Informing Policymakers About the Impact of State Funding Formula Components on Rural Schools

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ABSTRACT

This paper is focused on both the conceptual framework for the financial treatment of small schools and/ or school districts and the actual status of such schools within existing state finance systems. The first segment provides a brief review of research on the association between school size and educational outcomes. The policy implications of that research are then considered. The third portion of the paper is devoted to a description of current state finance formulas, which are reviewed with a particular emphasis on sparsity and geographical isolation factors. Finally, some policy considerations relative to the use of such factors are identified.

INTRODUCTION

Small rural school districts face a wide variety of problems, from difficulty in hiring and retaining quality teachers to inability to field competitive athletic teams because of the limited number of students. Some perceive that survival is the greatest problem facing those districts. In fact, between 1930 and 1980, the number of school districts in the United States decreased by 88%, from 128,000 to 15,900. But even for the surviving small school districts, the most critical and pervasive problems deal with costs and revenues. Small schools, if they are to provide educational programs similar in breadth and quality to those of larger schools, will inevitably incur higher per-pupil costs due to limited enrollments, small pupil-teacher ratios, higher utility and other operational costs per pupil, and other factors which limit economies of scale.

Large schools and districts have long been considered to be more efficient because they achieved greater economies of scale by educating larger numbers of students at lower per-pupil costs than did small schools and school districts. This thinking is changing however. Policymakers, educators, and others are beginning to question the effectiveness of the largest school districts, with their often impersonal atmospheres, high drop-out rates, and other attendant problems. In many cases, they are finding that the per-pupil cost of providing educational services is only one piece of the efficiency puzzle. More recent assessments of efficiency have considered relationships between revenues and such factors as increased learning, lower drop-out rates, increased participation in school events, and positive attitudes towards education. Now, when these are taken into account, questions are being raised as to whether the old adage "bigger is better" is the appropriate theme for schooling in the 1990s. Instead, in an era that focuses more on results in education, efficiency in schooling may be better interpreted by the expression "small is wonderful."

This conceptual shift from large to small schools and districts as a basis for achieving greater efficiency in schooling is driven by a growing body of research that focuses not only on the costs of schooling but on what may be obtained as the result of such expenditures. These studies show that small schools and districts may be a more efficient investment than large schools and districts because the learning value per unit of expenditure is generally higher in such small, rather than large, organizations.

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However, the higher per-pupil costs for education in small schools and school districts do remain as a problem and state policies regarding their funding vary considerably. Self (1991) identified four conceptual bases from which such policies have evolved. The base perhaps most responsible for the rapid and considerable decline in the number of school districts was referred to in his work as that of "intolerance." Other state policies are based on a concept of "neutrality" in which there are no funding provisions unique to small schools or school districts. Still other states have developed policies which support the provision of supplemental revenue to offset the higher per-pupil costs. The foundation program formulas in a number of states include sparsity and/or geographical isolation factors. Such actions comply with the final two conceptual bases: the provision of additional money to either all small schools (the sparsity factor) or only to those schools which are both small and geographically isolated.

SCHOOL SIZE AND ACHIEVEMENT

In a 1981 synthesis of 30 earlier research studies on school district size, Fox observed that "most questions related to size are concerned with the potential cost savings associated with educating different numbers of pupils" (p. 281). However, he observed, costs related to the "number of students [do] not provide information on the quality of education" (p. 281). In a more recent research study on school size and school quality, Butler and Monk (1985) concurred with the earlier findings on this topic. They noted that "the analysis of scale economies enjoyed by larger districts can come at the expense of the efficient production of educational outcomes." In fact, when considering their data from New York State, lower levels of efficiency were found to exist in large as compared to small districts. Likewise, Walberg and Fowler (1987), summarizing that and other recent studies on the relationship of district size and student achievement, noted the growing evidence that large school districts usually achieve less efficiently. "Research on the district size . . . is at best equivocal," they stated, "and much of it suggests that bigger districts yield low achievement, and poor student, parent, and staff morale" (p. 8).

Utilizing data from New Jersey to compare school district size and achievement, Walberg and Fowler (1987) then found that, in "all cases, larger district enrollments are associated with lower test scores" (p. 12). They concluded that the findings "contradict the hypothesis sometimes put forward that large districts are efficient" (p. 11) and emphasized this as the unintended result of state policies over the last century that have encouraged wide-scale school district consolidation.

