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Few issues in public finance receive as much attention and are of greater importance than the financing of the public school system. As a democratic society, an educated populous is essential to promoting the values of democracy as well as providing individuals with the opportunity to succeed in the economic marketplace. National interest in school financing has recently been peaked by events in two states of the Seventh Federal Reserve District which includes Illinois, Indiana, Iowa, Michigan and Wisconsin. In Illinois, the nearly annual funding crisis for the Chicago school system provides an excellent example of the types of strains which urban school systems face when tax base growth fails to keep up with the spending pressures of the school system. The Chicago public schools are typical of many northern, urban school systems with high operating costs linked to older school buildings, a high percentage of disadvantaged students and funding competition for the same property tax base that must provide for a host of other city services and functions. The protracted struggle to craft a budget for the 1993-94 school year and the piecemeal compromise used to provide adequate funding illustrates a school system which is running out of ways to make ends meet.[1]

The second event gathering national attention is in the state of Michigan. In a sweeping move, the legislature in 1993 eliminated nearly $6 billion in local property tax revenues used to fund the local schools. Through a voter referendum, this funding was largely replaced by a shift to a generally lower millage statewide property tax accompanied by a higher state sales tax rate. The motivation behind this appears to be property tax relief as Michigan's general reliance on the property tax base had led to high tax rates and voter reluctance to increase property tax rates to fund school and other expenditures.

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By shifting to a tax structure that combines a statewide property tax and a rise in the sales tax rate, the responsibility for financing education in Michigan has been largely laid upon the state's shoulders. Michigan's shift to a school system with nearly 80 percent of funding coming from state government has caught national attention and has lead to a similar, but less ambitious proposal for reforming education funding in Wisconsin.[2]

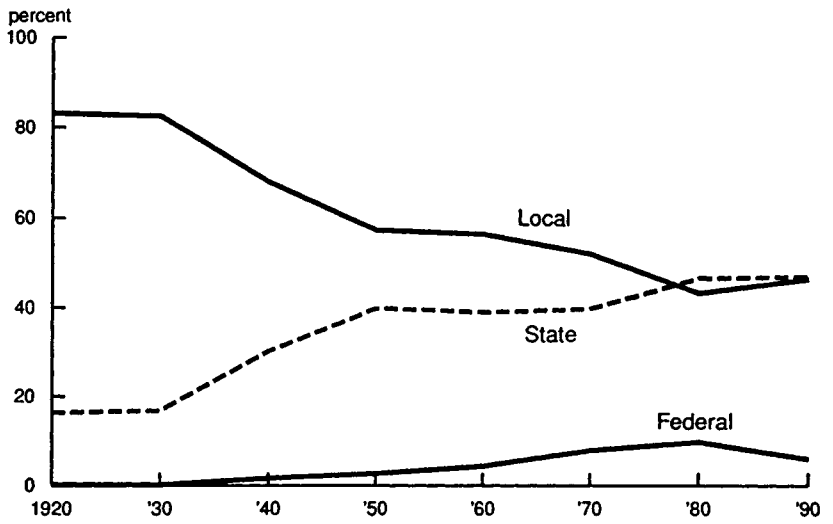
This paper will describe the common issues which surround the school financing debate. How much to spend; how equitable the spending; what revenue sources are desirable; and what level of government should be responsible for funding education. It will also describe differing financing mechanisms which have been proposed to alter school financing arrangements and take a specific look at the funding situation in the states in the Seventh Federal Reserve District--Illinois, Indiana, Iowa, Michigan and Wisconsin.

A brief history of school financing

School financing has always reflected an uneasy tension between the goal of local control of the schools (including financing levels) and the desire of the state to direct education in order to provide equal educational access to help promote economic opportunity for all individuals. However, at the turn of the 20th century, it was the local community that was primarily responsible for establishing both the funding and the curriculum of the local school (see Figure 1, school revenues by government source). This reliance on the local tax base to fund schools created disparities between towns in per student educational spending. As early as the 1920s, school reformers began to recognize inequities in school financing levels and proposed alternative funding schemes.[3] These original equalization plans were designed to aid rural school districts as population growth shifted to urban centers. Cities during this time were often growing at such a brisk pace that the tax base could support higher spending levels for schools. The basic approach to solving the disparity problem was through the "foundation" program.[4] The foundation program set a state supported minimum for local education spending. While setting a minimum spending level did not necessarily reduce disparities in funding it was felt that the state was at least guaranteeing access to a minimum level of educational services. The original foundation programs were gradually augmented or modified as court challenges lead to new approaches, however foundation programs are used by 38 states in one form or another.[5]

Figure 1

School revenues by sources, historic trend



Source: U.S. Department of Education, Office of Educational Research and Improvement, *Digest of Education Statistics, 1992*, Table 148, Washington, D.C., October 1992.

The courts became involved in school financing through the Fourteenth Amendment of the U.S. Constitution and similar state laws on the basis that education was a fundamental interest to both individuals and society and that access was protected by the Constitution.[6] Because education was a fundamental interest, the state would have to have a compelling reason to justify discrimination in the provision of education. This lead to the "principle of fiscal neutrality" which states that the quality of public education should not be a function of wealth other than the *total* wealth of the state. This called into question whether equitable funding of public education could ever occur in a system which allowed communities with greater wealth to provide more educational services than communities with fewer resources.

Court decisions have often provided a lack of specific guidance for policymakers. As a general rule the courts have objected to education financing plans where school districts exerting the same level of tax effort are able to raise widely varying levels of revenues. This has left most states favoring some form of an equalizing program in which the state government tries to minimize disparities in per pupil expenditures by providing equalizing aid to poorer school districts.

Why is there such a range of funding differences between school districts?

Before looking at the various proposals for equalizing spending gaps between school districts, it is useful to first establish why such disparities exist. There are four obvious reasons for disparities in school spending per student.[7] First is simply the sheer number of school districts. In 1990, there were 15,449 school districts in the U.S. and this vast number would obviously make it likely that per pupil expenditures would vary. Second, given that the financial resources which these districts have to draw on varies, one would only expect perfectly equalized per pupil spending if there was a broad consensus that it was the role of state government to provide equal financial resources to every school district. However, the states' role in aiding public education has never been clear and this difference in the local "taste for education" leads to differing levels of aid and intervention on the part of specific states. Third, regional and local cost differences exist in providing education services. For example, factors such as maintenance and operating costs differ regionally. Heating and snow removal costs found in northern state school budgets are obviously not found in southern schools. Other variations can include the cost of land and construction in differing communities. Generally, the cost of constructing and operating an urban school are higher than the costs of operating a suburban or rural school. Also the mix of the student body can significantly influence per pupil education costs. Underprivileged or special needs students often require higher spending levels and districts with concentrations of these students will often have higher operating costs than other districts. Finally, a particularly important and highly variable cost is that of attracting and keeping teachers. Teacher salaries typically consume more than 70% of school operating budgets and as such, differences in how much school districts must pay to attract teachers has a significant influence in creating spending disparities. For example, urban school systems must often pay teachers higher wages to compensate for a higher cost of living and tougher teaching conditions than other more desirable districts.

All of these factors contribute to variations in spending levels between school districts. The nature of these cost differences also make it apparent that educational equity cannot be addressed by simply equalizing the per pupil spending between all districts. These variations can also make it entirely reasonable that a community can have higher expenditure levels per student on education and still not necessarily deliver a better quality of educational service than another community. Given this, a central debate in education finance tends to center around whether fiscal equalization is an adequate strategy for insuring equal access to comparable education services without recognizing even intra-state differences in the costs of education service provision. Similarly this reflects a need to recognize other competing claims in the tax base for non-educational services and adjust equalizing aid accordingly.

