
School Finance Reform in Pennsylvania:

Increasing State Taxes to:

**Cut Local School Real Estate Taxes,
or
Cut Local School Real Estate Taxes *and*
Enable More School Board Spending
or
Cut Local School Real Estate Taxes *and*
Improve Student Learning?**

A Presentation to the Pennsylvania
State Board of Education

September 13, 2001

Robert P. Strauss¹

Professor of Economics
and Public Policy
The H. John Heinz III School
of Public Policy and Management
Carnegie-Mellon University
Pittsburgh, Pennsylvania
15213-3890

¹ Email: RS9F@Andrew.CMU.Edu; Home Page: <http://www.heinz.cmu.edu/~rs9f>. The views and opinions are the responsibility of the author and do not represent those of Carnegie-Mellon University or its Board of Trustees.

Table of Contents

1.0 Introduction and Summary

- 1.1 Political Risks of Financial Reform without Continued Accountability Reform
- 1.2 Accountability Proposals
- 1.3 School and Municipal Finance Reform Proposals

2.0 A Framework for Assigning State and Local Spending and Financing Responsibilities

- 2.1 General
 - 2.1.1 Services and Ability to Pay vs. Benefit Taxation
 - 2.2.2 Optional Vs. Mandatory Local Tax Structure
- 2.3 Implications for General Structure
- 2.4 Outstanding Issues

3.0 Some Pennsylvania Considerations and the Briar Patch of Local Tax Reform

- 3.1 Some Historical Background
- 3.2 The Two Local Tax Reform Briar Patch Issues
 - 3.2.1 The Philadelphia Commuter Tax
 - 3.2.2 The Local Real Estate Tax Base
- 3.3 Structural Impediments to Getting out of Briar Patch

4.0 Enhancing Accountability in Pennsylvania's Public Schools

- 4.1 Meanings of Accountability
 - 4.1.1 Fiscal Accountability: Changes in the Composition of Revenues, but No Net New Spending
 - 4.1.2 Fiscal Accountability: Changes in the Composition of State and Local Revenues and New Net New Spending to help Poor School Districts AND Changes in Educational Requirements
 - 4.1.3 Accountability Needs in Pennsylvania
- 4.2 Current Standards Governing School Board Directors and School Superintendents Conduct
- 4.3 Strengthening the Oath of Office: Student Learning as the School Director's Primary Objective
- 4.4 Strengthening the Oath of Office: Eliminating Conflict of Interests
- 4.5 Professionalizing the Hiring Decision: Hiring Criteria and Advertising
- 4.6 Strengthening Accountability through Parental Choice of Teachers
- 4.7 Strengthening the Pennsylvania Department of Education's Evaluation, Management, and Research Capabilities

5.0 Reforming Pennsylvania's System of School and Municipal Finance

- 5.1 General Issues Surrounding State School Aid Distribution Formulas²
- 5.2 Different Algebraic Structures of State Aid Formulas
- 5.3 Moving from the School Real Estate Tax to the Local Income Tax
- 5.4 Components of Municipal Finance Reform

² This section draws heavily from Gold, *et al.* (1995).

1. Introduction and Summary

Tax reform is always popular to promise because of its inherent ambiguity³, is always difficult to accomplish politically because taxes ultimately are controversial and the pieces of the puzzle in Pennsylvania are highly inter-related, and can be quite dangerous upon implementation. If done improperly, tax reform can lead to unintended if not unforeseen outcomes such as the further outpouring of people and business from Pennsylvania to other states. After the tax reform dust settles, current residents (people and business) always figure out what really happened, and decide whether or not some place else offers a better principled bargain in public services for taxes paid.⁴

My remarks this morning are composed of several essential points that revolve around the political economy of reforming school and municipal finance without dealing with accountability issues, a presentation of some ideas about how to improve accountability within the traditions of local control in Pennsylvania, and then a presentation of what reforming school and municipal finance might ultimately entail. I hope you will excuse the periodic insertion of real-politic considerations. Having labored in these vineyards for better than 20 years, I have learned a few practical lessons which may help you avoid some of the stickier parts of Pennsylvania's Local Tax Reform Briar Patch.

1.1 Political Risks of Financial Reform without Continued Accountability Reform

Trying to reform the financing of public education in Pennsylvania (code words for raising state taxes to increase funding for poor public school districts and also cut local school property taxes) without materially increasing the odds of improving student learning will likely not pass the straight-face test before the General Assembly and the working-age electorate. Pouring more money into a public education system that, on average among the states, has among the very highest teacher salaries and per pupil spending without stronger odds that learning outcomes will improve to similar levels, is a very dangerous proposition for elected officials to sign up for.

There are several reasons why enacting just fiscal changes may be viewed with caution by elected officials. In Pennsylvania, raising the lowest (and likely poorest) districts in terms of per-pupil spending will involve greater total state and local funds for public education than are currently being spent, e.g. it will require a net increase in total taxes levied for education. Since Philadelphia will be among that group that winds up receiving and spending more per-pupil, it will turn out to be even more expensive, since Philadelphia is the largest school district in the state by a factor of five⁵. Also, if lowering Philadelphia's commuter tax to reasonable levels is part of the ultimate bargain that must be made to accomplish school tax reform, then the overall tax increase needed to finance this change will again be larger. The resulting large fiscal price tag will cause representatives in the General Assembly of other parts of the Commonwealth to expect various

³ To not be in favor of "reform" is to oppose progress which can be viewed as offending American optimism.

⁴ Pennsylvania's emergency revenue measures in 1991 are a case in point. Proposed largely as a dare to pro-business Republicans, they wound up being adopted and raising business taxes to the point that even organized labor realized later in the decade that the business capital tax (the Capital Stock and Franchise Tax) and the Corporate Net Income Tax had to be lowered to stop the out-migration of capital.

⁵ Compare Philadelphia's student population of about 200,000 to the next largest district, Pittsburgh, with a student population of about 40,000.

kinds of quid pro quos which again will make the undertaking yet more expensive in terms of new state taxes.⁶

Restructuring school finance is inherently complicated, and easily misunderstood by the electorate, so unless it is coupled with something relatively easy to understand that is popular, like eliminating or substantially reducing the local school real estate tax, there will not be popular support for the set of changes. Reducing or eliminating the local school real estate tax to attract political support in the General Assembly will measurably shift the burden of school finance from household and business real estate owners to households who generate Pennsylvania taxable income. For working age income generators, who are also the ones who primarily have children in the public schools, to embrace willingly a tax increase on themselves, they should, deserve, or likely will insist that there be strong prospects that the increased taxes will lead to improved learning opportunities and subsequent improved learning performance for their children.

There is also likely now to be public skepticism for a promise to reduce or eliminate the local school real estate tax, because that promise was made several years ago upon enactment of Act 50, which by design or mistake, was sufficiently unattractive so that only a few of the Commonwealth's 501 school districts adopted it. The Governor and General Assembly may have bought some time by enacting Act 50; however, they may now have also lost credibility since so few districts have adopted the optional structure, and complaints about the burden of the local school real estate tax continue to grow. When promises are made and then not kept, it is more difficult to make the same promise.

1.2 Accountability Proposals

“Increased accountability” (as a quid pro quo for pouring more money into public education) like “tax fairness” means different things to different people. The ideas below, that I believe will increase student learning and therefore accountability for the new funds put into the system, are a bit different than those being debated, enacted, and refined in other states. They may represent innovations in institutional design which have been, periodically, the hallmark of Pennsylvania's contribution to national public policy innovations.

The accountability ideas below are different for several reasons. First, the Commonwealth, through the leadership of this State Board, has already made landmark changes in the way teachers are prepared and certified. Second, the Commonwealth has similarly made substantial progress in the development of state curricula and test standards. While both of these pieces of the accountability puzzle require continued vigilance and refinement, there remain other pieces of the puzzle which no state has yet to address, and which, in my judgment need to be addressed, to justify raising taxes: 1) strengthening local governance in order to convince taxpayers that the additional state and local taxes will be spent to good effect (improving student learning), and 2) rebuilding independent oversight at the local and state level with attending information to safeguard the public interest.

⁶ In 1990/1, the General Assembly was forced by the Commonwealth's recession to raise tax rates in order to balance the state budget. Knowledgeable observers comment that for every \$1 of additional revenues needed to close the budget gap, an additional \$2 of taxes were imposed and spent for particular projects in order to find the votes to support final passage of the emergency revenue measures.

The emphasis of my solutions to the accountability puzzle is on process rather than on large numbers of specific rules, and is thus squarely in Pennsylvania's tradition of "local control" and Jeffersonian Democracy. It is also, I believe, largely consistent with our traditions of very strong teacher unions whose stated support for improved student learning outcomes I take at face value. Greater accountability is achieved by clarifying the rights and responsibilities of the state and local educational establishment in fairly simple terms, providing relevant information available to all about student learning outcomes, and, importantly, by empowering parents, through an existing choice mechanism implicit in the current School Code and entirely consistent with current collective bargaining agreements, to immediately put pressure on the system to produce increased learning for each child.

The basic elements of the system are increased clarity over what the local school director is elected and the appointed superintendent are to achieve; enhanced ethical standards for both school directors and superintendent so that their allocation of resources can reasonably be expected to accomplish increased learning; state compensation to each school director so they are not tempted to use their position to indirectly compensate themselves for their time and efforts at school governance; reliance on annual testing of all students at the beginning and end of each school year using nationally normed tests; and, explicit enabling of parental choice of teachers for their children.⁷

The new accountability system involves:

- 1) Meaningful⁸ oaths of office for school board members and superintendents;
- 2) Meaningful conflict of interest statutes which eliminate both direct and indirect self-dealing by school board members;
- 3) Direct state payment of school board members (\$12,000/year) by the General Assembly in recognition of their legal standing as agents of the General Assembly;
- 4) Meaningful hiring guidelines that obligate local schools to advertise widely, and hire the most academically qualified applicants in terms of their content knowledge;
- 5) Modification of current law waiver language which enables local districts to engage in nepotism or worse;
- 6) Annual fall and spring student testing of all grades and at state expense, using national tests (e.g. Stanford or Iowa) of all students with results provided to all stakeholders:

⁷ Under parental choice of teachers, if parents are unwilling to place their child in a particular teacher's classroom, then the child goes to another teacher's classroom that the parents prefer. At the extreme, there may be a few teachers without any students. They would continue, however, to get paid. The presumption is that sooner or later the teachers without students would either alter their behavior which led parents to sending their children elsewhere, retire, or the district would find something else for these teachers to do.

⁸ A statutory or regulatory provision is "meaningful" when it is clearly stated, it is monitored for compliance by an independent authority, and non-compliance has significant consequences. For an example of a non-meaningful statutory provision, consider the Second Class County Assessment Code which governs much of Allegheny County's real estate assessment procedures. Under the Code, it is no more than a misdemeanor for an assessor to accept a bribe in return for lowering a real estate assessment. In other states such an act is a felony *for both parties*, and punishable not only by significant (\$10,000) fines but also mandatory prison sentences. In such states assessors are not bribed; in Allegheny County it is widely believed to occur.

students, parents, teachers, superintendents and staff, school board members, and the state Department of Education;

- 7) Formal state adoption of the parental choice of teacher for each child;
- 8) Systematic rebuilding of the oversight, management and analytical capabilities of the Pennsylvania Department of Education and/or the separate development of a state level evaluation capability that is consistent with a high level (e.g. 2/3) of state funding of public education

1.3 School and Municipal Finance Reform Proposals

Once the above accountability system is enacted and in place, then the state would enact the system of school finance reforms that involve raising state taxes, and also addresses several long-standing problems of local finance that two statewide tax commissions have made recommendations on, but which have not been acted upon.

