98.4
Farmingdale	107.5	112.2
Fayetteville-Manlius	94.3	104.7
Fillmore	100.1	93.6
Fishers Island	82.1	90.8
Florida	104.7	102.1
Fonda-Fultonville	97.7	98.6
Forestville	94.3	91.7
Fort Ann	83.2	89.5
Fort Edward	96.6	90.3
Fort Plain	102.1	100.5
Frankfort-Schuyler	87.1	94.2
Franklin	87.4	82.4
Franklinville	98.8	92.6
Fredonia	93.7	94.3
Freeport	187.0	118.2
Frewsburg	89.6	92.2
Friendship	106.2	91.6
Frontier	91.7	106.1
Fulton	106.7	102.6
Galway	86.9	93.1
Gananda Central	83.8	91.8
Garden City	90.5	107.5
Gates-Chili	98.2	110.6
General Brown	91.0	96.4
Genesee Valley	97.1	95.0
Geneseo	92.5	96.1
Geneva	125.2	101.0
Germantown	96.9	99.1
Gilbertsville-Mount Vernon	91.9	93.0
Gilboa-Conesville	87.9	85.0
Glen Cove	144.8	108.9
Glens Falls	100.1	105.4
Gloversville	101.7	97.0

Appendix Table 6. Cost Indexes by School District		
District Name	Full Cost Index	Wage Cost Index
Gorham-Middlesex	85.0	87.3
Goshen	93.4	103.8
Gouverneur	98.5	95.0
Gowanda	94.0	92.2
Grand Island	87.4	103.7
Granville	91.6	91.8
Great Neck	117.9	113.0
Greece	107.1	117.0
Green Island	87.2	98.4
Greenburgh	122.0	117.5
Greene	89.9	94.6
Greenport	110.5	105.7
Greenville	90.4	98.8
Greenwich	97.9	94.6
Greenwood	89.6	90.2
Groton	98.7	101.4
Guilderland	95.0	109.3
Hadley-Luzerne	110.0	99.9
Haldane	97.3	99.3
Half Hollow Hills	96.0	107.6
Hamburg	87.8	104.9
Hamilton	90.8	91.4
Hammond	91.8	89.7
Hammondsport	93.5	92.1
Hampton Bays	120.1	104.1
Hancock	88.3	85.0
Hannibal	96.0	100.6
Harborfields	93.5	105.2
Harpursville	106.1	103.3
Harrison	110.4	114.5
Harrisville	90.2	85.8
Hartford	77.2	86.6
Hastings-on-Hudson	93.7	107.8
Hauppauge	92.7	105.8
Haverstraw-Stony Point	145.5	116.9
Hempstead	229.5	120.1
Hendrick Hudson	92.9	110.6
Herkimer	88.5	87.0
Hermon-Dekalb	96.3	89.0
Herricks	115.7	111.3
Heuvelton	100.9	91.6
Hewlett-Woodmere	95.2	107.7
Hicksville	126.7	112.8
Highland	89.5	101.7
Highland Falls	95.8	102.9
Hilton	94.8	109.5
Hinsdale	97.0	91.3
Holland	87.2	100.3
Holland Patent	89.0	96.0
Holley	90.9	88.8
Homer	91.7	99.7
Honeoye	82.8	85.6
Honeoye Falls	89.3	106.4
Hoosic Valley	90.2	95.9

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Appendix Table 6. Cost Indexes by School District		
District Name	Full Cost Index	Wage Cost Index
Hoosick Falls	95.7	100.5
Hornell	98.6	101.8
Horseheads	84.5	96.1
Hudson	126.0	107.3
Hudson Falls	89.7	98.6
Hunter-Tannersville	100.8	89.0
Huntington	152.6	111.7
Hyde Park	101.3	108.2
Ilion	92.3	87.1
Indian Lake	88.2	83.6
Indian River	115.5	100.2
Iroquois	86.4	102.3
Irvington	93.3	101.9
Island Trees	94.4	107.0
Islip	104.1	106.6
Ithaca	117.6	107.6
Jamestown	114.2	100.6
Jamesville-Dewitt	95.9	103.6
Jasper-Troupsburg	113.3	92.7
Jefferson	92.4	83.1
Jeffersonville		94.7
Jericho	94.8	105.9
Johnsburg	104.7	97.5
Johnson City	123.0	103.5
Johnstown	91.6	93.7
Jordan-Elbridge	90.5	101.7
Katonah-Lewisboro	96.3	111.5
Keene	81.0	87.3
Kendall	88.7	87.7
Kenmore-Tonawanda	91.6	107.0
Kinderhook	95.5	100.1
Kings Park	94.4	105.7
Kingston	102.8	108.5
La Fayette	88.7	100.4
Lackawanna	131.1	103.7
Lafargeville	87.9	93.1
Lake George	92.7	100.7
Lake Placid	91.0	91.8
Lakeland	95.9	116.2
Lancaster	91.7	105.5
Lansing	88.6	100.3
Lansingburgh	95.3	105.1
Laurens	94.1	95.5
Lawrence	125.5	112.9
Le Roy	85.1	85.5
Letchworth	93.5	92.3
Levittown	96.8	112.5
Lewiston-Porter	88.2	99.2
Liberty	102.5	95.2
Lindenhurst	104.2	108.8
Lisbon	95.7	92.4
Little Falls	92.9	84.8
Little Valley	87.8	89.8
Liverpool	94.6	107.2