These striking trends confirm other recent studies of district size and suggest that the policy of district consolidation undertaken by states in this century may have hurt rather than helped learning since they suggest diseconomies rather than economies of scale. The same trend might also be found for the size of schools, and this possibility certainl deserves more systematic research (p. 12).

In *A Place Called School*, Goodlad (1984) wrote that small schools yielded the highest outputs in the sample investigated. "Most of the schools clustering in the top group of our sample in major characteristics were small." From this, Goodlad noted that "surely any arguments for larger size based on administrative considerations are far outweighed by educational ones against large schools" (p. 309). However, he observed, current practice generally did not reflect the research.

Conant suggested that a high school with 100 graduating seniors would be sufficiently large to facilitate his recommended curriculum. Some school boards and superintendents concluded, apparently, that more would be better and pushed for school consolidation, usually accompanied by curricular expansion, the availability of more alternatives, and the teaching and course resources necessary to tracking. I have difficulty arguing the virtue of any of these, given our data (p. 310).

In summary, Goodlad stated that, while "it is not impossible to have a good large school; it simply is more difficult" (p. 309). "Admittedly, the low student-teacher ratio required to provide [for the small high school's] surprisingly rich curriculum is costly, but substantial costs would [also] be incurred through consolidation" (p. 310).

AN OVERVIEW OF POLICY IMPLICATIONS

State policymakers, administrators, and others are faced with a dilemma: if the per-pupil cost of providing a basic or common educational program is

higher for small schools and districts then, all other funding elements being equal, they will be less able to provide an equal educational opportunity for their students. These districts have two choices: they must either spend greater amounts of available revenues to provide the resources necessary to offer a basic educational program to their students or they must be satisfied with more limited educational offerings (Monk, 1982). For many poor rural school districts that do not have the ability to raise additional local revenues, fiscal freewill is a cruel illusion, as Justice Thurgood Marshall noted in the landmark *Rodriguez* case. If these rural schools and districts are to provide equal educational opportunities for all students, state finance systems must provide them with additional support to compensate for the elevated costs of providing a minimum education. If states do not provide additional revenues to poor rural areas, then the quality of a child's education will become dependent upon where that child lives. This is in contrast to the long-held and widely espoused American ideal which affirms the availability of an equal educational opportunity for students in all sectors of the educational landscape.

Do states provide additional financial support for rural and small schools and/or school districts? If so, on what basis is such support distributed? In 1988, Bass conducted research that was focused on the extent to which states provided such supplemental funding. He found that in half of the 48 states for which data were obtained mechanisms were provided for the allocation of additional revenue beyond the basic per pupil guarantee(s) for all districts. The additional funds were provided to the small schools and/or school districts on the basis of either sparsity (school size) or geographical isolation. Therefore, according to the results of that study, the policies of the other half of the states could be considered to have been derived from the conceptual bases of neutrality or intolerance. A review of the relative numbers of school districts would readily indicate which of those two bases had received the greater support in each such state.

The base of *neutrality* would indicate that a state's laws and policies do not provide any differing actions toward small schools solely because of their size. The policy base of *intolerance* would likely dictate state attempts to eliminate small school districts through consolidation. The remaining two policy bases both stem from a recognition that small schools must necessarily incur higher per pupil costs if they are to provide any semblance of a comparable or adequate educational program. One of these bases, *sparsity*, would support the provision of additional financial

support to all small schools while the other, *geographical isolation*, would encourage such distribution of aid only to selected small schools. The geographical isolation factor is thus based upon a belief that the state has a responsibility to provide supplemental revenue to offset the necessarily higher per-pupil costs of those small schools or districts for which there are no feasible organizational alternatives for increased size and efficiency. The same level of supplemental revenue is then considered to be a local obligation in those districts which remain small by local choice.

STATE AID SYSTEMS

During the 1989-90 school year, Verstegen (1990b) attempted to collect data from each state's chief state education finance officer on behalf of the Education Commission of the States (ECS). The data were utilized to describe state aid systems and financing mechanisms which were used to fund small schools and/or districts. Responses were received from all but six states (Alabama, Hawaii, Louisiana, North Carolina, Oklahoma, and Vermont). For those states, data were used from the 1987-88 ECS survey (Verstegen, 1988). This larger portion of the paper provides a review of that study along with an analysis of the related policy issues of interest and concern to state leaders.

