

APPENDIX V

Review of the Supplemental Poverty Formula and Alternatives



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ISSUES AND OPTIONS FOR SUPPLEMENTAL GENERAL STATE AID
REPORT TO THE EDUCATION FUNDING ADVISORY BOARD

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ISSUES AND OPTIONS FOR SUPPLEMENTAL GENERAL STATE AID

Executive Summary

Supplemental General State Aid (GSA) to local school districts is designed to provide additional funding to meet the needs of students from low-income households, as well as to recognize the higher costs associated with larger concentrations of low-income students. Although the term "poverty grants" is often used to refer to Supplemental GSA, the effective target population is "low-income," which generally means household income below 200 percent of the federal poverty level.

Supplemental GSA has grown from 12 percent of total GSA in FY 2004 to an estimated 29 percent of GSA in FY 2010. In some school districts, poverty grants account for more than half of total GSA.

This report examines the three main components of the poverty grant formula: the base dollar amount per pupil, the adjustment for concentration of low-income pupils, and the low-income student count. The analysis concludes that the overall structure of Supplemental GSA should be changed. Each of the major components of the formula has significant flaws:

- The maximum dollar amount per low-income pupil (\$2,994) has not been changed since the current formula was instituted in FY 2004. The maximum grant was 62 percent of the foundation level in FY 2004 but only 49 percent of the foundation level in FY 2010.
- The formula's adjustment for percentage of low-income students multiplies the variable component of the base poverty grant (\$2,700) by the square of the district concentration rate. This approach was intended to target resources to districts with the highest concentrations of poverty, but it has had the effect of shifting resources away from districts that are closest to 50 percent low-income.
- For purposes of the poverty grant formula, the low-income student population is based on a three-year average of the Department of Human Services (DHS) count of children enrolled in various public programs. The DHS count, largely driven by Medicaid enrollment, has been increasing at a much faster rate than the low-income estimates in fall enrollment reports (based largely on participation in the National School Lunch Program). Moreover, use of the DHS count has had disparate effects across school districts.

The report presents some options to address significant flaws in the poverty grant formula, as well as relevant cost estimates. Interaction between the various components of the Supplemental GSA formula requires that proposed changes be evaluated together. Before developing specific recommendations for consideration by the Education Funding Advisory Board, we need more detailed analysis of alternatives to the DHS low-income count and the current adjustment for concentration of low-income students, as well as the costs of alternative reform packages. In the short term, the State Board of Education should provide greater transparency by improving access to data on General State Aid and other funding for public schools.

Background

Supplemental General State Aid (GSA) to local school districts is designed to provide additional funding to meet the needs of students from low-income households, as well as to recognize the higher costs associated with larger concentrations of low-income students. Although the term “poverty grants” is often used to refer to Supplemental GSA, the effective target population is “low-income,” which generally means household income below 200 percent of the federal poverty level (FPL). Children below 100 percent of FPL represent about half of low-income children.

The current poverty grant formula was recommended by the Education Funding Advisory Board (EFAB) in October 2002 and was implemented in FY 2004. School districts with low-income populations under 15 percent receive a flat grant of \$355 per low-income pupil. For all other school districts, the following formula is used:

$$\text{Per pupil amount} = \$294.45 + (\$2,700 \times \text{DCR}^2)$$

DCR = district concentration rate (percentage of low-income pupils)

For purposes of the poverty grant formula, the low-income student population is based on a three-year average of the Department of Human Services (DHS) count of children enrolled in Medicaid, the Children’s Health Insurance Program (CHIP), Temporary Assistance for Needy Families (TANF), or the Food Stamp program (now the Supplemental Nutrition Assistance Program). Income eligibility limits for these programs, as a percentage of the federal poverty level, are as follows:

Medicaid	100% of FPL
CHIP	200% of FPL
TANF	28% of FPL
Food Stamps	185% of FPL

The poverty grant formula implemented in FY 2004 was phased in for school districts that would get more funding than under the previous formula. These school districts first received the full amount under the new formula in FY 2007. School districts that would receive less funding under the new formula were held harmless at the FY 2003 level. Phase-out of the hold-harmless provision was scheduled to begin in FY 2005 but did not start until FY 2010. The phase-out will be complete in FY 2012.

