

Adequacy in Education Finance: Can This Be a Reality?

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Abstract

School finance has changed significantly from the days in the early years of this country when schools were funded by private or religious money. The concept of free public education began in the nineteenth century. Since that time there has been a debate as to how much money is enough. Starting in the 1970's, education has seen a dramatic increase in school finance litigation. This early litigation centered on the concept of equity or being fair to all students with resources. Today, there are new issues of concern.

These issues revolve around the concept of adequacy or the question of enough money provided to produce a particular outcome? This paper is an exploration of the issues of adequacy as those issues relate to Texas school finance.

Introduction

Ladd and Hansen (2002) argue that there is a desire in our nation to ensure that all children learn and achieve to high standards, which challenges almost every facet of business as usual in American education. Consequently, policy makers and educators are searching feverishly to provide today's school children with the knowledge and skills they need to compete in a global society that promises to be increasingly complex and interconnected with dwindling resources. The key component of this quest is how to raise the \$300 billion spent in the United States annually on public education and spend it effectively (Ladd & Hansen).

State concern for public education and tax support for the public schools can be traced to actions of the colonial legislature of Massachusetts (Johns, Morphet & Alexander, 1983). Since that time, there has been a continual evolution of how to finance public schools (Odden & Picus, 2000). Deciding how to spend resources, especially those within states, has encouraged finance reform efforts for years (Ladd, Chalk & Hansen, 1999). While reforms brought about by historical, constitutional, and social origins come in many shapes and sizes (Picus, 2000), current state school finance systems are antiquated, obsolete and aging (Verstegen, 1997).

Most public school state school finance systems were created in the 1920s and 1930s to support a minimum education necessary for an individual to effectively function

in an industrial era (Verstegen, 2002). These antiquated finance systems rest on a notion of a minimal education, not a world class education (Verstegen, 2002). Long focused on fiscal equity, today school finance is changing and moving toward fiscal adequacy in the framework of standards-based education reform (Odden, 2001).

In recent years, questions about finance reform have centered on improving school performance (Picus, 2000). This has led Odden and Picus (2000) to challenge school leaders, “to rethink school finance systems to meet the productivity expectations and accountability requirements inspired by these reforms” (p. 1). To make school funding part of the larger reform movement, finance systems do not need to be repaired, they need to be reinvented and aligned to desired outcomes that correspond to state constitutions (Verstegen, 2002).

In this paper I take a brief look at the history of school finance in the United States and, specifically for the state of Texas. A definition of adequacy is presented using current literature as a basis followed by four models of adequacy currently being discussed in school finance literature. Finally, I recommend of a model for educational adequacy for the state of Texas.

History – United States

There has not always been a system of free, tax-supported schools in this country. In fact, the idea of free public education was created in the United States in the nineteenth century. As a result, a large number of public school systems were formed during the latter part of the nineteenth and early twentieth century (Odden & Picus, 2000).

According to Odden and Picus (2000) schools began as local entities. Most were private or religious during the seventeenth, eighteenth, and early nineteenth centuries.

The nineteenth century saw a rise in compulsory attendance laws and a view that education was significant in economic terms. Rural communities initially established one-room elementary schools that were supported through local tax efforts. The large cities were forming increasingly large systems with the schools being much better supported due to the wealth of the city, compared to a small one-room country school, in which many struggled financially (Odden & Picus).

The creation of common schools signified the importance of education in America. However, there was a shift of control from individuals and churches to the state. Trying to control schools in local communities from the state level was a problem. In order to control these problems, boards of education were formed that would take the place of the individual parents and churches of the past (Odden & Picus, 2000).

The advent of common schools also raised many fundamental issues about school finance. With the key issue being the level of government and/or level of financial support at the local or state levels with constitutional phrases such as “general and uniform,” “thorough and efficient,” “basic,” “adequate,” “suitable,” or “support and maintenance of an efficient system” meant an equal amount of dollars would be spent for every student in the state, or did it mean just providing a basic education program for every student, with different amounts of total dollars determined at the local level (Odden & Picus).

Minimum foundation programs began in the 1920’s, which provided more financial support and were a result of both state and local funds. These formula driven programs were efforts to help support local districts whose fiscal capacities were insufficient to fully fund a school system. However, these formulas have proven to be

inadequate to contain the wide variances in local property tax bases (Odden & Picus, 2000).

