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A PILOT STUDY
OF POSSIBLE ADJUSTMENTS TO THE WEALTH MEASUREMENT IN ILLINOIS
BASED ON USING PRIVATE OR PAROCHIAL STUDENTS
IN THE STUDENT COUNT

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March, 1978

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We would especially like to thank the following individuals and organizations for their support in securing these research funds, and for their constant encouragement in conducting school finance studies: The Honorable Gene L. Hoffman, chairman, Illinois School Problems Commission; The Honorable Arthur L. Berman, vice-chairman, Illinois School Problems Commission; John J. Callahan, Director, Legislators' Education Action Project, National Conference of State Legislatures; Denis P. Doyle, Director, School Finance and

Organization Division, National Institute of Education; David R. Mandel, Chief, School Finance Branch, School Finance and Organization Division, National Institute of Education. We would like to thank the staffs of the Illinois Office of Education, the Board of Higher Education, and the Board of Regents for their encouragement of school finance research at Illinois State University. Finally, our debt extends to Mrs. Alberta Carr for keeping our opinions and facts in some readable form. As is customary, all errors of fact and/or opinion are solely those of the authors.

March, 1978

B.C.H.
G.A.H.

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A perplexing problem faced by those who attempt to provide equity to taxpayers, in addition to the attempts at equalizing opportunities for students in the public schools, is created in communities where a large share of the taxpayers also support a private or parochial school. There are, in Illinois as in all states, communities where every child who lives within a district is educated in the public schools. In this case, to say that the assessment per pupil is some amount has meaning as a measure of wealth. However, if as is true in some districts, one-half of the school-age population attends schools other than the public schools, then a division of the count of public school students only into the district's assessment gives a warped idea of the actual wealth per pupil and the taxpayers' ability to pay.

Two communities with the same total assessment and the same number of students could, with the above characteristics, appear in school statistics as though one were twice as wealthy as the other. This would mean that although both paid equal state taxes and had truly equal wealth, one would, with the present system of funding in Illinois, get far more state dollars per student than would the other.

The community that provided the private or parochial schools would not only have to pay the full cost of educating the private and parochial students, but would be required to pay a larger share of the cost of those students attending public schools. The reader should be reminded that, under the Illinois system, the addition or subtraction of one child in any district under the resource equalizer formula adjusts the state dollars claimed in general aid by $1,260, providing they are taxing at the maximum tax that the state will match. The problem, then, for taxpayers in communities that furnish private and parochial schools, is that for each student (as counted in TWADA) the community fails to be able to claim $1,260 of state assistance that could be claimed if the child attended the public schools and if the district were taxing at the maximum.

To attempt to see what this means to communities, three districts, where both the public and the parochial schools were willing to furnish attendance data by school districts, have been selected for study. Attendance data for private and parochial schools are not normally kept by public school districts and there is no systematic way to secure these data at present. If any of the plans suggested later were to be accepted, it would be necessary to gather data not now gathered for any other purpose.

If the proposal to count all students for the wealth measurement (Plan "B" below) is to become a reality or even if the research necessary to determine its effect on such factors as equity is to be conducted, it will require new rules and regulations or laws to cause the data to be gathered. Any plan to enact the concept into law would require simple changes in the definition of students to be counted in the wealth measurement, i.e., add the ADA count of private and parochial students for the purpose of determining the wealth level for state support. The complication legislatively would result from the necessary forced entrance of the state or its agent into requiring some specific reporting of the parochial schools, which the Illinois General Assembly has been reluctant to require in any area. There are also some complications relative to computing the concentration of title one eligibles that would need to be worked out.

Elsewhere in the literature there are many explanations of how the Illinois system works, so that need not be repeated.(1) The adjustments that will be made to the claims of the three districts using the regular calculation system in order to demonstrate possible adjustments and to show the problem are:

A. Count all students in ADA in both public and private schools, use this count in determining relative wealth, and then pay the claim amount that this would earn to the public schools.

B. Count all students, both public and private, only in determining the wealth of the district as measured by assessed value for aid purposes and then pay the district money only for the students attending public schools.

The data in Tables 1 through 3 are taken from the 1975-76 final claim of the public schools augmented by attendance data from the parochial schools, which were calculated only for those students who live within the public school districts converted to WADA; then the data were used to calculate the maximum claim that the district would make first under the law as it existed in 1977, and then as is prescribed in "A" and "B" above. The parochial and private school data were converted from enrollment to WADA by taking 96 per cent of enrollment and adding 25 per cent for students in grades 9 through 12.