Even though the poverty grant formula has not changed since FY 2004, the amount of Supplemental GSA has nearly tripled. Poverty grants grew from 12 percent of total GSA in FY 2004 to an estimated 29 percent of GSA in FY 2010. Another notable trend is the declining share of poverty grants for the Chicago Public Schools — from 57 percent in FY 2004 to less than 50 percent in FY 2011 (see Exhibit 1). Nonetheless, 58 percent of Chicago’s total GSA entitlement in FY 2011 comes from poverty grants. For some school districts (e.g., Proviso Township, Carbondale, and Bloomington), the proportion from poverty grants exceeds 70 percent (see Exhibit 2).

This report examines the three main components of the poverty grant formula: the base dollar amount per pupil, the adjustment for concentration of low-income pupils, and the low-income student count. The report also presents some options to address significant flaws in the formula, as well as relevant cost estimates. More detailed analysis is needed to develop effective, equitable, and feasible alternatives to the current structure of Supplemental GSA.

Exhibit 1: Changes in Poverty Grants, FY 2003 to FY 2010

Fiscal year	Total GSA (\$ millions)	Pct. change	Poverty grants (\$ millions)	Pct. change	Poverty grants as pct. of total GSA	Chicago pct. of pov. grants
2003	3,184.2	---	388.2	---	12.2	57.1
2004	3,476.3	9.2	410.8*	5.8	11.8	57.3
2005	3,668.0	5.5	455.7*	10.9	12.4	55.8
2006	3,838.1	4.6	532.6	16.9	13.9	53.6
2007	4,106.0	7.0	675.4	26.8	16.4	52.5
2008	4,394.0	7.0	785.4	16.3	17.9	52.7
2009	4,607.7	4.9	941.4	19.9	20.4	52.8
2010	4,616.0	0.2	1,100.4*	16.9	23.8	52.9
2011**	4,600.3	-0.3	1,348.6	22.6	29.3	49.5

* Prorated amount

** Does not include \$415 million from the federal Education Jobs Fund.

Exhibit 2: Poverty Grants as a Share of General State Aid, Selected School Districts, FY 2011

School district	County	GSA gross entitlement (\$1,000s)	Poverty grant (\$1,000s)	Poverty grant as pct. of total GSA
Proviso Township HDS 209	Cook	8,085	6,398	79.1
Carbondale ESD 95	Jackson	1,945	1,466	75.4
Bloomington SD 87	McLean	7,488	5,363	71.6
West Chicago SD 33	DuPage	4,794	3,259	68.0
Ford Heights SD 169	Cook	2,698	1,742	64.6
Addison SD 87	DuPage	4,590	2,961	64.5
City of Chicago SD 299	Cook	1,147,176	667,030	58.1
Urbana SD 116	Champaign	5,609	3,215	57.3
Champaign CUSD 4	Champaign	7,561	4,055	53.6
Hazel Crest SD 152-5	Cook	5,900	2,794	47.4
Madison CUSD 12	Madison	5,467	2,536	46.4
W. Harvey-Dixmoor PSD 147	Cook	9,549	4,350	45.6
Dolton SD 148	Cook	16,444	7,312	44.5
Springfield SD 186	Sangamon	35,764	15,504	43.4
Rockford SD 205	Winnebago	78,090	31,889	40.8
Peoria SD 150	Peoria	43,143	17,493	40.5
Cairo USD 1	Alexander	4,074	1,652	40.5
Chicago Heights SD 170	Cook	19,595	7,889	40.3
Decatur SD 61	Macon	37,124	14,746	39.7

Per-Pupil Grants

School finance research includes various methods for estimating the extra costs required to educate disadvantaged students. Cost function studies have typically generated estimated poverty weights in the range of 1.0 to 1.5 for states with large urban areas — which means that it would cost 100 percent to 150 percent more to raise achievement of

a student in poverty to the same level as students who are not disadvantaged. Another approach to estimating higher costs for low-income students is the use of professional judgment panels, which have generally produced per-pupil weights lower than those from cost function studies.¹

Policies in Other States

Although most states provide at least some funding to school districts on the basis of poverty or low-income status, the additional funding per pupil is considerably smaller than the weights derived from the research literature. A survey of state policies conducted by the Center on Budget and Policy Priorities found that additional amounts for *low-income* students ranged from 2 percent to 59 percent of per-pupil funding for all students, with an average 17 percent.²

Among states that provide additional funding for low-income students, most use fixed "poverty weights" or flat supplemental per-pupil grants. Some states also account for low-income concentration, but they typically make step-wise adjustments at different ranges of low-income concentration, as Illinois did prior to FY 2004. The most common measure for low-income student counts is eligibility for the National School Lunch Program (NSLP); some states distinguish between eligibility for free lunch (135% of FPL) and eligibility for reduced-price lunch (185% of FPL).