The school finance reforms would be composed of a significant state foundation program (e.g. \$5,000/pupil) with local effort, state assumption of a high level (e.g. 2/3) of the total cost of public education, minimum state teacher salary related to 9/12 of what a college graduate earns⁹, roll back of the school real estate tax, and reform of the real estate assessment and appeals system.

The higher state fiscal responsibility would be entirely financed by an increase in the state personal income tax rate applied to a personal income tax base that would be expanded to include all private and public retirement payments, and whose tax entry point would be raised well above the poverty level for a family of 4.

At the local level, counties, municipalities and school districts would be enabled to levy taxes only on the newly defined taxable state personal income tax base¹⁰, and the rate at which they could levy the tax would be capped as follows¹¹:

Counties: maximum tax rate on state taxable personal income of .25%
Municipalities: maximum tax rate on state taxable personal income of .5%,;
School districts: minimum tax rate on state taxable personal income of .5%

⁹ According to the *Statistical Abstract of the US: 2000*, in 1999, the average 12 month starting salary for an AB in Humanities was \$27,861, \$28,608 in the Social Sciences, and anywhere from \$34,111 to \$50,440 in science and engineering. Tabulations of the 1999/2000 Pennsylvania Professional Personnel File revealed that starting salaries for inexperienced, full-time primary and secondary classroom teachers in 1999/2000 with a bachelors degree ranged from \$29,000 to \$31,800. These represented respectively the 25'th and 75'th percentiles of the salary distribution of new teachers, and compare rather well with ¾ of the 12 month starting salaries of most college graduates.

The starting 12 month salary for a mathematics major was \$37,253; ¾ of that is \$27,940 which is below the 25 percentile of starting teacher salaries of \$29,000. That is, better than ¾ of the starting teacher salaries, taking into account that they only work 9 of 12 months, was above the mean starting salary of a math major when put on a 9 month basis. Only 10% of Pennsylvania's starting teachers earned \$26,000 or less in 1999/2000.

¹⁰ The local base would thus be after application of the poverty threshold, and include self-employment and service income.

¹¹ The local earned income tax would thus be replaced by the local income tax and the local occupation and occupational privilege taxes would be replaced. Some provision for home rule municipalities would have to be considered.

and a maximum of 1.5%

Any jurisdiction could request that the state Department of Revenue collect and remit the local personal income tax on residents after deducting a nominal (e.g. 1 or 2% of collections) processing fee.

Additional features of the local tax reform proposal include:

- 1) Mandatory elimination of occupational taxes, elimination of local gross receipts taxes
- 2) Imposition of maximum non-resident tax on earned income¹² of (up to 8/24 or 1/3) of resident tax rate in Philadelphia on state taxable income to over-ride the Sterling Act.
- 3) Statewide assessment reform of real estate assessment through: annual state funding of an independently elected assessor; state funding to each assessment office of \$6.00/parcel; balance of budget from a mandatory local real estate tax (e.g. .00005 of full market value) imposed and transmitted to the independently elected assessor, and supplemental appropriations from county government; state standards of county assessment; 10 year goal of reducing the coefficient of dispersion to 10% for residential property.
- 4) Immediate statutory separation of the assessment function from the appeals function which would become a new, special initial part of each county's Court of Common Pleas under supervision of the Court.

There is also merit in examining the practicality of state wide assessment of commercial and industrial property and sharing back to municipalities and schools of resultant revenue; however, working through the details of this is beyond the scope of this paper.

Section 2 provides a normative framework through which one can analyze taxes and spending and what the relationship between the state and local school districts should be; Section 3 discusses some of the Pennsylvania specific impediments to reforming school and municipal finance. Section 4 describes an accountability system that implements the framework in which citizens elect local school boards who vote on local school budgets, and through the superintendent and delegation of authority to the superintendent, children receive learning opportunities. Section 5 describes the fiscal reforms that lead to a marked increase in state financial responsibility and reduction in the local school real estate tax.

2.0 A Framework for Assigning State and Local Spending and Financing Responsibilities

2.1 General

Government intervention in the market place through taxation and the use of funds through a public budget is typically justified by several motivations:

¹² Under this scheme, the Philadelphia commuter tax base would be wages, salaries, personal service, and self-employment income, but not retirement income or passive income from capital. Dividends and partnership income which have the character of wages and salaries would be taxable; rents and royalties (active capital income) attributable to commuters would be taxable.

- An agreed upon safety net of minimum financial support so that the unfortunate who can not support themselves do so at government's expense (this justifies the current types of public assistance and in kind assistance for food, health care, and public education)
- An agreed upon minimum level of public services that the private sector can not profitably supply, because pricing is not feasible or desirable (this justifies public subsidy of transportation, the provision of public roads; federal provision of national defense)
- An agreed upon provision of essential judicial and enforcement services that maintain and adjudicate conflict over contractual and property rights
- Education, because its benefits are delayed, can be justified as a societal investment that parents may not be able or willing to make, and thus is a form of risk sharing among private interests; certainly the long-term benefits often accrue well beyond the individual through inventions and discoveries.

2.1.1 Services and Ability to Pay vs. Benefit Taxation

When government provides services that benefit limited classes of beneficiaries, the services are best financed by barometers of use of such services. The local real estate tax is typically viewed as appropriate to the financing of local municipal services, because the value of the property often reflects the value of the services. Homes and businesses benefit from police and fire protection, and a single rate of tax on the value of these assets reflects the insurance value these services provide.

When redistribution is the motive for government action, then taxes measuring ability to pay are the more appropriate barometer, and income or broad-based consumption are usually viewed as the appropriate tax bases to be taxed in support of government activities.¹³ A corollary to this reasoning is that poor areas should not be expected, through local ability to pay taxes, to support all the costs of public education. It follows that state government has some substantial financing responsibility, and likely also a responsibility for ensuring that regardless of where a child lives, he or she should receive a minimum standard of educational services that ensures that the person is literate, numerate, learned in our history and traditions, will be a productive member of society and a participating citizen in our democracy.

If one looks around the world at how the above rationale for public education has been implemented, one finds that in some democracies the national government finances and controls the daily details of public education. Given our national constitutional compromise in Philadelphia that the social welfare of the new nation was the primary responsibility of the states, not the federal government, it is not surprising that history, necessity, and ingenuity have led the states in various directions that vary from virtually entire state-level finance and control to highly decentralized systems with little fiscal equalization by state government.

¹³ Some argue that wealth, measured by local real estate values, can also be a barometer of ability to pay. The use of local real estate as the local tax base for school districts reflects in good measure a trade which each state made during the Great Depression. Given the dire circumstances of local school budgets, state governments gave up their state taxation of real estate and gave it to local school districts so that they could have a stable and steady revenue base, and took advantage of the new found constitutionality of consumer sales and use taxes. Local real estate taxes ultimately run into problems of liquidity for the elderly who may be house rich and income poor.

Just as one can debate endlessly about the wisdom or foolishness of politically independent vs. politically dependent¹⁴ school districts, one can argue endlessly about whether or not heavy state funding and heavy state control of local educational services is wise or foolish. However, the following seems to be increasingly understood: if one wants to engage in substantial redistribution so that all students, regardless of their family income and wealth and regardless of the income or wealth of where they live, can have access to high levels of educational services or at least high levels of per-pupil spending, then there must be greater state participation in financing and overseeing the provision of educational services. Even if one finds state oversight sometimes characterized as state interference to be repugnant and an interference with local autonomy, there remains the political reality, which every parent exercises towards his child who asks for money or use of the family car, that he who pays the piper will insist on calling the tune.

When the adequacy of state laws to finance education have been successfully litigated against constitutional provisions to provide a "...thorough and efficient public education," state governments have wound up taking on larger proportional responsibilities for the financing and control of public education. Here, as in other states, our judiciary has tossed out the problem of funding adequacy, and simply invited other branches of government to deal with it.

2.2.2 Optional Vs. Mandatory Local Tax Structure

The last general point to consider involves whether or not the new form of local finance should be optional in terms of tax base as well as optional in terms of the *rate of tax* chosen by local school boards. Passing tax reforms that provide local tax "options" is sometimes justified by the argument that "one size does not fit all;" unfortunately this approach to changing a system of taxation can ensure that nothing changes if the options are carefully designed to be sufficiently unpalatable to local officials and participants in a local plebiscite (e.g. Act 50).

While it is true that short and fat men and women will fit into different suit and dress sizes than tall and slim men and women, I do not think this observation informs how a local tax system should be developed using common sense as the standard of reasoning. The notion of "choice" when applied to local taxation makes sense when applied to citizens and businesses deciding on where to reside, not on the way the local government can subsequently choose to finance itself once the citizen and business decide to locate. Spot real estate reappraisals, which are an example of the latter approach to local finance, have been found to be unconstitutional in Pennsylvania. Citizens and businesses interested in deciding where to locate should be able to determine *prior* to moving how governments vary in the tax rates and service levels they offer. Clarity in these choices offered to citizens and businesses will, through competition among governments, lead to the efficient allocation of services and tax levels, and location of citizens and businesses in accordance with their preferences. If one allows governments to vary *what* they tax and the rate of tax, then nobody will be able to figure out how to compare taxes among governments when deciding where to live or do business, and governments will be undisciplined in how they spend monies. The second approach leads to governmental inefficiencies and typifies the way underdeveloped or Third World countries finance themselves.

¹⁴ In Pennsylvania, only Philadelphia has a politically dependent school, e.g. school directors are appointed rather than elected.

2.3 Implications for General Structure

The above discussion leads to the following qualitative conclusions about how public education should be funded.

First, the state has a responsibility to equalize resources so that minimum school services are available to poor students and students in poor areas. Second, such state funding should be obtained from income and/or broad based consumption taxes. Third, state payments to local school districts are necessary, although what the balance ultimately should be between state vs. local finance involves the tradeoff between achieving state-wide fiscal equalization goals, and allowing local autonomy in deciding how much in the way of educational services should be provided. Fifth, whatever discretion is accorded to districts to raise their own revenues should be based on the same tax base for each district with only the rate of tax being allowed to vary.

2.4 Outstanding Issues

The outstanding general issues that need to be resolved are: 1) how much in a proportionate sense the state should participate in the financing of public education, 2) whether the local school real estate tax needs to be reduced or even entirely replaced by some combination of increased state aid and a local resident income tax, and 3) whether or not the difficult matter of how local real estate taxes are implemented (the assessment and appeals process) should be examined in conjunction with reforming the *structure* of school and municipal finance. As long as the local school real estate tax remains an important source of school finance, its inequities due to poor assessment practices deserve systematic state attention. Even if local school real estate is largely eliminated, counties and municipalities would still rely heavily on the local real estate tax. As a result there remains within the context of municipal tax reform a need to create assessment uniformity.

3.0 Some Pennsylvania Considerations and the Briar Patch of Local Tax Reform

3.1 Some Historical Background

The history of public support for education in Pennsylvania is extensive, and when closely examined not particularly encouraging. Early public education was provided for orphans, and, compared to New England, not nearly as accessible. Cubberley(1919) observed that the constitutional debate over a self-imposed obligation to provide free public education in Pennsylvania took better than a half century to resolve, longer than in the other former colonies, and that the inception of high schools was particularly spotty and driven more by local skill needs of business than leadership and a shared educational vision in the state capitol. Adequately funding public education was a struggle that spanned several centuries.¹⁵

To be sure, these events have been superceded by some of the highest average per-pupil spending amounts and teacher salaries in the US. However, such largesse does not reflect careful state educational design, let alone implementation. Rather, as I told the New York Board of Regents

¹⁵ See PARSS(2001).

several years ago, this largess reflects the fact that we have the toughest teacher unions in the United States, and probably in the world.