Financing reform measures

State intervention and influence in the governance and financing of the local school system has been growing for a number of reasons. Currently three motivations seem to be driving state activism. First, is a growing sense that many states are simply investing too little in elementary and secondary education. With the skills of a state's workforce becoming increasingly linked to the economic health of the state's economy, a case has been made that it is good public policy for the state government to guarantee that all children in the state receive an adequate education to maximize the state's supply of high quality human capital. A second motivation stems from court activism. Many disadvantaged school districts have banded together and brought suit against the state in order to force a more equitable school financing system. Court cases have been at the center of prompting financing reforms in Texas and Alabama. A final motivation emerges from a desire to offer property tax relief to disgruntled voters. This motivation was certainly present in the reform efforts in Michigan and is an aspect of the reform debate in Wisconsin and Illinois. Since local property tax levies are usually dominated by school funding needs, virtually the only way to offer significant property tax relief is to reduce reliance on raising school revenues locally.

State aid can take many forms but most of the programs entail setting a statewide minimum expenditure level for public education and using some form of state aid to insure that all school districts are able to meet that standard. Most of the widely used state aid and education funding distribution programs have concentrated on providing fiscal equity, establishing a minimum level of spending on education, and encouraging efficiency. The programs

have not been geared toward reforming the operations of schools or introducing school choice. The following is a partial list of the most popular forms of state aid. The major features of each program are summarized in Table 1.

Matching grants. These grants were among the first tried by the states and were intended to encourage higher spending levels on education by local communities by rewarding towns with state money when they committed resources to enhance local education. The problem with these grants is that they tended to reward rich towns that had excess fiscal capacity and could more easily meet the thresholds required to receive the matching grants. Because matching grants tended to expand funding inequities between districts, they were largely abandoned by the states or are now used for specific purposes such as school construction or special instruction programs.[8]

Flat grants. These grants provide a flat, per student grant for each student in every school district regardless of the wealth of the district. In effect these state paid grants are designed to reflect the per student cost of the basic, state defined minimum education. Any spending beyond the minimum grant is the decision of the local community. The flat grant obviously does not try to equalize spending between districts in the sense that wealthy communities will still be able to tax themselves to raise additional revenues for enhancing basic education. A basic criticism of the flat grant program is that it tends to be underfunded by the state for several reasons. The tendency is for the state to assume that local communities will augment the flat grant and therefore the state tends to set the flat grant at a level that is probably less than it should be. Second, flat grant programs, because they cover all students in the state can be very expensive and limit the ability of the state to spend on other programs. This forces education spending to compete for funding with other state programs. Since education spending is discretionary, it often loses ground when costs in mandated programs such as Medicaid or corrections rise. However, this criticism can also extend to any funding scheme that relies predominantly on state support.

Flat grants are sometimes designed to vary depending on the particular needs of the student population. The state flat grant for a special needs student may be set higher than that of a regular student in order to reflect the higher cost of providing the same basic education. Other weighting schemes are also sometimes used to vary the dollar value of the flat grant to reflect special needs of students or school systems.[9]

Table 1

Type of state aid program	How the program operates	Advantages	Disadvantages
Matching Grant	The state provides a match for any money raised by the local community. This is intended to encourage the community to spend more on education.	Lowers the cost of paying for education to individual towns. When used for a specific purpose, (new buildings or modernization) it can be enough of an incentive to encourage a town to undertake a program that it otherwise would have ignored.	Matching grants can actually reduce school district spending effort if towns use the state grant to replace rather than augment local funds. Also, matching grants can reward wealthier school districts where it may be easier to raise local revenues in order to receive a state match.
Flat Grant	A state funded flat grant is provided for each student.	Sets a floor for education spending while allowing local school systems to choose to provide additional funding.	While popular in the early 1900s, flat grants were largely abandoned when it was discovered that spending inequities between districts persisted. Flat grants did not reflect differences in the cost of providing education in differing school districts and since they were provided without regard to the districts' wealth, they tended to provide money to districts that did not need assistance.
Foundation programs	The most popular form of state aid, a foundation program begins like a flat grant with the state establishing a floor for per pupil spending. The difference is the foundation program considers the wealth of the school district when arriving at what the state's share of this foundation level should be. A required local effort must be made and the state funds the difference between what is raised through the local effort and the state established foundation level.	Because the resources of the school district are considered, poor districts receive more aid through foundation programs and rich districts are not provided with aid that they do not really need. Also, the strain on the state treasury is less since unlike flat grants, the state is only paying for a portion of the state mandated minimum per pupil spending level.	Foundation levels are often set too low to truly provide a minimal funding level for education. Foundation programs can also fail to recognize difference in costs of providing education between districts within the same state.
Power equalizing	Power equalizing is designed to equalize the ability to raise revenue and not the expenditures per pupil. It guarantees a revenue yield if a district agrees to set a given tax rate. For example if a district votes to levy a 5 mill property tax, power equalizing might guarantee a revenue yield of $1000 per student even if the district's property tax base might not yield this much revenue. In this case the state provides the missing share.	Power equalizing lowers the "price" of purchasing education in poor districts. This presumably would encourage poor districts to levy the highest tax rate that the state is willing to guarantee the revenue yield for.	In practice, poor districts fail to levy the optimal tax rate to insure the higher guaranteed revenue yield per pupil. Also if the state does not cap the potential yield for a given tax rate the cost of the program to the state treasury can be quite high. Finally, power equalizing does not set a floor on education spending, so it is possible for a district to provide little support for education.
Need equalizing	Need equalizing provides differing levels of funding based on the educational needs of individual students. It reflects the fact that some students have special needs and may require higher spending levels.	By recognizing that the cost of educating certain types of students may be higher, school funding is brought more in line with the actual expenditures that are spent on these students.	Determining the appropriate level of spending for students with special needs can be difficult.
Cost equalizing	Cost equalizing attempts to equalize differences in operating costs across districts.	This allows higher cost of living factors, found particularly in urban school districts, to be reflected in state aid and support.	This can reward inefficient operations in some school districts by compensating higher operating costs that reflect inefficient operations rather than higher local costs of living.
Guaranteed Tax Base	Establishes a minimum per pupil property tax base statewide. This is designed to equalize the revenue raising capacity of school districts while still leaving the choice of how much to tax to the local community.	GTB provides taxpayer equity by providing all districts with the same tax base. It allows each district with the ability to choose an expenditure level per student that reflects the community's taste for education.	As with power equalizing, this does not establish a minimum level for education spending. As such, underprovision of education may occur if a community simply places a low priority on education.

Foundation programs. These programs are the most popular mechanisms used by the states to determine the state's contribution to local education. Like flat grant programs, the state government establishes a base spending level for all school districts, usually based on per pupil spending. The difference is that rather than having the state be responsible for fully funding this base education level, the local communities are usually required to levy a prescribed tax rate for education and to use the proceeds to help fund the foundation level. In the case of poorer communities the prescribed tax rate will not be enough to reach the foundation level and in these cases the state will have to make up the difference. In the case of the wealthy communities, the tax rate may fund more than the foundation level and in these cases, the revenues above the foundation level may be returned to the state (through recapture) and used to help fund the poorer districts. In most foundation programs there is still the ability of the community to impose an optional levy on top of the state prescribed levy to fund educational enhancements beyond the base program. Foundation programs, because they combine state and local resources, are often able to set higher minimum spending levels for education than is the case for flat grants.[10]

Sometimes, states combine foundation and flat grant programs in an effort to gain political good will, particularly in richer districts. If the wealthy district under a foundation program ends up providing all of the foundation amount from its own tax base and then has to rebate additional revenues to the state, political support for the foundation program can be very thin in these communities. If the state provides a minimal flat grant and then places a foundation program on top of that, the wealthy community can feel that it is at least receiving something from the state for education. Foundation programs are popular and are used in one form or another in 38 states.

