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ABSTRACT

A 1977 restudy of Colorado school finance, following a 1974 study of the effects of the state's 1973 finance reforms, indicates that Colorado school finance is still unequal. Colorado's school finance program is essentially a resource equalization plan (also known as a "guaranteed tax base" or "district power equalization" plan). The major changes in the preceding 5 years involved improvements in property assessment practices and the setting of an authorized revenue base (ARB) for each district. Assessment of the equity of Colorado's current school finance structure is based on equality of expenditure per pupil (the amount of variation in such expenditure across school districts) and on fiscal neutrality (the extent of the relationship between a district's expenditure level and its fiscal capacity). Data from Colorado's 181 districts show the state met neither equity standard in 1977 (nor did it in 1974). Per-pupil expenditures vary greatly and are related to districts' ARBs. Further, expenditure per student and district ARB vary with district wealth and income, so the state is not fiscally neutral. The authors suggest changing both the ARB, claiming it locks in unequal expenditures among districts, and the guaranteed tax base, which they say is too high and covers too many districts. (RW)

PAPERS IN EDUCATION FINANCE

PAPER NO. 8

SCHOOL FINANCE IN COLORADO: AN UPDATE

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SCHOOL FINANCE IN COLORADO: AN UPDATE

In 1975, the Education Finance Center of the Education Commission of the States conducted a short study of the first year impact of the Colorado School Finance Reform of 1973. That report indicated that expenditures per pupil differed substantially across school districts, with the ten highest expenditure per pupil districts spending 2.7 times the amount of the ten lowest expenditure per pupil districts. That report also indicated that the expenditure per pupil differences were closely linked to local school district property wealth: school districts high in assessed valuation per pupil enjoyed high expenditures per pupil with below average tax rates, while school districts low in assessed valuation settled for average or below average expenditure per pupil levels even with above average tax rates. The report concluded that the expenditure per pupil differences were likely to remain, as well as be related to local district property wealth and income unless Colorado: 1) adjusted assessed valuations by assessment/sales ratios to compensate for unequal assessment practices; 2) reduced substantially or eliminated the minimum guarantee of the formula; and 3) adopted some type of income factor. The report did not emphasize the role of the authorized revenue base (ARB) in maintaining expenditure inequalities, but it should have been predicted that the ARB, by locking in historical expenditure inequities, would exacerbate the three problems underscored by the report.

The earlier report, however, analyzed data from the 1974 school fiscal year, the first year in which the 1973 reform was implemented. The full impact of such a major finance reform cannot be felt fully in the first year. The Center has long planned to update the earlier report sometime in 1978 with information from the 1977 school fiscal year, which would indicate the impact

of the reform after four years.

An updated report becomes all the more useful at this time because of the many events in Colorado school finance that have occurred over the past five years. There have always been critics of the Colorado school finance plan; the critics include liberals, conservatives and persons in the middle of the political spectrum. While the criticisms have varied, the common theme has been that the Colorado plan would not improve school finance equity and that, over time, things would get worse rather than better. Some felt that the flaws in the current structure were so problematic that a court suit was needed to focus attention on the inherent inequalities in the system, that are argued to be in violation of both the equal protection and education clauses of the state's constitution. Colorado's version of Proposition 13, the Burch-Orr amendment, further intensifies the school finance debate currently going on in Colorado.

Given these various concerns and events, it was felt that an update of the 1975 report would be useful in providing an objective overview of the current status of school finance in Colorado. This short report is designed to provide that perspective and has three sections. The first describes the major elements in the Colorado school finance structure and the changes that have been implemented over the past five years. The second assesses the degree to which the current structure meets the two basic equity standards in school finance: 1) fiscal neutrality, i.e., no relationship between expenditure levels and district fiscal capacity; and 2) expenditure equality, i.e., limited expenditure per pupil differences across all school districts. The last section provides some conclusions and policy implications related to local

control and possible adjustments that could improve the Colorado school finance system.