Just as the Pennsylvania State Board of Education is an instrumentality of the Pennsylvania General Assembly that implements in part its constitutional responsibility to provide public education, the establishment of locally elected boards of education fixes these boards as agents of the General Assembly. To be sure, the State Department of Education promulgates all manner of rules and regulations that implement their responsibilities under the School Code; however, one should not lose sight of the fact that elected school board members are there as agents of the legislative branch of state government, not the Executive Branch of state government.

The primary justifications for locally elected boards of education entail delegated oversight functions, and honoring the proposition that the imposition of local taxes to support in part the costs of a school district should be through representative democracy. Arguably if there were no local taxes to support education, there would still be a need for local oversight in how centrally provided state funds are locally expended. In unitary systems of government, the possible abuse that can occur through the expenditure of ‘somebody else’s money’ is thwarted through a system of local auditors who are central government employees. Another approach is to have locally elected officials perform the oversight. Of course, if there is no guidance and disclosure under either system of oversight, then mischief or worse can readily occur. This matter of lack of guidance, proper structuring of incentives, and disclosure and information about both the resources going into local education and the outcomes resulting or not from the resources is central to any meaningful reform of public education.

3.2 The Two Local Tax Reform Briar Patch Issues

Over the last 100 years, tax study commissions of various sorts have been a cottage industry in Pennsylvania. Governors and the General Assembly have, on average, called upon such commissions once every six years. This periodicity likely reflects the following realities: 1) the business cycle periodically causes severe budgetary problems for the Commonwealth, and commissions are used as a source of authority and advice to justify raising taxes during such times of economic duress; 2) Pennsylvania’s constitution prohibits progressivity in tax *rates* so that tax revenues from income and sales taxes generally grow proportionate to the state’s economy, although our appetite for public services likely grows faster than the economy. As a result we have periodic revenue crises when the economy slows down or goes into recession.

There are two fundamental local finance problems that have long faced the Commonwealth: a poorly administered real estate tax (discussed in part above) with very little state oversight, and a commuter tax imposed on those commuting into Philadelphia which has destroyed 150,000 jobs, according to Professor Robert Inman of the University of Pennsylvania. The commuter tax has precluded municipalities and school districts close to Philadelphia’s borders from using their authority to levy the combined 1% tax on earned income that has been optionally available to them. As a result, the local school real estate tax in school districts surrounding Philadelphia are high.

Both fundamental problems have not been addressed because, in the case of the real estate assessment problem, there is widespread fear that whomever reforms the local real estate

assessment system will be blamed for the vast changes in real estate taxes that will occur once the vast inequities in the assessment system are eliminated.

3.2.1 The Philadelphia Commuter Tax

In the case of the Philadelphia commuter tax, its elimination would entail a revenue loss to Philadelphia of almost \$500 million/year; this revenue loss cannot be realistically replaced by increasing Philadelphia's resident income and real estate taxes on households and businesses. Further, without progress on these two fundamental problems, there has been a lack of political will in the General Assembly to tackle other, related local tax problems. In addition to these large tax structure problems, there are another set of structural tax problems whose solution has been largely held hostage by inaction on repairing the real estate tax assessment system, and fixing the Philadelphia commuter tax problem.

3.2.2 The Local Real Estate Tax Base

In May, 2000, I was invited by Senator Rhoades to comment before the Senate Education Committee on the economic and distributional effects of Pennsylvania's local school real estate tax, and documented why it has become a lightning rod in virtually every school district in the Commonwealth. I do not want to repeat those extensive remarks (it is available on my web page), but I do want to remind you why people are upset about the local school real estate tax:

- There has been a national long term increase in the *relative* importance of residential vs. commercial and industrial real estate in local school districts; this is due largely to changes in federal depreciation laws over the past 20 years, and the out-migration of manufacturing from Pennsylvania and the US more generally; this shift of burden and incidence has been most pronounced in industrial communities which have lost their industries;
- Pennsylvania's local assessment practices are among the worst in the nation; while currently there are no comparable federal statistics on just how bad assessment practices are here compared to other major industrial states, the sort of self reported assessment quality data which the State Tax Equalization Board collected in 1999 from county assessors shows a shocking level of inequity in virtually every county in the Commonwealth; while nationally some entire states have dispersion coefficients below the 15% recommended by the International Association of Assessment officers, the mean and median dispersion coefficients in 1999 for Pennsylvania's 67 counties was 31% or *twice* the recommended dispersion level; only 5 counties had dispersion coefficients of 15% or less.¹⁶ The debacle in Allegheny County as it went into court-ordered reassessment for the second time in 25 years is a poster child for the entire state, and no doubt an enormous business climate liability that will take a decade for Allegheny County to overcome;
- Sluggishness in inflation-adjusted per-pupil state aid to education;
- Ongoing increases in local school spending by local school boards that put upward pressure on an increasingly residential property tax base;

¹⁶ The coefficient of dispersion in Center, Chester, Lancaster, McKean, and Montgomery counties ranged from 10% to 15.3% in 1999.

- Sluggishness in the taxpaying ability of most Pennsylvanians in terms of their personal money incomes compared to the rest of the US;
- Complaints by the elderly and farm groups that the local school real estate tax is driving them out of homes and off of farms; and,
- Continued public skepticism about the efficacy of public education, and a correlative disinterest in pouring further tax dollars into public education.

I have described why Pennsylvania's local real estate tax is disliked and some reasons why its administration is often inequitable. Let me turn to the Philadelphia commuter tax problems and explain why it has not been solved to date.

In the midst of the Great Depression, Philadelphia State Senator Sterling was able to enact special taxing authority for Philadelphia which allowed it to impose a tax on commuter wages and self-employment income that took precedence over any resident income or wage tax that might be levied by resident's suburban municipalities or school districts. At its peak, the tax on commuters was 4 and 5/16 percent (or 4.3125%), well above even the state personal income tax rate of 2.8%, well above the optional local combined rate of 1% available to municipalities and school districts, and the source of much anguish and anger in Philadelphia's suburbs. Commuters have long felt they were paying local taxes twice, and far in excess of what anyone could reasonably argue was in recognition of their use of Philadelphia's municipal services.¹⁷ In the 1990's, Philadelphia has sought to reduce both the non-resident tax rate and resident tax rate, so that they stand in 2001 respectively at 3.97% and 4.56%. Historically, elected officials from Philadelphia and its surrounding suburban areas have prevented systematic statewide local tax reform until the issue of Philadelphia's onerous commuter tax is addressed. South Eastern Pennsylvania is in political agreement that the commuter tax should be eliminated or substantially reduced, and also in political agreement that the City itself can not make up the revenue loss that would occur with the elimination of the commuter tax. The issue of the commuter tax is complicated because commuters from Delaware and New Jersey also pay the commuter tax.

Much of the political tug of war in the General Assembly over local taxes is how and more specifically who across the state is going to finance the reduction in Philadelphia's commuter tax. The combined political influence of South Eastern Pennsylvania's House and Senate delegations has been sufficient to block other state-wide local fiscal reforms which the rest of the state has wanted.

3.3 Structural Impediments to Getting out of Briar Patch

Some basic fiscal arithmetic clarifies the difficulty of finding a statewide solution to eliminating the Philadelphia commuter tax. First, recognize that one has to invent a fiscal pretense or a way to do it. Currently, Philadelphia estimates that the commuter tax brought in \$469 million/year or 37.5% of their total wage tax collections. The Philadelphia budget is not capable of absorbing that sort of cut. Incidentally, \$469 million is well above the size of the entire Pittsburgh

¹⁷ No one has ever tried to publicly argue that commuters should defray the costs of schools where they work, as that responsibility rests on the shoulders of the parents and residents of where the children go to school, and the state more generally.

budget which is about \$320 million; \$469 million is a little less than half the size of Allegheny County's budget.

A state revenue sharing program based on a population formula to "buy out" the commuter tax problem would require a great deal of new state taxes. According to the 2000 Census, Philadelphia's 2000 population of 1,517,550 was 12.3% of the Commonwealth's 2000 population of 12,281,054. To get \$469 million to Philadelphia on a population basis would require \$469 million / .1235 = \$3,795 million or \$3.8¹⁸ billion of *new* taxes to fund the state revenue sharing. That is, there has to be \$3.8 billion of *new* state taxes to "buy-out" Philadelphia's commuter tax.

Given that the state personal income tax is expected to bring in about \$7.7 billion this fiscal year at a rate of 2.8%, it follows that raising \$3.8 billion of new personal income tax revenues would require an additional 1.38% on top of the 2.8% tax rate to bring the new state personal income tax about 4.18%. The sales and use tax is expected to bring in \$7.29 billion this fiscal year; similar calculations indicate that legislators would need to raise the 6% sales tax rate to about 9.1% to accomplish the same revenue objective. Of course, if one believes that commuters should pay Philadelphia at a rate commensurate with the amount of time they spend in the city (8 hours/day out of 24 hours/day argues for a commuter tax rate that is 1/3 the resident rate), then the size of the revenue sharing program gets reduced accordingly. For example, moving the commuter tax rate from 4.39672% to somewhere in the 1.5%¹⁹ range would both cost less²⁰ at the state level and certainly be embraced by suburban commuters as very significant tax relief that could readily break the log-jam on other local tax reform issues.

Using a population based formula to eliminate or reduce the Philadelphia commuter tax that has been the Gordian Knot of local tax reform is only one of a family of formulas that one might imagine to consider. The more concentrated the formula is viz. a viz. Philadelphia, the smaller the state-wide tax increase has to be. Historically, under the PURTA formula, Philadelphia gets around 19% of each dollar, so the new state pot would have to be \$469 million/.19 = \$2,468 million or \$2.5 billion of state revenue sharing.

If the commuter tax problem in Philadelphia does not get addressed (translation: the City's budget has to be held harmless), then one can imagine that the rest of the school finance and local tax reform agendas will be difficult to achieve.

4.0 Enhancing Accountability in Pennsylvania's Public Schools

4.1 Meanings of Accountability

"Enhancing accountability" has become a permanent addition to our lexicon of educational reform objectives and has been used to describe or justify anything from more frequent and

¹⁸ When I did these calculations in the mid 1990's, Philadelphia's population share was a larger fraction of the state population, and the commuter tax was smaller with the result that the needed statewide amount to share back on a population basis was \$2.9 billion rather than \$3.8 billion.

¹⁹ 1/3 of 4.56% is 1.51%.

²⁰ \$1.3 billion would be needed to bring the commuter tax rate to 1.51% which would add .8% to the state personal income tax rate, and bring the state personal income tax rate to 3.6%.

demanding student testing to changing the way schools are allowed to finance themselves. Here I describe a range of policies that are discussed in conjunction with enhanced accountability. They involve fiscal accountability, and various kinds of academic accountability, and the consequences of poor student performance viz a viz state funding or the actual operation of a school building or entire district.

