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Education Tax Policy Institute

## Complete Systematic Overhaul?

An Analysis of  
Education Funding Provisions  
in Sub. H.B. 94, 124<sup>th</sup> General Assembly

June 2001

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## OVERVIEW

The Ohio Supreme Court required in its decision in *DeRolph II* in May 2000 that the General Assembly address seven aspects of the school funding situation in Ohio. Those seven aspects included:

- 1) Continued reliance on local property taxes as a primary means to fund Ohio's schools;
- 2) Structural deficiencies in the basic aid formula;
- 3) Continuing attention to the mechanism for funding school facilities;
- 4) Reevaluation of the School Solvency Fund;
- 5) Unfunded mandates from H.B. 412 and S.B. 55;
- 6) Failure to eliminate phantom revenue;
- 7) Adoption of strict statewide academic guidelines.

In listing these seven aspects of the system that need attention, the Court explicitly said that they “are not by any means the only areas requiring scrutiny...”

This analysis will consider the provisions in Sub. H.B. 94 in the context of these seven aspects of the school funding system judged deficient by the Ohio Supreme Court. Special attention will focus on the requirements for more adequate funding and less reliance on local property taxes. Where appropriate, the analysis also identifies “other areas” worthy of scrutiny.

Sub. H.B. 94 would change the method for funding K – 12 education by modifying formulas for the distribution of State aid. It also expands aid for districts that fail to levy enough local mills to pay the local share of education costs (“Gap Aid”), and it introduces additional aid for districts with certain unusual costs (“Excess Cost Aid”) and additional aid for districts below the 80<sup>th</sup> percentile in wealth (“Parity Aid”). It would not make changes in the tax structure. Generally, the changes in the bill consist of modifications to existing formulas rather than the enactment of an entirely new school funding structure.

The analysis reviews these changes from two different perspectives. With a subject as complicated as school funding, many details fit together in the design of funding provisions. At the same time, the provisions themselves interact in complex ways to yield results that sometimes differ from the result anticipated in the design of each individual provision. The issues related to the details involved in each provision of the school funding program represent the “trees.” The interaction of these provisions to produce a final outcome represents the “forest.”

The analysis of Sub. H.B.94 approaches the legislation first from the perspective of the trees and then from the perspective of the forest. It begins by analyzing the effects

of several changes enacted in the legislation in detail. Then, it examines whether these specific changes fit together in a package such that the outcome is likely to meet the constitutional standards as interpreted by the Ohio Supreme Court.

## **PART I : THE TREES – DETAILED ANALYSIS OF IMPORTANT PROVISIONS IN SUB. H.B. 94**

This part of the analysis will focus on nine aspects of the legislation. The topics covered include:

- 1) Effects of changes in the computation of the basic per pupil amount, especially when districts achieve success in both FY96 and FY99;
- 2) Effects of including seven districts that failed to meet the stated standard for “success;”
- 3) Effects of using an inflation factor without any recent empirical foundation;
- 4) Effects of changing the Cost of Doing Business Factor;
- 5) Appropriateness of reducing vocational education weights;
- 6) Adoption of a new special education weighting system
- 7) Effects related to funding for disadvantaged pupils (DPIA)
- 8) Effects of removing the income adjustment from the computation of the chargeoff amount;
- 9) Effects of computing the income adjustment for purposes of parity aid based on FAGI per pupil.

A separate discussion of each of these topics follows. However, before diving into the details, some context for each of these provisions will be useful.

In 1998, the General Assembly enacted Am. Sub. H.B. 650 in response to the decision of the Ohio Supreme Court in *DeRolph I*. That legislation included provisions based on the recommendations of Dr. John Augenblick for computing the cost of an adequate education. The system enacted at that time is based on the assumption that the State can deduce an amount that represents the cost of an adequate education from the experience of “successful” school districts. Thus, the statute for determining the cost of an adequate education contains instruction for defining “successful” school districts and for averaging the costs incurred by those districts as a standard for setting the base cost of an adequate education. The base cost is supposed to provide adequate funding for the education of pupils with no special needs. Other adjustments in the formula add funds for purposes like special education, vocational education, transportation, and extra assistance for economically disadvantaged pupils.

The computation of the basic cost of an adequate education is a crucial step in defining the funding needs of the entire system. Therefore, changes in the formulas used to compute the basic cost of an adequate education demand careful scrutiny. The first three topics in Part I involve such changes.

The next four topics involve changes to provisions that adjust for costs associated with special needs. These topics include changes to the cost of doing business factor, changes in special and vocational education funding, and changes in the formulas designed to assist economically disadvantaged pupils.

Finally, the funding of an adequate education has proceeded as an effort to which both the State and individual school districts contribute funds. The last two topics in Part I examine two changes related to the distribution of funding responsibility between the State and local school districts.

### **A. Changes in the Computation of the Basic Per Pupil Amount**

The bill changes the computation of the base cost of an adequate education. The “base cost” is a per pupil amount that equals the average of the base costs in the “successful” school districts. The base cost in each district is computed by deducting from the district’s expenditures per pupil amounts associated with special needs, including special and vocational education spending, spending for disadvantaged pupils, and transportation spending. Remaining base expenditures are then deflated by the district’s cost-of-doing-business factor. The sum of the per pupil base cost in each “successful district” divided by the number of “successful” districts yields the average per pupil base cost in those districts. This amount becomes the State Base Cost amount for purposes of the school “Foundation” formula.

Additional funding is affected by the Base Cost amount because a school district’s cost of an adequate education increases beyond the Base Cost per pupil when the formula applies multipliers based on special education weights, vocational education weights, and the cost of doing business factor. Therefore, the determination of the Base Cost amount drives a substantial portion of the entire funding formula.

The derivation of the base cost of an adequate education results from the identification of successful school districts. The costs incurred by successful school districts provide the basis for defining the cost required to achieve adequacy. For this reason, the calculation of costs in the successful districts is a crucial step in the determination of the basic per pupil subsidy because the base costs of the successful districts are averaged to obtain the basic per pupil amount.

#### **1) Inclusion of More High Wealth Districts**

One of the changes in the bill would bring the computation of the cost of an adequate education more closely in conformity with the original method designed by John Augenblick. This change would exclude the top and bottom 5% of all districts in terms of property wealth per pupil and income wealth from the districts identified as “successful.” This represents a change from the current law which excludes the top and

bottom 10% of all districts. The practical effect of this change is to include some successful districts with higher wealth.

## 2) Exclusion of Actual Costs of Successful School Districts – “Echo Effect” Controls

The bill also would make changes that take the computation further away from the method as originally recommended by Dr. Augenblick.

Sub. H.B. 94 makes the following changes in the Augenblick method for calculating base costs in successful districts. The new method would *not* use actual costs in some districts. The General Assembly decided that actual costs could include an “echo effect” from earlier State aid increases. As a result, it enacted the following “echo effect” control. In those school districts that appeared in the list of successful districts in the computation of FY96 base costs and in the list of successful districts in FY99, the new formula would substitute a 2.8% inflation factor for the actual experience of the districts, unless the actual expenditures increased by less than 2.8% per year. For example, if a successful district had a base cost of \$4,000 in FY96, and it qualified as successful in FY99, too, its base cost would equal \$4,000 x 1.028 (FY97) x 1.028 (FY98) x 1.028 (FY99) or \$4,345. If the district’s actual base cost for FY99 were \$4,300, then the formula would use that amount rather than the amount based on the inflation adjustment.

The use of an inflation factor rather than actual data is based on a theory that the increase in State aid itself in FY96 contributes to a ratcheting up of the average base cost in FY99. The bill states that “the increased state funding *may* (our emphasis) have driven the districts’ expenditures beyond the expenditures that were actually needed to maintain their educational programs at the level necessary to maintain their ability to meet the fiscal year 1999 performance criteria...” (R.C. 3317.012(B)(3)). The use of the term “may” in the legislation underscores the fact that no empirical study or data has verified the actual existence of the effect that the General Assembly intends to control by substituting an arbitrary inflation factor for actual data.

An analysis of the 127 “successful” districts in FY99 shows that 83 of them qualified as successful districts in FY96. Since the hypothetical extra increase in aid has sometimes been called the “Echo Effect,” these districts will be referred to as the “Echo Districts.” Analysis of the 83 Echo Districts contradicts the entire premise upon which the General Assembly acted. Rather than achieving higher per pupil cost amounts from the provision of more State aid, the actual data show that *property taxes* accounted for most of the increase in the base cost expenditures in the Echo Districts.

Figure 1 summarizes the experience of the Echo Districts from several different perspectives. The most important result registered there shows that a majority of the Echo Districts experienced a higher increase in property taxes compared to their increase in State aid.

**Figure 1: Property Taxes vs. State Aid in the Echo Districts – FY96 to FY99**



1) Of the 83 districts, 43 districts registered a larger increase in property taxes between FY96 and FY99 than the increase in State aid for those districts over the same period.

2) Property tax increases from FY96 to FY99 in the 83 Echo districts equaled \$112.9 million or a 19% increase over FY96 taxes. The State aid increase for the same districts over this period equaled \$65.4 million or a 24% increase over State aid in FY96.

3) In the 43 Echo districts where property taxes increased by more than State aid increased, the excess of new property taxes over new State aid equaled \$64.9 million. In the 40 Echo districts where State aid increased by more than property taxes, the new State aid exceeded the new property taxes by \$17.4 million.

4) In 64 of 83 districts, the total increase in State aid plus property taxes, i.e., the total increase in revenue, exceeded the cumulative inflationary factor of 8.64% (2.8% per year for three years).

5) In only 31 of these districts did the increase in State aid alone exceed an 8.64% increase in the total revenue per pupil.

6) In only 25 districts did the increase in State aid per pupil exceed both the inflation rate of 8.64% and the property tax increase per pupil.

7) In 39 of 64 districts where the total increase in revenue exceeded 8.64%, either the State aid increase alone did not equal the inflation rate, or State aid exceeded the inflation rate, but the increase in local property taxes exceeded the increase in State aid.

Figure 1 shows that the changes in base costs in the successful districts were affected less by State aid than by local taxes. However, the General Assembly decided to assume that increase “may” have occurred because State aid increased. The data show that the theory designed to limit education expenditures known as the Echo Effect is completely unsupported by the facts.

Table 1 summarizes the analysis of the Echo Effect by showing the percentage increase in revenues per pupil separately for property taxes and for State aid. For example, the table shows that Kalida’s 20.33% increase in State and local revenue divided about equally between a 10.18% increase in revenue attributable to more local taxes and 10.15% more total revenue attributable to State aid. The Echo effect computation removes 11.69% from the 20.33% revenue growth experienced by the school district for the purpose of computing the new base cost. However, the excess of the increase attributable to State aid over inflation equaled only 1.51%.

In general, the Echo effect adjustment totally ignores the contribution made by local taxes to the base cost amount. The data show that local revenue increases

accounted for more of the total dollar increase than that for which State aid accounted. Sub. H.B. 94 states that increases in State aid *may* have caused districts to exceed the amount needed to fund an adequate education. Rather than accept the State's supposition, the analysis of the so-called Echo effect investigated the actual changes in revenues in the Echo districts. These changes show that property taxes accounted for a significant portion of revenue increases in most districts.

By assuming that State aid *may* have caused districts to exceed the amount needed to fund an adequate education, the General Assembly also tacitly assumes the voters in those districts undertook \$112 million in additional tax burden unnecessarily. This assumption has no support in any empirical data.

As Table 1 shows, the distribution between increases attributable to State aid and increases attributable to property tax increases differed from district to district. Overall, the State aid in the 83 Echo districts increased by \$297 per pupil. Property taxes in the same districts increased by \$469 per pupil. Under these circumstances, the decision to exclude actual increases in the districts' base expenditures from the computation of FY99 adequate base costs because the *State aid* raised the districts beyond adequacy appears dubious at best and ludicrous at worst.

