The figures suggest that educational expenditures in New York State are not equalized on a per pupil basis and that the goal of providing equal opportunities for education, in terms of equal expenditures on education, is not even close to being achieved.

Financing Public Elementary and Secondary Education in New York State

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Our purpose in this report is to provide a state-of-the-state snapshot of public school finance in New York. We discuss, in turn, major aspects of the state aid funding program, revenues that are used to support elementary and secondary education, and selected policy considerations which affect or are affected by the current funding structure.

The New York State Education Department reported that for the 1994–95 school year, the public school system included "38 Boards of Cooperative Educational Services (BOCES), 711 districts, 4,068 schools, and 2,733,913 students" (The University of the State of New York, 1996a, p. xiv). Reported district revenues for the prior school year (1993–94) were $23.41 billion, of which the state provided 38.7 percent in aid to local districts (The University of the State of New York, 1996a). The average expenditure per pupil in 1994–95 was $8,421, which places New York as the third-highest expenditure per pupil state, behind New Jersey and Alaska (U.S. Department of Education, 1996).

Although New York State has one of the largest public education systems in the United States, and an elaborate complex of representative governance and regulatory administration, the perennial problems associated with public school finance persist. For example, despite a modified percentage equalizing state aid formula that provided an average $1,313 per pupil to the highest wealth decile districts and an average $5,400 per pupil to the lowest wealth decile districts in 1993–94, the average per pupil expenditure in those poorer districts ($6,338) was less than half of the average per pupil expenditure in wealthier districts ($12,996). [The University of the State of New York, 1996a.] Clearly, these figures suggest that educational expenditures in New York State are not equalized on a per pupil basis and that the goal of providing equal opportunities for education, in terms of equal expenditures on education, is not even close to being achieved.

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State Aid Program

The hallmark of state aid to schools in New York is that it is based on a combined property and income wealth ratio that drives a percentage equalizing mechanism of distribution. Straightforward as this may seem, the percentage equalizing mechanism includes a foundation target, various caps, and appended formulae that are used to determine total state aid to schools. The complexity of this school aid arrangement was criticized by Crampton (1993, 1994) and further examined by Brent and Monk (1995) who reported that the school aid package included more than 40 different formulae. Next, we outline the major components of the school aid package, provide additional sources of technical information in the References section, and consider fundamental components of New York State aid to public elementary and secondary schools.

Pupil Units and Attendance

While we use descriptors such as per pupil and pupil units in the generic sense, it is important to recognize that New York State makes use of pupil unit measures that are weighted to reflect costs of education at different levels and across different types of programs. Part of the complexity of the New York funding system is due to the fact that pupil weightings and counts are arrived at differently for certain formula calculations and that these calculations are based on different years of operation. For example, district wealth measurements rely on Total Wealth Pupil Units (TWPU) based on the district's resident pupils' average daily attendance two years prior while Operating Aid calculations rely on Total Aidable Pupil Units (TAPU) based on the adjusted average daily attendance of all pupils attending a district one year prior (Diefenbach et al. 1995). Furthermore, while the basic funding structure primarily uses Average Daily Attendance (ADA), certain aid formulas, such as the Extraordinary Needs Aid (ENA) formula, rely on both ADA and Average Daily Membership (ADM) measures.

Combined Wealth Ratio

Rather than basing school aid singularly on the value of property owned or the income earned by residents within district boundaries, the New York program considers both property and income wealth within the district. The Combined Wealth Ratio (CWR) represents an equal weighting of property value and earned income at which 1.000 is the estimated average wealth measure for the state. The CWR can be illustrated as such:

$$.5 \times \frac{\text{District Property Wealth Per Pupil}}{\text{State Average Property Wealth Per Pupil}} + .5 \times \frac{\text{District Income Wealth Per Pupil}}{\text{State Average Income Wealth Per Pupil}}$$

Because of this equal weighting formulation, districts that have property wealth above the state average can still participate fully in the state aid program if their income wealth is correspondingly below the state average. This occurs, for example, in relatively poor income wealth districts that have large utilities or commercial enterprises as property owners. Less likely, but still possible theoretically, is the situation of an income wealthy district that is correspondingly property poor.