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| Appendix Table 6. Cost Indexes by School District | | |
District Name	Full Cost Index	Wage Cost Index
Livingston Manor	116.9	93.9
Livonia	89.8	96.7
Lockport	98.4	103.1
Locust Valley	102.9	108.3
Long Beach	130.3	113.3
Long Lake	83.0	81.3
Longwood	110.8	111.8
Lowville	91.7	89.0
Lyme	92.9	93.4
Lynbrook	102.3	108.8
Lyndonville	86.1	85.4
Lyons	92.4	92.9
Madison	92.7	90.5
Madrid-Waddington	91.1	92.1
Mahopac	92.3	102.4
Maine-Endwell	91.1	100.3
Malone	101.4	99.6
Malverne	113.3	109.4
Mamaroneck	107.2	114.8
Manchester-Shortsville	83.9	87.5
Manhasset	97.0	107.6
Marathon	94.3	98.4
Marcellus	89.1	101.2
Margaretville	113.1	85.4
Marion	82.6	92.2
Marlboro	94.9	102.7
Massapequa	92.5	111.4
Massena	93.9	94.8
Mayfield	89.0	91.8
Mcgraw	91.8	97.0
Mechanicville	86.4	93.5
Medina	98.2	89.6
Mexico	97.2	99.8
Middle Country	100.4	112.2
Middleburgh	86.7	87.3
Middletown	136.1	111.9
Milford	87.3	94.8
Millbrook	89.1	102.8
Miller Place	88.3	100.3
Mineola	147.2	114.4
Minerva	87.3	87.7
Minisink Valley	90.8	105.5
Mohanasen-Drap	99.4	112.7
Mohawk	85.7	86.4
Monroe-Woodbury	93.9	108.1
Monticello	130.2	102.8
Moravia	93.8	99.1
Moriah	91.5	93.1
Morris	95.0	96.7
Morristown	93.0	91.2
Morrisville-Eaton	84.8	93.5
Mount Markham	90.0	85.9
Mount Morris	107.4	93.1
Mount Sinai	90.5	103.7

Appendix Table 6. Cost Indexes by School District		
District Name	Full Cost Index	Wage Cost Index
Mount Vernon	149.3	122.6
Mt Pleasant Cent	93.3	109.6
N. Babylon	102.9	109.4
N. Collins	94.3	98.4
N. Colonie	95.0	107.3
N. Rose-Wolcott	95.9	94.0
N. Salem	108.9	110.1
N. Syracuse	92.0	107.5
N. Tonawanda	93.8	104.0
N. Warren	101.1	98.3
Nanuet	99.5	106.8
Naples	85.5	84.3
Narrowsburg		94.7
New Hartford	85.5	96.5
New Lebanon	89.8	96.1
New Paltz	105.6	103.4
New Rochelle	178.6	123.8
New York City	267.0	152.3
New York Mills	88.0	95.9
Newark	102.6	97.0
Newark Valley	100.7	100.1
Newburgh	156.9	114.8
Newfane	94.4	98.4
Newfield	95.1	98.6
Niagara Falls	112.5	105.7
Niagara-Wheatfield	94.5	100.3
Niskayuna	95.4	111.5
North Shore	97.8	107.2
Northeast	97.9	103.7
Northeastern Clinton	95.5	96.0
Northern Adirondack	97.6	97.6
Northport	95.5	106.9
Northville	96.8	90.0
Norwich	102.3	96.5
Norwood-Norfolk	94.6	93.0
Nyack	130.2	113.5
Oakfield-Alabama	82.4	83.6
Oceanside	106.8	111.3
Odessa-Montour	90.1	87.7
Ogdensburg	94.0	95.1
Olean	101.4	103.4
Oneida	93.4	96.2
Oneonta	98.3	97.5
Onondaga	90.1	100.2
Onteora	100.2	104.7
Oppenheim-Ephratah	93.3	88.5
Orchard Park	89.8	104.9
Oriskany	84.8	93.0
Ossining	137.3	118.1
Oswego	100.0	101.1
Otego-Unadilla	102.4	97.4
Otselic Valley	90.7	91.8
Owego-Apalachin	92.2	100.5
Oxford	91.2	92.9