- In Massachusetts, the state sets a "foundation budget" for each school district. In FY 2010, the statewide average was \$9,659 per pupil. The state provides additional funding for low-income students based on NSLP eligibility. In FY 2010, the increment was \$3,239 per pupil for grades 1-8 and \$2,619 per pupil for grades 9-12.
- Maryland's compensatory education formula also provides funding based on NSLP eligibility. The supplemental funding per eligible student is 97 percent of the per-pupil foundation amount (\$6,694 in FY 2010). The state, however, covers only half of the cost, so the effective low-income weight is 48.5 percent of foundation funding (\$3,247).
- Colorado uses participation in the *free lunch* program as a proxy for a school district's at-risk student population. Depending on the concentration of at-risk students, the district receives additional funding ranging from 12 percent to 30 percent of its total per-pupil funding.
- In Minnesota's complex formula for "compensatory revenue," students eligible for reduced-price lunch are given half the additional weight of those eligible for free lunch.

¹ William D. Duncombe and John Yinger, "Measurement of Cost Differentials," in Helen F. Ladd and Edward B. Fiske, eds., *Handbook of Research in Education Finance and Policy* (Routledge, 2008).

² Kevin Carey, "State Poverty-Based Education Funding: A Survey of Current Programs and Options for Improvement" (Center on Budget and Policy Priorities, November 2002).

Current Per-Pupil Grants in Illinois

Under the current poverty grant formula in Illinois, the constant dollar amount per pupil (\$294.45) and the variable dollar amount per pupil (\$2,700) have never been changed. In FY 2004, the maximum grant per pupil (\$2,994) was 62 percent of the foundation level. In FY 2010, the same maximum grant was less than half the foundation level (see Exhibit 3). The base amounts could be updated in various ways — for example, by adjusting for inflation or by setting the grants as a percentage of the foundation level. The latter approach was recommended by EFAB in 2001 (see below).

	Foundation level	Maximum poverty grant	As pct. of foundation level
FY 2004	\$4,810	\$2,994	62%
FY 2005	4,964	2,994	60%
FY 2006	5,164	2,994	58%
FY 2007	5,334	2,994	56%
FY 2008	5,734	2,994	52%
FY 2009	5,959	2,994	50%
FY 2010	6,119	2,994	49%

Adjustment for Low-Income Concentration

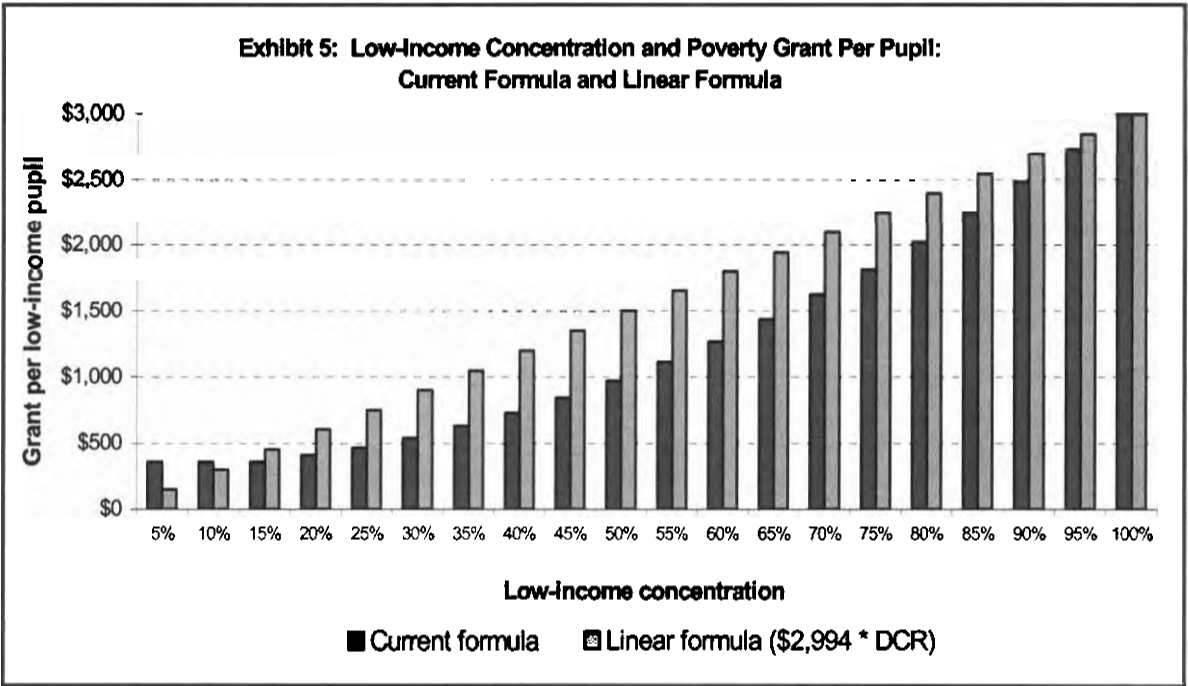
Under the current Supplemental GSA formula, the per-pupil grant varies according to the school district concentration of low-income students. The poverty grant formula incorporates a curvilinear (i.e., exponential) relationship between low-income concentration level and per-pupil grant. The variable component of the “base” poverty grant (\$2,700) is multiplied by the square of the district concentration rate (DCR). This formula was intended to target resources to school districts with the heaviest concentrations of poverty, but it has the effect of shifting resources away from school districts that are closest to 50 percent low-income. For a school district with 100 percent DCR, the per-pupil grant (\$2,994) would be 49 percent of the FY 2010 foundation level (\$6,119). For a district with 70 percent DCR, the grant would be \$1,617 per pupil or 26 percent of the foundation level. For a district at 50 percent DCR, the grant would be only \$969 or 16 percent of the foundation level (see Exhibit 4).