Operating Aid Ratio

The Combined Wealth Ratio (CWR) is used to determine each district's Operating Aid Ratio (OAR). The OAR is "selected" because it is the optimal result from one of four alternative OAR formulas established by the state. The 1996–97 OAR formulas are:

1. 1.35 - [1.50 x CWR]
2. 1.00 - [0.64 x CWR]

3. 0.80 - [0.39 x CWR]

4. 0.51 - [0.22 x CWR]

Which of the formulae is optimal depends upon the district's CWR measure of wealth. For example, a district that has a low CWR will benefit most from the first formula whereas the fourth formula will be most beneficial to wealthy districts. A district that has the state average CWR, 1.000, will calculate a .41 OAR by selecting the third formula (Diefenbach et al. 1996).

Operating Aid

The Operating Aid Ratio (OAR) is used to determine each district's amount of Operating Aid through a basic formula that supports a foundational target of $3,900 in Approved Operating Expense (AOE) per pupil. Districts are, however, provided some incentive to spend more than $3,900 through use of an adjustment that recognizes approved operating expenditures up to $8,000 per pupil. The adjustment, which is based on a district's Combined Wealth Ratio (CWR) and its per pupil AOE between $3,900 and $8,000 establishes, in effect, a ceiling on state operating aid per pupil. The operating aid formula can be expressed as:

Operating Aid Ratio x [$3,900 + Adjustment] = Aid

Adjustment = [AOE - $3,900] x [.075/CWR]

Sample calculations for the state average wealth district (CWR=1.000; OAR=.41), with expenditure levels below and above the state average ($8,421), are provided to illustrate the effect of the Operating Aid formula adjustment:

AOE = $7,000 .41 x [$3,900 + $233] = $1,695

AOE = $8,421 .41 x [$3,900 + $308] = $1,725

AOE = $10,000 .41 x [$3,900 + $308] = $1,725

With Approved Operating Expense of $10,000 per pupil, this district would receive $1,725 in Operating Aid. If the district spent substantially less, $8,421 per pupil, it would likewise receive $1,725, because both levels of expenditure are above the $8,000 cap on the formula adjustment. Notice that with an Approved Operating Expense of $7,000 per pupil, $1,421 less than the state average, the district would receive $1,695, which is only $30 less than the operating aid maximum for this district. A final note, all districts in New York State receive operating aid. For those districts that have extremely high CWRs and hence OARs that equal zero, the State provides flat grant Operating Aid in the amount of $400 per pupil.

Other Aids

Operating Aid is the general or basic aid provided to New York's public schools. For the 1996–97 school year, Operating Aid was expected to be 56.6% of the total school aid package. The other 43.4% of the package was distributed among the following types of aids with expected percentages given (New York State Education Department, 1996):

Operating	56.60%
Excess Cost	14.92%
Transportation	7.32%
Building	6.07%
Tax Effort and Equalization	5.08%
Extraordinary Needs	4.84%
BOCES	3.50%
Software, Library, Textbook	1.43%
Special Services for Big Cities	1.25%
Growth Aid	0.71%
Limited English Proficiency	0.64%
Educationally Related Support Services	0.42%
Reorganization Incentive	0.37%
Gifted and Talented	0.15%
Hardware and Technology	0.11%
Transition Adjustment	-3.40%
Total	100.00%

BOCES aid is unique to New York State. The acronym represents Boards of Cooperative Educational Services which provide services and programs such as vocational and special education for districts that could not otherwise offer such programs and services efficiently. This aid helps to support district participation in the BOCES system. Special Services for Big Cities aid helps to support programs and services similar to those provided by BOCES in the five cities—Buffalo, New York City, Rochester, Syracuse, Yonkers—that are not allowed to participate in the BOCES system. Excess Cost and Extraordinary Needs aids help to support the educational programs and services provided to handicapped and at-risk students (The University of the State of New York, 1996b).