According to Berne and Stiefel (1999), the 1970's marked the beginning of a major period of school finance equity as turning point years of finance litigation. The landmark California Supreme Court case of *Serrano v. Priest I* declared "the quality of education may not be a function of wealth other than the wealth of the state as a whole" (1999, p. 8) and ushered in a series of court cases, academic studies, and legislative changes focused on the equity of state school financing systems (Guthrie, Garms & Pierce, 1988 p. 201).

This short review of school finance history brings us to the current time period where equity cases have been tried in the court systems over the past 30 years. A new wave of finance issues is emerging and being addressed across the country and the wave is called adequacy. With that in mind, I discuss Texas and its history proceeding to the current day.

History – Texas

The Texas Constitution includes a mandate the state will provide public schools. This document directs that "[a] general diffusion of knowledge being essential to the preservation of the liberties and rights of the people, it shall be the duty of the Legislature of the State to establish and make suitable provision for the support and maintenance of an efficient system of public free schools" (Texas Constitution, Article VII, Section 1, p. 1).

According to Farr and Trachtenberg (1999), today's financing structure originated with the Gilmer-Aikin proposals in 1947-1949, which called for the provision of an equal minimum education opportunity for every student to be financed by equalized local tax effort and supplemented by state aid sufficient to compensate for the variations in local tax bases. The minimum foundation program (MFP), embodied in the Gilmer-Aikin proposals, assigned a proportionate share of the local financing requirement to each school district and allowed local districts to enrich their programs beyond the guaranteed minimum. While institutionalizing a state-local partnership in the financing of education, the MFP never reached its stated goal of providing an adequate minimum education for Texas students due to flawed formulas and *inadequate financing* (Farr and Trachtenberg, 1999).

Furthermore, Farr and Trachtenberg (1999) stated by the mid-1980's the funding scheme was designed to provide a "foundation" for district financing. The state earmarked funds for certain purposes, and the Foundation School Program did not provide for school facilities and debt repayment. Transportation costs and career ladder salary supplements were under-funded. In fact, funding under both the older school finance system known as the Minimum Foundation Program and the newer Foundation School Program failed to provide districts with enough money to meet the state's own minimum accreditation requirements in areas such as teacher-student ratio, infrastructure, and special programs. Local supplementation of state monies, therefore, was an absolute necessity. *The state provided less than a bare minimum*, explicitly expecting school districts to supplement state funds from local taxes (Farr & Trachtenberg, 1999).

In the late 1980's several lawsuits, commonly known as the Edgewood cases were brought against the state. These suits were based on the financial equity of the state funding system. On October 2, 1989, the Supreme Court of Texas finally decided Edgewood Independent School District v. Kirby. In a unanimous decision, the Supreme Court reversed the appellate court and once again declared the Texas school financing system unconstitutional. Focusing on the plaintiffs' efficiency provision, the high court affirmed, but modified, the district court's decision (Farr & Trachtenberg, 1999). By early June of 1990, the Legislature had finally answered the Supreme Court's mandate. With Senate Bill 1, it had created a reform package that would achieve substantial fiscal neutrality in just a few years. The Legislature had nobly performed its duty to create a constitutional school-finance system (Farr & Trachtenberg, 1999).

According to Farr and Trachtenberg (1999), in less than a year and a half Edgewood I was challenged with the plaintiffs charging that Senate Bill 1 "failed to provide substantially equal access to funds of all the state's students, *failed to create a priority allocation of state funds to education* (emphasis-added), and failed to curb unequalized enrichment of educational funding by local districts" (Farr & Trachtenberg, 1999, p. 650). This led to the beginning of Edgewood II and Senate Bill 351, which created County Education Districts, where schools were grouped into one or two county units to share wealth.

On June 17, 1991, little more than two months after Governor Ann Richards signed Senate Bill 351 into law three groups of property wealthy school districts challenged the new law on three grounds. First, they asserted that the law constituted a state *ad valorem tax*, which was unconstitutional. A second alleged a constitutional

infirmity arose from the absence of voter authorization for the infusion of tax authority in the new CEDs. The third basis of challenge was that it allegedly constituted a local or special law in violation of the constitution.