4.1.1 Fiscal Accountability: Changes in the Composition of Revenues, but No Net New Spending

In the context of how the Pennsylvania General Assembly interprets this invective when school finance reform is linked to it, it likely means one of the following possible fiscal scenarios:

The local school real estate tax would be reduced, and some combination of a local school income tax and remaining school real estate taxes would be allowed to co-exist, but only to the extent that \$1 of income tax dollar newly levied would replace \$1 dollar of local real estate taxes. To the extent one wants to raise per pupil spending in low per-pupil spending districts, this approach can not accomplish both goals.

This is a variant on the above proposal. The local school real estate tax would be reduced, and replaced dollar for dollar by a combination of newly enacted local personal income tax and an increase in the state personal income tax.

4.1.2 Fiscal Accountability: Changes in the Composition of State and Local Revenues and New Net New Spending to help Poor School Districts AND Changes in Educational Requirements

This sort of change, which was most dramatic in Michigan, involves not only the reduction in local taxes in support of education and higher state taxes, with the state taking over a higher proportion of the total responsibility, it also involves giving poor districts more money to spend overall than before, and a variety of changes to improve school performance. As is well known, Michigan eliminated most of its local school property tax, imposed a state-wide property tax on commercial and industrial real estate, radically increased the state share of total educational expenditures from 30 to 70% through an increase in the state sales tax from 4 to 6%. It also put very strong restrictions on how fast school spending could grow, materially strengthened its charter school program, and enacted annual state-wide student testing. School buildings whose scores were very low for three years straight risked being disbanded. School districts which lost teaching days due to teacher strikes also lost any state reimbursement for those days lost due to strikes. As a result, the right to strike was essentially eliminated because teachers no longer receive back salary payments for work stoppages.

4.1.3 Accountability Needs in Pennsylvania

While many states have introduced curricula reforms in the last decade, and introduced periodic or annual testing, only a few states have radically redesigned their financing of public education at the same time. The other area of educational reform which has been active in the past five years involves teacher testing, program approval standards, and alternative routes to teacher certification.

What no state has yet addressed in the context of educational reform are issues surrounding the local educational decision process which are usually described as “governance issues.” As every superintendent knows, he or she works at the pleasure of locally elected school boards. By their very nature, local school board members are immediately accessible to their citizens, and find themselves at the focal point of most of the friction over school performance. National surveys consistently show that public education is the number one public policy concern of voters, and poor international test results, and lack of progress on national assessment tests indicate that there is much room for improvement. That improvement ultimately involves school boards voting to maintain or raise taxes, allocate budgets, and vote to make offers to prospective teachers. The pressures, incentives, and information surrounding these decisions constitute the firing line of public education. National and state school reform has focused on some combination of providing more money and top-down ideas to local boards to consider and act upon. No state has systematically tried to change the incentive structure facing school boards and superintendents. Rather, school principals and superintendents are subjected to pressure should their students not test at certain levels.

In my remarks and proposals below, I seek to develop a better defined relationship between each elected board member, and the electorate, and the entire board and the superintendent, in which the goal of the organization is more clearly stated, and the ethical environment in which resource allocation decisions are made is consistent with that goal. With information about the learning position of students at the beginning and end of the school year, agreement that improved learning is the sole purpose of public service via school board membership and the objective of the superintendent, and parental authority to choose the teacher for his student, it seems likely to me that stake holders will ensure that greater learning than before occurs.

There are several reasons why governance issues seem to be central to move Pennsylvania forward. As this Board discovered in its survey of school district teacher recruitment practices, many of Pennsylvania’s schools are very careless about how they make such long-term decisions. A question arises how such decisions can be made more carefully without writing hundreds of pages of rules and regulations which undoubtedly will cause outcry among the 501 school districts in the Commonwealth. Absent specific rules, only improved process or procedure can achieve a different outcome with any predictability. Whether improved process and procedure gets followed can only be determined by oversight and evaluation of the final outcomes in the form of greater student learning. Improved process becomes more important when higher state-wide taxes are imposed to improve school finance and school outcomes.

To understand how this new set of relationships will work, one must first understand the current environment governing school board member and superintendent decision-making.

4.2 Current Standards Governing School Board Directors and School Superintendents Conduct

School Board Directors

Under current Pennsylvania law, school boards are composed of 9 members who must be 18 years of age or older, of good moral character, and have resided in the district for at least a year

prior to election or appointment. The School Code and other parts of Pennsylvania law are silent, as they are in other states,²¹ about what the specific duties of an elected school director are in relation to the learning objectives of the students and parents, and do not convincingly prohibit school directors engaging in activities for their personal and/or financial benefit. School board members in Pennsylvania are rarely paid except for out of pocket or travel expenses, and the relationship between the board and superintendent is not well defined in the School Code.

Direct self-dealing by school directors is limited statutorily in several ways:

- 1) School employees are prohibited under Act 2 of 1989, from serving on a board where they are employed; however, this does not preclude them serving on a board where they live if the the district of residence is different form the district of employment.
- 2) School board members are prohibited under the School code, Section 1111, from voting on the appointment of a relative to a teaching position on the board.
- 3) The Public School Code, Section 324, prohibits a school board director from being interested in, or doing business, with the school district during the term of office.

This last prohibition is, however, only a direct prohibition, and does not deal with indirect issues of conflict of interest. Indirect conflict of interest arises when, for example, a spouse, relative, or friend engages in business with the district in which the school director serves, and the transfer or benefit of such funds to the school director is through such a third party.

Section 3-325 of the Pennsylvania Code attempts to deal with such indirect self-dealing and prohibits a school director from receiving, directly or indirectly, monies as a consequence of voting on matters which come before the school board. This limitation, however, is easily circumvented. By not participating in the vote on a contract decision, or delegating decision-making over financial matters to a superintendent or other school board members, a school director is relieved of this prohibition, and can readily indirectly benefit through third parties from activities of the district.

Prior to 1968, the oath of office administered to elected school board members obligated them to affirm "...that I will not knowingly receive, either directly or indirectly, any money or other valuable thing for the performance or non-performance of any act or duty pertaining to my office, other than allowed by law. Effective November 22, 1968, the oath of office was changed to simply asserting support and obedience to the state and federal constitutions, and agree to discharge the duties with fidelity.²²

School Superintendents

To become a school superintendent in Pennsylvania under current law, the aspirant must receive a letter of eligibility which in turn requires either having completed a Pennsylvania

²¹ See Strauss and Kolb(1999).

²² It is argued by some that changes in parts of Pennsylvania's ethics laws in the late 1960's otherwise ensured that school directors would not engage in self-dealing or conflict of interest in the allocation of school resources, and eliminated the need for strong positive assurances in the oath of office. A review of decisions by the Pennsylvania Ethics Commission which has had many cases of school director self-dealing before it over the years reveals a very narrow interpretation of the ethical responsibilities of school directors. See Strauss and Kolb(1999).

approved graduate-level program of educational administrative study minimally approximating two full academic years for the preparation of chief school administrators; or having been prepared through an out-of-state graduate-level program equivalent to those approved in Pennsylvania. Eligibility further requires demonstration of six years of teaching or other professionally certificated service in the basic schools for the Assistant Superintendent's Letter of Eligibility, and for the Superintendent's Letter of Eligibility three of those six years must have been in a supervisory or administrative capacity.

4.3 Strengthening the Oath of Office: Student Learning as the School Director's Primary Objective

Corporations through their charters obligate their managers to make money for their shareholders. If corporations fail to do so, management risks a drop in share prices²³, the possibility of getting fired, and even being subjected to shareholder litigation. While failure to provide effective learning opportunities does not immediately affect school districts and school boards, parents no doubt vote with their feet.²⁴ The fact that currently school board directors are essentially volunteers undoubtedly colors the way the judicial system looks at their decisions when taxpayers and parents seek redress through the courts. Paying school director salaries, and requiring both oaths of office related to improved learning as well as requiring higher ethical standards seem essential to school reform, especially if school districts rely more heavily on state aide than is currently the case. Spending "somebody else's money" often can lead to careless behavior. Again, I believe that enhanced local processes are a better solution than a doubling in the length of the School Code.²⁵

Deciding precisely what a school board member, upon election, should attest to uphold besides the state and federal constitutions is not easy to define. Commonsense suggests to me that

²³ Since management's compensation is often tied to share prices, the first effect of lack of profitability can be a drop in compensation.

²⁴ It is well known that housing values reflect the success or failure of schools in educating their children. The September 3, 2001 *Washington Post* examined in detail housing values through out Montgomery County and found that houses near high performing schools sold at a premium while identical houses on identical parcels of land near low performing schools sold at discount. Most realtors can quickly provide from a CD-ROM SAT scores for each school district one might be interested in locating in; the current PDE web page lists SAT scores for every school district in the Commonwealth.

²⁵ Much of current "accountability" policy in other states involves putting principal's employment at risk should student outcomes be below some standard. This is often viewed by my fellow economists as treating school principals like plant managers.

Several points about this perspective are in order. First, at the secondary level, what one inherits from middle and elementary schools is out of control of a high school principal. General Motors may be able to outsource for car radio components and thereby put its captive subsidiary (Delco) on notice that it will not tolerate shoddy workmanship; the building principal does not have the alternative available. Blaming the victim seems especially demoralizing and unfair. Second, building level principals do not typically control their staffs who are entirely unionized, and also typically highly tenured. Teachers are not "at will" employees in Pennsylvania, the terms of their compensation are fixed, and unrelated to the success of their students as well. Third, the compensation of principals compared to teachers of equivalent seniority in many districts is not that different. Fourth, and related to the compensation problem is the fact that the bargain contemplated by punishing principals for poor student performance is typically one sided. Success in the form of learning gains in excess of what might be expected is typically not rewarded in any significant fashion. Absent upside rewards, it is unreasonable to expect that principals will undertake significant risk-taking in their management of teachers and students.

less should be stipulated about the particulars of what goes into public education than the *outcomes* which we can generally agree upon. An important baseline might be that resources be used *solely* for ensuring that each student learns to his or her intellectual capacity. Whether using public monies to put an artificial surface on the high school football field fits into this framework is an interesting question. Less challenging (to me) would be to interpret funding the school band or equipping a computer cluster in the school library as resource allocations which improve student learning. Whether or not assuming that the intellectual capacity of each student is static remains the outstanding issue for this modest proposal.

Were board members to affirm their commitment to individual learning, and superintendent's and their subordinates affirm it as well, then one would hope that the board members would insist they be provided periodic reports on student learning progress, and through the oversight process see to it that corrections be made to policy so that the *desirata* is accomplished. Public disclosure of outcomes without publicly embarrassing individual students and their parents seems essential to such a process; private notification of students and their parents of learning progress seems equally essential. I see merit in statutorily obligating superintendents to provide a written report to his board of directors before the close of the fiscal year (June 30) along with a plan of how the budget for the forthcoming year will address identified deficiencies and successes as revealed by the gain in learning during the academic year just completed.

4.4 Strengthening the Oath of Office: Eliminating Conflict of Interests

As noted, Pennsylvania's limitations on board employment and business relationships with the school districts they govern are relatively porous and easily circumvented; 18 USC Sec. 201 sets a high federal standard in defining what constitutes bribery, graft and conflict of interest for various federal officials, and could easily be reworked to apply to school directors and to deter most if not all of the objectionable or questionable conduct discussed earlier.