**Table 1: Property Tax Increase as a Percentage of Total Revenue Compared to State Aid Increase as a Percentage of Total Revenue – FY96 to FY99  
(Data Computed on a Per Pupil Basis for Each Year)**

School District	Tax Increase	State Aid Increase	School District	Tax Increase	State Aid Increase
Jackson	25.49%	1.89%	Celina	4.71%	12.01%
Mentor Ex	25.02%	3.35%	Green	4.47%	4.61%
Perkins	24.44%	3.28%	Bluffton	4.46%	10.32%
Van Buren	19.43%	2.55%	Miller City-New Cleveland	4.13%	14.75%
North Royalton	16.64%	5.33%	Kings	3.98%	0.65%
Chardon	16.37%	3.64%	Wauseon	3.94%	8.58%
Fairview Park	15.52%	2.96%	Tallmadge City SD	3.89%	4.13%
Medina	15.18%	-1.90%	Louisville	3.73%	11.19%
Tipp City	14.45%	0.97%	Ottawa-Glandorf	3.53%	13.77%
Grandview Heights	14.21%	2.55%	Southeastern	3.43%	10.74%
Lake	13.77%	10.47%	Arcanum Butler	3.33%	9.90%
Maumee	13.59%	0.71%	Avon Local SD	3.17%	-4.62%
New Bremen	13.49%	7.60%	Fort Recovery	3.17%	12.09%

Bethel	13.28%	3.75%	Bexley	2.87%	4.58%
Bowling Green	13.18%	3.02%	Canal Winchester	2.72%	10.44%
Wadsworth	13.10%	3.60%	Poland	2.47%	9.15%
Sylvania	12.85%	5.35%	Manchester	2.43%	7.39%
New Knoxville	12.51%	11.97%	Lisbon	2.22%	9.89%
Berlin-Milan	11.34%	9.46%	Canfield	2.04%	5.48%
South Range	11.31%	10.08%	Chippewa	1.75%	4.83%
Kalida	10.18%	10.15%	Fort Loramie	1.61%	11.87%
Russia	9.98%	-1.17%	Ottoville	1.20%	16.03%
Green	9.66%	8.73%	Jennings	1.13%	7.80%
Minster	9.54%	0.93%	St Henry	0.93%	5.92%
Howland	9.50%	3.23%	Spencerville	0.32%	13.69%
Olmsted Falls	9.14%	2.95%	Mariemont	0.29%	5.15%
Liberty Benton	8.70%	9.38%	Crestview	0.00%	20.90%
Lexington	8.44%	9.64%	Pettisville	-0.04%	9.23%
Ayersville	8.19%	0.31%	East Local	-0.17%	20.87%
Perrysburg	7.87%	11.60%	Shawnee	-0.65%	2.18%
Kettering	7.86%	2.92%	North Canton	-0.66%	5.58%
Amherst	7.84%	7.97%	Franklin-Monroe	-1.05%	9.20%
Versailles	7.68%	8.24%	Eastwood	-1.28%	16.20%
Botkins	7.45%	17.71%	Marion	-1.39%	8.23%
Anthony Wayne	7.38%	5.44%	West Geauga	-1.46%	0.25%
Oak Hills	6.83%	6.40%	Columbus Grove	-1.49%	7.96%
Pandora-Gilboa	6.02%	15.86%	Highland	-1.92%	-2.39%
Liberty Union-Thurston	5.94%	5.52%	Coldwater	-4.11%	13.12%
Forest Hills	5.67%	6.22%	Madeira	-4.56%	8.21%
Garaway	5.38%	7.64%	Champion	-4.63%	7.17%
Covington	5.22%	3.79%	Anna	-7.80%	-1.19%
Lakeview	4.92%	7.50%			

## **B. Inclusion of Seven “Unsuccessful” Districts**

The computation of the basic per pupil amount uses the experience of “successful” school districts as the standard for determining how much the basic component of an adequate education should cost. This computation determines the State Basic Aid amount. In computing the State Basic Aid amount Sub. H.B. 94 defined “success” as the achievement of the 20 or more of the 27 performance measures applied to school districts by the Department of Education. The measures include satisfactory passage rates on proficiency tests, attendance rates, and graduation rates. In defining successful districts, the State adopted the practice of “rounding up” if a district with “success” on 18 or 19 performance measures came within a fraction of a student of achieving success on one or two performance measures.

As a result of this “house rule” on rounding, seven districts were added to the 120 districts where success on 20 performance measures occurred without any rounding up. The seven districts appear here with the name of the county in which the district is located following in parentheses: Tallmadge (Summit), Southeast (Wayne), Northridge

(Licking), Tuscarawas Valley (Tuscarawas), Ross (Butler), Seneca East (Seneca), and Gibsonburg (Sandusky).

The average per pupil base cost in these seven districts in FY99 equaled \$3,758 and after the adjustment for the echo effect, the per pupil base cost as used in the State's adequate cost formula became \$3,659. The comparable base cost for the 120 school districts that achieved success on 20 performance measures without the benefit of rounding equaled \$4,375 and after the echo adjustment their average base cost became \$4,216. With or without the "echo effect" adjustment, the 120 school districts that truly met the definition of success by performing successfully on 20 performance measures showed per pupil funding about \$550 to \$600 per pupil higher than the 7 districts added to the computation by the rounding rule.

After making the formula adjustment for the cost-of-doing-business factor, the data show that the addition of the 7 districts with only 18 or 19 standards achieved reduced the per pupil cost by about \$33. It is difficult to conclude that the addition of these marginally unsuccessful districts to the list of successful districts occurred for any reason other than the reduction of the total per pupil cost of an adequate education.

### **C. Arbitrary Inflation Factor**

With the enactment of Am. Sub. H.B. 650 in 1998, the General Assembly began to use a 2.8% inflation factor as a kind of standard measure of cost changes from year to year. The source of the 2.8% adjustment was the general rate of inflation as it appeared to be in 1997. This percentage approximately equaled the average of the change in the Consumer Price Index (CPI) for 1994, 1995, and 1996. As a measure of the overall rate of inflation in the economy at that time, the 2.8% factor provided an accurate adjustment. In fact, the average rate of inflation over the period from 1993 through 2000 actually equaled a slightly smaller percentage (2.6125%). *However, no research ever connected the rate of general price changes to the changes in the cost of providing an adequate education.*

Table 2 shows the average rate of inflation for the most recent three years of available data for categories of expenditures most frequently required of school budgets.

**Table 2: Average Inflation Rate for Most Recent Three Years of Data for Components of School Budgets**

<b>Component</b>	<b>Average for Years</b>	<b>Average Change</b>
Education Books & Supplies	1998, 1999, 2000	5.5%
Electricity	1998, 1999, 2000	1.0%
Gas	1998, 1999, 2000	5.1%
Transportation	1998, 1999, 2000	2.1%
Medical Care	1998, 1999, 2000	3.6%
Median Income M.A.	1996, 1997, 1998	3.7%
Median Income B.A.	1996, 1997, 1998	4.4%
Non-degree employees	1996, 1997, 1998	2.7%

Sources: U.S. Dept. of Labor and U.S. Dept. of Commerce

The Census Bureau, U.S. Dept. of Commerce, did not have information available for 1999 and 2000 for income by level of schooling so the most recent three years were 1996, 1997, and 1998. The data on the table for salaries show the changes in the labor market within which schools must compete. Therefore, the 4.4% increase for the "Median Income for B.A." shows the change in income for all holders of a bachelor's degree. It does not show teachers only. About 55% of Ohio teachers have a B.A. and about 45% have an M.A. degree or higher.

The table shows that in 5 of 8 categories of expenditure the most recent inflation experience exceeds the 2.8% factor used in the school funding formulas. The last three categories relate directly to the cost of employing teachers, administrators, and other school employees. A fourth category, medical care, relates indirectly to employment costs in that the total compensation package includes health insurance coverage, and the cost of medical care influences the cost of health insurance. Salaries account for 70% to 80% of expenditures in most school budgets. Of these four categories, three exceed the arbitrary 2.8% factor by substantial margins. Only the change associated with wages for non-degree personnel falls slightly below the 2.8% standard.

The difference between a 2.8% adjustment and an adjustment only 0.5% higher may seem quite small, but the effects of compounding of percentage increases make a one-half percent difference in the inflation factor very important over time. For example, as scheduled in Sub. H.B. 94, the basic per pupil amount increased by 2.8% per year would equal \$5,527 by FY07. The use of a more realistic inflation factor of 3.3% would yield an FY07 per pupil amount of \$5,662, about \$135 more per pupil. Moreover, the use of a given inflation factor for a year or two can be justified. The use of an inflation factor for six years has no justification other than convenience. If Sub. H.B. 94's inflation factor were enacted, it would mean that the State would use for FY07 an inflation factor based on the CPI averaged from a period 13, 12, and 11 years before the period in which the factor is used. From the perspective of economics, this practice would be nonsensical.

Finally, as a kind of reality check on the inflation factor used as a standard in the school funding formulas, another category of inflation measured by the Bureau of Labor Statistics is the change in tuition charged by private K-12 schools. The measure of the changes for 1998, 1999, and 2000 for this consumer expenditure shows an average 6.7% annual change. Therefore, the conclusion appears inescapable that: 1) the State's 2.8% annual inflation factor does not focus on school budget expenditures because it relies on the general rate of inflation in the economy; 2) the State's failure to update its inflation measure compounds the inappropriateness of using 1994, 1995, and 1996 data; 3) comparisons with education's private sector suggest that education costs have increased much faster than 2.8% per year; 4) 6 to 12 years is too long a period to use any single inflation percentage.

#### **D. Effects of Changing the Cost of Doing Business Factor**

##### **1) Overview: What the Cost of Doing Business Factor Is...**

Current law provides an adjustment to the basic per pupil amount for each school district based on the relative cost of operating within different geographical locations of

the State. Recent research suggests that the cost of doing business can differ by as much as 40% from Ohio's highest cost counties to the State's lowest cost counties. Provisions of current law (prior to Sub. H.B. 94) would phase in an adjustment factor by which the cost adjustment in the school funding formula would use a range equal to almost one-half of the cost differential.

The cost of doing business adjustment works as a multiplier of the Basic Aid amount per pupil. A factor or multiplier is assigned to the school districts in each county based on the labor costs in that county. This multiplier is applied to the Basic Aid amount to obtain a cost adjusted Basic Aid amount for each school district. For example, in the lowest cost county (Gallia), the factor equals 1.0. Therefore, in Gallia County schools the Basic Aid amount is multiplied by 1.0 to obtain the adjusted per pupil amount used in computation of the Basic Aid amount. (The Basic Aid amount equals the cost adjusted per pupil amount multiplied by a school district's enrollment.) In Hamilton County, the Basic Per Pupil amount would be multiplied by 1.152 to obtain the cost adjusted Basic Aid per pupil. Thus, the cost of doing business factor simply changes the Basic Aid per pupil amount to reflect higher costs. For each \$1.00 computed in the Basic Aid formula for a Hamilton County school district, the district's cost adjusted amount would equal about \$1.15 under current law.

Since Hamilton County receives the highest adjustment at the current stage of the phase-in of the cost of doing business factor, the range in FY02 would extend from 1.0 to 1.152 in FY02.

Sub. H.B. 94 would reduce that range to a scale of 1.00 to 1.075. Therefore, the lowest cost county would remain at a 1.0 cost of doing business factor. The highest cost county would receive a 1.075 cost adjustment. The remaining districts would receive an adjustment calibrated to place the district at its relative cost between 1.0 and 1.075.