I. COLORADO'S SCHOOL FINANCE PROGRAM

Colorado's school finance formula can best be described as a resource equalization plan. Such a program has been called a guaranteed tax base, guaranteed yield or district power equalization plan in other states. The essence of the plan is that the state guarantees to every school district a dollar yield per pupil for every mill of tax levied. During 1974, Colorado guaranteed a yield of $25 per pupil per mill. If the local tax base provided less than that amount, the state made up the difference. However, regardless of the tax base yield in a particular school district, each district was eligible for a minimum guarantee of $8 per pupil per mill. The $25 and $8 figures were changed each year as shown below and reached $31.92 and $10.85 for the 1977 school fiscal year.

School Year	Guarantee ($/pupil/mill)	Minimum Guarantee ($/pupil/mill)
1974	25.00	8.00
1975	27.00	9.00
1976	29.62	10.35
1977	31.92	10.85
1978	35.00	11.35

However, there were limitations to this basic structure. In order to control expenditure increases, the state calculated an ARB for each school district which included local and state general revenues and was based on figures from the 1972-73 school year. Districts were allowed to increase the ARB by a maximum of 7 percent a year for districts with an ARB above $1,000 and

a larger percentage for districts with smaller ARBs. If districts wanted to exceed the allowable increase, they had to request approval from the State Budget Review Board. If approval was denied, the district needed a school district referendum to raise expenditures. All increases beyond the ARB had to be funded entirely from local funds during the first year, an especially onerous burden for low wealth districts. The double digit inflation of the mid-1970s soon put nearly all districts on the 7 percent allowable annual increase. In 1977 all districts were limited to an ARB increase of $120 per pupil. These expenditure increase controls are among the most inflexible in the country and effectively eliminate local fiscal control for all districts.

In addition to the basic plan, the system also provided additional aid for small school attendance centers which equaled, for each bonus pupil, the lesser of the ARB or the state guarantee per mill per pupil times the district's general fund mill levy.

These general, unrestricted aids were complemented by a set of categorical aids for special education, bilingual education and transportation. While the law authorizes the state to reimburse local districts for the excess cost of special education programs that program has never been fully funded and, in general, districts have recovered about 50 percent of their excess costs. Bilingual education programs were funded beginning in the 1975-76 school year and the state provided a total of $2.4 million in 1978 for students linguistically and culturally different and below level in academic achievement. Transportation costs were shared by the state up to a maximum of 90 percent.

Perhaps the most substantive change in school finance was the improvement made in property assessment practices. Since 1976, assessing jurisdictions have been mandated to assess all properties at uniform levels set by the state. Recent analyses have shown that assessments have changed dramatically and that the local assessment jurisdictions are abiding by that state mandate. Though improvements are still possible in assessment procedures, the use of locally determined assessed valuations, unadjusted by assessment/sales ratios, is no longer the problem it was in 1974.

During the 1977 school fiscal year, revenues for public elementary and secondary schools in Colorado totaled about $950 million. Of that total, 47 percent was derived from local sources, primarily the property tax, 43 percent from state sources and 6 percent from the federal government. Beginning year fund balances accounted for about 4 percent of total revenues.

II. THE IMPACT OF COLORADO'S SCHOOL FINANCE PROGRAMS

There are two basic standards of equity or fairness in school finance. The first, expenditure per pupil equality, is focused on students. Its requirement is that expenditures per pupil be equal across school districts (after adjustments for varying pupil needs and differing education costs) and the objective of a school finance program designed to meet this standard is to reduce spending gaps between high and low expenditure per pupil districts. This standard is increasingly becoming associated with state constitutional clauses calling for a thorough and uniform, general and uniform, thorough and efficient, and even just a free public school system.