Another problem with the current formula is that the DCR calculation uses the three-year average DHS count as the numerator and average daily attendance (ADA) as the denominator. Using ADA rather than total enrollment has the effect of inflating the DCR and penalizing school districts with higher attendance rates. For regular GSA, school districts have an incentive to improve their attendance rates, but for Supplemental GSA, a higher ADA results in a lower DCR and a smaller per-pupil poverty grant.

Exhibit 4: Low-Income Concentration and Poverty Grants Per Pupil

Percent low-income	Poverty grant per pupil	As pct. of FY 2010 found. level (\$6,119)
10.0	355	5.8
20.0	402	6.6
30.0	537	8.8
40.0	726	11.9
50.0	969	15.8
60.0	1,266	20.7
70.0	1,617	26.4
80.0	2,022	33.0
90.0	2,481	40.5
100.0	2,944	48.9

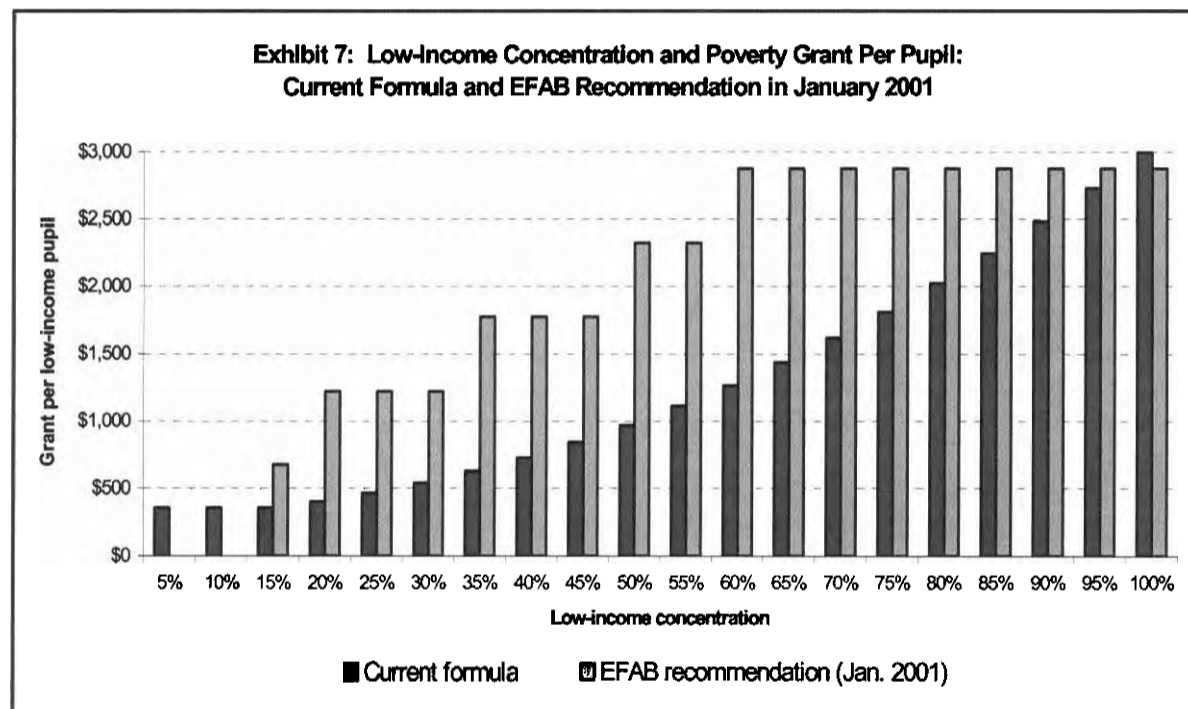
Exhibit 5 compares the current formula with a linear adjustment for concentration of low-income pupils. The linear formula retains the maximum grant of \$2,994 but eliminates the \$355 minimum grant and the \$294.45 constant factor in the formula. Nearly all school districts would receive larger per-pupil grants than under the current formula. Districts below 15 percent DCR would get smaller grants, while grants for those at 100 percent DCR would remain the same.