The most frequent criticism of foundation programs has to do with the establishment of the foundation level. If a statewide level is set for all districts, those districts with higher operating costs are likely to complain that the foundation level is not sufficient to "buy" the same level of educational services as those districts with lower costs. This can be corrected by adding certain weighted factors to the foundation formula (such as disadvantaged children or poverty measures) but assigning weights to these factors is often politically contentious and practically hard to achieve. A second criticism is that foundation levels often fail to keep up with increases in school expenditures. In some cases, the foundation level, once set, is infrequently revised. In other cases, the factors used to index increases in the foundation level fail to keep up with school expenditures. Over time, this usually means

that the local government must take a greater responsibility for funding education or reduce the school services they provide.

Power equalizing. John Coons, William Clune and Stephen Sugarman developed the concept of power equalizing in the early 1970s as a method for equalizing district wealth disparities.[11] Power equalizing is a variation on the Guaranteed Tax Base program. Power equalizing is not designed to equalize expenditures per pupil between all school districts but rather intends to equalize the ability of local school districts to support schools. It attempts to blend the states interest in insuring that equal tax effort be rewarded with an equal revenue yield while leaving the decision as to how much money should be raised to fund schools being left up to the local community. Power equalizing focuses on equalizing the ability to raise money between districts. In power equalizing, the state guarantees a certain amount of revenue per pupil for a given tax rate. For example the guaranteed revenue per pupil might be $1000 for a local property tax rate of 5 mills. It is still up to the town to set what the ultimate tax rate will be for supporting education, but the state guarantees that if the town chooses to levy a given tax rate that it will receive a fixed amount of revenue on a per pupil basis. In power equalizing a schedule is usually set illustrating what the guaranteed revenue per pupil is at varying tax rates. The economic principal behind power equalizing is to lower the purchase price of education in poorer communities by guaranteeing the revenue yield even if the property tax base of the community would not have produced that same yield on its own. The poor community is insured that it will receive equivalent revenues as the rich community simply by agreeing to levy a similar tax rate. Power equalizing can also be set up on a progressive revenue schedule where the state guaranteed revenue per student declines once a community decides to spend above a given threshold for education. This protects the state from having to provide a guaranteed level of revenue for a school district which chooses to levy a high tax rate for education that would be above and beyond the level that would represent the state's interest in providing education.[12]

The primary problem with power equalizing programs is not with their design but rather that in practice they have not provided as much of an incentive to poor towns to spend money on education as was expected. Despite the lower purchase "price" for education, poor towns seem to choose to under finance school expenditures. Discrepancies in funding levels between districts often narrow only slightly and students living in those districts that simply choose to under fund education fail to receive adequate funding.

Need equalizing. This form of equalizing recognizes that all students are not alike in their educational needs. In need equalizing it is assumed that whatever equalizing plan is attempted by the state, factors must be introduced to reflect the demographics of the school population in the individual districts. This can be accomplished through a weighting system which reflects the higher costs associated with educating certain types of students. A student who requires a special program might receive a weight of 1.2 in comparison to a student in the normal program with a weight of 1.0. A weighting program such as this can also reflect that the cost of educating students varies based on the grade level of the students. For example, the per pupil cost of educating a high school student is usually higher than that of an elementary school student. By recognizing the varying costs of educating different types of students an equalization plan can see that aid can be tailored to the specific needs of individual school districts.[13] Need equalizing can become a component of a Foundation or Power Equalizing program.

Cost equalizing. This type of program tries to equalize districts based on differences in the costs they face for providing educational services. This can help compensate districts for what they must pay in per unit costs for goods and services and for differences in wages paid for school staff. The problem with cost equalization is that it has been easier to recognize that differences in costs exist between districts than it has to figure out which costs should receive compensation from the state.[14] Critics point out that cost equalizing can end up rewarding inefficient operations rather than compensating for genuine higher local operating costs.

Guaranteed tax base (GTB). Basically another type of equalization plan in which the state guarantees the availability of a uniformed tax base for all communities. Local communities still decide what they are willing to spend on education but as the local tax effort grows, so does the level of state aid. The guaranteed tax base focuses on the tax side rather than the revenue side of education financing. In this case the state sets a tax base of, for example $100,000 per pupil in property tax valuation. The town selects a tax rate and the equalization occurs with the state paying aid to those districts whose property valuation per pupil is below the $100,000 per pupil threshold. If the town's property valuation is above the $100,000 per pupil threshold, the state will attempt to recapture the difference, although this is rarely actually done. In most cases, GTB programs only equalize revenues for those towns with tax bases below the GTB level.[15]

Other financing reform plans. In addition to the equalizing plans, there are two other reform plans that are frequently mentioned in education finance. The first is full state funding. In this case the state establishes the funding level for all schools and local communities are prevented from setting differing local schools expenditure levels. This occurs for example in Hawaii, where the state is entirely responsible for elementary and secondary education. This form of centralized control however is not popular with many who feel that a community should be permitted to tax itself at a higher rate if it has a "taste" for educational services just as it has the right to tax itself more if it desires to have more of other public services such as recreation. Implicit in full state funding is the idea that revenue will be redistributed and that the excess tax capacity of wealthier districts can be captured by the state and used to improve the school system in poorer districts. This approach also addresses the problem of fiscal neutrality, since the amount of money spent on education represents the total wealth of the state rather than the wealth of individual districts.

The second type of reform program is usually interested in increasing school choice and is usually accomplished through some type of voucher program. The voucher program is not specifically interested in financing reform or equalization but tends to focus on introducing the discipline of the private market to the provision of educational services. The voucher system was first proposed by Milton Friedman in 1955, in part in reaction to the very successful experience with the G.I. Bill following World War II.[16] The G.I. Bill allowed U.S. servicemen to attend the college of their choice with the U.S. government paying the tuition. The program allowed many to go to college who otherwise would not have been able to afford it and had the benefits of improving the quality of colleges while producing a better educated population. Friedman foresaw the voucher system as a way in which the government could provide a minimum level of education which could be financed by giving parents a voucher redeemable for a specified level of educational services at an approved institution. Parents would be able to add to the voucher with their own resources and purchase additional educational services but the choice of who to purchase the services from would be left to the parents. The state would simply certify that a vendor of educational services was adequate and services could be purchased from public or private sources based solely on the parents preference. The competition to attract students would drive schools to offer the best educational services and in doing so would lead to general improvement in the quality of education.

Evaluating financing reform--does increasing the level of state involvement in funding education effect school expenditures?

Efforts to increase state equalization programs inevitably expand the role of state government in funding education. This increased state role is usually accomplished by trading taxpayer acceptance for higher state taxes with some type of restriction on raising local revenues. The Michigan financing program illustrates this. In return for a higher sales tax rate and a statewide property tax, taxpayers have been offered a reduction in their local property tax bill. The question is will changing the balance between state and local resources influence the level or growth rate of per pupil expenditures?