An examination of the data shows that in 1989-90 there was a bifurcated system of education finance in the United States. The systemic prongs of financing arrangements across the 50 states were distinguishable through inherent differences in the manner in which equity was conceptualized and operationalized into the particular distribution scheme. Systems of finance in the United States can thus be classified into those which, on the one hand, seek to equalize funds between and among students in an effort to guarantee pupil equity and, on the other, those which provide equal access revenues in an effort to provide taxpayer equity. Some states attempt to accommodate both approaches to equity by including both objectives in their financing scheme through two-tiered systems. For example, one tier of the financing plan may be dedicated to pupil equity and the second to taxpayer equity. When a two-tiered approach is taken, however, the first tier usually receives the major financing emphasis.

In this study it was also recognized that issues of adequacy undergird equity considerations. Thus, any measure of the equity of a state financing program must begin with an evaluation of the adequacy of the foundation guarantee. That is, if the basic funding for

education is not sufficient to cover the costs of the basic (or, better yet, a quality) education program, then more affluent districts will more easily raise those additional funds, whereas the available revenues for poorer districts will not even be able to provide a minimum education for their children. Large disparities in program offerings will, no doubt, lead to great variations in life chances. Thus, inadequate support breeds unjust social and fiscal policy.

It is not surprising therefore that, to-date, states have focused on developing more precise estimates of the costs of various "basic" educational programs and services. Much of the interest in obtaining more precise cost data stems from a concern with providing adequate resources to schools. For instance, Alaska, Illinois, and Connecticut have used sophisticated resource cost models to predict differences in the cost of serving special student populations in different settings (e.g., rural vs. urban; large vs. small) (Verstegen, 1990b). Other states, such as Texas and Missouri, have generated education cost indices to determine the variance in the purchasing power of the dollar across the state. Still other states seek to determine actual cost differences for programs for special versus regular populations, or for rural versus urban areas, and to provide supplemental revenue to compensate for differences in basic program costs.

Fund Equalization. Today, 33 states—by and large the majority—are utilizing pupil equalizing financing schemes in which revenues are provided to localities through foundation programs. The objective of such programs is to provide education support resulting in equal treatment of equals, often referred to as horizontal equity. Inherent in the concept of horizontal equity is the assumption that each pupil receives equal resources which provide support for a basic (i.e., foundation) educational program. Of those states using the foundation approach for the apportionment of state-local revenues, 25 provide a foundation guarantee based on a pupil unit (in average daily attendance, ADA, or average daily membership, ADM) and 8 states provide a guarantee based on instructional units (defined according to the number of students needed to support one classroom teacher together with indirect costs).

Another assumption built into the foundation program is that components of a basic education can be first identified and then expressed in terms of dollars to be expended. Revenue is subsequently provided to support the perceived cost of that basic education on an equal basis to all beneficiaries, the children of that state. A continuing issue in this regard,

however, is "What is a basic education?" Until this is clear, fairness issues regarding the cost of education remain debatable. Even when states have undertaken to define education through accreditation and/or legislatively-promulgated standards, the determination of the cost of providing the identified education program across localities can be contentious.

Resource Equalization. While per-unit equalization of revenues formulates one prong of the bifurcated system of financing American public schools, the other prong is based upon equalization in relation to the ability of a locality to provide resources for education. State finance systems which reflect a resource equalization approach to equity allow school districts to determine the level of educational programming they desire, and the amount which they are willing to spend to reach their education goals. Such plans must normally fall within prescribed limitations (e.g., floors and ceilings). The state then provides the difference between some set of state guarantees and what the district can generate from its own resources at a predetermined level of effort, generally based on a linear schedule. Under these plans, education funding guarantees per pupil may vary somewhat between school districts across a state.

Because these resource equalizing formulas allow each district to have some latitude in determining the desired level of spending per pupil, an issue related to these plans would be whether the resulting intrastate revenue disparities are justifiable and if less affluent districts have an equal opportunity to raise additional funds for schools compared to their more affluent counterparts. Some researchers have argued that for poor, rural districts, with meager ability to pay for education, fiscal freewill is a cruel illusion (Verstegen, 1990a). The inability to raise funds due to a depressed tax base, or lower disposable incomes from which those taxes must be paid, hobbles them in their "opportunity" to provide quality education for all children. If this is so, then district power equalizing financing schemes are the least desirable for poor localities, whether rural or urban.