On January 30, 1992, the Supreme Court ruled that Senate Bill 351 was unconstitutional and as a consequence of that ruling Edgewood III was established. Farr and Trachtenberg (1999) note that: (Justice) Cornyn, voted onto the court after the Edgewood II case was decided, interpreted the word “efficiency” much differently than either previous courts or the current majority, despite his protestations to the contrary. Starting with the premise that “[e]fficient conveys the meaning of effective or productive results and connotes the use of resources so as to produce results with little waste,” (Farr & Trachtenberg, 1999, p. 669) Cornyn wrote:

An “efficient” education requires more than elimination of gross disparities in funding; *it requires the inculcation of an essential level of learning* (emphasis added) by which each child in Texas is enabled to live a full and productive life in an increasingly complex world ...(Farr & Trachtenberg, 1999, p. 669).

Edgewood III ruled in favor of the property wealthy districts and the Legislature was back to the drawing board. Following shortly, the idea of recapture and “Robin Hood” was born and Senate Bill 7, with a multi-option formula *designed to “level down”* the wealthiest districts, came into being.

In less than two weeks after the passage of Senate Bill 7, the property poor districts were back to the courts objecting to three elements, in particular: (1) *inadequate state funding*, (2) a \$600 gap between property rich and property poor districts at the maximum allowable rate of taxation, and (3) the biennium lag in determining the amount

of state aide. Edgewood IV was decided, on January 30, 1995. The Supreme Court ruled that the Legislature had finally established a constitutional finance system. Justice Cornyn conceded that the system was finally constitutional but emphasized that it was far from optimal. He wrote:

Yet sadly, the existence of more than 1000 independent school districts in Texas, each with duplicative administrative bureaucracies, combined with widely varying tax bases and an excessive reliance on local property taxes, has resulted in a state of affairs that can only be charitably called a 'system.' For too long, the Legislature's response to its constitutional duty to provide for an efficient system has been little more than crisis management. The rationality behind such a complex and unwieldy system is not obvious. We conclude that the system becomes minimally acceptable only when viewed through the prism of history.

Surely Texas can and will do better. (emphasis added) (Edgewood IV, Tex.1995, p. 726)

In reflection, it appears that Justice Cornyn knew Robin Hood (the nick name given to identify the finance system of recapture as designed by Senate Bill 7) was not a long term or even a good short-term solution however, the solution was minimally acceptable.

At that time, former chairperson of the House Committee on Public Education, Libby Linebarger predicted:

There will be a challenge within the next ten years, because I don't think our system will stay equitable because we rely on the property tax. Until we change our tax structure in the state, you are not going to really have a real equitable financing system. This was the best we could get in my opinion with our tax

structure... The Legislature, in my opinion, is going to start backing off and backing off and backing off from funding it. Our system depends on its being fully funded... but historically, the Legislature has started backing away. When that happens, it's going to get out of kilter and there will be another lawsuit (Farr & Trachtenberg, 1999, p. 723).

Representative Linebarger's prediction of another lawsuit came to fruition. There is a new lawsuit in Texas challenging the structure because of the lack of funding, West Orange-Cove Consolidated Independent School District, Coppell Independent School District, La Porte Independent School District, Port Neches-Groves Independent School District v. Nelson.

Today, the Texas legislature has "backed off" as Representative Linebarger predicted, from the funding responsibilities of Edgewood IV. Simmons (2001) states, "As a result the state of Texas does not have a wealth recapture system that supports wealth equalization. It only has a recapture system that levels-down the mean wealth of the high-wealth districts" (p. 87). His research concludes that wealth was being taken from the property wealthy but not being given to the property poor. In fact, the numeric data revealed that property poor districts actually lost wealth.

Defining Adequacy

James Guthrie and Richard Rothstein (1999) stated that "attempting to define an 'adequate' education and thereafter to translate such a definition into the reality of school finance has begun" (p. 251). However, the decision makers of today, whether it is an elected official or a judge, should understand that this interpretation is still very primitive and far more an art than science. James Guthrie and Richard Rothstein (1999) further

reinforce in the unlikely event that we ever do have a full consensus on the objectives of the educational system, we do not know how to measure progress toward those objectives with complete precision.

Most states with “foundation systems” define adequacy by determining how much money is politically available (Guthrie & Rothstein, 1999). Defining adequacy must entail specifying resource levels minimally necessary to produce desired outcomes, not a level that wastes resources unneeded for this production (Guthrie & Rothstein, 1999). Clark and England (1996) defined adequacy as a sufficiency of resource inputs an amount adequate to ensure desired outcomes. Ward (1991) has argued that adequacy can be defined in terms of educational inputs consisting of financial resources, school facilities, library holdings, and educational standards or school outputs consisting of test scores, graduation rates, dropout rates, and college attendance rates. Paul Minorini and Stephen Sugarman (1999) define adequacy as “high-minimum quality education for all” (p. 188).