Arguments have been made by several economist (Fischel (1989,1992), Picus (1991) and Downes and Shoenman (1994)), that those reform efforts that constrain school funding from local sources while increasing funding from state sources have either lowered overall expenditure levels or slowed the growth rate in education expenditures. For example, Fischel argues that limiting the ability of local government to raise taxes to pay for schools erodes support in wealthy school districts for education expenditures. Because the level of education spending no longer reflects the wealth of the community and instead is determined based on the relative wealth and equalization plans of the state, these districts see state funding as redistributing their communities' wealth to other communities in the state. This tends to make these affluent districts less supportive of education spending increases since they are not able to restrict the benefits of the spending increase to their local district. Picus argues that by shifting to state funding, education expenditures are forced to compete with other statewide programs for funding status and that this can hurt the growth of education expenditures. This can particularly be the case when a state must fund increases in mandated expenditures such as Medicaid and corrections spending during periods of recession. This can severely reduce the availability of funds for discretionary state funding programs such as education. Supporting this notion are findings from research focusing on Washington state and California. In both cases reforms that triggered significant increases in the state share of education expenditures[17] lead to declining growth rates in education expenditures.

However, recent research by Downes and Shah (1994) suggests that the effects of financing reform on the growth of school expenditures is complex and needs to be considered on a case by case basis. This work suggests that the effects

of financing reform on expenditure levels is dependent on the level and trend in the *determinants* of school spending--such as student enrollment, racial-ethnic composition of student body and faculty salaries. While the type of reform undertaken does influence the spending trend, it is the relationship between expenditures and the trend and level of the previously enumerated determinants of spending that influence the growth in expenditures. In examining this question, the authors divided state reform efforts into two categories. Strong reform was equated to court ordered financing programs. Weak reform was defined as voluntary changes in financing. In the study the authors find that weak reform programs tended to lead to slightly larger increases in education expenditures than strong reforms.

To be able to predict the effect of finance reform on school expenditure levels, analysts will need to examine the determinants of school expenditures and see how their behavior is affected by the finance reform. School finance reform alters the structure of the school expenditure function and it is this relationship that needs to be understood. While the type of reform matters, (weak vs. strong), it is the influence of the type of reform attempted on these determinants that varies. For example the authors found that under weak reform, a higher number of districts per student tended to increase per pupil expenditures, but that the opposite occurred under strong reform. Other variables also demonstrate similar inconsistencies showing that the type of reform does matter but that it is difficult to generalize as to whether a particular type of reform will increase or decrease school expenditure levels without considering the specifics of the state's school expenditure function.[18]

A related question in financing reform concerns the choice of tax base used to support greater state support for education expenditures. When funding responsibility is shifted to the state it is likely that the income tax or the sales tax will become the primary revenue source for education funding. Each of these tax bases has some particular advantages and disadvantages when it comes to funding education that needs to be considered. The income tax has the advantage of being a high yielding tax and is relatively equitable in the sense that it requires that individuals with similar adjusted gross incomes pay similar amounts of tax. Depending on the type of rate structure used, the income tax can also be highly progressive in the sense that it requires individuals with higher incomes to pay a larger percentage of their income in tax. Furthermore, administration of the income tax, while complex at the Federal level, can be less complicated at the state level if federally adjusted gross income is used as the base for determining state tax liability. Particularly popular with politicians is the strong revenue growth produced by

the income tax. When income tax brackets are not indexed to account for inflation, revenue yield automatically increases in states with progressive rate structures through bracket creep. This is when increases in individual income push taxpayers into tax brackets with higher tax rates.

The disadvantage of the income tax is that the yield from the tax can fluctuate due to declines in the economy. During recessions, states that rely on income taxes can find that this volatility can end up producing budget gaps and funding problems. This could be a particular problem for school systems where stability in year to year budgeting has always been valued. This type of volatility is less of a problem for the Federal government which is highly reliant on the income tax, since an unanticipated decline in income tax revenues can be covered through deficit spending, but it is a problem for state governments that are largely required to carry a balanced budget.[19] In addition, anecdotal evidence suggests that state taxpayers are not fond of income tax increases. In the case of Michigan, voters were effectively able to choose whether the sales tax or the income tax would be used to pay for a significant share of the state's contribution to education. They overwhelmingly choose the sales tax. Finally, faster growth in the income tax revenues relative to other sources is less likely in states with flat income tax rate structures. For example, Illinois has a flat rate income tax which makes the income tax a proportional rather than progressive tax. While gains in personal income will increase the state's yield from the tax, there are no additional tax brackets with higher tax rates that would further enhance the state's revenue yield through "bracket creep."

The next tax base to consider to help fund increased state support for education spending is the sales tax base. Sales taxes are consumption taxes and have the advantage of being a tax base that is primarily state controlled. While the states must compete with the federal government for the use of the income tax, the design and rate structure of the sales tax is up to the states. While localities are sometimes permitted to levy local option sales taxes, these are usually smaller in magnitude and are add-ons to the basic state tax rate. Sales taxes raise significant amounts of revenue, however recently revenue gains from sales taxes have been harder to come by. First, changes in the consumption patterns of consumers have not been reflected in the tax bases of most state sales taxes. The increasing consumer demand for services has not been fully factored into the sales tax base. Services have not been included in the tax base to the same degree as goods have been, meaning that consumption of many services often escapes taxation. Since services are the faster growing component of consumption, failure to include a broad list of

services in the sales tax base has slowed the revenue growth from the sales tax. Second, a popular trend has been to exempt food and drugs from the sales tax in an effort to prevent taxation of "necessities." This is usually done in the name of equity, on the grounds that taxing necessities places a higher tax burden on low income individuals who consume more food and drugs as a percentage of income than wealthier individuals. However, by narrowing the tax base by excluding these products, sales tax revenues become more volatile and more reliant on big ticket purchases for revenue growth. While during economic recovery, sales tax revenues can grow dramatically through increased sales of autos and appliances, revenue performance can lag during recessions when such big ticket purchases are avoided. This volatility can make maintaining fiscal commitments in times of recessions difficult.[20] Furthermore, recent research has suggested that the income elasticity of the sales tax is around 1.0. This means that sales tax revenues tend to grow at the same rate as gains in personal income. This is not necessarily a problem, however state expenditures and particularly education expenditures, have grown during the 1980s and early 1990s at a rate faster than personal income, indicating that the growth in sales tax revenues has not kept up with growth in these expenditures. If school expenditures are going to be funded through the sales tax, this may mean that the future growth rate of school expenditures will need to be curtailed or that hikes in sales tax rates may be necessary.

There is also the option of continued, perhaps restructured reliance on the property tax.[21] This can include instituting a statewide uniformed property tax or continuing to permit the use of a local property tax to fund some portion of education expenditures. The biggest problem with relying on the property tax is its unpopularity with taxpayers. It has the disadvantage of coming due in annual, semi-annual or quarterly payments and presents taxpayers with large tax bills. The assessment process used to establish the value for a property is often complicated and appears arbitrary to the taxpayer. The tax creates disparities in the revenue raising capacities of towns based on the property wealth of the community and factors such as the presence of exempt property or commercial property. Some analysts advocate local control of the commercial property tax base because communities are compensated for the noxiousness of business development through business property tax payments. Policy reform which removes commercial property from local control can simultaneously remove the desire of local communities to provide (zone) land for commercial purposes. Some fear that such widespread lack of commercial zoning can hurt a region's overall growth and prosperity. Finally, the property tax is not a tax based on an ability to pay principal. People with similar

incomes can face widely differing property tax bills depending on the community they live in even if they live in houses with the same assessed valuation. However, when the property tax is applied on a statewide, uniformed basis, most of these objections are muted. The one objection that remains is that the tax is not based on the ability of the homeowner to pay and this is often the root of taxpayer dissatisfaction when property tax assessments rise faster than taxpayer incomes.