In January 2001, EFAB recommended a step-wise formula that would link per-pupil poverty grants to the foundation level (see Exhibit 6). The maximum grant, for school districts at or above 60 percent DCR, would be 47 percent of the foundation level. Per-pupil grants below the maximum would range from 38 percent to 11 percent of the foundation level. School districts under 15 percent DCR would not receive poverty grants.

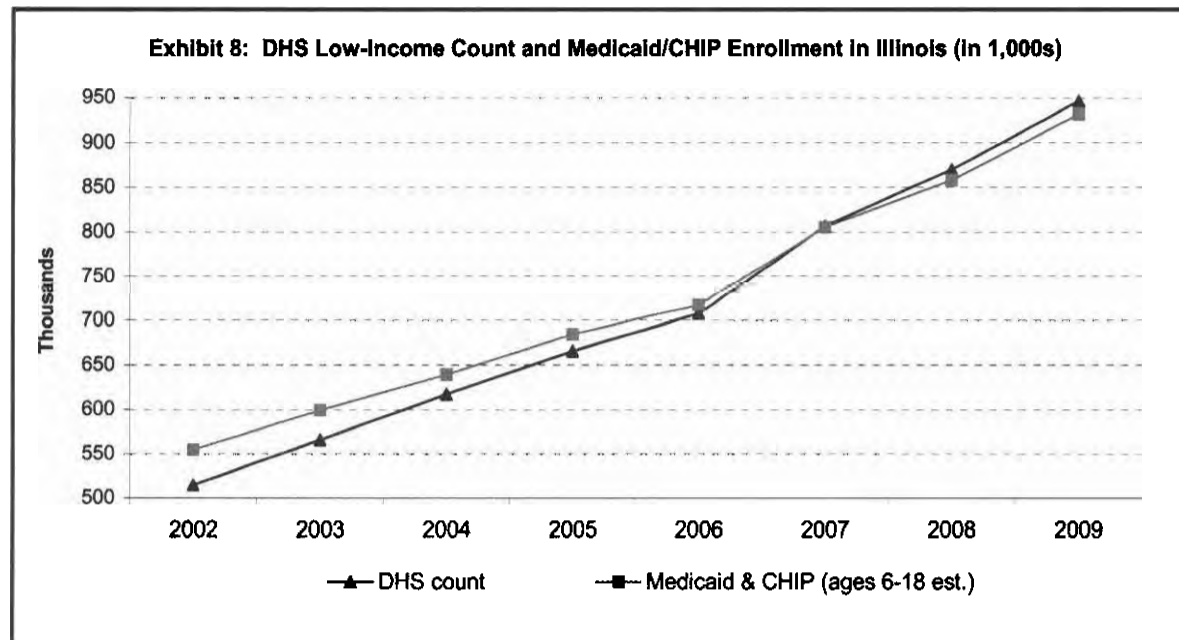
District concentration rate	Per pupil grant as pct. of found. level	Per pupil grant with FY 2010 found. level
DCR < 15%	0%	0
15% ≤ DCR < 20%	11%	673
20% ≤ DCR < 35%	20%	1,224
35% ≤ DCR < 50%	29%	1,775
50% ≤ DCR < 60%	38%	2,325
DCR ≥ 60%	47%	2,876

Exhibit 7 compares the current formula with the 2001 EFAB recommendation — using the FY 2010 foundation level of \$6,119. Under the step-wise formula, per-pupil poverty grants for districts at 100 percent DCR would be slightly smaller, and districts below 15 percent low-income would no longer receive minimum grants. In all other school districts, poverty grants would be substantially higher than they are now. For example, districts at 50 percent DCR would see their per-pupil grants increase from 16 percent to 38 percent of the foundation level.