## **2) Historical Background**

The Cost-of-Doing-Business Factor in the foundation formula is an attempt to reflect the variation in the prices of goods and services apparent across Ohio's counties. This adjustment has been in place since the 1980s and is based on Bureau of Labor Statistics weekly wage rate data for various occupations. In the early 1990s, Cuyahoga County had the highest weekly wage rate at \$407 and Meigs County had the lowest weekly wage rate at \$299. This wage rate range reflects a 36% differential ( $407/299=1.36$ ) between the state's most expensive and least expensive labor markets. However, at the time, Ohio limited the cost of doing business adjustment in the formula to a 7.5% range between the least and most costly counties.

It was generally accepted at the time that 36% overstated the true cost differential across counties (in part due to the effects of widespread unionization of teachers as well as the presence of the state minimum salary schedule) while 7.5% understated the true differential. In 1998, H.B. 650 accelerated a phase-in of the cost-of-doing-business factor so that the factor would cover an 18% range by FY04. In FY02 the cost-of-doing-business factor was slated to have a range up to 15.2% (this was to be accomplished by multiplying the cost-of-doing-business factors computed with a 7.5% range for each county by the ratio  $15.2/7.5$ ).

### **3) Consequences of Reducing the Cost of Doing Business Factor**

Sub. H.B. 94 would abandon the phase-in to a cost of doing business factor which is based on an 18% cost differential and assigned to the school districts in each county using a range from 1.0 to 1.18. Instead, the legislation will return to a factor designed to adjust for a 7.5% cost differential by assigning school districts a factor that ranges between 1.0 and 1.075. There are four primary consequences of Sub. H.B. 94's return to the cost-of-doing-business factor range of 1.0 to 1.075.

#### **(a) Tradeoff between the cost-of-doing-business factor and the Basic Aid Per Pupil amount**

The reduction of the cost-of-doing business factor resulted in an increase of the calculated base cost of \$255 per pupil from \$4559 to \$4814. This change had the effect of moving dollars from the cost-of-doing-business adjustment in the Foundation formula to the computation of the Basic Aid per pupil amount. This shift occurred in the following manner.

When the base cost per pupil is computed in each successful district, the State deflates the amount by each district's cost-of-doing-business factor so that geographical cost differentials are removed from the base cost. The deflated amount is obtained by dividing each district's actual base cost by the cost-of-doing-business factor for that district for the appropriate year. (Since the computation in Sub. H.B. 94 is based on FY99 data, FY99 cost-of-doing-business factors were used.) The sum of the deflated per pupil base cost amounts divided by the number of successful school districts yields the average per pupil base cost amount that the Foundation Formula uses to compute Basic Aid in each school district. The cost-of-doing-business factor then reappears in the formula so that each district receives its geographically based cost adjustment after the basic cost per pupil has been determined.

When the State computed the basic cost per pupil under the provisions of Sub. H.B. 94, it divided base costs by cost-of-doing-business factors obtained from the 1.0 to 1.075 scale rather than from the 1.0 to 1.152 scale as originally scheduled. Thus in each school district (except those in Gallia County which, as the current lowest cost county in the state, would experience an adjustment factor of 1.00 under both the old law and under Sub. H.B. 94), the base cost per pupil was divided by a smaller deflator under Sub. H.B. 94 than the deflator used in current law. Dividing the same numerator by a smaller denominator always yields a larger quotient. In this situation, the State divided the base cost in each successful district (numerator) by a smaller cost-of-doing-business factor (denominator) which yielded a larger base cost per pupil (quotient).

This equation creates the appearance of a larger increase than actually occurs because the subsequent addition of the lower cost-of-doing-business factor at the next step of the Foundation Formula means a smaller adjustment under the new law than would have occurred under the old cost-of-doing-business factor phase-in repealed by Sub. H.B. 94.

**(b) Unequal Impact of the Tradeoff Between the Cost-of-Doing-Business Factor and the Basic Aid Per Pupil Amount**

While the increase in the basic per pupil amount is clearly a step forward, the reduction in the cost-of-doing business factor undermines this increase. As described in the preceding section (a), the base cost per pupil is only one factor in the Foundation Formula. The cost-of-doing-business adjustment is a second factor, and enrollment is the final factor. The product of these three factors yields a school district's Foundation Formula amount. A higher base cost makes the product larger, but a smaller cost-of-doing-business factor makes the product smaller.

Sub. H.B. 94 trades off a reduction in the cost-of-doing-business factor to obtain a higher per pupil base cost amount. This tradeoff affects differently situated school districts in different ways.

Districts in counties with higher cost factors experience greater per pupil reductions in their Foundation Formula amount than districts in counties with lower cost factors. This can be easily illustrated by considering the examples of Hamilton and Hancock counties. Hamilton is now the highest cost county in the state, and as such would have received a cost-of-doing-business adjustment of 15.2% in the form of a 1.152 factor. Instead, this adjustment is now 7.5% (1.075 factor). The Foundation Formula amount under the old law and under Sub. H.B. 94's reduced cost-of-doing-business factors can be computed as follows:

Hamilton County Effective Foundation Level: Phase-in Continued in FY02

$$\$4559 * 1.152 = \$5252/\text{pupil} \quad (\text{Old law})$$

Hamilton County Effective Foundation Level: CDB Factor Reduced in FY02

$$\$4814 * 1.075 = \$5175/\text{pupil} \quad (\text{Sub. H.B. 94})$$

It is clear that for districts in Hamilton County the Foundation Formula now provides **\$77 per pupil less** than if the base cost were lower and the cost-of-doing-business factor was as intended by the phase-in plan repealed in Sub. H.B. 94.

In contrast, consider the case of Hancock County (next alphabetically after Hamilton):

Hancock County Effective Foundation Level: Phase-in Continued in FY02:

$$\$4559 * 1.0436 = \$4758/\text{pupil} \quad (\text{Old law})$$

Hancock County Effective Foundation Level: CDB Factor Reduced in FY02:

$$\$4814 * 1.0215 = \$4918/\text{pupil} \quad (\text{Sub. H.B. 94})$$

Districts in Hancock County experience an effective foundation level \$160 per pupil higher than they would have under the phase-in plan, however this represents an actual effective net increase of **\$95 per pupil less** than the \$255 increase that would be expected by simply subtracting \$4559 from \$4814. In other words, the change in the base amount per pupil implies an increase of \$255, but Sub. H.B. 94 creates the

appearance of a greater increase than actually occurs. In Hancock County, appearances show a \$255 per pupil increase, but the real increase is only \$160 per pupil after the change in the cost-of-doing-business factor is included in the computation.

While a typical school district would probably not realize that the basic per pupil amount would have been \$4559 instead of \$4814 had the cost-of-doing business factor not been decreased, the same effect is in place when comparing increases in funding from FY01 to FY02. Without considering the cost-of-doing-business factor, it appears that all districts could expect an increase in FY02 of \$520 in the basic amount per pupil in the Foundation Formula from the FY01 level of \$4294 ( $\$4,814 - \$4,294 = \$520$ ). Again using Hamilton County as an example, the effective Foundation Formula amount in FY01 was:

$$\$4294 * 1.138 = \$4887$$

When compared with the effective FY02 foundation level of \$5175 (calculated above), districts in Hamilton County experience an **actual increase of only \$288 per pupil, rather than the \$520** that might be expected at first glance. In this manner, the reduction in the cost-of-doing business factor undercuts the apparent increase in the base cost. Further, districts in urban counties are more adversely effected than are districts in rural counties because of the disproportionate reductions in their cost factors.

### (c) Unequal Impact of the Tradeoff Within Counties

Under the Foundation Formula, the State share of Basic Aid equals enrollment times the Basic Per Pupil amount times the cost-of-doing-business factor less the local share. The "local share" equals 23 mills multiplied by a school district's property tax base as defined by its recognized value. The local share determined in this manner is called the "chargeoff." If the chargeoff causes the Foundation Formula to apportion to a school district less State Aid than it received in FY98, then the district receives instead the FY98 amount. Such districts are called "Guarantee Districts," because their State Aid results from a historical guarantee rather than the Foundation Formula itself.

The third consequence of the cost-of-doing-business factor reduction is that while at first glance it might appear that all school districts within a single county will be affected similarly, in fact, Guarantee Districts are largely insulated from the change in the cost-of-doing-business factor. This is because the foundation formula calculations do not directly determine these districts' state aid amounts.

Therefore, these districts are substantially immune from changes in foundation formula factors such as the cost-of-doing-business factor. Since it is primarily relatively wealthier districts that are on the guarantee, relatively poor districts in urban areas are hardest hit by the reduction in the range of the cost-of-doing-business factor to its original range of 7.5%. This can be seen by considering the case of Cuyahoga County where 11 of the 31 districts are on the basic aid guarantee in FY02. These districts represent 11 of the 12 wealthiest districts (in terms of valuation per pupil) in the county. Changes in the cost-of-doing business factor do not change the State aid received by these districts. In the other 20 districts in Cuyahoga County, the change in the cost-of-doing-business factor

reduces the relative benefit of State aid even though all 31 districts are affected by the same geographical cost levels.

**(d) Tradeoff between the Cost-of-Doing-Business Factor and the Basic Aid Per Pupil Amount can Lower Special Education and Vocational Education Funding**

The final effect of the cost-of-doing business factor reduction is that categorical funding for special education and vocational education may be reduced as a result of reductions in the state share. For example, the computation of Cincinnati's Foundation amount would have used \$77 more per pupil with a higher CODB factor and a lower basic aid amount as illustrated above. With \$77 more per pupil, the basic Foundation amount would have been \$3.5 million more. The chargeoff would not change. As a result, the \$3.5 million additional amount in the Foundation computation would have gone to Cincinnati in State aid. The additional State aid would have meant that Cincinnati's percentage share of the Foundation amount would change. The State share would go up because the State aid amount increased. The local percentage share would go down because the local amount would have remained constant as the State aid amount increased. The change in the State share percentage or "State Aid Ratio" would have equaled about 0.8% in FY02. The State share percentage determines the share that a school district must pay of the formula costs for special and vocational education. As a result, under the pre-Sub.H.B. 94 formula the State would pay 42.5% of Cincinnati's special education and vocational education costs instead of 41.7% estimated after the change in Sub. H.B. 94 lowers Cincinnati's Foundation Formula amount.

**(e) Summary of the Effects caused by the Tradeoff between the Cost-of-Doing-Business Factor and the Basic Aid Per Pupil Amount**

The reduction in the cost-of-doing-business factor seriously undermines the effects of the increase in the base cost to \$4,814 per pupil. This effect is of such severity that it is disingenuous for proponents of Sub. H.B. 94 to tout the apparent \$520 per pupil increase in the basic per pupil amount, when this increase is observed only for districts in Gallia County and those on the guarantee. The most objectionable aspect of this feature of the bill, however, is that the reduction in the cost-of-doing-business adjustment was undertaken without any basis in research which suggests that 7.5% is a more legitimate range of low to high labor cost than is 18%. In fact, according to the Ohio Department of Education the ratio of high-to-low weekly wage rates is now approximately 40%. One can only conclude that the driving force behind this change is either the desire to transfer state aid from urban areas to rural areas or simply the desire to seemingly increase the foundation level without paying the full price of doing so.