The argument for considering "A" would be that a community should get equal treatment regardless of where it educates its children. Given the constitutional prohibition against direct aid as it has been interpreted to date, this aid could not go to the private and parochial schools. It would, however, cause public school personnel to appreciate the private schools and should result in far more cooperative efforts between the schools. This could result in better total education. It would at the least reduce the local tax that all would have to pay to achieve a given level of funding for education.

The arguments for Plan "B" are much stronger and, in fact, fairness argues strongly for a measure of wealth that represents ability to pay. Without data to calculate all pupils rather than just public school pupils to determine wealth, no final conclusion can be drawn. There are, however, some school districts that appear by present measures to be wealthy when assessment per public school pupil is used as a measure that are quite poor by income measurement per capita. In fact, after the median is reached, there seems to be little correlation between income and assessment as a measure of wealth.(2) In many cases, using all pupils would improve assessment as a measure of real ability to pay. Incidentally, one of the chief problems of comparing income (family or total) and assessment has always been that total assessment, corporate and individual, has been measured against pupil counts in the public schools, while income measurements have been calculated using "per family" or "per capita" data without the complication of corporate income. Plan "B" simply arrives at a different, and the writers believe a more fair, measure of a community's wealth than does the present system, and then pays the district based on this new measurement for the public school pupils only.

As is true of all work of the Center, when speculation is made about results, the Center philosophy has been to gather data, have projections run, and then have the redistribution of funds or the additional cost calculated. If when this is done these measures of wealth correlate more closely with ability to pay, and in fact result in a more equitable distribution of funds plus more equity for taxpayers, it should be adopted.

Just as the major revision of the formula was phased-in when the resource equalizer was passed, the concepts expressed here could be phased-in through time. In fact, contrary to the earlier phase-in, the General Assembly might decide that some percentage of the increase resulting from this calculation rather than the full amount would be more fair. This would be a political or philosophical decision that politicians rather than researchers should make.

<u>Possible Legislation That Might Be Needed if This Plan Were to Become Law</u>

1. Either through the State Board of Education's rule-making power or through legislation, there would have to be a requirement that accurate and comparable WADA be kept for the private and parochial schools.

2. Once, or if, the desirability of changing the formula is proven through state-wide calculations and

comparisons with the equity of the present system, the state would have to change the law to count all students living in a district for wealth measurement in the formula.

Possible Research

As mentioned previously, the pupil count that is needed can really only be supplied by the private school authorities, and state legislation would be required to bring that about. However, with regard to this matter, we are in a position that is roughly comparable to the situation with regard to an income factor. Despite a constant clamor for current income data by school district, to be extracted from the state income tax forms, we still, as of this writing, do not have very reliable and dependable income data upon which to base a grant-in-aid system. However, that has not kept us from learning at least some things about the income distribution among Illinois school districts by using income data gathered in the federal decennial census of population and housing. No one claims that census-derived income data are as useful for school finance purposes as data derived on an annual basis from the state income tax form. However, the census income data have served us well for research purposes. We can use the same approach here by using the population count for a "school age" cohort (age group) gathered in Illinois in 1969. One would, however, have to make some assumptions in order to update that data to 1978 or 1979. Alternately, one could simply wait for the new 1980 federal census which will be gathered in 1979. Unfortunately, it often takes two or three years to organize the new federal census data into a useable form that can be utilized in school district analysis.(3)

If we assume that a "census child" analysis would be useful, though not as rigorous as a law collecting the enrollment data from the private school authorities, what kind of questions would we like to have answered from such an analysis? First, we might want to investigate the relationship of various measures of wealth; e.g., property valuation per TWADA, property valuation per census child, income per TWADA, and income per census child, to one another. Since we already know that many of these "wealth" relationships are not linear, we might wish to begin with a curvilinear regression analysis to discover the "best fit" of these wealth variables, one to another. An analysis based on the "community type" of the school district--that is, central cities, high growth suburbs, low growth suburbs, independent cities, rural districts, and so on--would also be helpful. We have used this type of analysis in other Center studies.(4) At times we have combined this with geographic specifications so that we can look at such areas as northern rural, central rural, and southern rural. For this more general geographic analysis the six supervisory regions of the state established by the Illinois Office of Education are useful.