The second standard of equity in school finance is called fiscal neutrality. This standard is focused more on taxpayers, its requirement is that expenditures per pupil be unrelated to school district fiscal capacity, and the objective of a school finance program designed to meet this standard is to provide equal expenditures per pupil for school districts with equal tax rates. This standard has been associated with state constitutional equal protection clauses and has been, until recently, the primary aspect of legal challenges to school finance structures.

In 1974, Colorado's school finance system met neither of these standards. That conclusion is also valid for Colorado school finance in 1977 as the following analysis will show.

Expenditure Per Pupil Equality

There is a wide variation in expenditures per pupil across Colorado's 181 school districts as shown in Table 1. While the median expenditure per pupil was $1,795 in 1977, the highest expenditure per pupil district spent 270 percent of that amount while the lowest expenditure per pupil district spent only 67 percent of that amount. The ratio between the school district at the 90th percentile of expenditures was 2.2 times that of the district at the 10th percentile. The magnitude of these expenditure per pupil differences cannot be attributable to cost variations, which could account for a maximum of 10 percent of expenditure differences. Nor can these large expenditure differences rationally be attributed to differing pupil needs. The fact is that expenditures per pupil among Colorado's school district are far from general and uniform.

TABLE 1

CURRENT EXPENDITURES PER PUPIL IN
COLORADO SCHOOL DISTRICTS, 1977

Highest: Washington-Lone Star		$4,888
90th Percentile: Park County		3,080
Median: Elbert-Big Sandy		1,795
10th Percentile: Elbert-Elizabeth		1,400
Lowest: Conejos-North Conejos		1,212
Ratio: Highest/Lowest:	4.0:1	
Ratio: 90th/10th Percentile	2.2:1	

Prepared by the Education Finance Center, Education Commission of the States from official data of the Colorado Department of Education.

TABLE 2

CURRENT OPERATING EXPENDITURES PER PUPIL
BY QUINTILE, 1977

Current Operating Expenditures Per Pupil	Percent of Pupils	Number of Districts
$1,212 - 1,495	20	35
1,495 - 1,650	18	20
1,650 - 1,725	23	11
1,725 - 1,935	18	39
1,935 - 4,888	21	76

Prepared by the Education Finance Center, Education Commission of the States from official data of the Colorado Department of Education.

These expenditure per pupil differences, moreover, are not just a result of a few high and a few low spending districts. Table 2 indicates that expenditures per pupil differ consistently across all districts and affect all students. Even after dividing students into quintiles of expenditures per pupil, expenditures differ by roughly $150 between each quintile, which means that students in the top quintile have a minimum of $600 more spent on them than students in the bottom quintile.

In a sense these expenditure differences are not surprising since the allowed increases in expenditures have been linked to the authorized revenue bases that were highly unequal in 1974 and continue to be highly unequal in 1977 as shown by the data in Table 3. The ARB of the median district was $1,341 while that of the district at the 90th percentile was nearly 50 percent above that, with the ARB of the district at the 10th percentile just 82 percent of the median. As demonstrated starkly in Table 4, moreover, ARB gaps have not been reduced. In fact ARB increases have been highest for those districts with the highest 1974 ARBs and lowest for those districts with low 1974 ARBs. In short, the expenditure inequalities that existed prior to the 1973 reform have been maintained by the ARB limitations and today, as well as prior to the 1973 school finance reform, expenditures per pupil vary dramatically across school districts and students in the State of Colorado.

These expenditure differences, moreover, translate into differences in the level and quality of education services provided to students. Higher expenditure districts are not simply providing the same level of education services as low spending districts but at a higher cost. High spending districts may pay higher salaries, but they not only obtain better qualified

TABLE 3

AUTHORIZED REVENUE BASE PER PUPIL
COLORADO SCHOOL DISTRICTS, 1977

Highest: Washington-Lone Star		$3,100
90th Percentile: Kiowa-Plainview		1,962
Median: Kit Carson-Stratton		1,341
10th Percentile: Rio Grande-Monte Vista		1,101
Lowest: LaPlata-Bayfield		1,004
Ratio: Highest/Lowest:	3.1:1	
Ratio: 90th/10th Percentiles	1.8:1	

Prepared by the Education Finance Center, Education Commission of the States from official data of the Colorado Department of Education.