The property tax has endured as the major source of local funding for education for several good reasons. First, because of the lag built into assessing property, declines in the value of property tend not to be reflected immediately making the revenue yield from the tax stable even in recessions. Also since the size of the tax base is already established through the assessment process, the annual property tax rate can be adjusted to fit the expenditure needs of the school system. Finally, many like the property tax because it is a highly visible tax and is more likely to draw closer scrutiny from voters.

In general, financing reform using the two major state tax bases--income or sales--does introduce somewhat of a less stable funding base for education. First, both tax sources are more volatile than the traditional reliance on the local property tax base and both sources are used to fund a host of other state programs that make competing claims for the tax revenues. However, the advantage of shifting to either source is that the level of education funding reflects the collective wealth of the state rather than the individual wealth of the community. Greater equalization in spending between districts will likely occur but it is unclear whether the overall growth in school expenditure levels would grow as quickly as they have under a system of local funding. Finally, it must be recognized that given the amount of revenue that must be raised to fully fund elementary and secondary education, it is unlikely that any one state tax base can be expected to replace the previous reliance on the local property tax. Given that states often compete to keep their tax rates low in order to attract investment, it is unlikely that any state would want to increase its sales or income tax rate too dramatically in order to fund education. This helps explain why financing reform plans will likely rely on a combination of tax sources from both the state and local level. Michigan's reform combines a sales tax increase, a statewide property tax, selective sales tax increases and permits a local option property tax all designed to fund education. This type of hybrid approach is more likely to be used than simply abolishing local funding and replacing it with state revenues from a single tax source.

Public School Finance Programs in the Seventh District

Education finance reform has become a key issue in all of the states in the Seventh Federal Reserve District (Illinois, Indiana, Iowa, Michigan and Wisconsin). On the heels of sweeping change in Michigan, other states in the District have been examining overhauls in their education financing. This debate ranges from establishing an appropriate level of spending to the determination of the appropriate tax base to be used for funding education. This section will describe the current funding mechanism used by District states as well as the key fiscal issues being considered.

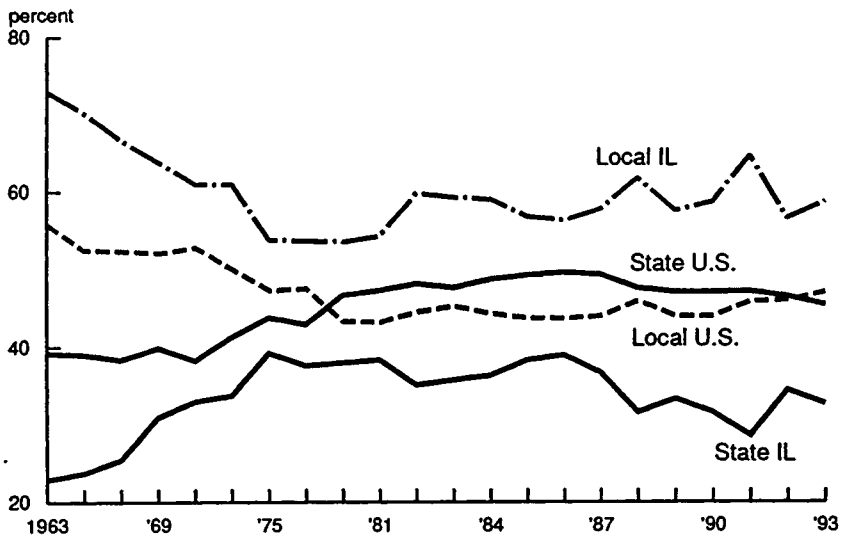
Financing education in Illinois--is the state doing enough?

In Illinois the state share of education funding has been steadily declining over recent years. A recent ballot proposal suggested that the state be required to fund the majority of education expense failed, but there is increasing sentiment that the level of the state's contribution is too low (see Figure 2). (The states share is currently below 33%).[22] The second issue is the chronic financing problems of the Chicago Public School system. Disruptions in the opening and operations of the Chicago School system have become annual events and the 1993-94 school year financing "solution" appears to be more tenuous than ever.

Illinois' primary state funding program is a foundation program that determines the level of state aid received by a district by establishing a district specific foundation level and then subtracting the towns required tax effort from that foundation level. Aid is distributed through the General School Aid (GSA) program with the level of state aid received by each district being determined primarily by the equalized assessed valuation of property within the district, standardized across districts by a weighted average attendance student count. While most of the state's aid is distributed through one basic formula, two alternative formulas are also used to assure that every district receives at least a minimal state grant. The actual choice of formula is determined by the district's actual property wealth per Chapter 1 student, weighted average daily attendance (CWADA). The aid formula compares the property wealth per CWADA of a district to a state guaranteed property wealth per CWADA. The state guaranteed wealth per CWADA differs depending on the type of school district. It is greatest for high school districts, ($227,000 per student in 1990-91) and declines to $131,000 per student for elementary districts and $90,000

per student for unit districts. The GSA program is a foundation program and the formula used is related to the foundation level which was $2501.63 per student in 1990-91. The actual aid computation is expressed as follows:

Figure 2
State/local share of total education revenues, Illinois and U.S.



Source: U.S. Department of Education, National Center for Education Statistics

District State Aid=CWADA x $[(V_s-V_d) \times T]$

where V_s = state guaranteed wealth per CWADA for the applicable type of school district;

V_d = general state aid equalized assessed valuation per CWADA student in the district;

T = applicable operating tax rate

The applicable operating tax rate varies with the type of organization of a school district. In 1990-91 the tax rate for elementary districts was 1.90 percent; high school districts was 1.10 percent and unit districts was 2.76 percent. The applicable operating tax rate is set by statute unless the operating tax rates fall below these minimums in which case the actual tax rates are used. This formula yields school districts a state funded entitlement per pupil ranging from $321.21 per pupil for affluent districts to $2,344.71 per pupil for the poorest districts. In 1990-91, the distribution of state funds under this formula found 96.1% of the total GSA allocation going to 751 out of the 955 school districts.

For the remaining districts state funding through GSA is determined through either the "alternate" method or by flat grant. For districts that are moderately well off with an actual wealth per CWADA of 87% or more of the state-guaranteed wealth per CWADA student, the following calculation is used.

Aid= CWADA x Foundation level x .13 x $(.87\ V_s/V_d)$

where: Foundation level=$2501.63 per pupil

V_s = state-guaranteed wealth per pupil per CWADA student for the applicable district type;

V_d = the district's GSA equalized assessed valuation per CWADA student

For 1990-91, 151 districts received their GSA revenue through this formula representing 3.6% of the total allocation of GSA funds.

Finally, the flat grant is used to provide state money to the richest districts with the highest equalized assessments per CWADA student. This works out to a minimum grant level of 7% of the Foundation level or roughly $175 per CWADA student. In all, 53 districts fell into this category and their allocation totaled roughly 0.5% of the GSA allocation.

Indiana--trying to do more and succeeding

Indiana's state share of public school financing is more generous than most of its neighboring states, contributing nearly 52 percent of the revenues used for local education. Indiana's concern was that throughout the 1980s, the combined state and local funding of public schools had averaged 15 to 20% below the U.S average. Given this, the primary education financing issue in Indiana is not the effort of the state in funding education but the level of education funding available. However, the 1990s have found this trend reversed and Indiana now has a relatively high level of expenditures per student. Maintaining this commitment may prove difficult given that Indiana has found many competing claims for its state tax dollars. Facing the usual expanding fiscal pressures of mandated increases in Medicaid and prison expenses, it is becoming harder and harder for the state simply to maintain its level of school funding. Total state revenues available for education funding are appropriated through the state budget process. In addition the Indiana General Assembly establishes a specified maximum General Fund property tax levy for each school corporation. While there is a procedure through which districts can sponsor local referenda to raise additional revenues, only a small number of districts have tried this and fewer than half have succeeded.