Consider the following reworking of 18 USC 201 as a component of the school director's oath of office:

“...I will not, under penalty of law,
directly or indirectly, corruptly demand, seek,
receive, accept, or agree to receive or accept anything of
value personally or for any other person or entity, in return
for:
 (A) being influenced in the performance of any official act;
 (B) being influenced to commit or aid in committing, or to
collude in, or allow, any fraud, or make opportunity for the
commission of any fraud on the district; or
 (C) being induced to do or omit to do any act in violation of
the official duty of such official or person;
and shall, upon being found violating this prohibition
be fined under state law not more than three times
the monetary equivalent of the thing of value, whichever is greater, or
imprisoned for not more than fifteen years, or both,

and may be disqualified from holding any office of honor, trust, or profit in the state.”

The last component in this new framework for ensuring high standards for school board director conduct is to provide the information base upon which judgments can be reached about whether self-dealing has in fact taken place. Financial disclosure is relatively commonplace for local officials; however, few states require the provision of comprehensive financial information. Here, by comprehensive I mean the official’s personal tax return as well as that of his spouse and any business returns. Perhaps as important as the nature of what is disclosed is the matter of *to whom* the disclosure should be made, whether or not it is or can be public information, and who will use this information to check compliance with these new state strictures against direct and indirect conflicts of interest.

Given that each school district is already audited annually by the Pennsylvania Department of Education, there is merit in extending the independent auditor’s responsibilities to include determining if each school board director is in compliance with state laws governing conflict of interest. The opinion letter would need to state whether or not the auditor believes there is evidence of direct or indirect self-dealing. Presumably the independent auditor’s opinion on self-dealing would be publicly stated locally and conveyed to the state and General Assembly. An annual, independently rendered opinion about the financial integrity of elected school board directors that is publicly stated should help organize perceptions about the integrity of school resource allocation decisions, especially if more state funding is infused.

Such an opinion would be far more effective than simply allowing anyone to look at a mound of financial data for each school board member. Whether or not financial disclosure militates against running for office is a difficult question, and one that deserves further inquiry before the sorts of changes in federal “strings” for education monies get enacted.

Obligating school directors to only pay attention to those matters which increase student learning, and putting them at financial risk for engaging in prohibited self-dealing is asking far more of today’s volunteers. Some sort of compensation for their efforts and time seems worthwhile, and I suggest they be paid by the General Assembly, whose agents they are, in the amount of \$12,000/year. City, borough, and township council officials are already paid under Pennsylvania law, and \$1,000/month seems adequate for the significant amount of time devoted to governing the local schools.²⁶

4.5 Professionalizing the Hiring Decision: Hiring Criteria and Waiver Policy

As this Board learned several years ago from its 1997-8 survey of district employment practices, 49% of all districts do not have any written hiring policies, and 26% reported requesting waiver of certification requirements because applicants were uncertified and/or unqualified, and 17% reported never advertising for commonly filled positions. Also, districts reported that, on average, 40% of their teachers earlier attended high school in that district.

²⁶ Given there are 4500 school directors in Pennsylvania, the annual cost of this innovation would be \$54 million/year.

Two districts, Philadelphia and Pittsburgh, are required under the School Code to hire strictly on the basis of numerically developed hiring lists. Applicants are scored on a standardized basis of various criteria. Given rumors of nepotism in the teacher hiring process that surrounded the Board's findings several years ago, the question arises how the hiring policy might be guided through state policy without resorting to the very confining system that was imposed by the General Assembly on Philadelphia and Pittsburgh many years ago in response to various problems.

The matter of teacher hiring has become more important for two reasons. First, retirements are now occurring throughout the Commonwealth's districts at an increasing pace. Second, while the program approval and content standards have been dramatically increased, there are literally hundreds of thousands of certified teachers in Pennsylvania who have not taught, and whose training was far less rigorous than that now in place for new graduates. Second, given that teacher tenure is rarely denied, the hiring decisions made by local districts over the next few years will determine the trajectory of public education (and therefore the state's economy and standard of living) for a very considerable period of time. The public policy question then entails the sort of guidance the state might undertake to ensure that the highest quality teachers are hired as more public monies are invested in public education.

Other accountability proposals, already discussed, will upon adoption eliminate most of the opportunities for nepotism or corrupt hiring practices; however, there remains the opportunity, and in my judgment the need, to provide more specific guidance to local districts as they hire teachers since the pool of certified teachers is quite heterogeneous. Several measures seem appropriate. First, it seems incumbent that districts be required to advertise openings in newspapers of general circulation. There are already public notice and bidding requirements for the purchase of other kinds of school services. The decision to hire a teacher at \$30,000/year is in effect a decision to spend \$30,000 initially but also represents an amount which will grow at 2-3%/year for 35 years. This can easily be a \$500,000 decision. Viewed in these terms, more systematic advertising for applicants seems essential, and will alert teacher preparation institutions of opportunities.

Second, there is merit in stipulating the information that districts can obtain from applicants and criteria which districts can use in making the employment offer decision. Analysis of PSSA scores in relation to various recruiting and hiring practices done after completion of my monograph for the Board indicated that districts which used professional hiring practices and requested more information than the minimum currently required were districts whose students scored more highly on the various PSSA tests.²⁷ For example, districts that obtained written recommendations, NTE or Praxis test scores, and academic transcripts about candidates were districts whose students did better on PSSA tests.

Third, and perhaps most difficult in conception and implementation is the stipulation of the criteria that districts should be obligated to use when deciding whom to offer a job. My own preference is to strongly encourage districts to weigh the content knowledge background of applicants most heavily, especially for middle and secondary school teachers. This preference is based on the recent finding that higher ETS General Knowledge Scores are highly related to student PSSA scores; a 1% increase in median teacher General Knowledge Score was associated

²⁷ See Strauss, Bowes, Marks and Plesko(2000), Table 10.

with an 8% increase in various measures of student achievement after controlling for the poverty status of students and the educational background of the community.²⁸

The precise wording of such guidance needs careful attention. For example, such guidance might include wording as: "...65% of consideration shall be based on the academic qualifications of the candidate as evidenced by subject coursework and academic achievement in the major teaching assignment the candidate is expected to teach in during the next 3 years..."

In preparing *Teacher Preparation and Selection In Pennsylvania: Ensuring HighPerformance Classroom Teachers for the 21st Century*, I reviewed carefully the waiver provisions in the School Code, and comparable provisions in other state school codes. I also discussed the practical application of the current waiver language. As you know Pennsylvania's current waiver language allows a local district to request that an emergency certificate be issued when "...a fully qualified and properly certificated applicant is not available."²⁹

If one looks carefully at districts and certification areas where this provision is utilized, one finds that many of the emergency certificates are granted to Philadelphia in the area of elementary education. Given the well known excess supply of elementary school teachers in Pennsylvania, and the large number of elementary certificates that are generated by approved programs in the Philadelphia area, I find it difficult to understand why the Philadelphia public schools are not able to hire fully certificated elementary school teachers. Other things must be at work here that may militate against students having the most academically qualified teachers in front of them.

I would suggest that adopting Michigan's language will accomplish providing flexibility and avoid various kinds of mischief. Rule 42 of the Michigan School Code provides:

"A full year special permit shall be issued when a properly certificated teacher is unavailable for a regular teaching assignment."

The Michigan rule further provides that in emergency situations a non-certified person with "reasonable qualifications" can teach "...if a candidate with substitute permit is not available and the failure to authorize this emergency permit will deprive the children of an education."

Systematic Accountability Information for School Board Decision Making: Taking Nationally Normed Tests Each Fall and Spring

The above innovations create a focus on improving student learning, and eliminate various distractions which school directors often face. Outstanding is a systematic source of information about learning outcomes which can be used to guide the allocation of resources to the benefit of students, parents and the school administration. As a college educator for better than 20 years, I can attest to the value of knowing at the beginning of the school year what my students bring to my

²⁸ See Strauss and Vogt(2001).

²⁹ The problem of this language is that the term "fully qualified" is not statutorily defined, and allows a local superintendent or personnel director to apply other criteria to the hiring decision besides the presence or absence of a certificate in the area being recruited.

courses in the way of prior knowledge and skills. Undoubtedly public school teachers face the same unknown, especially for students who are new to the district. While public school curricula are relatively standardized, the pace and method of instruction can be adjusted to the range of knowledge and skills students bring to the school after Labor Day. One way to ascertain this systematically is to test students immediately in the fall, and immediately convey individual test score information to students, parents, and teachers. Teachers and students so informed can then begin their respective teaching and learning tasks with an understanding of what building blocks are in place and what needs to be accomplished during the year to bring the student to the next grade level of knowledge and skills.

Given the national emphasis on testing students periodically with the presumption that student outcomes are the responsibility of the teacher, creating such an initial information base defines the task teachers have to deal with from the beginning. Also, given the growing need for Pennsylvania high school graduates to be competitive viz. a viz. their counterparts from other states, there is merit in using tests that are nationally normed; many states use the Stanford or Iowa test series.

Since enhanced student learning is the primary objective of this revised governance scheme, it follows that the Fall and Spring test scores should be conveyed by the Superintendent to the Board at a date certain in the fall³⁰ accompanied by a discussion of how initial excellence and deficiencies in student knowledge and skills will be affected by current and recommended school policies to the Board. While this sort of conveyance may seem unduly mechanical, the status of student learning is as essential as the status of the budget, for the simple reason that student learning justifies the budget, and excellence and deficiencies necessarily implicate the expenditure of resources. Hopefully energized school administrators will examine student learning in relation to various resources assigned to these activities (primarily teachers and curricula), and identify things that work and things that do not.³¹

4.6 Strengthening Accountability through Parental Choice of Teachers

Annual testing at the beginning and end of the school year will: 1) inform stake holders (children, parents, teachers, school administrators, and school board directors) what 'problem' prospectively they need to solve during the academic year, and 2) what success in solving the educational 'problem' they achieved during the year. Providing parents with this information and requiring them to choose who should teach their child in the subsequent year changes in a very radical way the incentive structure of all the stake holders. Currently, assignment of a student to a teacher is a delegated responsibility by the General Assembly to the local school board which in turn delegates it to their administrators. The idea of parental choice of teachers is to statutorily delegate this responsibility instead to parents (who can choose not to exercise it). School administrators would then implement parental choices on behalf of the General Assembly and their delegates, the local boards.

³⁰ Standardized tests are rather inexpensive to impose, on the order of \$5 to \$7/student, and the results can be obtained relatively quickly if the testing service is paid a premium. Given there are 1.8 million public school students in Pennsylvania, the tests could be quickly administered and reported back to local districts for less than \$20 million per test or about \$40 million/year.

³¹ Given the realities of school scheduling, initial testing the last week before Labor Day, and in the 36th week of the school year seems workable.

It is likely that parents would take it upon themselves to demand information about what has and will happen in the classroom, and school boards, administrators and teachers will meet these demands, because no teacher will want to run the risk of finding themselves with no students when classes begin. During the school year, parents will also monitor what happens and become engaged in working with their child and school to ensure that gain in student learning, what everyone agrees is the desired outcome of the educational process, in fact occurs.

Under the proposed public school choice model, choice is introduced in a sequence of opportunities: First, choice is available among teachers within the building that each student normally attends. Second, if no choices within the building are acceptable to parents, then they are, under this model, enabled to elect to send their child to another public building in the same district. This in effect is a magnet portion of the model.

Third, if intra-district choice is not attractive to parents, then they may take their child to a building in another district, if the district is willing to accept the payment. This across district movement is associated with the loss of per-pupil state aid from the origin district; the state might be required to add to the payment if the differential is quite large. The destination district must, however, be willing to accept the student.