TABLE 4

CHANGE IN ARB FROM 1974 TO 1977
BY QUINTILE OF 1974 ARB

Quintile of 1974 ARB	Average 1974 ARB	Average 1977 ARB	Change in ARB: 1974 to 1977
Highest	$1,226	$1,765	$+539
Second	1,034	1,440	+406
Third	959	1,386	+427
Fourth	897	1,265	+368
Lowest	845	1,149	+304
State Average	$980	$1,409	$+429

Prepared by the Education Finance Center, Education Commission of the States from official data of the Colorado Department of Education.

teachers with the higher pay scale but also hire more teachers and more aides and offer a wider range of education programs. Indeed studies of the use of large increases in school finance reform dollars as well as the difference in expenditure patterns between the high and low spending districts show that the additional dollars are used to expand educational services, provide more programs to students with special needs and upgrade the quality of education in a school district.

Fiscal Neutrality

While the primary objective of the 1973 school finance reform may not have been to eliminate expenditure per pupil disparities, a primary objective was to eliminate the relationship between expenditure differences and local district fiscal capacity. As Table 5 indicates, assessed valuation of property per pupil is substantially different across Colorado school districts, ranging from over $300,000 per pupil in the wealthiest district to just over $4,000 for the poorest district, a difference of more than 70 to 1. With such wide wealth variations and heavy use of the property tax to raise local funds, one would expect a close link between expenditures per pupil and local property wealth, unless the state aid equalization formula was designed to compensate for varying wealth and provided equal yield per pupil for equal tax effort. While ostensibly designed to fulfill this goal, the Colorado system -- as it has been implemented -- has fallen far short of this goal.

In Table 6, both the ARB and expenditures per pupil are given by quintiles of assessed valuation of property per pupil, with approximately equal numbers of students in each quintile. These data indicate that there is a direct

TABLE 5

ASSESSED VALUATION PER PUPIL IN
COLORADO SCHOOL DISTRICTS, 1977

Highest: Rio Blanco-Rangely		$326,269
90th Percentile: Eagle-Eagle		57,516
Median: Mesa-Plauteau Valley		20,670
10th Percentile: Montezuma-Dolores		10,764
Lowest: El Paso-Fountain		4,197
Ratio: Highest/Lowest	77.7:1	
Ratio: 90th/10th Percentiles:	5.3:1	

Prepared by the Education Finance Center, Education Commission of the States from official data of the Colorado Department of Education.

TABLE 6

ARB AND CURRENT OPERATING EXPENDITURES PER PUPIL
BY QUINTILES OF ASSESSED VALUATION PER PUPIL, 1977

Assessed Valuation Per Pupil	Percent of Pupils	Number of Districts	Authorized Revenue Base	Current Operating Expenditures Per Pupil
$ 4,197 - 12,800	19	33	1,196	$1,532
12,800 - 15,500	20	25	1,312	1,594
15,500 - 17,600	14	14	1,299	1,667
17,600 - 24,500	27	32	1,476	1,742
24,500 - 326,269	20	77	1,692	2,342

Prepared by the Education Finance Center, Education Commission of the States from official data of the Colorado Department of Education.

correlation between property wealth and both the ARB and expenditures per pupil. As wealth increases, both the ARB and expenditures per pupil increase. Put another way, the wealthier a school district, the higher the actual expenditure per pupil and the higher the expenditure per pupil allowed by state law. In other words, not only the state expenditure controls, i.e., the ARBs, discriminate among districts on the basis of wealth, but also actual district expenditure policies are driven by local wealth. In short, the fiscal neutrality standard, with fiscal capacity measured by property wealth, is not met by the current school finance structure.