**E. Reduction of Vocational Education Weights**

The bill outlines a reduction of each of the excess cost weights for vocational education from .6 to .57 and from .3 to .28, respectively. The rationale for the proposed decrease in these weights is to compensate for the increase in the base cost amount resulting from the reduction of the cost-of-doing-business factor. As discussed in the preceding section of this report, with no change in the cost-of-doing-business factor the basic aid amount for FY02 would have been \$4559. However, because the cost-of-doing-business factor was reduced to a maximum of 7.5% (instead of the planned maximum of 15.2% outlined in current law), the base cost figures of the districts meeting the outcomes criteria were reduced by the lower CDB factor values. This results in the higher base cost amount for FY02 of \$4814.

The reason for reducing the weights for vocational education is to maintain excess cost funding for vocational education services at the dollar levels which would have resulted had the base cost amount been \$4559. The calculations behind this change proceed as follows:

Step 1: Vocational Education Excess Cost Type I:  $\$4559 \times .6 = \$2735.40$

In order to maintain the same excess cost dollar amount with the new, higher foundation level of \$4814 the following step is taken:

Step 2:  $\$2735.4 / \$4814 = .568$  (because  $\$4814 \times .568 = \$2735.40$ )

.568 is rounded to the new proposed weight of .57

A similar calculation is made for the Vocational Ed. type II weight where

$(\$4559 \times .3) / \$4814 = .284$  which is rounded to .28

There are two clear implications of the proposed downward adjustment of the vocational education weights. The first implication is that somehow \$4559 is the "real" foundation level for FY02 and \$4814 is an "artificially high" foundation level. Otherwise, it is unclear why excess cost amounts for vocational education would be pegged to this seemingly irrelevant base cost figure.

The second effect of lowering the current weights is to increase funding for vocational education at a rate less than the increase provided for basic aid. This reintroduces the problem present in the old unit funding system often referred to as the "parity" issue. Because the unit funding system for categorical programs was completely separate from the basic aid formula, funding increases for vocational education (and special education) would typically lag behind increases in basic aid, raising questions about the adequacy of categorical funding over time. Elimination of the parity issue was one of the two primary policy objectives behind the adoption of weighted pupil funding (the other being the equalization of categorical funding). The return of the parity issue is illustrated in the example below:

FY 00: Base Cost = \$4177/pupil  
Vocational Ed. FY00 Total Cost = \$6683/pupil  
Excess Cost =  $\$6683 - \$4177 = \$2506$ /pupil

$$\text{Vocational Ed. Weight} = \$2506/\$4177 = 0.60$$

$$\text{FY 01: Base Cost} = \$4177 * 1.028 = \$4294$$

$$\text{Vocational Ed. Weight} = 0.60$$

$$\text{Excess Cost} = \$4294 * 0.60 = \$2576$$

$$\text{Vocational Ed. FY01 Total Funding} = \$2576 + \$4294 = \$6870$$

$$\text{Rate of Increase of Base Cost Funding} = \$4294/\$4177 = 1.028 \text{ (2.8\%)}$$

$$\text{Rate of Increase of Vocational Ed. Funding} = \$6870/\$6683 = 1.028 \text{ (2.8\%)}$$

FY 02 - Recalculation of Base Cost without any adjustments to weights:

$$\text{New FY02 Base Cost} = \$4814$$

$$\text{Vocational Ed. Weight} = 0.60$$

$$\text{Excess Cost} = \$4814 * 0.60 = \$2888$$

$$\text{Vocational Ed. FY02 Total Funding} = \$2888 + \$4814 = \$7702$$

$$\text{Rate of Increase of Base Cost funding} = \$4814/\$4294 = 1.121 \text{ (12.1\%)}$$

$$\text{Rate of Increase of Vocational Ed. Funding} = \$7702/\$6870 = 1.121 \text{ (12.1\%)}$$

FY 02 - Recalculation of Vocational Ed. Funding as Recommended in Sub. HB 2:

$$\text{New Should-be-Irrelevant Rejected Base Cost: } \$4559$$

$$\text{Original Vocational Ed. Weight} = 0.60$$

$$\text{New Should-be-Irrelevant Excess Cost} = \$4559 * 0.60 = \$2735$$

$$\text{New FY02 Base Cost} = \$4814$$

$$\text{New Should-be-Irrelevant Vocational Ed. Weight} = \$2735/\$4814 = 0.57$$

$$\text{New Vocational Ed. Excess Cost} = \$4814 * 0.57 = \$2744$$

$$\text{Vocational Ed. FY02 Total Funding} = \$2744 + \$4814 = \$7558$$

$$\text{Rate of Increase of Base Cost Funding} = \$4814/\$4294 = 1.121 \text{ (12.1\% increase)}$$

$$\text{Rate of Increase of Voc. Ed Funding} = \$7558/\$6870 = 1.100 \text{ (10.0\% increase)}$$

The results are similar for the reduction of the second vocational education weight from .3 to .28. As is clear, the reduction of the weights not only makes the formula significantly more complex, but it reintroduces the parity issue by resulting in an increase in vocational education funding of only 10.0% while basic aid increases by 12.1%. The burden is clearly on the legislature to explain why basic aid funding merits a larger increase than does funding for vocational education. As was mentioned in the preceding section of this report, the effects on local school districts of the vocational education weight reduction are compounded by the reduction in the state share caused by the use of the lower cost-of-doing-business factor.

#### **F. Adoption of New Special Education Weighting System**

Analysis of Sub. H.B.94's special education funding components has been complicated because the original provisions of the bill have been amended three times. The bill as originally introduced proposed a reduction in the current special education weights from .22 to .21 and from 3.01 to 2.85 for the same reasons as discussed above with regard to vocational education. As is the case with vocational education, the proposed reduction of the current special education weights would recreate the lack of parity in funding increases for special education and basic aid characteristic of the old unit funding system.

The bill, however, was amended by the House of Representatives and sent to the Senate with provisions delineating the adoption of a new 6 weight system for funding special education based on a study done by the Ohio Coalition for the Education of Children with Disabilities (OCECD). The study, originally completed in November 2000 and revised in April 2001, recommends the new weight structure based on more detailed analysis of the costs of providing special education services than was possible when the current special education weights were determined in 1997.

The cost of adopting and fully funding the proposed weights was estimated to be \$102.6 million for FY02 by OCECD. However, the amended bill stipulated that weights be funded at 80.5% of the recommended level in FY02 and 85% of the recommended level in FY03. No additional funding for the special education weights would be provided in FY02 and \$20 million of additional funding would be provided in FY03. There were no provisions in the bill regarding whether the 6 weight system would ever be fully funded in subsequent years.

When the amended bill was received by the Senate, the provisions for adoption of the new 6 weight funding model were deleted and replaced by the bill's original language delineating a rollback in the current weights to offset the effects of a decrease in the cost-of-doing-business factor.

After deliberations by the conference committee, a third change was made to the special education funding system. A modified 6 weight funding system was adopted, which utilized the general structure recommended by OCECD but changed specifics relating to the weights for many of the handicap conditions. Learning disabled, developmentally handicapped, orthopedically handicapped, multi-handicapped and other health handicapped students are given weights lower than recommended in the OCECD study. Severe behaviorally handicapped, hearing impaired, visually impaired and deaf and blind students receive higher weights. The weight for "Speech Only" students is identical and the weight for autistic students and those with traumatic brain injuries is only slightly lower than as initially amended by the House. As with the amendment passed in the House, these weights will not be fully funded. In FY02 the weights will be funded at 82.5% of the recommended level, while in FY03 the weights will be funded at 87.5% of the recommended level (presumably this means no funding increase for FY02 attributable to the changes in special education weights and only a \$20 million increase for FY03). As with the original House amendment, there are no provisions prescribing full funding in outlying years. ■

Table 3 below summarizes and compares the three proposed special education funding plans with the current system.

While each of the two proposed 6 weight systems have the potential to make a clear improvement in the adequacy of special education funding, this is only true if the weights are fully funded. It is also important at this point to stress that in order for the overall system of funding to be adequate all of the component parts must be funded at adequate levels. In this regard, it is useful to recall the nomenclature adopted in the report of the Joint Committee to Re-Examine the Cost of an Adequate Education (the "Adequacy Committee"). In this report, the base cost level of funding was referred to as

"Tier I-A", while the level of funding for variable costs above the base cost was referred to as "Tier I-B". This nomenclature clearly expressed the notion that adequacy of categorical funding is integral to the adequacy of the funding system overall, not some type of optional "supplement" which goes beyond adequacy. As such, the decision to

**Table 3: Current and Recommended Special Education Instructional Weights\***

Current Funding Formula		Senate Proposal	Revised OCECD & House Proposal		Conference Committee Proposal	
Handicap Category	Weight	Weight	Handicap Category	Weight	Handicap Category	Weight
DH LD Other Health	0.22	0.21	Speech Only	0.2892	Speech Only	0.2892
SBH Visual Hearing Orthopedic Multi- Handicap	3.01	2.85	DH LD SBH	0.4240	DH LD Other Health (Minor)	0.3691
			Visual Hearing	1.6736	SBH Visual Hearing	1.7695
Deaf-Blind TBI Autism	3.01	2.85	Orthopedic Other Health	3.0022	Orthopedic Other Health (Major)	2.3646
			Multi-Hand. Deaf-Blind	3.7507	Multi- Handicap	3.1129
			TBI Autism	4.7693	Deaf-Blind TBI Autism	4.7342

Note: DH = Developmentally Handicapped  
 LD = Specific Learning Disabled  
 SBH = Severe Behavior Handicapped  
 TBI = Traumatic Brain Injury

\*All Weights include Related Services and represent the additional cost of providing service beyond the base cost level.

phase-in the new special education weights may by itself violate the clear dictates of the court warning against phase-ins of adequate funding levels in the *DeRolph II* decision, entirely apart from the concern that the new weights are never even fully phased-in.

An additional concern regards the possibility that even though total funding in FY02 of the 6 weight structure is the same as for the present weights, the fact that some of the weights increase while others decrease may lead to some districts getting increased funding while others see a decrease from funding as distributed through the current formula. It is also not clear if the funding level of the 6 weight system is equal to that provided by weights of .22 and 3.01 or equal to that provided when the weights are reduced to account for the reduction of the CDB factor. If the latter is the case then the parity issue will still be present with the 6 weight structure.

Overall, the OCECD weights are higher in seven categories compared to the bill, as changed by the Conference Committee. In four categories, the OCECD weights are lower than the weights for those categories in the bill, and in one category the weights are the same in the OCECD recommendations and the bill. At least the OCECD weights had an empirical basis publicly presented. An OCECD report provided detailed descriptions of the methods and computations used to derive the weights recommended in that report. While these recommendations are not infallible, it is difficult to understand how they can be changed without some comparable justification.

Since the Ohio Supreme Court has placed on the General Assembly the burden of showing that the State provides an adequate school funding system, the enactment of special education weights without any technical justification, at the last minute of the budget process, without any public debate must raise a question about the credibility and constitutional validity of the Conference Committee weights.

#### **G. Failure to Address Problems of Economically Disadvantaged Students**

The final substantial component of adequate funding pertains to the level of resources needed to provide an adequate education in school districts with high concentrations of economically disadvantaged students. With regard to this issue, Sub. H.B. 94 is notable only for its failure to make any significant changes to the Disadvantaged Pupil Impact Aid (DPIA) funding program designed to redress this problem. While the Conference Committee did move to adopt (in FY04) a new four-indicator measure of the number of children in poverty developed by the Legislative Office of Education Oversight (LOEO), no provisions to modify, or even study, the funding levels required to adequately serve the needs of these children were included in the bill.