Currently only about six states have based their financing systems solely on these mechanisms. New York and Rhode Island, although they conceptually fall into a resource equalizing category, set a fixed guarantee on spending at the state level. It could be argued that they would, therefore, be considered fund equalizers. This is because the major variable in resource equalization is the ability of the locality, not the state, to set the amount of shared state-local costs,

with a corresponding scale of required tax effort. If these two states are discounted, then only four states use such district power, or resource, equalizing formulas.

Combination Approaches. A number of states have attempted to accommodate the previously noted bifurcated education financing systems by incorporating both of the two major goals into their distribution programs. A two-tiered approach is thus used in the financing plans of nine states. These systems attempt to accommodate both fund and resource equalization goals. For example, Kentucky, Oklahoma, and Utah have combined foundation programs with district power equalizing formulas while Pennsylvania and Massachusetts have joined a foundation program with a percentage equalization plan.

With these two-tiered programs, the same arguments as previously offered can be made on behalf of poor rural schools for *each* of the separate tiers. A benefit of these plans, however, is that they are inclusive; that is, all funding flows through the formula(s). This tempers the disequalizing effect of revenue raised outside the principal financing formula, an option which is allowable in most states under foundation plans.

Only one state, Hawaii, provides full state funding of education. This approach to both resource and fund equalization, effectively combines the two prongs of the American financing system for public schools. However, local control is likely to be constrained under this system in which the state determines the full cost and resources available for education. Thus, the realization of statewide equity likely restricts the ability of localities to provide additional revenue for education beyond that provided by the state financing program. A decreased emphasis on liberty, most often described as a loss of local control, has often been associated with such a restriction.

Weighting Systems. Also inherent in the value of fairness that undergirds state financing programs is the concept of vertical equity. It is related to the argument that an absolute equal distribution of dollars across localities is neither required nor always desirable if equity is to be achieved. According to this criterion, additional compensation provided by the state to individual districts is considered equitable if those funds are based on justifiable and relevant differences in circumstances that affect the cost of providing a basic or minimum education. The principle of vertical equity, therefore, calls for unequal treatment of unequals. Legitimate differences in funding for pupils or districts may result, for example, from diseconomies

of scale, programs for special needs students (e.g., those in gifted/talented, bilingual, vocational, compensatory, and/or special education), decline or growth in enrollments, or regional variations in the educational purchasing power of the dollar. According to the data collected from the ECS survey, additional state revenues, beyond those provided by the basic state guarantee(s), have also been allocated to local districts based upon such factors as density (or sparsity) of school populations, capital outlay and/or debt service requirements, transportation costs, and grade level differences.

While the manner in which vertical equity considerations have been operationalized into financing schemes across the United States varies, various systems of pupil weighting have been used in a majority of the states. Other methods used to compensate for such additional costs include flat grants, classroom unit systems, and excess cost or percentage reimbursement schedules. These mechanisms distribute supplemental financial support to localities when student or district needs justify additional resources to provide equivalent services or programs.

In general, financing systems that base additional allocations to school districts on a per-pupil amount of revenue, either through flat grants or categorical aid, are the least beneficial to small schools or small school districts, since such mechanisms usually generate an insufficient amount of revenue to provide the necessary services, to establish required programs, or to hire properly certified teachers. One possible corrective action would be to provide to each school offering a specified program a minimum amount of funding (a floor) that would fund that program, including support for the necessary instructional personnel and other minimum costs. In this regard, percentage reimbursement funding schemes could provide for excess costs and meet the needs of small and rural school districts if they were based on overall programmatic needs. However, the fact that these involve *reimbursements* creates difficulties for poor districts with meager local revenue capacity and/or cash flow limitations.

Any analysis of the mechanisms available to finance vertical equity considerations, however, must consider that there are trade-offs. The wide diversity present in rural school districts militates against a "one size fits all" approach as related to state aid mechanisms for supplemental allocations. Many states do provide additional funding guarantees to small, sparsely populated, and/or rural school districts to compensate

Table I
**Factors in State Funding Formulas for the Provision of Additional Revenue
to Rural Schools or School Districts**

State	No Factor	Sparsity	Geographical Isolation	Sparsity & Isolation	Other Combinations
Alabama	X				
Alaska				X	
Arizona				X	
Arkansas				X	
California				X	
Colorado		X			
Connecticut	X				
Delaware	X				
Florida			X		
Georgia			X		
Hawaii	[NA]				
Idaho			X		
Illinois	X				
Indiana	X				
Iowa					X
Kansas		X			
Kentucky	X				
Louisiana		X			
Maine				X	
Maryland	X				
Massachusetts	X				
Michigan	X				
Minnesota					X
Mississippi	X				
Missouri					X
Montana		X			

for diseconomies of scale through factors designed specifically for this purpose. However, as has been noted by various researchers, these areas not only have "to keep up, they have to catch up" on many years of underfunding that preceded the current period. This suggests that the sensitivity of the state aid system to both the adequacy and compensatory ability of such supplemental revenue is a crucial factor in determining its effectiveness in addressing the additional revenue requirements of rural and small schools and districts.