We should also wish to simulate, by computer, the new state aid payments which would result from using several of these new "census child" wealth measurements. One does this, of course, by holding all other variables constant in the allocation formula while substituting the variable of interest. The new state aid allocations are then used to study the equity situation in the state by using the statistical techniques developed at the Center to give operational specification and objective meaning to concepts such as "wealth neutrality."(5) The Center is in the process of expanding its measurement techniques relative to "equity goals," thanks to new conceptual and measurement developments in the "equity" area.(6) From prior research and simple logic we know that all measurements of "equity" are affected by changes in the type of "wealth" measurement selected; that is, personal income, corporate income, real property valuations, personal property valuations, various mixtures and combinations of these measurements and other wealth elements. We also know, however, that the "unit of measurement" selected to standardize these aggregate wealth specifications--for example, per capita, per total student, per public school student (average daily attendance or average daily membership, or both), per weighted public school student--also affects the flow of state aid and all "equity" measurements. Political forces are as sensitive to the way pupils are counted as they are to the way wealth is measured. All that we have suggested in this short pilot study is that there is another dimension to the wealth factor, not yet explored in Illinois; e.g., "wealth per census child," or "wealth per total child." We therefore recommend that the General Assembly and the School Problems Commission explore this added dimension more fully by proceeding with simulations based upon counts from the federal census. If the results of these census-based investigations prove useful, then we recommend that consideration be given to legislation requiring a count of private school pupils in each public school district.

TABLE 1

A LOOK AT ALTERNATIVE WAYS TO COUNT PUPIL POPULATION FOR STATE AID FOR ALTAMONT COMMUNITY (Using 1975-76 Data and the Formula as it Was Adjusted in 1976)

Numbers Used From State Aid Form	Public School Claim 1975-76 for a TWADA of 900.16	Plan A All Children 900.16 + 177.38 = 1,077.54	Plan B Wealth All Children Claim Only 900.16
2. State Guaranteed Resources			
A. District 1974 Equalized Assessed Valuation	$16,117,020	$16,117,020	$16,117,020
B. Assessed Valuation Per TWADA	$ 17,904	$ 14,957	$ 14,957
C. $43,500-- (Line B) $17,904	$ 25,596	$ 28,543	$ 28,543
3. District 1974 Operating Tax Rate	2.0517%	2.0517%	2.0517%
4. 1975-76 Claim* (2c x 3 x TWADA)	$ 473,721	$ 631,025	$ 527,148

*All claims are based on 1975-76 data, but are calculated as the law exists today (10/12/77) and assuming full payment by state.

Plan A increases $158,304
Plan B increases $ 54,427

TABLE 2

A LOOK AT ALTERNATIVE WAYS TO COUNT PUPIL POPULATION FOR STATE AID FOR EFFINGHAM COMMUNITY (Using 1975-76 Data and the Formula as it Was Adjusted in 1976)

Numbers Used From State Aid Form	Public School Claim 1975-76 for a TWADA of 2,887.82	Plan A All Children 2,887.82 + 1,011.79 = 3,899.61	Plan B Wealth All Children Claim Only 2,887.82
2. State Guaranteed Resources			
A. District 1974 Equalized Assessed Valuation	$47,619,770	$47,619,770	$47,619,770
B. Assessed Valuation Per TWADA	$ 16,489	$ 12,211	$ 12,211
C. $43,500-- (Line B) $16,489	$ 27,011	$ 31,289	$ 31,289
3. District 1974 Operating Tax Rate	2.0764%	2.0764%	2.0764%
4. 1975-76 Claim* (2c x 3 x TWADA)	$ 1,619,652	$ 2,533,514	$ 1,876,158

*All claims are based on 1975-76 data, but are calculated as the law exists today (10/12/77) and assuming full payment by state.

Plan A increases $913,862
Plan B increases $256,506

TABLE 3

A LOOK AT ALTERNATIVE WAYS TO COUNT PUPIL POPULATION FOR STATE AID FOR BLOOMINGTON (Using 1975-76 Data and the Formula as it Was Adjusted in 1976)

Numbers Used From State Aid Form	Public School Claim 1975-76 for a TWADA of 6,582.10	Plan A All Children 6,582.10 + 1,164.48 = 7,746.58	Plan B Wealth All Children Claim Only 6,587.10
2. State Guaranteed Resources			
A. District 1974 Equalized Assessed Valuation	$227,114,015	$227,114,015	$227,114,015
B. Assessed Valuation Per TWADA	$ 34,504	$ 29,317	$ 29,317
C. $43,500-- (Line B) $34,504	$ 8,996	$ 14,183	$ 14,183
3. District 1974 Operating Tax Rate	2.6167%	2.6167%	2.6167%
4. 1975-76 Claim* (2c x 3 x TWADA)	$ 1,549,415	$ 2,874,961	$ 2,442,791

*All claims are based on 1975-76 data, but are calculated as the law exists today (10/12/77) and assuming full payment by state.