While the General Assembly has made important changes in recent years to transform the DPIA program from its historical genesis as a system of largely unrestricted grant money (based on the 1970s concept of "municipal overburden") to one where funding is tied to specific services (such as reduced class size and all-day kindergarten), the funding parameters of DPIA have never been based on any study of the necessary cost of providing all needed programs. It is difficult to understand how the state can claim that Sub. H.B. 94 provides adequate funding for all of Ohio's students without outlining at least a plan to comprehensively study this issue. This is especially true when considered in light of the fact that both the reduction in the cost-of-doing-business factor and the elimination of the income adjustment to the chargeoff (discussed below) also disproportionately affect urban school districts. As such, it is not surprising that published district-by-district printouts of Sub. H.B.94 funding levels show that

increases in funding to urban districts lag well behind increases received by many other districts with less obvious needs.

With regard to the technical issue of how to most accurately identify the number of economically disadvantaged students in each of Ohio's 612 school districts, some historical context is required. For many years Ohio used the number or percentage of children whose families received cash assistance through the Aid to Dependent Children (ADC) program as the indicator of poverty. Changes in Federal welfare law resulted in the 1997 evolution of ADC to a new cash assistance program known as Ohio Works First (OWF). The combination of the new OWF program requirements along with an unusually strong economy resulted in drastic decreases (roughly 64%) in the number of children identified as economically disadvantaged under OWF in comparison with ADC. In an attempt to ensure that school districts not lose DPIA funding as a result of the dramatic decrease in the number of children whose families were enrolled in OWF, the legislature took four steps. The first was to base funding on a newly created DPIA "Index" that was based not on a district's percentage of its own students in poverty, but on the district's percentage of its OWF students relative to the total number of OWF students across the state. The second step was to adopt a five-year averaging approach to determining the number of economically disadvantaged students in each district in order to cushion the effects of any decrease in numbers. The third step was to establish a DPIA "Guarantee" equal to each district's FY98 funding level. The final step was to assign LOEO the task of researching a new poverty indicator.

LOEO released its research findings in the report, "A New Poverty Indicator to Distribute Disadvantaged Pupil Impact Aid" in April, 2000. This report recommended the adoption of a new four-program poverty indicator which would result in a more accurate measure of economically disadvantaged students than could be achieved by using OWF alone. A revised version of this report which corrected a data problem in the original was released in May, 2001, with the overall recommendations essentially unchanged. According to the revised study, more than 61,000 additional children were found to be living in poverty by using the new measure than were found by using OWF enrollment alone.

While the new four-program poverty indicator developed by LOEO is clearly superior to the use of OWF reciprocity alone, the report also contains analysis which suggests that simply adopting the new indicator without changing any of the other DPIA parameters will likely be a mistake. Simulation of the effects of the new indicator reveal three issues that need to be addressed if the new poverty indicator is to be used without adversely effecting the very districts it is designed to help.

First, the utilization of the new indicator can lead to a decrease in DPIA funding for any given school district, *even if the number of children in poverty in the district increases*. This paradox occurs as a result of the DPIA Index, since the index will decrease for any district if their percentage growth in the number of students identified in poverty is less than the percentage increase across the state. Because the new four-program poverty measure has led to a proportionally greater increase in the number of impoverished students living in rural areas than in urban areas, using the new indicator in combination with the DPIA Index will work to the disadvantage of urban school districts.

The extent of the problem described above is evident in the revised LOEO report which estimates that adoption of the four-program poverty indicator for FY00 would have resulted in a \$5.7 million dollar decrease in DPIA funding compared with funding based on OWF counts alone. A funding system which adopts a new measure of poverty that demonstrates that there has been a systematic underidentification of children in these circumstances which then results in lower funding for the program which serves these students cannot possibly be construed as adequate.

The problem of decreased DPIA funding in response to increased identification of children in poverty can be addressed in the short-run by changing the DPIA guarantee so that it applies to FY00 levels of funding rather than to FY98 levels. In the long-run this issue should be addressed by eliminating the DPIA Index entirely and reverting to a funding formula based on the district's actual percentage or number of children in poverty (to be consistent with vocational and special education funding, a series of poverty weights in which per pupil funding levels escalate as the concentration of poverty increased could ultimately be adopted based on an appropriate cost study). The purpose of the DPIA index was to stabilize funding for DPIA during the transition period from the old poverty indicator system of ADC until a new indicator could be developed, however it is not a good long-term model because of its inherently relative nature. While the relative nature of the index allows it to limit losses in funding when the statewide number of students in poverty is decreasing, it also makes it easy for the state to limit the amount of money it spends on DPIA when the number of students in poverty is increasing.

Both before and after Sub. H.B. 94, the law measures the number of economically disadvantaged children by using a five-year average of the measurement data. Such an average helps to stabilize the funding for disadvantaged students by spreading the effects of abrupt changes in the poverty statistics over more than one year. While the average works to prevent abrupt changes, it also provides a basis for projecting future numbers of disadvantaged pupils in each school district.

The final issue raised by LOEO is that the DPIA funding problems faced by the urban districts currently are only likely to worsen over the next few years as a result of the five-year averaging of the poverty counts. Because there are a couple of years of relatively high ADC numbers still in the average, a significant problem of dramatic decreases in student counts has been masked to some extent. The best solution to this problem is to adopt the most accurate possible system of identifying students in poverty and then to conduct a thorough cost study which will assure that all districts receive funding sufficient to meet the educational needs of all the students that they serve.

#### **H. Removal of the Income Adjustment from the Computation of the Chargeoff Amount**

Under current law the amount of a school district's share of the cost of basic education is computed by multiplying the district's valuation by 23 mills. This computation is called the "chargeoff." For this purpose, the taxable valuation of each district receives at least one adjustment to spread the effects of reappraisal/update valuation changes over a three year period. This adjustment results in "recognized value." Therefore, recognized value equals the taxable value of a district reduced in

reappraisal and update years, and in the year following a reappraisal or update, so that the effect of the reappraisal or update is phased-in over a three year period for purposes of computing the chargeoff.

A further adjustment for districts with less than the statewide median income reduces recognized valuation in those districts to income adjusted valuation. Current law provides that a district's income adjusted valuation equals the sum of four-fifteenths of income wealth derived from the district's median income plus eleven-fifteenths of property wealth as measured by recognized valuation of the district.

The presence of the income adjustment to valuation means that school districts with a median income less than the statewide median income have a lower chargeoff attributed to them. Cumulatively, this adjustment saved 300 school districts \$63.7 million in basic per pupil subsidy amounts using FY01 data. Additional savings also occurred in the amount of special education and vocational education contributions required of these districts under the formula. For FY02, the use of income adjusted valuation would save the districts with less than the average median income about \$43 million.

A savings occurs in these districts because the income adjusted valuation in them is lower than the recognized valuation. Therefore, the computation of the chargeoff in the district is based on a lower measure of local wealth. As a result, in FY02 the removal of the income adjustment means that the chargeoff will equal about \$43 million more in these lower income districts, and the State share of the basic per pupil subsidy to them will equal 43 million less. Less State aid and more local chargeoff will mean a higher local share and a lower State aid ratio. The lower State aid ratio will mean that the State will pay the districts with below average income a lower percentage of special and vocational education aid than it would have paid if the chargeoff were based on income adjusted recognized valuation. The effect of lower special education and vocational education contributions from the State would be added to the \$43 million additional local share of the basic per pupil amount.

The effects of using recognized valuation rather than income adjusted valuation do not have an equally distributed impact on all school districts. First, by definition, the impact can occur only in school districts with less than the statewide median income. Second, of approximately 300 districts with less than the statewide median income, over one half of the dollar losses from eliminating the income adjustment would concentrate in a few districts. The rest would be distributed among about 290 districts.

**Table 4: Estimated Cost of Eliminating the Income Adjustment to Chargeoff Valuation for Eleven Large School Districts – FY02**

<b>School District</b>	<b>Loss in State Basic Aid</b>	<b>Estimated Replacement Mills</b>	<b>Formula ADM in FY01</b>
Cleveland CSD	(6,516,735)	1.07	73,911
Columbus City SD	(2,534,296)	0.31	63,186
Cincinnati City SD	(2,101,535)	0.34	45,958
Toledo City SD	(1,654,514)	0.57	36,661

Akron City SD	(1,720,718)	0.65	31,278
Dayton City SD	(1,637,892)	0.85	22,958
Canton City SD	(1,210,911)	1.42	12,192
Youngstown City SD	(1,327,157)	2.02	11,267
Lorain City SD	(621,644)	0.86	10,192
East Cleveland City SD	(663,602)	2.75	5,524
Lima City SD	(551,734)	1.93	5,361
Total 11 Districts	(20,540,738)		318,489
Statewide Total	(42,876,312)		1,725,520

Table 4 shows that the cost of removing the income adjustment to valuation would have the largest impact in eleven urban school districts. Of \$42.8 million in State aid lost through the removal of the income adjustment, almost one-half would occur in these eleven districts. These districts accounted for 18% of total statewide enrollment in FY01, but they would pay for almost 50% of the cost of this change. Again, these costs show reductions in State basic per pupil subsidies and do not include additional costs associated with special and vocational education that school districts would incur as a result of the elimination of the income adjustment.

The income adjustment used in computing the chargeoff has the effect of reducing reliance on the local property tax. For districts with lower than average income, the adjustment means that the formula reduces their local contribution. The elimination of the income adjustment in the chargeoff has the opposite effect. It increases reliance on the property tax because it increases the local chargeoff.

The proponents of this change apparently believe that “gap” aid makes irrelevant the increase in the chargeoff caused by the elimination of the income adjustment to valuation. (“Gap Aid” consists of a State money paid to a school district if the district's local tax revenues do not raise enough funds to pay for its 23 mill chargeoff and/or for its local share of the cost of special education, vocational education, and transportation.) They also may argue that the income factor used in the computation of parity aid makes up for the elimination of the income factor from the chargeoff computation.

At some point for a district that qualifies for gap aid, the difference between a chargeoff based on recognized value and a chargeoff based on income adjusted value becomes meaningless. Under a certain combination of circumstances, the difference between the two measures of the chargeoff base only determines the distribution of State dollars as between gap aid and regular Foundation aid.

However, if a school district pays its own local share in order to raise local revenue above the amount required by the chargeoff's apportionment of State and local shares of the cost of an adequate education, the difference between recognized value and income adjusted value can make a significant difference. Table 4 shows that Cleveland would need 1.07 additional mills, Youngstown 2.02 additional mills, East Cleveland 2.75 additional mills, and Lima 1.93 additional mills, to account for the additional chargeoff amount related to the basic per pupil subsidy. These districts would need to levy these additional amounts of taxes in order to continue to raise the same amount of tier 2 local revenues, i.e., local revenue in addition to the local share of the cost of an adequate education. The parity aid formula equalizes local ability to raise tier 2 funds, but in each

district, it assumes a local effort to achieve full equality in funding. The shift from income adjusted valuation to recognized valuation increases the chargeoff. The higher chargeoff makes the threshold level of local taxes necessary for full parity more difficult to achieve.

Theoretically, the new income adjustment in the computation of parity aid would provide lower income districts with more State parity aid than they would receive in the absence of the adjustment. Again, theoretically, the new income adjustment could provide enough additional parity aid to offset the effects of removing the income adjustment from the computation of the State's share of adequate education costs. In fact, the flawed implementation of the income adjustment in the parity aid formula makes the outcome even worse for most low income districts, as detailed in the next section of this analysis.

More research would show whether the shift in the income adjustment from the basic subsidy computation to the parity aid computation means a net gain or loss for school districts. The estimated effect of the shift on Cleveland CSD using FY01 data shows that the district loses about \$6.5 million in basic subsidy and gains about \$3.3 from the income adjustment in the parity aid formula. Therefore, the shift in the income adjustment would cost Cleveland about \$3.2 million. Cleveland would obtain about \$3.2 million more State aid if the income adjustment remained within the basic aid computation. The effects of this shift for other school districts have not been computed, but since most poor districts are worse off using the income adjustment in the parity aid formula, and since all poor districts benefit from the income adjustment in the basic aid formula, it is reasonable to conclude that the shift in the location of the income adjustment hurts most poor districts.