Revenue Sources

The revenues received by public school districts in New York State are derived primarily from the property tax and the state aid program. In the 1993–94 school year, districts received 56.8 percent of their revenues from local sources and 38.6 percent from state sources, the 4.6 percent remainder was derived from federal sources (The University of the State of New York, 1995). The local revenue sources consisted of property taxes and, for some districts, modest amounts from sales and or utility taxes. New York State schools also receive lottery aid, but proceeds from lottery operations flow to the state rather than directly to local school districts.

During the past six years (1988–89 through 1993–94), total revenues for New York's schools increased, but the state's proportional share decreased over 5 percent. For the most part, local revenue sources were used to make up this difference along with modest increases in the proportion of federal revenues. Table 1 presents the local, state, and federal shares of revenue for years 1988–89 through 1993–94:

Table 1
Proportion of Total Public School Revenues.

School Year	Local Sources	State Sources	Federal Sources
1988-89	53.1%	43.8%	3.1%
1989-90	55.0%	41.4%	3.6%
1990-91	53.8%	42.8%	3.4%
1991-92	55.1%	40.8%	4.1%
1992-93	55.9%	39.6%	4.5%
1993-94	56.8%	38.6%	4.6%

(The University of the State of New York, 1995, p. 7.)

Given that the state proportion of district revenues peaked in 1988–89, and that federal relief has remained modest, it seems likely that the trend of increased local burden for the operation of public schools will continue.

Policy Considerations

As demonstrated earlier, educational expenditures in New York State are not effectively equalized. While perfect equality in expenditure is not possible or even desirable if it imposes limits on educational investment, the disparities produced by New York's current system of finance could be reduced. In theory, the percentage equalizing approach to distributing state aid to schools in New York could be implemented to equalize educational expenditures across the state. However, the cur-

rent practice prevents such equalization from occurring, because (1) the state guarantees a flat grant amount of operating aid to even the wealthiest of districts, and (2) the state's equalization scheme ignores expenditures beyond $8,000 per pupil.

In order to equalize educational expenditures across the state, the guaranteed flat grant would need to be repealed and the operating aid formula would need to support per pupil expenditures beyond $8,000. Whereas the repeal of the flat grant would free some funding for the equalization of higher levels of expenditure, obtaining the required amount of funding and achieving an environment of strict equalization would not likely occur until some form of recapture were imposed on high-wealth districts.

Support for expenditure equalization funding beyond $8,000 per pupil, at least to the $8,421 average expenditure per pupil mark, could possibly survive the political process. However, repeal of the guaranteed flat grant in operating aid and the imposition of recapture provisions would likely fail politically. Short of a court order, considerable disparities in expenditure among New York's public school districts, due to the modified implementation of the percentage equalizing approach, are likely to continue.

The proportion of public school revenues provided by the state has been declining. Although Governor Pataki has acknowledged the problem and attempted to relieve local burden by proposing a $302 million increase in state aid to schools (Sorensen, 1997), his proposed budget may be defeated by the state legislature and, if passed, would only increase the state's share to roughly 39.8 percent of total public school revenues. Therefore, it seems likely that the trend revealed in Table 1 will continue, and that New York's public schools will be forced to rely more heavily on the local property tax as a means to financing educational programs. Considering an inherent relationship between localized wealth measures and educational spending levels, the impact of this trend would unequally affect property poor and property wealthy districts, causing the poorer districts to put forth greater effort in terms of taxation or to suffer decreases in educational services. While the New York State school aid formulae recognize local fiscal capacity and local tax effort based on full property valuation, imperfections in the operation of these school aid formulae and weaknesses in the overall equalization approach, due largely to the lack of recapture provisions, would likely be magnified during an era of increased reliance on the local property tax. During such an era of increased reliance on the property tax, perhaps it would be prudent to consider other sources of revenue to school districts or to consider changing the current system of property taxation.