Provisions for Small Schools/Districts

The survey data show that, in 1989-90, 30 of the 50 states recognized the higher cost of providing a basic education in rural/small school districts by providing factors in their school finance formulas to allocate additional revenue to such organizations. In 23 states, 50% or more of the public school students attend such schools (Johnson, 1989). An additional 14 states each have more than one third of their students attending schools in these localities.

Of the 30 states with factors in their funding formulas for the provision of additional revenue to small districts, officials in 10 states reported such distribution to be based on sparsity (school or district size), while those in 6 states reported factors based upon geographical isolation. There are 11 states in which the award of supplemental aid was reported to be based on a combination of sparsity and isolation while the final three states provide for such funding based on other factors. These data are summarized in Table I.

Sparsity. In 10 states, supplemental funding is distributed on the basis of school or district size. When

Table I (continued)
**Factors in State Funding Formulas for the Provision of Additional Revenue
to Rural Schools or School Districts**

State	No Factor	Sparsity	Geographical Isolation	Sparsity & Isolation	Other Combinations
Nebraska			X		
Nevada		X			
New Hampshire	X				
New Jersey	X				
New Mexico		X			
New York	X				
North Carolina			X		
North Dakota		X			
Ohio		X			
Oklahoma		X			
Oregon				X	
Pennsylvania				X	
Rhode Island	X				
South Carolina	X				
South Dakota					X
Tennessee	X				
Texas				X	
Utah				X	
Vermont	X				
Virginia		X			
Washington				X	
West Virginia			X		
Wisconsin		X			
Wyoming	X				
Totals	**19**	**10**	**6**	**11**	**3**

sparsity is utilized to allocate funding, states typically specify enrollment "cutoffs" or "target" sizes that establish eligibility for all schools thereby defined as small. In four states—Colorado, Kansas, Ohio, and Oklahoma—aid is provided on the basis of overall school district size. In Oklahoma, funding is awarded to all school districts with less than 500 students. Colorado officials, under that state's recently revised aid system, assign instructional unit funding ratios to eight district categories that are based on size. For schools in rural areas, $65,518 is earned for each 12.8 pupils, in addition to $58 in per-pupil aid for purchased instructional services. Schools with the small attendance area classification earn $49,468 for each 7.0 pupils and $204 for instructional services. In Ohio, such aid is provided only to three small Lake Erie districts. Officials in low enrollment districts in Kansas

are permitted to submit a higher per-pupil budget than are their counterparts in larger districts.

Legislation in five states provides for extra funding allotments to districts based on *school* size rather than on *district* size. In Louisiana, aid is provided in the form of teacher allotments to all schools with less than 438 pupils. Montana, Nevada, New Mexico, and North Dakota laws provide differential support levels to elementary, junior high, and/or high schools based on student population. For example, the factor in use in Montana provides a range of funding levels to elementary schools that each have less than 100 students (as counted by the average number belonging, ANB) and to high schools each with less than 600 students (ANB). Within that range, the level of supplemental aid decreases as school size approaches these size targets.

The New Mexico funding program provides for the allocation of additional aid to school systems based on both school and district size factors. Districts with a total of 4,000 or fewer students (ADM) receive supplementary funding, as do elementary schools with less than 200 students (ADM) and high schools with less than 400 students (ADM). High schools with fewer than 200 students (ADM) receive additional allotments. Pupil weighting factors are adjusted for small North Dakota schools. While the factors are adjusted for various levels of enrollment in high schools with up to 550 pupils, the maximum additional weighting factor is 0.635 per pupil. For small elementary schools, pupils are weighted at factors up to 1.045 each, with restrictions that prevent larger districts from operating small elementary schools in order to receive the higher pupil weighting factors.