## **I. Parity Aid Income Adjustment Based on FAGI Per Pupil**

### **1) Description of the Parity Aid Program**

Sub. H.B. 94 provides for a new kind of aid program called "parity" aid. Under this program, the State will pay to each qualified school district an amount per pupil equal to the product obtained in the following formula:

(Wealth per pupil of the district in the 80<sup>th</sup> highest percentile of all districts ranked by wealth minus wealth per pupil of the qualified district) times 9 \_ mills.

A district qualifies simply by having less wealth per pupil than the district at the 80<sup>th</sup> percentile. As used in this program, "wealth" means a combination of two measures of wealth combined as follows:

1) One-third of a district's wealth measure equals the cumulative federal adjusted gross income (FAGI) of the district divided by the number of pupils in the district; and

2) Two-thirds of a district's wealth measure equals the recognized value in the district divided by the number of pupils in the district.

Payment of the parity aid amount would be phased in over five years as follows: FY02 – 20%; FY03 – 40%; FY04 – 60%; FY05 – 80%; FY06 and after – 100%. When the State recomputes the basic per pupil subsidy every six years, it also would recompute the benchmark rate used to determine parity aid. The benchmark rate represents the average taxes charged in mills for operating purposes in excess of the local share contribution dictated by the Foundation Formula and its related components in the 70<sup>th</sup> to 90<sup>th</sup> percentiles of districts ranked by wealth.

## **2) Historical Use of Income Adjustments to Wealth**

Historically, the State has used the median income in each school district compared to the statewide median income as a measure of the relative wealth of each school district compared to the State as a whole. Figure 2 explains the difference between median income and average income (mean income). The use of a factor that compared district median income to State median income was used in the chargeoff formula to lower the measure of wealth in districts with income below the State median. Therefore, historically, the inclusion of an income component in the determination of wealth tended to help school districts with taxable property valuation disproportionately high compared to the income wealth of the district's residents.

## **3) Income Adjustment based on Mean FAGI per pupil Makes Poor Districts Appear Wealthier**

The income adjustment in the computation of parity aid uses an income factor derived by dividing the total FAGI in a school district by the number of pupils in the district (formula ADM). The derivation of an FAGI amount per pupil results in a meaningless number because the FAGI in a school district has no relationship to the enrollment in the district's schools. Moreover, the total FAGI in a district does not necessarily yield a meaningful estimate of the district's ability to support schools.

Cumulative FAGI in a school district is a function of the number of tax returns filed in the district and the amount of income reported on each return. The number of pupils in the school has no relationship to either factor. For example, two school districts could have the same number of returns and the same cumulative FAGI but very different enrollments. Under those circumstances, the district with more pupils will appear poorer than the other district. In reality, both districts have the same income per return and the same income tax-paying capacity.

### **Figure 2: Difference Between Mean Income and Median Income**

**“Mean Income”** equals the quotient obtained by adding all income and dividing by a factor such as the number of tax returns or the number of pupils as in the parity aid program. The result of such a computation usually represents the same amount as intended when the term “average” is used in common speech.

**“Median Income”** means the income on the tax return which falls exactly at the

midpoint of all tax returns. Median income provides a measure that reflects the distribution of income to some extent.

**Example:** A school district contains 11 income taxpayers who report the following FAGI amounts: 100,000; 100,000; 90,000; 75,000; 60,000; 50,000; 45,000; 45,000; 40,000; 30,000; 25,000.

The Mean income per return equals \$60,000.

The Median income per return equals the sixth return or \$50,000.

If six of the taxpayers have one child each, the per pupil FAGI equals \$110,000.

A few wealthy taxpayers pull up the Mean average. The Median average shows a somewhat more realistic indication of the income per return relative to the distribution of income. The per pupil income has no relation to the income per return at all.

Alternatively, two districts could have the same number of pupils and the same total FAGI but very different wealth profiles because one district has many more tax returns than the other. The income per return in the district with more returns would be smaller. This would indicate a poorer district because the wealth of each economic unit in the district appears more accurately as a function of income per return rather than income per pupil.

Finally, two districts could have the same number of pupils, the same number of returns, and the same total FAGI but very different wealth profiles depending on the distribution of income. For example, one district has ten taxpayers with total income of \$1.1 million divided equally among them. In this district, each taxpayer has income of \$110,000. Another district has the same total income of \$1.1 million. In this district, one taxpayer has income of \$1.0 million and the other nine taxpayers have about \$11,100 apiece. The different distributions of income define the first district as relatively wealthy and the second district as essentially poor, even though a millionaire lives in the latter district.

Obviously, the last example shows an extreme situation, but it also reveals an important point about the method used in the parity aid formula to measure the income component of wealth. Wealth per pupil has no meaning unless variables such as the distribution of income among taxpayers are taken into consideration. In this regard, the median is far less sensitive to unusually large income values (which skew the distribution) than is the mean.

An analysis of school districts in Franklin County shows that the FAGI per pupil measure of income wealth consistently makes Columbus CSD appear more wealthy compared to other districts in the county than a measure based on median income per tax return. Table 5 shows the comparison. The first column of the table lists the school districts in Franklin County. The second column shows the median income in each district based on tax year 1998 data obtained from the Ohio Department of Taxation. The third column shows the relationship between Columbus median income and the median income of each other district. For example, the median income in Whitehall equals about \$25,852. The median income in Columbus equals about \$25,502. The third column

shows that Columbus median income equals 99% of median income in Whitehall (25,502/25,852 = 99%).

The fourth column shows the FAGI per pupil in each school district. The last column shows the relationship between FAGI per pupil in Columbus and FAGI per pupil in each other district. (FAGI equals the average FAGI for 1996, 1997, and 1998.) For example, Columbus FAGI per pupil of about \$109,000 equals 129% of Whitehall FAGI per pupil of about \$84,000.

Thus, the FAGI per pupil measurement of income makes Columbus look 29% wealthier than Whitehall, when, in fact, median income data show the two districts have about the same income wealth and the same income tax-paying capacity.

**Table 5: Franklin County Comparison of Different Measures of Income – Columbus Median Income Versus Median Income of Other Districts and Columbus FAGI Per Pupil Versus FAGI Per Pupil in Other Districts**

School District	Median Income	Columbus as a % of Other's Median	FAGI/Pupil	Columbus as a % of Other's FAGI
Bexley City SD	\$44,297	58%	296,606	37%
Canal Winchester Local SD	36,149	71%	99,100	110%
Columbus City SD	25,502	100%	108,607	100%
Dublin City SD	49,607	51%	178,563	61%
Gahanna-Jefferson City SD	44,442	57%	157,231	69%
Grandview Heights City SD	35,857	71%	162,939	67%
Groveport Madison Local SD	31,825	80%	85,144	128%
Hamilton Local SD	31,885	80%	54,836	198%
Hilliard City SD	44,560	57%	104,525	104%
Plain Local SD	50,346	51%	255,130	43%
Reynoldsburg City SD	33,803	75%	122,025	89%
South-Western City SD	31,130	82%	91,121	119%
Upper Arlington City SD	50,125	51%	270,515	40%
Westerville City SD	42,818	60%	135,145	80%
Whitehall City SD	25,852	99%	84,354	129%
Worthington City SD	45,136	57%	158,866	68%

The table shows that Columbus has a median income lower than each of the other 15 school districts in Franklin County, but a measurement based on per pupil FAGI makes Columbus appear more wealthy than six other districts. The FAGI per pupil measurement also makes Columbus appear relatively more wealthy compared to the median income measure in 11 of 15 districts in the county.

Further evidence shows that the FAGI-per-pupil method for measuring income wealth has a perverse effect. An analysis of Athens County school districts shows that in four of the county's five districts the FAGI-per-pupil measurement *increases* the

district's wealth measurement even though these districts qualify as poor Appalachian school districts by virtually unanimous agreement.

Table 6 shows the per pupil FAGI and the per pupil recognized value for the five districts. In four of the five districts, FAGI per pupil exceeds recognized value per pupil. Therefore, in all but one Athens County district the creation of a blended wealth measure using 1/3 income and 2/3 recognized value will result in a higher amount than the use of recognized value only. In fact, even Alexander LSD would receive less aid by one dollar per pupil under the Sub.H.B.94 wealth measure, because the blended income/recognized value method and the recognized-value-only method yield almost the same measure of wealth for that district, but the recognized value method yields a slightly higher statewide standard. As a result, even Alexander would receive more parity aid under a recognized value only measurement of wealth. An income measure that makes 100% of the school districts in one of the poorest counties in Ohio appear to have *more* rather than *less* revenue raising capacity fails to improve equalization of resources.

**Table 6: Comparison of Income and Property Wealth Measures in Athens County When Income Is Measured as FAGI Per Pupil**

School District	FAGI Per Pupil	Recognized Value Per Pupil
Alexander LSD	68,911	69,154
Athens CSD	119,760	92,446
Federal Hocking LSD	56,387	54,553
Nelsonville-York CSD	62,985	58,428
Trimble LSD	42,468	25,156

A comparison of a parity aid system based on the blended wealth measure used in Sub. H.B. 94 (1/3 FAGI per pupil + 2/3 recognized value per pupil) with a similar parity aid system based entirely on recognized value per pupil shows that 148 districts would receive more parity aid under the Sub. H.B. 94 method and 354 districts would receive more aid under the method based entirely on recognized value. (The sum of 148 plus 354 equals more than the 489 districts entitled to parity aid because the two methods yield a slightly different mix of school districts.)

When districts are ranked according to FAGI per pupil, the Sub.H.B. 94 method for measuring wealth provides more parity aid in 56 school districts out of the poorest half of all 611 districts while the recognized value method provides more parity aid to 250 of the poorest 306 districts. Clearly, the addition of the income factor as designed in Sub. H.B. 94 works against the interest of the less wealthy districts. It is difficult to understand why the State would add an income factor to the parity aid formula in such a manner as to penalize the low income districts that parity aid is designed to assist.

As a late addition to the Parity aid formula, Sub. H.B. 94 would offer an alternative computation for determining aid in those districts with median income less than the State average median income *and* a DPIA index factor greater than 1.0 *and* a cost-of-doing-business factor greater than 1.0375. An attempt to run the alternative computation compared to the standard computation of Parity aid indicated that only two school districts would benefit from the alternative formula when both formulas are fully

phased in. These districts were Cincinnati and Lockland. Both are in Hamilton County. The inclusion of an entire alternative computation apparently for the purpose of ensuring that Cincinnati receives some parity aid justifies claims that politics and residual budgeting drive the funding system rather than objective measures. As detailed in the preceding paragraphs, the income measure of valuation based on FAGI per pupil works against the interest of hundreds of school districts, but the alternative formula designed to address the deficiencies in the standard formula helps only Cincinnati and one other district.

In general, the median is a more meaningful measure of wealth compared to the mean. Use of median income avoids distortions caused when a few individuals with very high income result in a mean average that does not reflect the true revenue raising capacity of the district. Median income *per return* also provides a more meaningful measure of wealth than income per pupil because it reflects a picture of income per taxpaying unit. Income per pupil may or may not accurately show income per taxpaying unit depending on the other demographic characteristics of the district. FAGI provides a crude measure of the productive potential of a school district income tax (regardless of whether the district levies such a tax). Median income provides a more accurate measure from a tax policy perspective of the ability of taxpaying units within a school district to sustain additional tax burdens.