In addition, the fiscal neutrality standard is not met when fiscal capacity is measured by income per pupil as shown by the results in Table 7. Both the ARB and expenditures per pupil increase as district adjusted gross income per pupil increases, and the relationship is even stronger than that for property wealth. Put differently, the Colorado school finance system is fiscally unneutral under both a wealth neutrality and an income neutrality standard. Even though state equalization aid is allocated in greater amounts to poor school districts than to wealthy districts, the aid structure together with the ARB do not eliminate the role played by wealth and income. Put bluntly, wealth and income still drive the Colorado school finance system.

This conclusion holds, moreover, even for school districts of similar pupil size. Table 8 indicates the total state and local revenue per pupil for districts broken into four pupil size categories and grouped by the quintiles of assessed valuation of Table 6. The data in Table 8 show that for each size grouping, state and local revenue per pupil decreases as wealth decreases. These results mean that even for districts with similar numbers of students,

TABLE 7

ARB AND CURRENT OPERATING EXPENDITURES PER PUPIL
BY QUINTILES OF ADJUSTED GROSS INCOME PER PUPIL

Adjusted Gross Income Per Pupil	Percent of Pupils	Number of Districts	Authorized Revenue Base	Current Operating Expenditures Per Pupil
$ 1,014 - 14,750	20	104	1,228	$1,628
14,750 - 18,200	20	39	1,280	1,625
18,200 - 22,000	16	17	1,360	1,662
22,000 - 26,130	25	12	1,448	1,707
26,130 - 40,420	19	9	1,723	2,305

Prepared by the Education Finance Center, Education Commission of the States from official data of the Colorado Department of Education.

TABLE 8

STATE AND LOCAL REVENUE PER PUPIL BY QUINTILES OF ASSESSED VALUATION PER PUPIL FOR DISTRICTS GROUPED BY PUPIL SIZE

	Quintile of Assessed Value Per Pupil	Number of Districts	State and Local Revenue Per Pupil
Fewer than 500 Students	Highest	44	$2,156
	Second	26	1,758
	Third	3	1,524
	Fourth	7	1,542
	Lowest	8	1,361
500 to 2,000 Students	Highest	17	$1,663
	Second	9	1,478
	Third	6	1,321
	Fourth	10	1,391
	Lowest	13	1,334
2,000 to 10,000 Students	Highest	1	$1,698
	Second	7	1,491
	Third	3	1,486
	Fourth	4	1,444
	Lowest	10	1,235
10,000 to 50,000 Students	Highest	0	—
	Second	2	$1,790
	Third	1	1,632
	Fourth	4	1,483
	Lowest	4	1,430

Prepared by the Education Finance Center, Education Commission of the States from official data of the Colorado Department of Education.

the Colorado school finance system is fiscally unneutral. Stated differently, neither expenditure per pupil inequalities nor the relationship between spending levels and wealth levels can be explained away by differences in the pupil size of school districts. Districts with fewer than 500 students have expenditure differences that are related to wealth differences, and this fact holds for districts with between 500 and 2,000 students, 2,000 to 5,000 students, and 5,000 to 10,000 students as well as all districts across the state.

In short, an inherent feature of the Colorado school finance system in 1977 is that it is driven by local school district wealth and income and produces wide expenditure per pupil variations from district to district.

Table 9 shows that even if property wealth were not a factor in Colorado school finance, tax rate difference would be strongly related to income. Given a basic education finance formula that, if perfectly implemented, would guarantee equal expenditures for equal tax rates, the data in Table 9 can be used to predict that tax rate differences would occur and would produce a system with substantial expenditure differences and with those differences related to income. While this conclusion was also reached from Table 7, the explicit relationship between tax rates and income as shown in Table 9 indicate that unless income is included in some way in the Colorado formula, income related inequalities could soon outweigh the current wealth related inequalities.