Appendix Table 6. Cost Indexes by School District		
District Name	Full Cost Index	Wage Cost Index
Oyster Bay	119.1	108.1
Palmyra-Macedon	85.5	93.3
Panama	88.4	93.6
Parishville	90.9	89.9
Patchogue-Medford	106.7	112.3
Pavilion	84.4	85.6
Pawling	91.2	103.0
Pearl River	92.9	107.3
Peekskill	132.0	116.8
Pelham	101.0	109.7
Pembroke	80.7	85.7
Penfield	96.2	109.6
Penn Yan	98.1	97.4
Perry	90.6	92.6
Peru	92.8	97.1
Phelps-Clifton Springs	82.5	89.0
Pine Plains	97.4	104.1
Pine Valley	101.1	93.0
Pinebush	99.4	108.1
Pittsford	93.7	109.1
Plainedge	91.5	108.5
Plattsburgh	96.4	96.9
Pleasantville	100.4	109.3
Poland	85.6	82.8
Port Byron	97.6	103.6
Port Chester	305.2	125.7
Port Jefferson	95.9	102.5
Port Jervis	102.0	106.7
Port Washington	134.6	112.7
Portville	87.8	90.8
Potsdam	100.7	94.9
Poughkeepsie	136.7	113.7
Prattsburg	94.6	90.9
Pulaski	105.0	99.0
Queensbury	89.1	104.7
Ramapo	101.9	109.2
Randolph	93.6	89.9
Ravena Coeyman	97.1	106.5
Red Creek	97.3	93.1
Red Hook	92.5	103.4
Remsen	93.0	93.3
Rensselaer	108.9	103.4
Rhinebeck	89.3	101.0
Richfield Springs	94.5	92.9
Ripley	88.9	90.5
Riverhead	112.0	108.3
Rochester	179.0	125.4
Rockville Centre	96.1	103.5
Rocky Point	92.4	105.6
Rome	100.5	102.6
Romulus	91.2	96.0
Rondout Valley	108.2	102.8
Roosevelt	153.2	107.7
Roscoe	92.7	88.7

Appendix Table 6. Cost Indexes by School District		
District Name	Full Cost Index	Wage Cost Index
Roslyn	104.5	107.6
Roxbury	95.1	83.6
Royalton-Hartland	89.6	96.8
Rush-Henrietta	104.4	110.0
Rye	109.0	110.4
Rye Neck	107.6	108.9
S. Colonie	93.8	108.5
S. Glens Falls	90.7	95.6
S. Huntington	120.8	110.8
S. Jefferson	94.8	100.6
S. Kortright	89.0	83.2
S. Lewis	101.7	101.1
S. Orangetown	102.8	109.7
S. Seneca	91.7	97.7
Sachem	100.3	111.2
Sackets Harbor	91.1	93.4
Sag Harbor	104.9	100.9
Salamanca	104.3	94.1
Salem	94.1	88.2
Salmon River	111.7	102.1
Sandy Creek	92.5	94.6
Saranac Lake	92.2	94.7
Saranac-Dannemora	99.0	98.1
Saratoga Springs	91.4	99.8
Saugerties	94.8	103.6
Sauquoit Valley	85.5	95.1
Sayville	91.8	104.8
Scarsdale	107.8	113.3
Schalmont	93.8	110.5
Schenectady	133.3	119.3
Schenevus.	91.0	92.2
Schodack	89.1	98.9
Schoharie	89.8	89.6
Schroon Lake	98.4	89.1
Schuylerville	101.5	93.4
Scio	92.7	93.7
Scotia-Glenville	94.4	101.7
Seaford	88.3	105.8
Seneca Falls	97.5	99.2
Sharon Springs	83.8	85.8
Shelter Island	91.1	96.3
Shenendehowa	87.4	98.2
Sherburne-Earlville	95.3	97.1
Sherman	93.0	91.3
Sherrill	91.2	98.0
Shoreham-Wading River	86.2	103.0
Sidney	85.0	86.9
Silver Creek	93.7	94.0
Skaneateles	86.7	100.5
Smithtown	93.8	109.3
Sodus	106.9	98.5
Solvay	118.0	104.1
Somers	92.1	109.0
South Country	111.9	110.3