#### **J. The “Trees:” A Conclusion**

Part I of this analysis of Sub. H.B. 94 has focused on some details in the changes enacted in the legislation. The analysis reveals some serious flaws in the individual provisions of the new school funding program. There are some blighted trees in the forest.

At the same time, other enactments in the proposal deserve some positive recognition, including provisions related to the expansion of “gap” and the introduction of “excess cost” aid. However, these changes occur in the context of the “forest” of formulas and special provisions that has evolved into the current school funding system. The second part of the analysis examines the ways that the trees grow together to become the forest of school funding provisions.

### **PART II: THE FOREST – DOES SUB. H.B. 94 COMPLETELY OVERHAUL THE SCHOOL FUNDING SYSTEM?**

The Ohio Supreme Court’s conclusion in the *DeRolph II* opinion contained the following identification of deficiencies in the current school funding system:

- (1) Continued reliance on local property taxes as a primary means to fund Ohio’s schools has not been specifically addressed and may in fact be compounded by H.B. 283’s phase-out of the inventory tax, which may result in even greater reliance on local contributions in the future. The failure to address this problem will make it exceedingly difficult for any system of school funding to comply with the Thorough and Efficient Clause, since the inherent inequities will remain.
- (2) The basic aid formula has structural deficiencies and may not in fact reflect

the amount required per pupil to provide an adequate education. The phase-in aspect of the basic aid amount should be reconsidered.

At the conclusion of its opinion in *DeRolph I*, the Court also made the following statement:

Let there be no misunderstanding. Ohio's public school financing scheme must undergo a complete systematic overhaul.

Part II of the analysis examines whether Sub. H.B. 94 brings about a complete systematic overhaul with respect to the current system's overreliance on the property tax and the structural deficiencies in its basic aid formula.

## **A. Continued Reliance on Local Property Taxes**

### **1) Specific Provisions**

A careful reading of the Supreme Court's opinions in both *DeRolph I* and *DeRolph II* shows that the Court is not simply concerned that school property taxes are too high. The concern about overreliance on *local* property taxes appears to rest more on a determination by the Court that the property tax *structure* provides an inherently unequal source of funding opportunities and that the property tax *levy process*, including the effects of H.B. 920, provides an inherently difficult and unpredictable source of funds for education. Further, the Constitution mandates a universal access to education on a basis that is "thorough and efficient." The process by which schools require an endless round of tax levies to maintain constant levels of funding satisfies none of these constitutional requirements.

Sub. H.B.94 attempts to address the issue of overreliance on the local property tax with four changes in the current system. The changes include:

#### **(a) Excess Cost Aid**

This change has two aspects. First, it includes the local share of transportation formula costs within the concept of a district's local share of the cost of an adequate education assigned to categorical expenditures. (The other categorical expenditures are special education and vocational education.) Second, if the local share of the cost of these categorical programs as apportioned to a school district by the school funding formulas exceeds three mills, the State pays for any "excess cost."

#### **(b) Gap Aid**

This State assistance makes up the difference between the amount of taxes that a school district actually levies and the formula cost apportioned to the district for basic aid and categoricals. Since every district must levy a minimum of 20 mills, and since the maximum local contribution under the provisions of Sub.H.B. 94 could not exceed 26 mills (because of the 3 mills of excess cost aid), gap aid will pay up to six mills to a school district in addition to the State share to which the district is entitled by the basic aid formula. Gap aid would replace the chargeoff supplement aid in the current law and expand it from coverage of 20 to 23 mills to coverage of 20 to 26 mills.

### **(c) Parity Aid**

This new program replaces the power equalizing provisions of current law. That current provision provides State matching money for certain districts for taxes levied between 23 and 25 mills. It might be argued also that it replaces the Equity aid program which the bill would phase out through FY05. Unlike the power equalizing aid program, Parity aid would not require a matching contribution from a school district. Districts would qualify for aid if they fall below the 80<sup>th</sup> percentile of all districts in a ranking from poorest to wealthiest. The amount of aid is computed based on each district's per pupil wealth relative to a benchmark district at the 80<sup>th</sup> percentile.

### **(d) "Solution" to Reappraisal Phantom Revenue**

A provision of Sub. H.B. 94 would require the General Assembly to review the relationship between the cumulative State share of the base cost of education plus Parity aid compared to the statewide total base cost of education plus Parity aid, including both State and local contributions. Base cost equals the per pupil formula amount multiplied by enrollment and by the cost-of-doing-business factor. Local base cost equals the lesser of a district's chargeoff or the per pupil formula amount multiplied by the district's enrollment and by its cost-of-doing-business factor. This review would occur at the time of the biennial budget process. If the State share percentage in the relationship described here changes by more than 2\_% of the total, then the new law would direct the General Assembly to do something. The proposal would not require the General Assembly to do any specific thing. The benchmark year for comparison purposes is the most recent year in which the General Assembly updated the per pupil funding amount.

For example, if the State share (Basic aid plus Parity aid) divided by the statewide total (base cost plus Parity aid) in FY02 equals 50%, the General Assembly would compare the estimated FY04 percentages to that relationship when it writes the next budget. If the estimated State share were 47.25%, then a change in excess of the 2\_% threshold would have occurred. Sub. H.B. 94 would say that the General Assembly must do something about that change in percentage beyond the acceptable limits.

## **2) Cumulative Effect of the Specific Provisions**

When viewed in isolation, each of these changes appears to have a beneficial effect. Closer examination reveals that the systematic outcome of these changes has serious flaws. Gap aid means that a school district no longer needs to make any local effort to pay for the cost of an adequate education beyond 20 mills. Parity aid insures that each district below the 80<sup>th</sup> percentile in wealth will receive some discretionary funds. However, the combination of these provisions results in a system that differs only in degree from the existing system. If a school district wants to levy local taxes to supplement Parity aid, it can do so only by foregoing all Gap aid. Gap aid occurs only at the expense of *all* local option taxes.

The example in Figure 3 shows the hypothetical finances of the same school district in two consecutive years. In the first year, the State Foundation Formula assigns the districts responsibility for \$3.9 million dollars based on the dollars produced by the

23 mill chargeoff plus the cost of categorical programs assumed here to equal the maximum cost of 3 mills. In Year 1, the school district exactly raises the required local contribution with its 26 mill property tax. It has an additional \$300,000 from a 1% income tax. In Year 1, this income tax revenue provides the district with extra revenue for optional programs or with necessary revenue to pay for adequate costs not entirely accounted for in the State's formulas because the cost of an adequate education as defined by those formulas is an approximation (as it will be under any methodology).

**Figure 3: Gap Aid Example**

		<b>Year 1</b>	
Formula			
Local Share			<b>3,900,000</b>
	Tax Base	Tax Rate	Revenue
Real Property	100,000,000	26 Mills	2,600,000
Personal Property	50,000,000	26 Mills	1,300,000
Personal Income	30,000,000	1.0%	300,000
Local Revenue			4,200,000
Gap Aid			0
Total Revenue			4,200,000
		<b>Year 2</b>	
Formula			
Local Share			<b>4,239,130</b>
	Tax Base	Tax Rate	Revenue
Real Property	113,043,478	23 Mills	2,600,000
Personal Property	50,000,000	26 Mills	1,300,000
Personal Income	30,000,000	1.0%	300,000
Local Revenue			4,200,000
Gap Aid			39,130
Total Revenue			4,239,130

In Year 2, a reappraisal increases the valuation of the district's property. Now the district's local share as assigned by the Foundation Formula equals \$4, 239,130. The reduction in the effective tax rate on real property holds the district's real estate tax revenue constant. The district needs all of its personal income tax revenue to make up the shortfall in real property taxes. State Gap aid only becomes available after all local revenue has been committed to pay for the Foundation Formula's local share.

Two consequences result from the situation faced by this hypothetical school district. First, in response to a perverse incentive of Gap aid, the school district would behave rationally by repealing its income tax. The income tax now has no function except to replace the three mills of real property taxes reduced by the operation of H.B. 920. If the income tax were repealed, Gap aid would replace it fully. On the other hand, if the district wants to continue to have local optional revenue, it needs to levy two-tenths of a mill on all property just to replace the Gap aid. Replacement of Gap aid has first claim on any new local revenue. Therefore, the first two-tenths of a mill levied by the district in Year 2 would yield no additional revenue at all.

Under other circumstances, a school district with little personal property valuation would find itself in a situation after several years under the Gap aid system where the district would need to levy seven mills to obtain one additional mill of revenue. Such a situation would result in a district where reappraisals drive the effective rate to 20 mills. If the State Formulas assign 26 mills to the district's local share, the first six new mills levied by the district would replace Gap aid. Only after the district levied these six mills could it obtain the benefit of one optional or extra mill.

Proponents of Sub. H.B. 94 may argue that Parity aid takes care of any need for additional local mills. This argument is true in the sense that local taxes would not become a precondition to receive Parity aid. However, the Parity aid structure only achieves partial equalization. For districts in the mid-ranges in terms of per pupil wealth, Parity aid provides some State aid beyond the cost of an adequate education. The ability of local effort to contribute *according to ability* remains part of the total Parity aid structure. Therefore, under Parity aid, a district in the 50<sup>th</sup> percentile by wealth receives less than one-third of the 9.5 mill Parity aid benchmark from the State in the form of Parity aid.

For example, in FY02, the Parity Aid benchmark will equal about \$1,268 per pupil (9.5 mills X 133,516 per pupil = \$1,268 per pupil). The median district of all school districts in the State will have an estimated local value under the parity formulas of \$95,365 per pupil. Parity Aid will pay that district about \$362 per pupil (9.5 mills X (\$133,516 - \$95,365 = \$362)). For the median district to reach the full parity funding, it would need to levy \$906 (\$1,268 - \$362 = \$906). Therefore, at the median, the State would pay 29% of the parity benchmark and the school district would have responsibility for 71%.

The Parity aid structure would not *require* the median district to levy the remaining 71% of the benchmark amount in order to qualify for the State payment. However, the district's ability to operate at the benchmark level clearly requires such a local effort.

The Parity aid program has the deficiency that the relatively low threshold established by the 80<sup>th</sup> percentile district means that many districts must make a substantial local contribution to achieve the benchmark amount. For example, if the benchmark amount were based on the average valuation in the wealthiest 10% of all school districts, the Parity Aid benchmark would equal \$2,185, and the State's parity aid contribution would equal \$1,279. In such a system, the State would account for 59% of the benchmark rather than 29%. Moreover, the benchmark itself would be much higher (\$2,185 vs. \$1,268) if the wealthiest 10% were used as the standard.

More importantly, to achieve a funding level commensurate with the standard established by the Parity aid benchmark, a school district must forgo Gap aid and continue to levy substantial amounts of local taxes in the teeth of the same phantom revenue effects upon which the current system foundered.

Alternatively, a school district can content itself with the State share of Parity and maximize Gap aid. Once a district makes that choice, it becomes extremely difficult to

reverse it because the cost of raising local taxes includes the requirement first to replace Gap aid.

The fact that Sub. H.B. 94 would phase-in Parity aid in incremental steps further undermines the ability of the new program to achieve systematic reform. Parity aid amounts to the major element of the legislation intended to address the unconstitutional overreliance on the local property tax in Ohio's school funding system. In this context, Parity aid offers the prospect of alleviating a small part of that overreliance initially. "Full" relief would require five years to achieve. Even when fully achieved, Parity aid as enacted in the bill would close barely one-half of the gap between discretionary funding in the poorest and wealthiest districts.

As a system, the combination of Gap aid and Parity aid does not really change the prospects that school districts face under current law. Districts can accept what the State provides and make do, or they can attempt to raise discretionary local money in spite of the effects of H.B. 920. Parity aid only works as it should in a context where school districts have a fair chance to raise local taxes appropriate to their ranking in wealth. The combination of Gap aid and Parity aid fails in a structural way to create that opportunity.