TABLE 9

ADJUSTED GROSS INCOME PER PUPIL AND ARB
BY QUINTILES OF GENERAL FUND TAX RATES

Ranges of Tax Rate (General Fund Mill Rate)	Adjusted Gross Income Per Pupil	Authorized Revenue Base
$ 5.60 - $37.70	$15,171	$1,226
37.70 - 40.98	16,430	1,263
40.98 - 46.75	16,963	1,362
46.75 - 46.90	21,830	1,477
46.90 - 58.35	28,973	1,660

Prepared by the Education Finance Center, Education Commission of the States from official data of the Colorado Department of Education.

III. CONCLUSIONS AND POLICY IMPLICATIONS

This short updated analysis of Colorado school finance in 1977 shows that the current system produces large expenditure per pupil differences of a magnitude that cannot be explained by varying costs and different pupil needs. These expenditure differences are inherent in the current structure because:

1) the ARB places strict limits on expenditure per pupil growth and essentially prevents low spending districts from "catching up,"

2) the ARB effectively locks in the expenditure disparities that existed in Colorado prior to the 1973 reform,

3) the minimum guarantee in the formula is so large that wealthy school districts receive large amounts of state aid that, together with the ARB limits, help them maintain their expenditure advantage, and

4) expenditure increases beyond the ARB limits must be funded entirely by local funds in the first year, which places a much larger burden on poor districts than on wealthy districts.

These same four factors are also largely the reasons why the expenditure differences will continue to be related to local school district wealth and income. A school finance structure that links expenditure per pupil levels to local wealth and income can hardly be one that fosters local control. Local control cannot blossom within the current Colorado school finance system. Because wealth and income drive the Colorado system, local control is a reality only for high wealth and high income school districts.

While the Colorado system remains seriously flawed, simple changes in the current structure could substantially improve the system. In fact, one of the most significant changes that has occurred in Colorado school finance has been

property assessment improvements. While the Colorado assessment system still has room for refinement, over the past four years dramatic progress has been made in getting all property assessed on a uniform, statewide basis. The correlation between assessed valuations and valuations adjusted by assessment/sales ratios is very high. The use of assessed valuation as a basis for aid allocation is no longer the problem it was in 1974.

Perhaps the most glaring flaws in the current structure are the minimum guarantee and the ARB. The minimum guarantee applies to too many school districts and, while all states have to include some compromises on pure school finance formulas to get bills passed, the high level of the minimum guarantee in Colorado is a major substantial concession that has compromised the intent of the basic structure of the formula.

The ARBs also have seriously hampered, perhaps even fatally hampered, the ability of the basic Colorado formula to guarantee equal yield for equal effort. The ARBs have simply locked in the old inequities and have prevented the system from gradually improving. Indeed, allowable expenditure increases for the high spending districts have been greater than for the low spending districts which means that relative expenditure differences have widened over the past years rather than diminished. Major changes in the application of expenditure controls, which are prerequisites of school finance reform especially in this post-Proposition 13 era, must be made in order for the Colorado school finance system to reduce the inequities and inequalities in the present system.

In this light, a few concluding comments on SB25, the changes in the Colorado school finance law passed in 1978, should be made. This bill increased

the minimum ARB and allowable ARB increases as follows:

Year	Minimum ARB	Allowed ARB Increase for Districts Above Minimum
1978	None	$120 per pupil
1979	$1,400	130 per pupil
1980	$1,600	140 per pupil
1981	$1,800	150 per pupil
1982	$1,800	160 per pupil

These changes are clearly steps in the right direction and they will blunt the most egregious aspects of the current ARBs. But they will not put all districts on an equal footing. For example, the ARB of the district at the 10th percentile in 1977 was $1,101. That will be allowed to increase to $1,221 in 1978, and would move to $1,351 in 1978 without the minimum. The minimum ARB floor that will be in effect will push the ARB up only $49, a marginal boost. Thus, while SB25 makes good attempts to help low ARB districts catch up, it is very unlikely that, even by 1982, the expenditure and ARB inequities will have been eliminated, or changed substantially from their status today.