Fourth, as a last resort, significant vouchers could be made available to allow parents for whom these public education choices are not acceptable. This undoubtedly would be the most controversial part of the proposal, and might need to be held off until it becomes evident that the within and across district choices are available.

Reliable information linking gain scores to teachers is critical over time to enable parents to make informed choices. It is likely that increased parental scrutiny of who teaches their child will do two things. It will strongly encourage continuing teachers to be more responsive to children and parents as to what their educational activities will be, and encourage them to make meaningful self-investments in professional development that improves their subject and pedagogical skills; accelerate the process of retirement, and create an opportunity in many districts to renew their teacher force at a lower cost.

4.7 Strengthening the Pennsylvania Department of Education's Evaluation, Management, and Research Capabilities

Any substantial increase in state funding for public education, especially to districts that are currently under-funded, can lead to excesses. Much of what I have described above involve strengthening local processes and creating information that can inform decision-making. This will help, but does not guarantee local districts will be prudent in how they use their additional funding. Strengthened state oversight requires the collection, synthesis, and analysis of information. Administering fall and spring tests to each student can be outsourced to the testing agency; however, both local districts and the General Assembly, State Board, and Governor will benefit if these test scores are scrutinized, and if patterns are detected, reported and acted upon. Many states, including Pennsylvania, have foregone maintaining in the state education agency test scores of individual students over time. Sometimes this is justified on the basis of privacy. On the other hand,

having a second set of reviews (hopefully under my accountability suggestions the local school administrators and local boards will begin looking carefully at test patterns by grade, subject and building) will improve the system-wide performance of the schools.

5.0 Reforming Pennsylvania's School Districts and Municipalities System of Finances

The design of a state and local school finance system requires several components: a mechanism or algebraic formula to distribute money each year based on the size and need of the service population, and local resources available to the school student population, and a system of state tax laws which enable the local school district to levy taxes (and fees) and enable the state to finance its annual payment to the school districts.

5.1 General Issues Surrounding State School Aid Distribution Formulas³²

School aid formulas typically measure the size of the service population and reflected in the number of public school pupils within a district³³ (usually weighted to account for differences in pupil characteristics), the cost of educating different student populations, and other educational cost factors beyond the control of the district.³⁴

The specific design of an educational aid formula carries with it implicit or explicit incentives for recipient behavior. Inevitably, the design must deal with conflicting objectives. For example, it is desirable to encourage districts whose students are not demonstrating learning, perhaps as evidenced by high percentages of the student body testing below grade level on nationally normed mathematics examinations. If one gives more money to such districts, because such performance demonstrates greater "need" then one in effect is penalizing other districts of otherwise identical characteristics (e.g. poverty level of students, educational background and wealth of the community) whose students are testing at higher levels. One can reasonably characterize the differential scheme as rewarding failure.

This distributional or ethical dilemma can be addressed in part by benchmarking all schools at all grades, and then in the subsequent year, *reward* schools whose *gain* in achievement is positive, and on a percentage basis above the state average. The information requirements are substantial since calculating the *gain* requires a beginning and end score. I say "in part" because if a particular school and grade level, or even classroom does not show much gain in learning, the idea of penalizing the school or even teacher may be an attractive form of negative reward; however, there remains outstanding the interests (which I would argue are primary) of the children who did not learn much.³⁵ The notion that not giving as much money next year to a school or teacher whose students did not learn much or demonstrate a gain in test score deemed adequate is a very distant (in terms of time) incentive for changing the school's administrative and instructional behavior. A

³² This section draws heavily from Gold, *et al.* (1995).

³³ Monk, *Education Finance*, p. 186.

³⁴ See John Yinger (2001), "Fixing New York's State Education Aid Dinosaur: A Proposal." (Syracuse University: Center for Policy Research) No. 21/2001.

³⁵ Parental choice of teacher inserts the children's interests at the forefront. With parents informed about what gain scores are in a school, they will find out which teachers work least and best. Teachers will also find out from parental enquiries what is most important to parents, student learning, and adjust their activities to accomplish that or face smaller and smaller classes of school children. This is precisely the college model of class enrollment.

teacher or school principal can affect test scores by restricting who takes the test (telling parents of special education students to keep their children at home due to “illness” or other subterfuges that raise the mean test score.³⁶

There is no doubt that the costs of educating children varies within Pennsylvania, if for no other reason than the cost of living and therefore the salary structure needed to attract teachers varies. Of course, just what cost-of-living means is not transparent, and underlying the general idea is a basic notion of what a minimum salary should be for a school teacher. Also, cost does not necessarily reflect productivity, rather it reflects the willingness of the school directors, and the aggressiveness of the local teacher’s union to push for higher salaries. School director willingness to raise salaries can reflect a desire to reward better learning outcomes, local growth in the tax base without attending increases in student enrollment³⁷, the reality of what it takes to attract and retain a high quality teaching staff, and/or weariness at the collective bargaining table.

It is said by many that students from poverty backgrounds are more expensive to educate, and there is much evidence that buildings with high concentrations of students from poor families display lower standardized test scores. However, precisely how giving buildings with higher concentrations of poor students more money to spend will improve learning outcomes for a group of poor students is not transparent.³⁸ Undoubtedly there are many ways to spend more money in schools with a concentration of poor students. Certainly inadequate nutrition and chronic health problems can impact student learning; however, addressing these issues at school is really addressing poverty rather learning *per se*. Funding programs after school that keep students away from homes and neighborhoods that are dysfunctional may reduce the rate of juvenile crime, and increase student attention to homework, but these are more properly characterized as social programs administered by local school districts rather than educational programs.

Paying for special education has proven especially problematical. Few would dispute that students who are physically and mentally disabled require greater financial resources than students who are not so disabled. However, by directing more resources based on counts of such students, and leaving the final counting to local districts, the states have generated enormous incentives to increasingly classify students as disabled. Further, districts that can afford to provide significant special education services find they encourage families with children who are physically and mentally disabled to move to such districts, further driving up the costs, and relative expenditures on special rather than on general education.

In 1984, there were 9,185 full-time teachers and supervisors whose primary assignment involved some sort of special education³⁹ out of 116,950 full-time professional personnel throughout the Commonwealth. In 1999, the corresponding figures were 16,581 involved in special education out of 135,399. Thus the percentage of public school teachers and administrators

³⁶ The imposition of standardized tests whose results affect how much money schools might get in the future has led to other predictable behavior like increases in the accounts of outright cheating.

³⁷ Consider the financially beneficial effects to a district’s budget of the development of a new shopping center or mall.

³⁸ My own research at the secondary level suggests that recruiting teachers with higher general knowledge scores on standardized tests will have huge effects on the percentage of students testing at grade level. Low values of this outcome measure are typically found in high poverty schools. The finding takes into account class size and other resource measures.

³⁹ More specifically, their major assignment was either in the 9200’s or 9800.

involved in special education had grown from 7.9% to 12.2%.⁴⁰ It is difficult to believe that the incidence of physical and mental impairments of young people in the Commonwealth has grown so dramatically. Rather some of the increase must be explained by the establishment of state aid programs that financially reward those who determine the classification.⁴¹

Below, I describe the typical measurement and distribute mechanisms, and conclude with some suggestions and comments about the type of formula that might improve the distributions of school aid in Pennsylvania.

Measuring Need in a School District: Pupil Count, Teacher Units, and Instructional Units

Three measures are employed in counting the public school student population: enrollment (ENR), average daily membership (ADM), and average daily attendance (ADA). ENR is based on a school district's total enrollment on a single day usually in mid-fall. ADM is based on a district's average total enrollment over a given time period. Some states determine ENR, ADM, and ADA using current year or previous year pupil counts. States typically audit locally reported enrollment counts to ensure that local districts do not over-state enrollments. Given that the school leaving age depends on the birthday of a student, the distribution of birthdays and time at which the pupil count is determined can have important financial implications for urban districts which can lose 30 to 40% of their 9th grade class due to dropping out.

Some states use teacher units or instructional units as a measure of need instead of pupil units. The number of teacher or instructional units is generally based on a district's pupil count.

State aid formulas are often composed of a basic formula, and then supplemental amounts for transportation, special education, and students in poverty who are believed to be more difficult and expensive to education.

Basic support aid is usually allocated on a per-unit basis, either pupil unit or teacher/instructional unit. Table 1 indicates that seven states used ADA, 22 states used ADM, 12 states used ENR and seven states used teacher or instructional units. At least 23 states used previous year(s) unit counts, but 13 of these states made adjustments based on the current year unit count.

Weighting Procedures

Generally, weighting procedures are based on average per-pupil expenditure differences in grade levels, educational programs, and/or pupil handicapping conditions. Weights are assigned in relation to the cost of educating the “regular” school pupil who is given a weight of 1.0.⁴²

Other Educational Costs

⁴⁰ Author's tabulations of annual Professional Personnel Files.

⁴¹ Classifying students as “special education students” may lead to greater state funding, but also imposes on the student an onus that can be quite adverse.

⁴² In the former Soviet Union, the school aid formulas were quite detailed and took into account differences in energy costs, temperature variations, square footage of each building to be heated, and method of heating.

Further adjustments to the basic costs include: adjustments for sparsity or isolated school districts, district size, teacher training and experience, municipal overburden, and enrollment growth. In the last several years, a number of school finance scholars have argued that differential educational costs should be reflected in state school aid formulas in order to ensure that students from poverty backgrounds are able to perform at adequate state levels and thereby graduate from high school.

Table 1							
Classification of 1993-94 Basic Support Allocation Units							
Total (ENR)	Enrollment	Average Membership (ADM)	Daily	Average Attendance (ADA)	Daily	Teacher Instructional	or

Colorado (w) Connecticut Georgia (w)(p*) Indiana (w) Iowa (w)(p) Kansas (w) Louisiana (w) Maryland (w)(p) Massachusetts (w) Nevada (w) New Jersey (w)(p) New Mexico (w)	Arizona (w) Arkansas (w)(p*) Florida (w)* Maine (p) Michigan (p*) Minnesota (w) Montana (p) Nebraska (w)(p) New Hampshire North Carolina (w)(p*) North Dakota (w) Ohio Oklahoma (w)(p*) Oregon (w) Pennsylvania (w) Rhode Island (p) South Carolina (w) Tennessee (w)(p*) Utah (w)(p*) Vermont (w)(p*) Virginia Wisconsin	California (w) Idaho* Illinois (w)(p) Kentucky (w)(p*) Missouri (p*) New York (w)(p*) Texas (w)(p)	Alabama (w)(p*) Alaska (w)(p*) Delaware (w) Mississippi Washington (w) West Virginia (w) Wyoming (w)(p*)
Total = 12	Total = 22	Total = 7	Total = 7
<p>The following states provided descriptions for school years other than 1993-94: Colorado -- 1994-95, Michigan -- 1994-95, and Wyoming -- 1992-93.</p> <p>States not included in Table 7: Hawaii (full-state funding) and South Dakota (aid is not based on allocation units).</p> <p>If the information was provided in the state description: (w) Indicates that the state uses a weighting procedure in the calculation of the allocation units. (p) Indicates that the state uses prior year(s) count of allocation units. * Indicates that the state makes allocation unit adjustments based on current year unit counts.</p>			

Source: Gold, Smith, and Lawton (1995)

Except for the two states that entirely fund the costs of public education, all others determine the financial ability of each school district. Typically this determination is made in relation to the tax base(s) accorded to the district under state law, as a practical matter is related to the local value of real estate or property on a per-pupil or per-ADM, per-WADM basis. Pennsylvania's determination is ½ on the basis of wealth and ½ on the basis of personal income. Since states accept the responsibility to redistribute resources among districts, the various formulas employed are *inverse* to the measure of ability to pay.