Traditional sources of revenue for public schools include the income tax, sales tax, and the property tax. New York State assesses the income tax and uses a portion of it to support the education program, including state aid to schools. Sales tax receipts are shared by the state and New York counties, some of which pass a portion of the revenues on to schools. For example, in Erie County in Western New York, the sales tax rate is 8 percent, of which 4 percent goes to the state and the county distributes .87 percent to local school districts (New York State Office of the State Comptroller, 1996). Overall, the state's operation depends heavily on income and sales tax receipts. Swanson and King (1997) make this point clear by reporting that individual income and sales tax receipts account for 49.5 and 19.9 percent of New York's tax collections, respectively. Furthermore, they illustrate that relative to fiscal capacity, New Yorkers put forth the greatest tax effort in the nation. Because the property tax is the only substantial source of revenue not captured by higher levels of government and the only revenue source that local school districts have primary control over, it is likely that any future reductions in state and federal aid to schools will be offset by increased property taxation.

Once again, we are challenged by an equalization problem which, in this case, is rooted in the valuation of property within each district and the relative ability and effort of districts to tax that property value. The current system of property taxation is inefficient in the sense that there is considerable disparity among the property tax bases available to school district taxing authorities. Were the equalization measures implemented by the state through state aid to schools effective, disparities in property tax bases would less likely be reflected in educational spending patterns. However, given fundamental inconsistencies in the state's implementation of equalization measures, inefficiencies in the distribution of property tax bases among school districts will become more apparent with greater reliance on the property tax.

A reasonable approach to reducing the disparities among local tax bases would be to consider all properties in the state as one tax base. This would enable a system of property taxation that could levy one effective tax rate for all districts without the need for equalization formulas based on property tax ability or effort. The major problem with consolidating the state tax base as such would be the removal of localized control over revenue generation. This would diminish local district and community autonomy, and directly conflict with liberty interests and the current trend of placing greater authority and responsibility at local levels of school administration. This effect could be reduced if tax bases were consolidated at regional or county levels rather than at the state level.

Effecting fundamental changes to the state aid distribution program or the collective property tax base available to support educational program expenditures would pose overwhelming political challenges. This does not mean, however, that these potentially positive changes should be ignored. If we choose to adopt an educational expenditure equalization mechanism, why should it be ineffective? Furthermore, if failed equalization attempts are tied to the current system of property taxation, why should it remain unchanged? Answering these fundamental questions and arriving at plausible solutions will require considerable research, reflection, and input from various political proponents. In the meantime, one direction of research that could begin to address both questions would involve the study of consolidating non-residential tax bases for generating education revenues.

The operations of large utilities and commercial enterprises effect the employment, income, and general economic well-being of citizens outside local school district geographic confines. For example, the Kintigh Station in Barker, New York provides electrical power for much of the Western New York region, but the property tax revenue that it generates primarily benefits the Barker Central School district. It would make sense to distribute tax revenues from these entities among a number of school districts that comprise the broader economic locale. If, under such a plan, residential properties were still taxed by local authorities, local autonomy would be reflected throughout the revenue generation process. Local district representatives could lobby with representatives of neighboring districts, belonging to the broader economic locale, to formulate policies of taxation on non-residential properties. And, local district residents, who have the greatest interest in local school affairs and tax levies on residential properties, would continue to have local school district and community control over their own taxation in support of educational programs. Properly implemented, this type of system could better represent the educational priorities of the residential community and simplify the process of equalization, which would then be primarily concerned with local income wealth.

Conclusion

Especially through initiatives to study and improve efficiencies within school districts and schools (e.g., Berne, 1994; Hanushek, 1986, 1994; King & MacPhail-Wilcox, 1994; Monk, 1989, 1992, 1994), much attention has been focused on historical and improved function and object expenditure patterns. While we believe that these pursuits are paramount to financing excellent educational programs in an environment of fiscal uncertainty, we have attempted to draw attention toward another piece of the puzzle. Our emphasis has been on some of the fundamental flaws in the generation of revenues for elementary and secondary education in New York as well as operational inconsistencies in the state's implementation of equalization measures. We hope that our articulation of these inconsistencies and some of the potential alternatives will encourage other researchers to pursue these aspects of education financing more comprehensively than can be accomplished in this brief state-of-the-state report.