In comparison to the relatively complicated formulas that are used for Illinois' program, Indiana utilizes a fairly straight forward foundation program which does require a specified level of municipal participation. The basic unit of funding in the plan is the pupil. This is determined by A Day's Membership (ADM) which is either the previous years revenue per pupil or the enrollment on a given day that is designed to reflect standardized enrollment in the district for that year. The Indiana formula is intended to establish a minimum level of state/local funding for each student in Indiana.

The actual formula for distributing state revenues operates off of the previous year's computation of school revenue determined by the state formula and the local property tax levy. Essentially following a couple of adjustments for vocational education categorical grants and the previous year's property tax levy, the previous year's revenue is multiplied by a factor of 1.05 (which is intended as an inflation adjustment), to arrive at the funding level for the next year.

For school districts experiencing growth in pupils, an additional per pupil amount is added to the total. The resulting adjusted revenue base per ADM plus the per-pupil revenues from the auto excise tax and the financial institutions tax, is compared to the established minimum ADM, which in 1991

was $2,825 per pupil. The district's spending level is established by taking either the established minimum ADM or the level established by the formula depending on which ever is greater. In 1990, approximately 90 out of 296 school districts qualified for this state established spending floor.

One interesting feature of the Indiana program is that it contains a guarantee that each district in the state receive at least a 5% increase in total revenues from the previous year and that the state is required to add to its revenue base the dollars necessary to achieve that guarantee. The state does set a minimum tax levy for local property taxes which establishes a required minimum local tax effort for each district.

Iowa--dealing with district consolidation

Iowa uses a foundation plan that has a uniform levy requirement for local governments, establishes a maximum spending level, and provides for state support to low spending districts in an effort to raise them to the state's foundation level. Iowa faces several unique challenges in education funding. First, many of the school districts in Iowa are losing students. District consolidation tends to be a more significant issue in the state as well as trying to determine what the optimal size for schools and school districts should be. Second, Iowa makes its state contribution to local school funding out of its general fund budget and this has made it difficult to increase appropriations to keep up with school demands in the face of sluggish revenue growth and other state spending priorities. For example, as part of a general financial reform plan, school districts in the state received $50 million less in state aid during the 1992-93 school year than they would have if the status quo had been maintained. However, similar to Indiana, state effort in paying for schools has been strong. Since the first foundation plan was instituted in 1972-73, increases in the percentage of state funding of the total education budget have been nearly constant with the state picking up nearly 52 percent of school expenditures.[23]

In 1990-91, Iowa had 425 school districts of which 379 were K-12 programs. In order to promote administrative efficiency, all 425 districts are supported by 15 intermediate service units, called area education agencies. These agencies provide specialized educational services to a group of school districts such as special education, media and other select education services. The agencies are funded by the individual school districts who pay support to the agencies to provide the specialized services.

The states basic foundation plan establishes each district's budget by multiplying a district's cost per-pupil times its weighted enrollment. The district's cost per pupil amount is defined as the historical spending in the district, plus a per pupil growth amount. The plan also establishes a cap for the amount a district is able to increase its expenditures by limiting the per pupil growth factor to an allowable growth rate as determined by a statewide formula. For low spending districts, the formula is set at the statewide average cost per pupil plus the growth factor. All school districts must levy a 5.4 mill property tax to be eligible for state aid. Each district is guaranteed a minimum state aid level of $200 per pupil. The state foundation level for 1990-91 was $2,472 per pupil.

Annual adjustments in the amount of funding that a district receives for education is a function of growth in district enrollment and a state determined allowable growth amount. The allowable growth amount is the per pupil cost times an allowable growth rate (defined as either the rate of change in the state's general fund revenues over two years or the average of the change in the state's general fund revenue and the Gross Domestic Product price deflator, with the lower of the two figures selected as the growth factor).

The state does use a number of differing weighting schemes to allow for local variation in aid based on differences in the types of enrollments at different schools offering assistance particularly to schools with large special education student populations. The state funding program also insures that local school spending will increase by at least 1% over the previous year's spending level.

Iowa is somewhat unique in that it also offers a state level school budget review committee to provide relief for special cases or unique circumstances that might fall outside of the state's basic foundation plan. The committee has the authority to grant districts additional allowable growth or increases in spending authority or property taxes. Iowa does control at the state level what the maximum district school spending is permitted to be.

Wisconsin--investigating a new funding system

Wisconsin is facing three major issues in education reform. The first is that the state share of K-12 funding has essentially stagnated at around 40% of school spending. Other expenditure demands on the state's budget have made it difficult for the state to keep increasing its share of education funding. This lack of growth in the state share combined with significant increases in total education spending (35 percent in real terms from 1980-81 to 1990-91) has

forced local school property tax rates to increase 56 percent over this period.[24] A growing sense is that the state's share of education spending is inadequate. Equalization has been the other funding issue. While less pronounced than the per pupil spending gaps in Illinois and in Michigan (prior to reform), Wisconsin per pupil district spending for K-12 districts ranged from $4,014 to $8,127 in 1990-91.[25] Perhaps more notable was the disparity in local tax rates which ranged from 5.4 to 29.5 mills.[26] A series of proposals have been floated without success, but a 1991 resolution would have amended the state's education clause (which currently requires "uniformity") to require the legislature to provide "adequate funding" for education and to allocate state aid through a formula that assures "equal educational opportunity" in all districts. Another proposal would have replaced Wisconsin's guaranteed tax base formula with a foundation plan. It is worth noting that in the 1990-91 school year, Wisconsin and Michigan were the only District states using a guaranteed tax base structure for determining state support for K-12 education. Finally, the biggest potential change for Wisconsin will be its interest in following Michigan's lead to reduce the use of local property taxes as a primary mechanism for funding education.

Wisconsin has a total of 428 school districts and utilizes "cooperative educational service agencies" (CESAs) to provide certain specialized programs to the 428 school districts. Wisconsin calls its guaranteed tax base formula the general equalization aid formula. Wisconsin's aid program can also be characterized as a district power equalization program that is designed to encourage poorer districts to spend more on education by lowering the "tax price" of education. It does this by insuring that poor towns will receive the same revenue yield per mill as rich towns. In other words by simply agreeing to levy a given tax rate they will receive the same level of revenue as a rich district even if their local property tax base would not have generated that level of revenue. The formula is based off of the equalized assessed property valuation (which is used as a measure of local fiscal capacity) and the student population based on the average of attendance on two dates during the school year plus the average daily attendance for summer school.

The formula is designed to guarantee a minimum amount of property value per student. If a town's per pupil property value is below the state prescribed minimum, state aid will be used to bring the town up to the minimum. In 1990-91 the guaranteed property value per pupil was $298,195 for K-12 districts (371 districts out of 428); $447,292 for K-8 districts (47); $894,585 for 9-12 high school districts (10). In a straight forward power equalizing/ guaranteed tax base plan only districts with property values per pupil under the

guarantee would receive aid and districts above the guarantee would actually be required to turn over revenue to the state. In practice however, these districts simply receive no general state aid.