School districts in some states have access to other revenue sources in addition to the property tax such as local income tax, local sales tax, vehicle excise tax, and user fees. Together, these form a pool of resources available to local districts to fund education.

Table 2 Classification of 1993-94 Basic Support Local Fiscal Capacity Wealth Measures				
Assessed Property Valuation (only)		Assessed Property Valuation & Other Revenue Sources (not using Personal Income)	Assessed Property Valuation & Personal Income	Assessed Property Valuation & Personal Income, plus other Revenue Sources
Arizona	Maine	Alaska	Connecticut	Alabama
Arkansas	Michigan	Indiana	Maryland	Missouri
California	Minnesota	Louisiana	Massachusetts	Nebraska
Colorado	Montana	Mississippi	New Hampshire	Tennessee
Delaware	North Dakota	Nevada	New Jersey	Virginia
Florida	Ohio	New Mexico	New York	
Georgia	Oklahoma	Oregon	Pennsylvania	
Idaho	South Carolina	South Dakota	Rhode Island	
Illinois	Texas	Wyoming	Vermont	
Iowa	Utah			
Kansas	West Virginia			
Kentucky	Wisconsin			
Total = 24		Total = 9	Total = 9	Total = 5
The following states provided descriptions for school years other than 1993-94: Colorado -- 1994-95, Michigan -- 1994-95, and Wyoming -- 1992-93.				
States not included in Table 8: Hawaii, North Carolina, and Washington. North Carolina and Washington do not use a measure of local fiscal capacity in the distribution of basic support aid.				

Table 2 indicates local wealth factors used in state measurement of local fiscal capacity. It is important to note that this table does not refer to the local revenue resources available to local school districts, but, rather, it focuses on factors that are incorporated into the state measure of local ability to pay. For example, Pennsylvania school districts have access to other revenue resources besides the local property tax and earned income tax.

5.2 Different Algebraic Structures of State Aid Formulas

State basic support aid programs can be broadly divided into five categories:

- flat grants,
- foundation programs,
- percentage equalizing,
- guaranteed tax base or guaranteed tax yield programs, and
- full state funding programs.

Table 3 displays the type of aid formula used in each state. In the early to mid- 1990's. State education finance basic support programs are comprised of various components or structural elements.⁴³

⁴³ Robert Berne and Leanna Stiefel, "Concepts of Equity and Their Relationship to State School Finance Plans," *Journal of Educational Finance*, 5 (Fall 1979), pp. 109-132.

Table 3
Classification of 1993-94 Basic Support Programs

Flat Grant	Foundation Program		Percentage Equalization Programs	Guaranteed Tax Base/Yield Programs	Full State Funding
Delaware (with separate equalization component)	<i>Required Local Effort</i>	<i>Local Effort Not Required</i>	Rhode Island	Indiana Wisconsin	Hawaii Washington
North Carolina	Alabama Alaska Colorado Florida Georgia ¹ Iowa Kentucky Maine Massachusetts Michigan Minnesota Mississippi Missouri ² Nevada New Mexico Ohio South Carolina Tennessee Texas ¹ Utah Virginia Wyoming	Arizona Arkansas California Idaho Illinois Kansas Louisiana Maryland Montana ¹ Nebraska New Hampshire New Jersey New York North Dakota Oklahoma ¹ Oregon South Dakota Vermont West Virginia	Foundation Type <i>Required Local Effort</i> Connecticut <i>Local Effort Not Required</i> New York Pennsylvania		
Total = 2	Total = 22	Total = 18	Total = 4	Total = 2	Total = 2

The following states provided descriptions for school years other than 1993-94: Colorado -- 1994-95, Michigan -- 1994-95, and Wyoming -- 1992-93.

¹ These states have a second tier of GTB/GTY funding in addition to the foundation program.

² Missouri uses a GTB approach in determining the foundation level for each district.

As mentioned above, basic support funding programs are broadly divided into five categories; however, many states have imposed minimum and maximum and other kinds of constraints on the application of these broad approaches to deal with special local circumstances and state budgetary problems.

Flat Grants and Foundation Programs

Flat grants and foundation programs are intended to assure every pupil the minimum level of per-pupil expenditure deemed necessary to provide an “adequate” level of education. Under this approach, the minimum expenditure level (determined by the state) does not depend on the school district in which the pupil resides. Additional per-pupil expenditures beyond the minimum level are funded by the school district without the benefit of state aid through the levying of fees, charges, and additional taxes.⁴⁴

Flat Grants

Flat grants, in simplest form, guarantee an equal amount of aid dollars per unit. The basic flat grant formula takes the following form:

$$A_i = FN_i$$

where: A_i = the dollar value of the state's grant to the i th district;

F = the flat grant level;

N_i = the number of pupils in the i th district.

Flat grants may be paid either on the basis of pupil units or teacher/instructional units. Flat grant programs do not address differences in local fiscal capacity among districts. Flat grants can address the issue of educational need by use of a weighting procedure in the determination of unit count. In this case, districts having different educational needs would receive differing amounts of state aid; the district with the greater educational need would receive more aid dollars.

Delaware and North Carolina, used a flat grant program as the primary mechanism to distribute basic support aid. Both incorporate the use of a weighting procedure and Delaware had a smaller secondary basic support aid program for wealth equalization.

Foundation Programs

Foundation programs provide each school district with a level of funding necessary to guarantee each of the district's pupils access to a minimum level of educational services in terms of dollars per pupil as prescribed by the state.⁴⁵

The basic formula for a foundation grant takes the following form:⁴⁶

$$A_i = N_i F - rW_i$$

⁴⁴ Guthrie et al., *School Finance and Education Policy*, pp. 132-137.

⁴⁵ Monk, *Education Finance*, p. 197

⁴⁶ Monk, *Education Finance*, pp. 197-198.

where: A_i = the dollar value of the state's grant to the i th district;

N_i = the number of pupils in the i th district (suitably weighted);

F = the foundation level;

r = the common tax rate selected by the state;

W_i = the total value of the i 'th district's tax base.

Foundation programs typically incorporate a measure of local wealth (W_i), and thereby introduce a local fiscal capacity element not found in the flat grant programs. This establishes an inverse relationship between a district's ability to pay and the amount of state foundation aid. Foundation grants may also take account of a district's educational need by the use of weighting procedures.

In some states the local effort (rW_i) is mandatory -- districts are required by the state to have a tax rate no lower than rate r in order to participate in the basic support program. In other states, local effort is used only as a computational device in determining the amount of basic support aid from the state. Districts are free to determine their own tax rates. Local school districts usually impose taxes that enable them to spend more than the foundation level, usually considerably more. Because this spending generally is not equalized, foundation programs place school districts with relatively small per-pupil tax bases at a disadvantage relative to school districts with larger per-pupil tax bases.

Table 3 shows that 40 states used a foundation plan program as the primary mechanism to distribute basic support aid. Of these, 22 states had a required local effort, while 18 states did not.

Percentage Equalization, Guaranteed Tax Base, and Guaranteed Tax Yield Programs

These three aid formulas presume that the state's responsibility is provide equal access to educational funding; however, each district decides its level of spending. The effect of this type of formula is that it is a form of percentage matching. The state matches a percentage of the funds raised for education by the school district based on the fiscal capacity of the district. The emphasis is on the equalization of the ability to generate revenues among school districts.⁴⁷ These three funding mechanisms are also known as District Power Equalizing mechanisms since they are concerned with the equalization of local districts' ability to raise revenue.

Although these programs help to "level the playing field" by providing larger grants to school districts with low fiscal capacity, they do not, in practice, equalize per-pupil spending. School districts with above-average tax bases usually impose sufficiently high tax rates that they spend considerably more per-pupil than school districts with below-average tax bases. Another difficulty with matching programs is that they have the long-run effect of pushing up the costs of education because they permanently lower the relative tax-price of education to local decision makers.

⁴⁷ Guthrie et al., *School Finance and Education Policy*, p. 133.

*Percentage Equalization Programs*⁴⁸

Percentage equalization grants take the following form:

$$AR_i = 1 - (fW_i / W_S)$$

Where: AR_i = the aid ratio for the i th district ;

f = a scaling coefficient;

W_i = the measure of local fiscal capacity for the i th district;

W_S = an arbitrary measure of fiscal capacity set by the state for use in this formula.

The aid ratio is the rate at which the state will match local funds. For example, if the aid ratio were equal to .6, the state would match 60 percent of the of locally raised school revenue. The scaling constant can be interpreted as the local share of the grant program. For example, if f is set at .4, then for a district whose wealth (W_i) is equal to W_S , the state would be required to pay 1 - f or 60 percent, leaving the district to pay 40 percent or .4. The level of W_i and the levels of f and W_S set by the state determine the state share of school revenue in each district. The amount of aid a district receives is equal to:

$$A_i = AR_i E_i N_i$$

where: A_i = the dollar value of the state's grant to the i th district;

AR_i = the aid ratio for the i th district;

E_i = the per-pupil expenditure for the i th district;

N_i = the number of pupils in the i th district (suitably weighted).

In theory, there need be no limit on the amount of district expenditures that state aid will match. In practice, states do restrict aid, usually by limiting the amount of per-pupil expenditure that the state will match with aid. This limitation is known as a spending ceiling. In this case, the total amount of aid a district can receive is equal to:

$$A_i = S AR_i N_i$$

where: A_i = the dollar value of the state's grant to the i th district;

⁴⁸ The discussion of Percentage Equalizing is based on Monk, *Education Finance*, pp. 214-215.

S = the state per-pupil spending ceiling;

AR_i = the aid ratio for the i th district;

N_i = the number of pupils in the i th district (suitably weighted).

Some percentage equalization programs essentially become foundation programs because the grants are no longer matching. This occurs when the state imposes a spending ceiling (S), where S is generally lower than the district per-pupil expenditure level (E_i).

Four states used a percentage equalizing plan as the primary mechanism to distribute basic support aid. Of these, one state required local effort, while three states did not. All of these states imposed spending ceilings. For purposes of these volumes, states that used an aid ratio in determining the amount of state basic support aid are classified as percentage equalizing programs. Rhode Island, because aid is based on previous year expenditures, approaches the percentage equalizing concept. Connecticut, New York, and Pennsylvania impose spending ceilings that limit the amount of aid a district can receive and thus operate like foundation programs. These three states have been classified as foundation type percentage equalizing programs. As a practical matter, Pennsylvania has not fully funded its percentage equalizing formula.

Guaranteed Tax Base and Yield Programs

Guaranteed tax base (GTB) and guaranteed tax yield (GTY) programs are conceptually similar. The state provides matching funds based on the level of local tax effort and the amount of revenues generated by that effort. In both the GTB and GTY funding mechanisms the state guarantees the school district a given amount of revenue per-pupil for a given tax effort.⁴⁹

GTB programs attempt to equalize district ability to pay by guaranteeing a given level of assessed valuation per-pupil. For example, if the statewide average assessed valuation per-pupil is equal to \$50,000, the state may guarantee this level of assessed valuation per-pupil for all districts. States, however, may set the guaranteed level at any amount, not necessarily at the statewide average assessed valuation.