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Appendix Table 6. Cost Indexes by School District		
District Name	Full Cost Index	Wage Cost Index
Southampton	121.7	105.9
Southern Cayuga	92.8	97.9
Southold	86.0	98.6
Southwestern	84.5	93.8
Spackenkill	95.4	103.8
Spencerport	98.4	111.8
Spencer-Van Etten	98.7	100.8
Springville	89.3	102.2
St Johnsville	92.3	96.7
St Regis Falls	95.0	89.1
Stamford	87.6	84.3
Starpoint	89.2	98.6
Stillwater	86.9	94.7
Stockbridge	89.4	91.3
Susquehanna Valley	91.2	101.3
Sweet Home	102.6	108.4
Syosset	97.6	109.9
Syracuse	152.4	117.0
Thousand Islands	88.4	95.2
Three Village	92.0	106.8
Ticonderoga	91.5	92.4
Tioga	89.3	99.3
Tonawanda	90.5	104.8
Town Of Webb	80.4	80.6
Tri-Valley	92.0	93.5
Troy	123.3	105.3
Trumansburg	90.0	101.2
Tuckahoe	103.4	107.7
Tully	91.0	100.6
Tupper Lake	90.4	92.7
Tuxedo	86.2	97.8
Uf of Tarrytown	229.9	120.5
Unadilla	97.7	93.6
Union Springs	88.2	96.7
Uniondale	131.5	109.9
Union-Endicott	92.9	101.6
Utica	185.6	112.4
Valhalla	103.4	109.6
Valley	97.2	108.6
Van Hornesville	85.3	79.9
Vestal	91.6	100.4
Victor	81.2	89.0
Voorheesville	86.8	103.3
W. Babylon	100.0	107.5
W. Canada Valley	82.6	83.7
W. Genesee	96.3	105.5
W. Hempstead	102.1	108.3
W. Irondequoit	92.4	107.5
W. Islip	90.6	105.0
W. Seneca	90.2	106.9
W. Valley	79.5	88.3
Wallkill	99.3	103.5
Walton	92.4	86.6
Wantagh	91.7	105.7

Appendix Table 6. Cost Indexes by School District		
District Name	Full Cost Index	Wage Cost Index
Wappingers	98.7	112.3
Warrensburg	102.5	108.9
Warsaw	89.5	91.4
Warwick Valley	89.1	101.0
Washingtonville	93.1	106.3
Waterford-Half Moon	88.5	93.9
Waterloo	97.9	99.7
Watertown	112.3	101.5
Waterville	90.5	96.9
Watervliet	107.0	106.8
Watkins Glen	87.9	88.5
Waverly	97.3	102.3
Wayland-Cohocton	95.9	100.2
Wayne	87.7	98.8
Webster	95.3	109.9
Weedsport	86.7	94.8
Wells	77.9	83.7
Wellsville	94.6	99.9
Westbury	246.5	120.3
Westfield	93.5	94.1
Westhampton Beach	102.3	103.3
Westhill	92.7	102.5
Westmoreland	85.2	94.6
Westport	96.6	87.9
Wheatland-Chili	90.9	104.0
White Plains	152.6	119.7
Whitehall	94.2	88.7
Whitesboro	91.3	104.4
Whitesville	89.3	88.6
Whitney Point	96.6	99.9
William Floyd	111.8	112.3
Williamson	91.3	94.3
Williamsville	92.7	107.5
Willsboro	85.3	90.1
Wilson	94.3	98.1
Windham-Ashland-Jewett	95.9	89.1
Windsor	92.9	99.2
Worcester	93.9	92.0
Wyandanch	189.3	111.8
Yonkers	238.9	131.9
York	90.4	92.8
Yorkshire-Pioneer	90.8	97.2
Yorktown	98.3	104.4
Source: Author's calculations.		

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