Geographical Isolation. In six states, supplemental financial assistance is provided to small schools or school districts based solely on a geographical isolation factor. Geographical isolation factors are based not only on size but also on such criteria as distance to the nearest other school of the same level, time required to transport students to school, population density, area of the district, and physiographic features of the district's land surface. Bass (1980) found several advantages in the use of geographical isolation factors to allocate supplemental assistance to small schools in rural areas. He noted that such factors do not entail the high costs of providing such aid to all small schools; do not provide incentives for the continued operation of schools which were "small by choice"; do not force consolidation, which would disregard local choice; but do recognize those "necessary remote" districts and schools which need additional per-pupil revenue.

Of the six states which have geographical isolation factors, four—Florida, Georgia, Nebraska, and West Virginia—provide funding based upon a measure of *district* isolation. In Nebraska, additional aid of from 10% to 40% of the basic need calculation is provided to districts on the basis of the number of persons per square mile, with a density of one person per square mile qualifying for the 40% increase and densities above four persons per square mile disqualifying districts for such aid. While West Virginia enacted a new provision in its finance formula to provide additional aid to districts based on both population density and bus miles driven, the provision was not funded in 1990. In North Carolina and Idaho, additional assistance is provided on the basis of isolated school *populations*. In Idaho, such designation is left to the discretion of the

State Board of Education, to which districts make application.

Both Sparsity and Geographical Isolation Factors. Eleven states include provisions in their school finance formulas for supplemental state aid, beyond the basic state guarantee, based on a combination of school or district size *and* geographical isolation. Four of these states provide assistance based on district size, four allocate funding to small "necessary" schools, and one state uses both school and district size targets.

Small and isolated school districts receive additional support in Arizona, Arkansas, Maine, Pennsylvania, and Texas. In Texas, districts which cover at least 300 square miles and have fewer than 1,600 students (ADA) receive supplemental revenue, as do all other districts with less than 130 students (ADA). All districts in the latter group may use 130 as their ADA for funding purposes, regardless of how small their actual attendance may be. Similarly, in Arizona all districts with less than 600 students (ADA) receive additional pupil weighting, which is increased even more if they are also designated as isolated. In both Arkansas and Pennsylvania, districts must also have a qualifying level of tax effort in order to receive supplemental funds.

The individual school site is the basis for identification of sparsity and isolation in Alaska, California, Minnesota, Oregon, Utah, and Washington. In California, districts with less than 2,501 pupils (ADA) which contain "necessary" small schools (less than 101 students ADA for elementary or less than 301 ADA for secondary) may elect to receive a prescribed dollar amount of funding rather than the regular formula funding. In Minnesota, additional funding is provided for small elementary (less than 140 pupils in grades K-6) or secondary (less than 400 in 7-12) schools if they also qualify as isolated. Such elementary schools must be 20 or more miles from another elementary school while the amount of revenue for secondary schools varies as a function of the number of pupils, the distance to the nearest other high school, and the total attendance area. The State of Washington provides assistance not only for "remote and necessary small schools," but also for elementary schools with less than 100 pupils and secondary schools with less than 300 pupils, depending on grade level and required pupil-staff ratios. "Necessarily existent" small schools receive additional aid in Utah and in Oregon. In Oregon, such elementary schools must be more than 10 miles from the nearest other elementary school and high schools must be more than 15 miles from any other high school.

Other Factors. Unlike the data reported by Bass (1988), only one state in the ECS study reported efforts to provide additional assistance to school districts based on cooperative arrangements. Iowa officials reported that state aid is provided for 0.5% of the time a pupil is instructed by a teacher employed by another school district or jointly employed. If a substantial number of pupils share more than one class or teacher, the weighting is reduced to 0.1%. South Dakota law provides for a "larger mill deduction" for some rural districts. One state, Missouri, provides assistance based on the prior three-year-average student count. Several other states have factors such as this, but which are designed as aid for districts with declining enrollments rather than specifically for small schools. Transportation allotments can also provide additional revenue to schools in rural areas that are isolated or sparsely populated, as can other special purpose factors which function to modify a state's basic finance structure to provide supplemental aid to students or school districts based on relevant, and justifiable, excess costs.