However, the Wisconsin system has an additional dimension that is designed as a cost control feature. The state has established two thresholds for determining a districts state aid eligibility. School district tax yields are equalized up to what is termed the "primary ceiling." The primary ceiling is a specified level of spending per pupil ($4,466 in 1990-91). For districts that are spending above this level **and** have a per pupil property tax base above the so-called "second guaranteed" property tax base ($185,906 for K-12 districts, $278,859 for K-8 districts and $557,718 for high school districts in 1990-91) will find that for each extra dollar of spending above the base, state equalization aid is actually reduced. For the small group of districts that fit this category, the decision to raise expenditures by $1 per pupil will cost more than $1 when both necessary local taxes and resulting reductions in state aid are included. This means that 46 districts (11%) are considered to be off formula in terms of receiving state aid.

The determination of the state/local share of school spending in each district is straight forward. If a district has property wealth per student equal to 60% of the state guaranteed tax base, it is responsible for paying 60% of the district's aidable costs. The state is therefore responsible for the remaining 40%. Critics of the current Wisconsin funding structure evaluate the current system as having narrowed the funding disparity between districts in the state but having done little to address issues of education quality. In 1991, general fund expenditures per pupil ranged from a minimum of $4,014 to a maximum of $8,127. This lack of expenditure disparity is even more noticeable if the comparison is restricted to the range between the 10th and 90th percentile where expenditures were from a low of $4,657 to $6,347.[27] The current state aid program for example does little to account for differences in the costs of educating students of differing backgrounds and even recognizing cost differences associated with specific locations in the state.

Michigan--Midwest model for finance reform?

Michigan's education funding solution has received national attention. In addition to moving away from the local property tax as a primary mechanism for funding education, to a tax system where nearly 80 percent of education expenditures will be paid for by the state, Michigan has chosen to abandon its

guaranteed tax base/power equalizing plan that the state has been using since 1973. Michigan's radical change in funding education was precipitated by three factors. First, Michigan has traditionally been a high property tax state.[28] This reliance on the property tax has had several perceived problems. First, high property tax rates have not proven to be popular with Michigan voters, particularly in older urban areas where tax rates have been extremely high relative to national averages. Second, it has left the local school systems dependent on a local source for raising school revenues while minimizing the role of the state in supporting education. By the 1993-94 school year state funds accounted for less than 39% of total school expenditures. This in turn has largely resulted in making the level of local education funding a function of local property wealth. School district revenue per pupil ranged from $3,277 to $10,518 in 1993-94.[29] All of this came to a head in the summer of 1993. At that time, the legislature voted to abolish the use of local property taxes to fund education. This effectively eliminated nearly $7 billion in school revenues representing more than 60% of available funds for elementary and secondary education. Michigan voters approved a ballot proposal on March 15th which creates an alternate funding mechanism through a new package of taxes.

The centerpiece of the revenue replacement package is an increase in the state sales tax rate from 4% to 6%. Additionally, a newly designed property tax structure will be introduced, creating statewide mill rates and two classes of property. Under this new program, primary homes will be assessed at 6 mills while commercial property and second homes are taxed at 24 mills. Smaller sources of revenue will be found in selective sales taxes (on telephone calls) and sin taxes.

At the same time, this package of taxes will help Michigan increase school spending by about 5% in aggregate. However, the most notable feature may be the redistributive features of the plan. Under the new funding arrangement revenues will be redistributed in a manner that will particularly benefit some of the poorer districts in the state as well as aiding schools with large numbers of poor students or at risk-pupils. For example, school with high numbers of poor students at risk of failing or dropping out will get an additional 11.5 percent per pupil. Also overall spending for at risk pre-schoolers will be up about 60%.

The new funding program is a foundation grant plan with the foundation level for 1994-95 being set at $5,000 per pupil. The formula adopted to determine each district's funding level works as follows. First for the poorest districts,

defined as those spending less than $4,200 per pupil, state aid will guarantee an increase in per pupil expenditures to $5,000 or a per pupil increase of $250 per pupil, whichever is greater. This will effect 119 out of 557 school districts (21.4%). A second tier of state funding has been established for school districts with 1993-94 expenditure levels between $4,200 and $6,500. These districts will receive per pupil funding increases of between $250 and $160 based on a sliding scale.[30] This formula will apply to 41 districts (7.4%). Finally the remaining 397 districts that were spending at or above $6,500 per pupil, will be permitted an increase in spending of $160 per pupil. Provisions in the law do allow districts spending more than $6,500 per pupil to maintain their per pupil expenditure levels from 1993-94 levels, by levying a local option property tax, although future increases in expenditures will be limited based on a state prescribed statutory index or the per pupil increase as derived from the percentage increase in the consumer price index, whichever is lesser. This will limit future expenditure growth by limiting these districts to the lesser of the per pupil dollar amount of the increase in the base foundation grant or the increase in the CPI. This funding structure will reduce the funding disparities between rich and poor districts primarily by bringing up the spending levels of the poor districts and reducing ability of districts spending more than $6500 from increasing their expenditure levels.

Financing trends

Four out of five of the District states are using foundation programs as their principal state aid programs with Wisconsin maintaining a power equalizing/guaranteed tax base plan. The biggest source of variation is in the magnitude of state funding of local education through these programs. Currently the District states provide an interesting laboratory for examining these issues given the fact that the state share of local education expense will range from a high of 80% in Michigan to under 33% in Illinois. With Wisconsin examining a Michigan style reform, a trend may be developing to increase state responsibility for funding education at least in the Midwest.

The purpose of these state funding programs is to equalize the per pupil expenditures between school districts within each state. Reform efforts such as Michigan demonstrate a desire to reduce disparities in expenditures per pupil as a primary public policy goal. Why this might matter is evident from Table 2 which provides the revenue per pupil and several equity measures for the 1990-91 school year. The pattern which emerges from these figures shows

that Illinois and Michigan had the greatest variation in per pupil expenditures and therefore can be viewed as having the least "equitable" funding schemes (if equity is defined as equal spending per student). At the other end of the spectrum is Iowa which exhibits very little deviation in expenditures per pupil and in fact had one of the most highly equalized school funding structures in the nation. Wisconsin and Indiana fall somewhere in between.

Table 2

Revenue per pupil and measures of financial equity, 1990

	Revenue per pupil	Standard deviation	Coefficient of variation	Federal range ratio	McLoone index
Illinois	5,062	1,590	0.314	2.40	0.83
Indiana	5,579	845	0.151	1.59	0.91
Iowa	4,566	472	0.103	1.28	0.95
Michigan	5,187	1,196	0.231	1.96	0.87
Wisconsin	6,087	841	0.138	1.52	0.92

Source: Common Core of Data (CD-ROM), 1985/87-1991/92, National Center for Education Statistics.

However measuring financing equity is a tricky business. Mieszkowski (1994) argues that while standard measures of equity have shown the gap between the lowest spending and highest spending school districts has grown during the 1980s, that in reality, this disparity is being driven by the extraordinarily high expenditure levels found in the richest 10 percent of the districts. Spending between the remaining districts is more or less equalized. Mieszkowski sites work by Reshovsky and Wiseman (1994) that found in Wisconsin that the average tax price (e.g. the property tax millage per $1,000 per pupil expenditure) has a relatively small range with nearly 80 percent of the districts exhibiting a range of variation of less than one mill.