Low-Income Pupil Count

The steady growth of poverty grants since FY 2004 reflects the unanticipated consequences of adopting the DHS low-income count for the allocation of funds to school districts. The DHS count has largely been driven by Medicaid and CHIP enrollment, which increased 56 percent between June 2003 and June 2009. In July 2003, the CHIP income eligibility limit in Illinois was raised from 185 percent to 200 percent of FPL. In July 2006, the state began implementation of the “All Kids” health insurance program, which offers coverage to uninsured children regardless of family income and has had significant spillover effects on Medicaid and CHIP. As Exhibit 8 shows, the DHS low-income count has closely paralleled Medicaid and CHIP enrollment of school-age children.



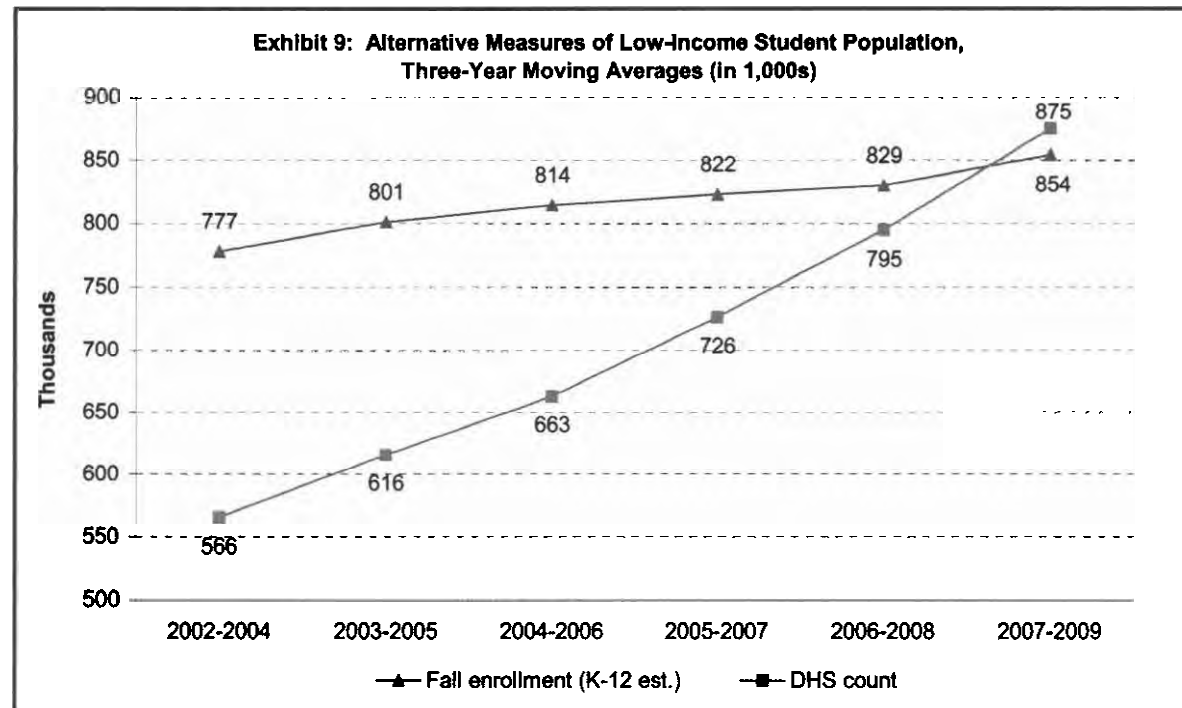
Despite the growth of Medicaid and CHIP enrollment, the DHS count does not necessarily capture the entire low-income student population. Some low-income families (about one-fourth) are able to cover their children with employment-based health insurance. Another factor is that until recently, immigrant children had to reside in the U.S. for five years before enrolling in Medicaid or CHIP. The Children’s Health Insurance Program Reauthorization Act of 2009 allowed states to waive the five-year waiting period for legal immigrant children. Undocumented immigrant children remain ineligible for these programs.

Comparing Low-Income Counts

The State Board of Education’s fall enrollment (FE) reports include low-income student estimates based largely on NSLP eligibility, although the estimates also include children in families receiving public aid and children in substitute care — both relatively small populations. Unlike the DHS counts, the FE counts are self-reported by school districts, although there is no evidence that the statewide FE low-income counts are inflated. In-

sofar as the FE counts are based on NSLP participation, they probably understate low-income enrollment in high schools. Moreover, statewide trends in the FE low-income count are close to the trends for data on NSLP participation.