In determining the tax rate necessary to raise its budget, the district would use the state guaranteed assessed valuation per pupil. The district would then apply this tax rate to its actual assessed valuation per pupil, with the state compensating the district for the difference between actual revenue raised and the amount that would be raised at the guaranteed valuation.⁵⁰ The amount of state aid equals:⁵¹

$$A_i = (V_s - V_i)r_i$$

where: A_i = the dollar value of the state's grant to the i th district;

⁴⁹ Guthrie et al., *School Finance and Education Policy*, pp. 138-141.

⁵⁰ Guthrie et al., *School Finance and Education Policy*, pp. 138-141.

⁵¹ Ronald C. Fisher, *State and Local Public Finance* (Glenview, IL: Scott, Foresman, 1988), p. 378.

V_s = the guaranteed per-pupil tax base;

V_i = the per-pupil tax base of the i th district;

r_i = the tax rate of the i th district.

The equalizing effect of GTB programs depends upon the guaranteed level of assessed valuation per pupil. The higher the guaranteed assessed valuation per pupil, the greater the equalizing effect. However, the cost to the state also rises as the guaranteed assessed valuation increases.

GTY programs attempt to equalize district ability to pay by guaranteeing a given level of revenue per pupil for a given tax rate. A sample GTY schedule would be similar to this:⁵²

<i>Effective Tax Rate</i> ⁵³	<i>Guaranteed Revenue Per-pupil</i>
0.5%	\$1,000
1.0%	\$2,000
1.5%	\$3,000
2.0%	\$4,000

The higher the guaranteed revenue per pupil, the greater the equalization effect and the cost to the state.

Again, in theory, there need be no limit on the amount of locally raised revenue through GTB and GTY programs that state aid will match. In practice, states do limit the amount of aid provided by imposing an upper limit on the number of mills eligible for aid.

Indiana and Wisconsin, used a GTB or GTY plan as the primary mechanism to distribute basic support aid. However, four states incorporated a GTB plan as a second tier of basic support funding in conjunction with a primary foundation plan program. All states impose upper limits on the number of mills eligible for aid.

Under full state funding, the financing of public education is a state responsibility. All educational funds are raised by statewide taxes.⁵⁴ Hawaii is the only state whose education finance system can be technically classified as full state funding. Washington, by court ruling, was ordered to assume full responsibility for the basic education program for grades K-12. Because of the court ruling, Washington is constitutionally obligated to fully fund the basic support program. Based on this, Washington was classified as a full state funding program for the basic support program only.

⁵² Guthrie et al., *School Finance and Education Policy*, p. 139.

⁵³ An effective tax rate is the amount of tax divided by the market value of property. Tax rates are often expressed in mills, where each mill is equal to \$1 per \$1,000 of assessed valuation. If property is assessed at its full market value, 10 mills is equivalent to an effective tax rate of 1 percent.

⁵⁴ Guthrie et al., *School Finance and Education Policy*, p. 141.

Washington has adopted state-wide collective bargaining as way to control the state costs of education. Local districts can impose taxes to provide supplementary support for non-basic programs.

Changes over Time in Type of Formula Used

Table 4: Classification of Basic Support Programs by Type

<i>Type of Program</i>	<i>1986-87</i>	<i>1990-91*</i>	<i>1993-94</i>	<i>Change 86-87 to 93-94</i>	<i>Change 90-91 to 93-94</i>
Flat Grant	5	2	2	- 3	0
Foundation	30	38	40	+ 10	+2
Percentage Equalizing	5	6	4	- 1	-2
GTB/GTY	6	2	2	- 4	0
Full State Funding	4	2	2	- 2	0
US Total	50	50	50		

Source: Gold, Smith, and Lawton (1995)

It is evident there has been an increased reliance on foundation plan programs to fund basic support aid. Between 1986-87 and 1993-94, ten states have changed to foundation plans from some other type of program. The major shift to foundation plans occurred between 1986-87 and 1990-91, when eight states changed plans. Between 1990-91 and 1993-94, the only change was a net increase of two in the number of foundation plans and a net decrease of two in percentage equalizing plans. There was no net change in GTB/GTY plans between 1990-91 and 1993-94 as Michigan changed to a foundation plan but Indiana changed from a foundation plan to a GTB plan.

Table 5: Classification of Basic Support Allocation Units By Type

<i>Type of Unit</i>	<i>1986-87¹</i>	<i>1990-91²</i>	<i>1993-94²</i>	<i>Change 86-87 to 93-94</i>	<i>Change 90-91 to 93-94</i>
Pupil					
ADA	9 ³	9 ³	7	-2	-2
ADM	24	21 ⁴	22	-2	+1
ENR	9	11	12	+3	+1
Teacher/Instructional	8	9	7	-1	-2
Total	50	50	48		

¹ Hawaii not included.

² Hawaii and South Dakota not included.

³ Missouri used an average of ADA and ADM and was included in both.

⁴ Colorado used a combination of ADM and Instructional Units and was included in both.

The major trend over this period has been a small shift from use of ADA and Teacher/Instructional units to enrollment based pupil counts. A significant shift occurred between 1990-91 and 1993-94 with two states changing from teacher/instructional allocation units to pupil count allocation units. The change in these two states, Colorado and Louisiana, resulted from the implementation of new foundation plans.

5.3 Moving from the School Real Estate Tax to the Local Income Tax

It is generally agreed that a large reduction in the local school real estate tax and its replacement by a combination of an increase in the state personal income tax and greater flexibility in the top rate of the local wage tax, whose base would be broadened to the state personal income tax base, would lead to a shift in burden from various types of business property to household income. Historically, this shift has been viewed as politically unattractive and worth forestalling through one of two techniques: either classification of the local real estate tax so that only the residential portion of the school real estate tax would be reduced, and tax contributions of business real estate basically retained, or a homestead exemption provided that would benefit primarily homeowners.

Several observations are in order about whether this issue is as important today in 2001 as it was twenty or thirty years ago. First, one can fashion several arguments for arguing that the shift in burden should be allowed to occur: (1) because the earlier imposts on business property were excessive, and/or policies towards business property today in Pennsylvania are designed to lighten taxation (e.g. the agreed-upon state gradual elimination of the Capital Stock and Franchise Tax and the local elimination of the personal property tax), and (2) most of the shift has already occurred with the exodus of manufacturing assets in many parts of the Commonwealth.

A second issue that arises in the planned reduction of the local school real estate tax involves whether or not local districts can add to amounts reduced and replaced by state aid. When Michigan radically restructured its state and local financial support of public education, high spending suburban school districts were basically frozen and precluded from increasing local taxes in the future to raise per pupil spending beyond the generally allowed increase in budgets contemplated for all districts. Whether or not this would be an acceptable result in Pennsylvania is difficult to judge.

5.4 Components of Municipal Finance Reform

As noted above, failure to obtain legislative agreement on the financing of the reduction of the Philadelphia Commuter Tax has led to political stalemate on other local tax issues around the Commonwealth:

Pennsylvania's Head Taxes.--various per capita taxes are heavily relied on and intensely disliked in the middle of the state; this past summer, the General Assembly enabled local governments dependent on such revenues to replace them with a local earned income tax. These revenue sources should be eliminated and replaced by real estate and income tax revenues.

Ability to Pay Tax Base for Counties.--some believe that where county governments provide redistributive services (health and youth services in particular), they should be funded by either an income or broad based sales tax. While Philadelphia and Allegheny County have 1% sales taxes which are collected and remitted by the Pennsylvania Department of Revenue, there are growing national pressures to eliminate local option sales taxes in order to simplify administration of sales and use taxes from electronic commerce. In view of these considerations, any expansion of ability to pay taxing authority to county government should be through enable limited access to the income tax base that is the same as that used for state personal income tax purposes. An examination of county spending several years ago indicated that something like a .25% maximum rate would be adequate to fund most counties' own source human service responsibilities.

Local Wage Tax Base.--most agree that the shared local wage tax base should be broadened to the same base as the state personal income tax; this usually adds 10-20% to the base. Symmetry between the local and state base, while it would lower compliance costs and simplify administration would likely be opposed by various for-profit tax collection agencies which assist local governments in the collection of the local wage tax.

Nuisance Taxes.--local business gross receipts taxes are usually viewed as harmful, because they cascade, and expendable in the context of meaningful local tax reform, and were frozen some years ago by the General Assembly. There is merit in considering the elimination of all municipal gross receipts taxes.⁵⁵

State Funding for Assessment Reform.--if assessment reform is enacted, supporters usually provide state financial support, sometimes through a revolving fund, to pay for the up-front costs of reappraisal and computerization.

Uniform State Statutes and Resolution of Consolidation Statute Black Holes.--the differing county assessment statutes are usually simplified in local tax reform packages, and sometimes the brave have ventured to recommend ways to implement the Pennsylvania Constitution.

Consistent Policy on Non-Resident Use of Municipal Services.-- few have supported a commuter tax on wages with a ceiling on the tax rate, state-wide, though periodically some have suggested a higher municipal services fee. Great care needs to be exercised in revising the tax treatment of non-residents to avoid the adverse economic effects of the Sterling Act on Philadelphia. One possible way to recognize the general impact of commuters on the cost of municipal services is to impose a commuter tax at a rate of 1/3 of the resident income tax rate in the municipality.

Anti-windfall Provisions.--base broadening (wage to income tax), improved administration (assessment reform), and new tax bases (school income tax to replace in part school property taxes) should be viewed as reforms, rather than revenue raising devices, and percentage caps are usually recommended.

6.0 Bibliography

Berne, Robert and Leanna Stiefel, "Concepts of Equity and Their Relationship to State School Finance Plans," *Journal of Educational Finance*, 5 (Fall 1979), pp. 109-132.

Cubberley, Ellwood (1919). *Public Education in the United States*. (Chicago: Houghton-Mifflin Company).

Fischer, Ronald C.(1995). *State and Local Public Finance*. (New York: McGraw-Hill Companies).

Guthrie, Walter I.(1989). *School Finance and Education Policy: Enhancing Educational Efficiency, Equality and Choice*. (Prentice Hall).

Gold, Steven D., David M. Smith and Stephen B. Lawton (1995) (editors). *Public School Finance Programs of the United States and Canada:1993-94*(New York: American Education Finance Association).

Monk, David(1995). *Education Finance*. (DIANE Publishing Company).

Pennsylvania Association of Rural and Small Schools(2001).*The History of School Funding in Pennsylvania: 1682-2001*.

Strauss, Robert P. with the assistance of Lori R. Bowes, Mindy S. Marks, and Mark R. Plesko(1998). *Teacher Preparation and Selection in Pennsylvania: Ensuring High Performance Classroom Teachers for the 21st Century*. (Harrisburg, Pennsylvania: Pennsylvania State Board of Education, June 4, 1998 ERIC TM029186).

Strauss, Robert P. (2001, forthcoming). *The Preparation and Selection of School Administrators in Pennsylvania*. (Santa Monica, California: The Milken Family Foundation).

Strauss, Robert P. and Kolb, Ruth L. (1999), "State Law Governing School Board Ethic" (Heinz Working Paper 99-12)

Strauss, Robert P, and William B. Vogt, "It's what you know, Not how you learned to teach it: Evidence from a study of the effects of knowledge and pedagogy on student achievement (post-script version)," Working Paper 2001-21 George Stigler Center for the Study of the Economy and Society, University of Chicago Graduate School of Business, Summer, 2001.

U.S. Bureau of the Census. (2000). *Statistical Abstract of the US: 2000*,

Yinger, John (2001)., "Fixing New York's State Education Aid Dinosaur: A Proposal." (Syracuse University: Center for Policy Research) No. 21/2001.