The McLoone index figures in table 2 also support this hypothesis while the other columns display less spending equity. This can be explained by some of the properties of the individual equity measures. For example the second

column which demonstrates the standard deviation for school revenues per pupil in the district suggests that Iowa revenues per pupil demonstrate a dispersion from the mean of less than one-third as great as Illinois. However, some of this extreme finding may be related to the sensitivity of the standard deviation to changes in the scale. However, the two measures that should correct for this scaling sensitivity, the federal range ratio and the coefficient of variation still find Illinois and Michigan exhibiting significant dispersion in spending. The federal range ratio is designed to eliminate extremes in school spending at either end of the distribution. By eliminating those districts that are found in the top and bottom 5 percent of the distribution, outliers are cut from the sample providing a truer picture of the dispersion in spending between the remaining districts. Exact equity in spending using the federal range ratio would be a score of zero. The farther the score is from zero the greater the inequity.[31] The coefficient of variation simply divides the standard deviation by the mean with scores closer to zero reflecting greater equity. Again, the range between Illinois' score on this measure and that of Iowa is reasonably extreme.

However another way to judge equity is through the McLoone index. As mentioned earlier, the purpose of most equalization programs is not to have the state pay all educational expenditures, but rather are designed to establish a state approved basic level for education expenditures in the state. The state's responsibility is then to assure that the basic level is provided and if individual communities choose to provide significantly more than this, it is at their choosing. The McLoone index is designed to measure equity by judging the distribution of spending between districts in the bottom half of the distribution. Implicit in this measure is that the level that represents the average statewide expenditures (eg. expenditures in the median school district) does represent the proper base education level for a student in that state. Analysts who favor the use of the McLoone index for measuring equity, believe that educational equity should not be judged based on the spending habits of those districts that spend significantly above the median. A score of 1 on the index is perfect equality. Using this scale, all five states appear to have greater spending equity than the other measures would have suggested.

However, the whole debate over how to measure equity really points out the continuing inability to define what is an optimal level of education spending and particularly, how to interject concepts of local and regional differences in the cost of education. State equalization programs have tried to introduce special factors, such as weighting values for certain types of students, to try and recognize differences in the costs of providing similar levels of education,

but these usually are poor approximations. Michigan will provide an interesting case study in the years ahead as its new funding scheme will lead to more uniformed expenditures. The real question however will be what this financing scheme will mean for education quality in the state.

Nationally, education finance is receiving intense scrutiny, however increasingly the choice of financing mechanism is less important in the debate than issues such as increasing school accountability and experimenting with different mechanisms for delivering education services. Since the academic literature has been unable to settle the debate over whether the level of funding of schools matters, school reformers have become more interested in moving past simple financing debates in determining the next frontier in the education debate. In Michigan, school finance reform was coupled with an aggressive plan to create "charter" schools in an effort to increase the educational alternatives available to students.[32] The "price" for higher education funding will be seen in greater accountability for student outcomes. Financing reform may encourage innovation and greater experimentation in school service delivery.

Footnotes

[1]In fact, Standard & Poors down graded the rating for general obligation debt issued by the Chicago School Finance Authority from double A to double A- because of "practical and political problems (which) continue to persist, not the least of which is the lack of a current plan to address continued operating gaps beyond fiscal 1995." Chicago Board of Education Bonds were also lowered to triple B-, the lowest investment grade category. (The Wall Street Journal, 12/22/93, A12.)

[2]For more on the Michigan financing changes, see Paul Courant, Edward Gramlich and Susanna Loeb, "School Finance Reform in Michigan", in *Midwest Approaches to School Reform*, William A. Testa, ed., Federal Reserve Bank of Chicago, forthcoming.

[3]K. Forbis Jordan and Mary P. McKeown, "Equity in Financing Public Elementary and Secondary Schools," in *School Finance Policies and Practices, The 1980s: A Decade of Conflict*, James W. Guthrie, ed. Ballinger Publishing, Cambridge, MA., 1980, p. 79.

[4]Jordan and McKeown, p. 80.

[5]*Public School Finance Programs of the United States and Canada 1990-91, Vol 1.* Steven Gold, David Smith, Stephen B. Lawton and Andrea Hyary ed., American Education Finance Association and Center for the Study of the States, State University of New York, 1992, p. 18.

[6]Guthrie in Guthrie, "United States School Financing Policy, 1955-1980", p. 8.

[7]Reischauer and Hartman, *Reforming School Finance*, pp. 58-94.

[8]Swanson and King, pp. 154-155.

[9]Austin D. Swanson and Richard A. King, *School Finance, Its Economics and Politics*, New York, Longman, 1991. p. 155.

[10]Swanson and King, pp. 156-159.

[11]John E. Coons, William H. Clune III, Stephen D. Sugarman, *Private Wealth and Public Education*, Cambridge: Harvard University Press, 1970.

[12]Walter Garms, James Guthrie, and Lawrence Pierce, *School Finance, The Economics and Politics of Public Education*, Englewood Cliffs, N.J., Prentice-Hall, 1978, pp. 197-199.

[13]Garms, et al., pp. 201-205.

[14]Garms, et al, p. 206.

[15]Swanson and King, p. 164-165.

[16]For more on Friedman's proposal see, Milton Friedman, *"The Role of Government in Education"*, in *Economics and the Public Interest*, Robert A. Solo, ed. (New Brunswick, N.J.: Rutgers University Press, 1955).

[17]Downes and Shah note that from 1975 to 1985 the state financed share of education in California rose from 46% to 74%.

[18]Thomas A. Downes and Mona P. Shah, "The Effects of School Finance Reforms on the Level and Growth of Per Pupil Expenditures," Tufts University, Medford, MA. unpublished manuscript, November, 1994.

[19]James W. Guthrie, Walter I. Garms and Lawrence C. Pierce, *School Finance and Education Policy: Enhancing Educational Efficiency, Equity and Choice*, pp. 106-109.

[20]Guthrie, et al., pp. 110-112.

[21]Guthrie, et al., pp. 112-126.

[22]1993-94 Estimates of School Statistics, National Education Association, Washington D.C., 1994.

[23]1993-94 Estimates of School Statistics, National Education Association, Washington, D.C., 1994.

[24]Andrew Reschovsky and Michael Wiseman, "Reforming School Finance," The Robert M. La Follette Institute of Public Affairs, University of Wisconsin-Madison, Madison Wisconsin, Working Paper No. 16, April, 1993. pp. 2-3.

[25]Reschovsky and Wiseman, p. 2.

[26]Reschovsky and Wiseman, p. 2.

[27]Reschovsky and Wiseman, p. 11.

[28]For example according to ACIR estimates, in FY 1990 Michigan was ranked 10 out of the 50 states in terms of property tax burden when measured as either a share of personal income or on a per capita basis. See, *Significant Features of Fiscal Federalism*, Advisory Commission on Intergovernmental Relations, Washington, D.C., Vol. 2, September, 1992.

[29]Citizens Research Council of Michigan, "Analysis of School Finance Ballot Proposal and Statutory Plan," Lansing, Michigan, Report No. 312, February, 1994, p. 18.

[30]The specific formula for determining a district's increase in expenditures for 1994-95 is $250-[$90*((1993-94 base-$4200)/$2300)]. See Citizens Research Council of Michigan, "Analysis of School Finance Ballot Proposal and Statutory Plan", Report No. 312, Lansing, Michigan (February, 1994).

[31]The federal range ratio is calculated by restricting the range to those districts in between the top and bottom 5 percent of the distribution and then subtracting the value of the per pupil expenditures in the district at the bottom of the restricted range from the value of the per pupil expenditures at the district at the top of the restricted range and dividing this by the value of the expenditures in the district at the bottom of the restricted range. For example a state with a federal range from $3,300 per student to $6,500 wold have a federal range ratio of .97. {(6,500-3,300)/3,300=.97.}

[32]For more on education delivery reform, see *Midwest Approaches to School Reform*, William A. Testa, ed., Federal Reserve Bank of Chicago, forthcoming.

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