Since FY 2004, the DHS count has been increasing at a much faster rate than the low-income estimates derived from the FE reports. In 2002-2004, the statewide DHS count was 27 percent below the FE estimate. The gap between the two measures was reduced to only 4 percent in 2006-2008. In 2007-2009, the DHS count exceeded the FE estimate (see Exhibit 9). Between 2002 and 2009, average annual growth was 9.1 percent for the DHS count and 2.6 percent for the FE low-income count. According to estimates from the U.S. Census Bureau's American Community Survey, the growth rate for the state's population of low-income children was 1.7 percent over the same period of time.



Impact on Poverty Grants

Changing the basis of the low-income pupil count would also change the DCR adjustments. For school districts statewide, replacing DHS counts with FE low-income estimates in FY 2010 would have resulted in a 4 percent increase in the low-income count but a 27 percent increase in total poverty grants. In FY 2011, however, shifting to the FE count would produce only an 8 percent increase in poverty grants. Using projections for FY 2012, such a shift would make very little difference (1.4%) in the statewide cost of poverty grants. The Chicago Public Schools would get a 20 percent increase, but poverty grants would decline in suburban Cook County, the collar counties, and other regions of the state (see Exhibit 10).

Exhibit 10: Estimated Poverty Grants Using DHS Count and Fall Enrollment Count of Low-Income Students, FY 2010 to FY 2012

	FY10 DHS (\$ mill.)	FY10 FE (\$ mill.)	Pct. diff.	FY11 DHS (\$ mill.)	FY11 FE (\$ mill.)	Pct. diff.	FY12* DHS (\$ mill.)	FY12* FE (\$ mill.)	Pct. diff.
Chicago	581.8	856.9	47.3	667.2	839.5	25.8	716.0	859.8	20.1
Suburban Cook	156.3	175.4	12.2	211.9	194.2	-8.4	248.5	205.9	-17.1
Collar counties	98.4	110.8	12.6	144.0	122.4	-15.0	177.7	137.4	-22.7
Rest of state	281.0	281.5	0.2	325.4	300.0	-7.8	352.8	312.1	-11.6
Total	1,117.4	1,424.6	27.5	1,348.6	1,456.0	8.0	1,494.9	1,515.1	1.4

* Projected

These aggregate estimates obscure much wider differences across school districts. If the DHS count were replaced by the FE count in FY 2012, one-fourth of all school districts would have poverty grants at the same or higher level, while the remainder would receive less funding. Exhibit 11 shows the estimated effects for selected school districts in various parts of the state — all of which have low-income enrollments of more than 50 percent. Using the FE count in FY 2012 would result in a 15 percent increase in the poverty grant for Quincy but a 55 percent decrease for East St. Louis. In the Joliet area, the elementary school district would get 44 percent less, but the high school district would get 49 percent more. In Cook County, Proviso Township High School District would lose more than 70 percent of its poverty grant.

Exhibit 11: Estimated Poverty Grants Using DHS Count and Fall Enrollment Count of Low-Income Students, Selected School Districts, FY 2011 and FY 2012

	FY 2011 DHS (\$1,000s)	FY 2011 FE (\$1,000s)	Pct. diff.	FY 2012* DHS (\$1,000s)	FY 2012* FE (\$1,000s)	Pct. diff.
Aurora East USD 131	22,629	13,774	-39.1	30,381	14,777	-51.4
Cicero SD 99	26,075	27,610	5.9	31,404	27,876	-11.2
Decatur SD 61	14,749	10,859	-26.4	15,427	10,627	-31.1
Dolton SD 148	7,312	5,823	-20.4	7,485	5,740	-23.3
Dolton SD 149	4,720	6,399	35.6	5,154	7,333	42.3
East St. Louis SD 189	22,261	12,559	-43.6	21,686	9,734	-55.1
Joliet SD 86	11,746	8,820	-24.9	13,791	7,769	-43.7
Joliet Township HSD 204	3,113	4,965	59.5	3,762	5,597	48.8
Kankakee SD 111	8,519	10,179	19.5	9,233	10,264	11.2
Peoria SD 150	17,498	19,054	8.9	19,017	18,993	-0.1
Proviso Township HSD 209	6,401	1,838	-71.3	7,954	2,283	-71.3
Quincy SD 172	2,822	3,354	18.9	3,120	3,589	15.0
Rockford SD 205	31,897	38,356	20.3	35,881	39,602	10.4
Springfield SD 186	15,510	12,530	-19.2	17,199	13,837	-19.5
Waukegan CUSD 60	20,846	16,123	-22.7	5,405	3,680	-31.9