The attempt to address phantom revenue with only a promise similarly fails to change the school funding structure. This approach fails to address the phantom revenue problem for three reasons. First, the 2\_% range still allows for substantial shifts in state/local responsibility in the total system. For example, if the State share in FY02 equals about 48% of a total of \$8.8 billion, then the local share would be about \$300 million more than the State share. Assuming the growth rates for the basic per pupil amount included in the bill, by FY05, the local share could exceed the State share by \$875 million without hitting the 2\_% trigger. This means that the local share could increase by about \$575 million more than the State share increase without causing the "Phantom Revenue Solution" to deploy.

Second, the 2\_% guideline would not address the effects of phantom revenue in specific school districts when those effects occur. For example, assume that the State reaches the 2\_% threshold in FY05 after the cumulative effects of four years of reappraisals or updates have occurred throughout Ohio. In the meantime, a school district located in a FY02 (tax year 2000) reappraisal county will have experienced the effects of phantom revenue for three years (FY02, FY03, and FY04) before sufficient cumulative effects have occurred statewide to trigger the advisory provisions of the "phantom revenue solution." Additionally, the problem of phantom revenue is one that varies greatly across districts depending on their individual circumstances. Without specific explication of the measures that the state will take to remedy this problem it is impossible to assess in any meaningful way the efficacy of the "solution" for different types of districts.

Third, the proposal would provide a remedy that is entirely hortatory in nature. In essence the proposal states: "If this undesirable consequence occurs, then the General Assembly shall do something about it." Such a provision does not change the *system* for funding schools as the Constitution requires. It represents a kind of *ad hoc* approach when the Court required a systematic overhaul. It offers a promise to fix the system if it breaks, but the Supreme Court already has determined that the system *is* broken.

The Ohio Supreme Court has determined twice that the current school funding system violates the Constitution because it relies too much on the property tax. For the most part, Sub. H.B. 94 only tinkers with the underlying system that the Court struck down. The piecemeal changes in the legislation do not fit together. They do not overhaul the school funding system. They do not end the necessity for many districts to return to the ballot on a regular basis simply to maintain existing levels of service.

## **B. Structural Problems in the Foundation Formula**

The analysis of the details of the proposed changes in the Foundation Formula appeared in Part I of this report. This section will focus on the Foundation Formula as a whole in keeping with the theme of the forest and the trees. The topic here is the Foundation Formula from the “forest” perspective.

The process of developing the base cost per pupil amount proposed in Sub. H.B. 94 has revealed a flaw in the underlying design of the Augenblick method for deducing the base cost of an adequate education. The Augenblick method assumes that an analysis of base cost expenditures in “successful” school districts will permit the derivation of an adequate base cost amount. The current process has shown that the derivative amount depends with great sensitivity on changes in the method for selecting “successful” districts. Changes in the proficiency tests themselves, changes in the percentage of answers considered acceptable for a passing score, changes in the number of categories with a passing score defined as the standard of success, and changes in the categories used to define success all can affect the computation of a basic per pupil amount by many dollars even when the change appears relatively small.

The Augenblick method for using a deductive approach to compute the basic cost of an adequate education represents a kind of compromise. On one side, the Equity and Adequacy Coalition, representing the plaintiffs in the *DeRolph* case, would like to define an ideal “market basket” of components needed to provide an adequate education. Some reason for concern exists that any system based on the ideal would cost an unreasonable amount of money. At the other extreme, the State would prefer a free hand to adjust education spending priorities along with all of the other demands on State finances. The Augenblick method appeared to offer a middle ground, because it rejects funding based on the ideal and at the same time appears to define an objective amount by which a limitation on legislative discretion is enforced. This limit guarantees adequate funding for schools by basing the computation of an adequate education’s cost on objective standards.

In practice, Sub. H.B. 94 undermines the credibility of the Augenblick compromise in several ways. First, the inclusion of some districts whose record of performance places them in the “continuous improvement” category creates an inconsistency between the labeling of districts for academic purposes and the legislation’s definition of “success” for funding purposes. Second, the inclusion of seven districts that technically failed to achieve even the expressed standard of 20 successes out of 27 performance measures also weakens the integrity of the final per pupil outcome. Third, the interaction between the basic per pupil amount and the cost-

of-doing-business factor offers an opportunity to manipulate the per pupil cost of an adequate education in ways that may or may not result in a more accurate computation.

Fourth, the formula's reliance on an inflation factor based on economic activity in the mid-nineteen-nineties and not based on cost factors specifically related to education becomes more inaccurate with every passing year. Finally, under Sub. H.B. 94, the formula would substitute an unsubstantiated inflation factor for the real cost experiences of "successful" school districts. The justification for this substitution rests on a wholly arbitrary assumption that an "echo effect" from the formula causes some school districts to receive over-compensation for the cost of an adequate education. No research supported this assumption. The adoption of measures to control the "echo effect" amounts to a direct violation of the compromise embodied in the Augenblick method.

The Ohio Supreme Court found in *DeRolph II* that the foundation formula had "structural deficiencies." It is difficult to conclude that Sub. H.B. 94 would provide a remedy for these structural deficiencies when so many of the details in the base cost formula appear arbitrary or manipulative. While the Augenblick method may have provided a sound theoretical basis for estimating the cost of an adequate education, Sub. H.B. 94 does not permit the method to work as designed. After two attempts to use the Augenblick method, the results have been disappointing as the method's sensitivity to small changes in the variables encourages controversy and undermines the credibility of its outcomes.

### **C. The "Forest:" A Conclusion**

With respect to the Foundation Formula, some aspects of Sub. H.B. 94 contribute toward funding an adequate education by raising the base cost amount to \$4,814 in FY02. In other respects, the proposed package of formula changes does not make the system more adequate. Specifically, the exclusion of actual base costs from twice successful districts arbitrarily assumes that a 2.8% inflation rate, unsupported by *any* timely research about inflation, more accurately accounts for changes in the cost of an adequate education than the actual practice in successful school districts. This assumption violates the first principle upon which the Augenblick method rests. The Augenblick method is based on the foundation that the actual experience of successful school districts will provide the best indicator of the cost of providing an adequate education. More importantly, the exclusion of real costs on the theory that State aid increased funding beyond adequacy ignores the fact that for every dollar of new revenue obtained in the 83 "Echo districts," sixty-three cents came from additional property taxes and only thirty-seven cents came from additional State aid.

This flaw in the computation of the basic per pupil amount is further compounded by the inclusion in the list of "successful" school districts seven low spending districts with successful performance on fewer than 20 performance measures. Therefore, not only would the State's method in Sub. H.B. 94 depart from the Augenblick formula based on *actual costs* in successful districts, it also departs from the principle of using only successful districts by adopting the principle that districts within a fraction of a student of success are successful.

The reduction in weights for vocational education rests upon a convoluted argument about alternative cost of doing business calculations. The rationalization for lower vocational education weights depends upon a fiction that the cost for these items depends objectively upon an iteration of the Foundation Formula which never had any existence in law.

The adoption of a new weighting system for special education is a clear step in the right direction, however the failure to fully fund the weights severely undermines the significance of the change. In addition, the derivation of the new weights occurred in secrecy without any publicly available research foundation.

The reduction by half of the cost of doing business factor does not appear to have any rationale other than to save money by creating the appearance of a more generous increase in the education funding level than actually occurs. The change in this adjustment also changes the ability of school districts to fund an adequate education at actual cost levels encountered by them. As in the case of the reduction of both vocational and special education weights, this change is not justifiable based on available research.

With regard to economically disadvantaged pupils, Sub. H.B.94 adopts a technical change in the method of identifying low-income pupils that would have resulted in a lower level of DPIA funding if it were in place today. Not only does the DPIA formula need to be revamped, but the entire issue of adequate funding for districts with high concentrations of low-income pupils is in immediate need of comprehensive study. As noted in the Overview of this analysis, the Ohio Supreme Court identified seven areas explicitly as requiring attention from the General Assembly. It also clearly stated that those seven areas were not the only topics in need of scrutiny. The school funding system's treatment of urban school districts and school districts with large populations of economically disadvantaged pupils qualifies as one of those other areas that the State must address. In Sub. H.B. 94, it failed to address these issues adequately.

Other provisions of the bill would worsen reliance on the local property tax. The shift of the income adjustment from the Foundation Formula to the parity aid formula would make it harder for school districts to raise the local share of the cost of an adequate education. The inability to raise that local share makes it much less likely for school districts to raise the local portion of tier 2 funds as contemplated in the Parity aid program. The use of an income measure unrelated to taxpayer's ability to pay weakens the distribution of revenue under the parity aid formula.

Sub. H.B. 94 sees a few trees but it misses the forest. Every improvement occurs at the expense of a tradeoff. The basic per pupil amount goes up, but the cost-of-doing-business factor comes down along with vocational education weights. Moreover, the changes to the computation of adequacy intended to control the "echo effect" arbitrarily lower the basic per pupil subsidy. The ceiling on the local contribution to the cost of an adequate education improves the system, but the gap aid provisions by which a district must commit all local revenue to pay for adequacy before any gap aid becomes available make it harder for districts to raise local option revenues. Parity aid improves equity, but changes in income adjustments to wealth measurements and the failure to address phantom revenue undermine this improvement.

The number of tradeoffs make it clear that the ultimate funds received by a school district do not result from an objective attempt to determine what schools need but rather from a series of bargains intended to contain school costs within the boundary of existing State revenue streams.

# ETPI

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## **Background on ETPI and Author Biographies**

ETPI is comprised of organizations across the state interested in how Ohio's tax policies affect school districts and other public entities. The Ohio School Boards Association and the Buckeye Association of School Administrators realized the need for an independent data-driven entity to analyze these issues and originally formed ETPI in 1997.

ETPI's mission is to educate state policymakers and the public about the implications of proposed changes to state and local tax policies on Ohio's public school districts. Membership now includes some 100 Ohio school districts. Warren Russell of OSBA serves as ETPI's President and Dick Maxwell of BASA as Vice President.

William Driscoll is a partner in the firm Levin & Driscoll, a state budget and tax policy research firm in Columbus, Ohio. The firm has been preparing school finance studies, revenue estimates, and tax research for both public sector and private sector clients since being founded in 1991. Driscoll served from 1985 to 1991 as Deputy Tax Commissioner for Legal Affairs in the Ohio Department of Taxation. Before joining the Department, he worked for the Legislative Service Commission, drafting and analyzing tax legislation. Driscoll holds an undergraduate degree in government from the University of Notre Dame and law degree from Ohio State University. In 1995, Driscoll served on the five-member panel appointed by Ohio's state school superintendent to design a new school funding formula in response to Judge Lewis' original DeRolph decision.

Dr. Howard Fleeter holds a Ph.D. in Economics from the University of California, Berkeley, and was a faculty member in the School of Public Policy & Management at Ohio State University from 1989 to 1999. He is currently on a leave of absence from the faculty of the School of Education at the University of Massachusetts Amherst and working in Columbus as a consultant to Ohio policy-makers on issues of public finance. He has taught courses and conducted research in the areas of public sector economics, state and local government finance, and school finance. In 1992, Fleeter authored the report, "Equity, Adequacy, and Reliability in Ohio Education Finance" for the Governor's Education Management Council, a panel appointed by George V. Voinovich.

Both Driscoll and Fleeter serve as staff consultants to ETPI. In addition, ETPI's tax consultants include Joanne Limbach of Limbach and Associates and Richard Levin of Levin & Driscoll. More information about ETPI can be found at its website [www.etpi-ohio.org](http://www.etpi-ohio.org).