Endnotes

Berne, R. (1994). Educational input and outcome inequities in New York State. In R. Berne & L. O. Picus (Eds.), *Outcome equity in education* (pp. 1–23). Thousand Oaks, CA: Corwin Press.

Brent, B. O., & Monk, D. H. (1995). School finance policy issues in New York. In C. Edlefson (Ed.), *School finance policy issues in the states and provinces, 1995* (pp. 115–121). [A monograph of the Fiscal Issues, Policy, and Education Finance Special Interest Group of the American Educational Research Association.] Columbus, OH: Ohio State University.

Crampton, F. E. (1993). The state of New York school finance 1993: Equity and efficiency at the crossroads. In C. D. Herrington (Ed.), *The political economy of educational finance: The state of the states in 1993* (pp. 128–142). [A monograph of the Fiscal Issues, Policy, and Education Finance Special Interest Group of the American Educational Research Association.] Tallahassee, FL: Florida State University.

Crampton, F. E. (1994). School finance policy issues in New York. In N. Theobald (Ed.), *The state of school finance policy issues, 1994* (pp. 73–86). [A monograph of the Fiscal Issues, Policy, and Education Finance Special Interest Group of the American Educational Research Association.] Bloomington, IN: Indiana University.

Diefenbach, G., Detraglia, F., Fisher, S., Kyer, L., Lattuca, D., Levings, M., Shea, B., & Williams, C. (1996). *Guidebook to state aid formulas for elementary and secondary education, 1996–97.* Castleton, NY: Questar III.

Diefenbach, G., Fisher, S., Kyer, L., Lattuca, D., Levings, M., Martin, G., Wilcox, P., & Williams, C. (1995). *Guidebook to state aid formulas for elementary and secondary education, 1995–96.* Castleton, NY: Questar III.

Hanushek, E. A. (1986). The economics of schooling: Production and efficiency in public schools. *Journal of Economic Literature*, 24, 1141–1177.

Hanushek, E. A. (1994). A jaundiced view of "adequacy" in school finance reform. Educational Policy, 8, 460–469.

King, R. A., & MacPhail-Wilcox, B. (1994). Unraveling the production equation: The continuing quest for resources that make a difference. *Journal of Education Finance*, 20, 47–65.

Monk, D. H. (1989). The education production function: Its evolving role in policy analysis. *Educational Evaluation and Policy Analysis*, 11, 31–45.

Monk, D. H. (1992). Education productivity research: An update and assessment of its role in education finance reform. *Educational Evaluation and Policy Analysis*, 14, 307–332.

Monk, D. H. (1994). Policy challenges surrounding the shift toward outcome-oriented school finance equity standards. *Educational Policy*, 8, 471–488.

New York State Education Department. (1996). State of New York 1996–97 State Aid Projections, July 1996. [Internet web site information supplemented by personal communication with the State Aid Division, Albany NY.] www.nysed.gov/Stateaid/dist95/LG96P061700.HTML.

New York State Office of the State Comptroller. (1996). Financial data for school districts for fiscal year ended June 30, 1995. Albany, NY: Author.

Sorensen, J. R. (1997, January 13). State aid proposal includes public-school transfer plan. *The Buffalo News*, pp. A1, A7.

Swanson, A. D., & King, R. A. (1997). *School finance: Its economics and politics* (2nd ed.). [With computer simulations programmed by S. R. Sweetland.] New York: Longman.

The University of the State of New York. (1995). Analysis of school finances in New York State school districts, 1993–94. Albany, NY: The State Education Department.

The University of the State of New York. (1996a). New York: The state of learning, statewide profile of the educational system. Albany, NY: The State Education Department.

The University of the State of New York. (1996b). State formula aids and entitlements for schools in New York State, 1996–97. Albany, NY: The State Education Department, State Aid Unit.

U.S. Department of Education. (1996). Public elementary and secondary education statistics: School year 1995–96. [Early estimates by L. M. McDowell.] Washington, DC: National Center for Education Statistics.