POLICY CONSIDERATIONS

The inclusion of sparsity and/or geographical isolation factors in foundation program calculations has obviously been of some interest to state policymakers and educators in recent years. In a number of states, policy debates have centered upon the issues related to the policy bases for dealing with small schools. While consolidation of rural school districts over the years resulted in larger schools and/ or fewer school districts, not all districts have been consolidated. Such small districts are frequently perceived as being less economically efficient. Some of these districts have remained small in response to public resistance to consolidation and to local demands for continuation of the community school. Others have been prevented from further consolidation due to sparse populations and geographic factors which would necessitate unacceptable student transportation conditions. This latter group is of particular concern because these schools may be perceived as too small to operate and finance a comprehensive and economically efficient program, and yet they are unable to increase their size. Declining enrollments and increased demands for broad educational programs and greater accountability have intensified this problem.

If state leaders do not subscribe to the policy bases which call for neutrality or intolerance toward such districts, then consideration of either a sparsity or

a geographical isolation factor might be warranted. Such a policy review could be focused by the following questions.

1. Should the state provide supplemental revenue to small schools or school districts to offset their necessarily higher per pupil costs?

2. Should there be a differentiation of small schools in order to distribute supplemental state revenue only to those which are isolated and which thus do not have a variety of options for reorganization?

3. Can and should the state expect or require that the residents of districts which are "small by choice" provide additional financial support equivalent to the state support provided through a geographical isolation factor?

4. What size and isolation criteria should be adopted for identification of those schools for which the supplemental support should be provided?

5. Should the criteria be based on absolute values for size and/or isolation or be constructed with a sliding scale of values so as to provide decreasing levels of support as schools or districts approach the cut-off values in the criteria?

6. What level of supplemental support should be provided through a geographical isolation factor? In ideal terms, what type of educational program ought to be provided in every school and how much more will that program cost (per pupil) in a small school?

In addition to these questions, state policymakers ought to also recognize some of the positive and negative perspectives regarding the use of sparsity or geographical isolation factors. From a positive perspective, geographical isolation allows limited state resources to be concentrated on a limited number of schools in order to possibly provide a greater impact on the educational programs for those schools. In addition, the provision of such aid is not likely to be seen as a disincentive to consolidation or other

reorganizational efforts since it is provided only to isolated districts.

Perhaps the most negative feature of a geographical isolation factor is its very basis: the differentiation of small schools or districts. The provision of funds only to a selected class tends to create a political conflict supported by those for whom funds are not provided. This was evident by the annual tendency in the state of Washington to declare either all or none of the applicant schools as "remote and necessary" (Bass, 1980). Obviously, it was difficult for state board members to place themselves in the position of considering other districts to be "not necessary." Another negative feature might be the inability to provide similar levels of funding for those small districts not considered to be isolated. A variety of equity issues could be raised under such circumstances. Finally, the adoption of a geographical isolation factor could be seen as a concerted effort to force consolidation among nonisolated districts.

SUMMARY

Small schools incur necessarily higher per pupil costs due to a variety of factors. Depending upon the policy base from which a state's regulations and statutes have been developed, sparsity or geographical factors may be incorporated into an equalized foundation program formula to provide supplemental revenue to small schools. A sparsity factor provides such aid to all schools below an established size. A geographical isolation factor, on the other hand, provides such aid only to those small schools which meet criteria both for size and for isolation.

Although by themselves these adjustments are not yet overly complex, the growing complexity of state aid systems stems from the interaction of these factors with the basic equalizing grant and numerous other, "add-on," factors. Thus, additional revenue can flow to rural areas through a bevy of factors that can be added to the state aid program, including such adjustments as linear density transportation formulas, enrollment loss provisions, and special population support factors, to name few. Space does not allow full treatment of these and their effects on rural areas, however. This paper has therefore focused on the four policy bases and the resultant mechanisms that provide supplemental revenue to rural and small schools and districts across the nation, as identified in a 50-state survey. As the review of literature suggests, attention to these factors is likely to increase in the future as a result of a shift in thinking concerning school size and

school efficiency together with the growing focus on educational outcomes.

The continuing debate that arises concerning the financing of rural education will, no doubt, focus on whether additional revenue should be provided to schools in rural areas and on the mechanisms which might be used to distribute such revenue. In addition, several critical issues will need to be addressed.

1. What level of financial support is needed for the provision of quality education programs in sparsely populated regions?

2. What financing mechanisms best meet the needs of small rural schools?

3. How should local fiscal capacity be measured and utilized to determine appropriate financedistributions?

4. What curriculum enhancement options are, or should be, available to small rural schools and districts?

It is to this debate that rural educators will direct their attention as they continue to seek the necessary financial support to provide the best possible educational services to their students and to their communities.

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