Plan A increases $1,325,546

Plan B increases $ 893,376

NOTES AND REFERENCES

1. There are several good descriptions of the Illinois 1973 grant-in-aid reform and subsequent amendments. Consult, for example, Garber, Lee O., and Ben C. Hubbard, Law, Finance, and the Teacher in Illinois, 1975, Interstate Printers and Publishers, Danville, Illinois; Hubbard, Ben C., Report #12, Illinois School Problems Commission, 1973, The Commission, Springfield, Illinois. See also Hickrod, G. Alan, Ben C. Hubbard, and Thomas W. C. Yang, The 1973 Reform of the Illinois General Purpose Educational Grant-in-Aid: A Description and an Evaluation, 1975, Center for the Study of Educational Finance, Normal, Illinois, 61761 (also available in Tron, Esther O. (ed.), Selected Papers in School Finance, 1974, USOE, Government Printing Office, Washington, D.C., and as ED 127 681 in the ERIC service). Other recent descriptions include: Report of the Citizens Commission on School Finance, 1977, Illinois Office of Education, Springfield, Illinois; Bradshaw, Fred, State, Local, and Federal Financing for Illinois Public Schools, 1977, Illinois Office of Education, Springfield, Illinois; and Hickrod, G. Alan, and Ben C. Hubbard, "The 1973 School Finance Reform in Illinois: Quo Jure? Quo Vadis," Journal of Education Finance, in press.

2. The question of what constitutes a good measurement of school district wealth is as old as the study of school finance itself. For recent discussions of this subject consult: Odden, Allan, "Alternative Measures of School District Wealth," Journal of Education Finance, Winter, 1977; Hanes, Carol E., and K. Forbis Jordan, "A Multi-Factor Index Technique for State Education Funding," 1976, paper for the annual meeting of the American Educational Research Association; Firestine, Robert E., "Income and Wealth in a Multivariate Classification of School Districts," Journal of Education Finance, Fall, 1977. For recent suggestions as to how the income factor might be brought into the Illinois school finance formula see: Hou, J. Dan, and Warren B. Carson, Alternative Measures of Local Wealth and Effort, 1977, Illinois Office of Education, Springfield, Illinois, 61761 (also available from the Center for the Study of Educational Finance), and especially McMahon, Walter W., A

Broader Measure of Wealth and Effort for Educational Equality and Tax Equity, 1977, Illinois Office of Education, Springfield, Illinois.

3. For discussions of problems concerning the use of census data for school finance research see: Pohlmann, Vernon C., "Suggested Uses and Some Limitations of School District Census Data," 1975, in 1970 Census; Illinois School District Profiles, Illinois Office of Education, Springfield, Illinois. See also Pohlmann, Vernon C., "Appendix D: An Analysis of the Procedures for Determining the Number of Children Below Poverty Level," 1976, in Hickrod, G. Alan, Ben C. Hubbard, Thomas W. C. Yang, and Tharin Rasanond, The 1973 Reform of the Illinois General Purpose Grant-In-Aid: An Evaluation After Three Years, 1976, Center for the Study of Educational Finance, Normal, Illinois, 61761.

4. See Hickrod, Hubbard, and Yang, 1973 Reform of the Illinois Educational Grant-in-Aid: Description and Evaluation, op. cit.

5. See Hickrod, G. Alan, Thomas W. C. Yang, Ben C. Hubbard, and Ramesh Chaudhari, Measurable Objectives for School Finance Reform, 1975, Center for the Study of Educational Finance, Illinois State University, Normal, Illinois, 61761 (also available as ED 103 977 in the ERIC service).

6. See Friedman, Lee S., and Michael Wiseman, Toward Understanding the Equity Consequences of School Finance Reform, 1977, Graduate School of Public Policy, Berkeley, California; also Friedman, Lee S., "The Ambiguity of Serrano: Two Concepts of Wealth Neutrality," Hastings Constitutional Law Quarterly, in press. In addition see: Berne, Robert, Equity and Public Education: Conceptual Issues of Measurement, 1977, Ford Foundation, New York, New York. A school finance "cooperative" organized by James Kelly of the Ford Foundation and Denis Doyle of the National Institute of Education is currently attempting to bring about some standardization and order in the area of school finance equity monitoring and measurement.