Projected

Small Area Income and Poverty Estimates

Both the DHS counts and the FE estimates have limited accuracy as measures of the low-income student population. Another alternative would be the Small Area Income and Poverty Estimates (SAIPE) published annually by the U.S. Census Bureau. The model-based SAIPE data include poverty estimates (but not low-income estimates) for all school districts. The federal government uses SAIPE data in the allocation of Title I grants, and some states use SAIPE in their school funding formulas.

One limitation of SAIPE is that the estimates represent all school-age children residing in a given district, regardless of whether they attend public or private school or are not enrolled in school. For the city of Chicago, where many students attend private schools, using the SAIPE data would underestimate the poverty rate in the public schools.

For most other school districts, SAIPE data could provide a more reliable and stable measure than either the DHS count or the FE low-income count. At the same time, using SAIPE data in the Supplemental GSA formula would entail targeting the funding on the basis of poverty rather than low-income status. Such a shift could, however, be accompanied by much larger per-pupil grants. Redesigning the poverty grant formula along these lines would require additional analysis of the impact across school districts.

Policy Options

This analysis suggests that the overall structure of Supplemental General State Aid should be reassessed. Each of the major components of the poverty grant formula has significant flaws:

- The base dollar amount per pupil has not been changed since the formula was instituted in FY 2004. The per-pupil grants could be updated by setting them as a percentage of the foundation level.
- The curvilinear adjustment for percentage of low-income students was intended to target resources to districts with the highest concentrations of poverty, but it has had the effect of shifting resources away from districts that are closest to 50 percent low-income.
- The statewide DHS count of low-income students (based largely on Medicaid and CHIP enrollment) has been increasing at a much faster rate than the low-income estimates in fall enrollment reports (based largely on participation in the National School Lunch Program). Similarly, the DHS count has been rising at much faster rate than the Census Bureau's estimates of the low-income child population in Illinois. Moreover, use of the DHS count has had disparate effects across school districts.

Viable solutions to the "poverty grant puzzle" are less clear than the flaws in the current system. For FY 2012, the projected cost of poverty grants is about \$1.5 billion. Exhibit 12 presents a summary of cost estimates for several alternatives to the current formula:

Replacing the curvilinear adjustment for low-income concentration with a simple linear adjustment would cost about \$310 million in FY 2012. If the linear adjustment were coupled with a change in the denominator for the district con-

centration rate (fall enrollment rather than average daily attendance), the aggregate increase in poverty grants would be smaller — about \$190 million.

- A step-wise formula linked to the foundation level, as recommended by EFAB in 2001, would cost about \$670 million more than the current formula in FY 2012. Changing the DCR denominator would save about \$40 million.
- Changing the low-income count from the DHS count to the fall enrollment estimate would cost about \$20 million in FY 2012. Allocating poverty grants to school districts based on the higher of the two measures would cost an additional \$190 million.

Exhibit 12: Cost Estimates for Changes in Poverty Grant Formula

	FY 2011 estimate (\$ mill.)	Change in cost (\$ mill.)	Pct. change	FY 2012 estimate (\$ mill.)	Change in cost (\$ mill.)	Pct. change
Current formula	1,349	0	0.0	1,495	0	0.0
Linear adjustment for DCR	1,658	309	22.9	1,806	311	20.8
With change in denominator for DCR	1,547	198	14.7	1,686	191	12.8
Step-wise formula linked to found. level	2,028	680	50.4	2,167	672	45.0
With change in denominator for DCR	1,992	643	47.7	2,129	634	42.4
Low-income count based on FE estimates	1,456	107	8.0	1,515	20	1.4
Using higher of DHS count or FE count	1,580	231	17.1	1,686	191	12.8

DCR = district concentration rate
DHS = Department of Human Services
FE = fall enrollment

These options are not the only possible alternatives, of course. Moreover, interaction between the various components of the Supplemental GSA formula requires that proposed changes be evaluated together. Before developing specific recommendations for consideration by the Education Funding Advisory Board, we need more detailed analysis of alternatives to the DHS low-income count and the current adjustment for concentration of low-income students, as well as the costs of different reform packages. In the short term, the State Board of Education should provide greater transparency by improving access to data on General State Aid and other funding for public schools.