The problem that arises from these definitions is that of defining needed inputs and/or outputs and then assigning a value is at best difficult, if not impossible, to derive an understanding that we posit as minimally acceptable. Specifying what is to be learned is particularly more difficult than it first appears. Some of the problems include: Does it cost the same to educate an urban child and a rural child. If not, what is the difference? Is there a difference in the resources needed to teach reading or math? What is the cost difference for a kindergarten child, fourth grade child or high school senior? Should social equity be factored into the equation? Should extra curricular activities be included

as a part of basic education? To what extent should schools be held accountable for designated outcomes? Should the goals be minimal, average or exemplary?

These are all important questions as a definition of adequacy is considered. Paul Minorini and Stephen Sugarman (1999), who equate adequacy with fairness, provide further consideration in stating, “In other words, at the level of the moral claim, educational adequacy seems to be about what fairly ought to be provided, leaving it in the end to the student to take advantage of that offering” (p. 189). In addition to the questions that arise when defining adequacy, an overarching question serves as the backdrop for the inquiry. That question is: Why should we consider adequacy? Specifically, two subsets of this question are: (1) why should the courts or legislature worry about adequacy and (2) why are minimum foundation plans like the one in Texas not adequate?

Why Adequacy?

According to Minorini and Sugarman (1999), foundation plans are based on wealth-based local add-ons and there becomes a legal problem with the determination of a foundation amount. These researchers cite many cases wherein judges rule in favor of claimants because the judges support the foundation system as a system in which a general diffusion of knowledge needs to be determined at the state level with the state deciding how to fund an adequate education. States tend to ascertain the number of outcomes based on state politics. In this way, it can be seen how the courts can justify the constitutionality of a required state system, though this requirement clearly does not exist in the United States Constitution.

John Augenblick, John Myers and Amy Anderson (1997) wrote that the most important action a state can take to guarantee adequacy is to decide what the basic level

of per-pupil funding is and to base that level on a judicious analysis of the educational objectives and student requirements. In other words, the state needs to determine the accountability level of schools and devise a funding methodology to arrive at the foundation level that is needed to provide for a general diffusion of knowledge. This is a difficult task because Legislatures have historically not determined goals before they have allocated resources. There are ways to accomplish adequacy and, while they are in their infancy of implementation, they are worth exploring.

Approaches to Adequacy Funding

There are four basic approaches being discussed in current literature to fund for adequacy. They include: (1) the professional judgment approach or expert design approach, (2) the successful school district approach or empirical approach, (3) the statistical or analytical technique approach and (4) the whole school approach. Each approach will be discussed as follows.

The theory of the professional judgment approach is that it is possible for a collection of experts to theorize the needs of a model school district with a degree of accuracy and to affiliate a set of expenditures with those needs (Guthrie & Rothstein, 1999). This approach, used in Wyoming, asks the professional educators to identify the resources needed for a prototypical school that is going to achieve a specific set of outcomes. Once the resources are set, costs are agreed upon and applied. These costs can then produce a hypothetical cost. Different schools, such as elementary, middle and high schools, can be combined for an overall district level cost (Augenblick & Myers, 2001). James Guthrie and Richard Rothstein (1999) support this archetype because this approach can adjust, if carefully exercised, for all the many different variables that are involved in

financing school districts, campuses or the individual student. One of the charges for the experts is to always be mindful of balancing what they would like to see with what is affordable given the state's fiscal and political realities. Guthrie, Hayward, Smith, Rothstein, Bennett, Koppich, Bowman, DeLapp, Brands, and Clark (1997) take this approach in a different direction by relying on the consultation with experts plus analysis of national research and whole school design. The professional judgment approach has as its strength the ability to be easily understood and transparent. Other approaches, to be discussed, are more complicated.

The successful school approach, as described by Augenblick, Myers, Silverstein, and Barkis (2002), relies on a different logic than the expert model. This approach has been used in Mississippi, New Hampshire, and Ohio to establish base cost levels. The model infers a base cost figure from actual spending patterns of school districts that have been determined to be successful according to a set of standards used by a state to determine the expected outcomes. Once the standards are set and school districts are rated according to those standards, a group of districts are chosen that meet the desired standard level chosen by the state. After selection, a percentage of the top and bottom schools are removed from the group to allow for extreme variances. The costs of these successful schools are then extrapolated based on socio-economic characteristics, size, sparsity, bilingual populations, career and technology students, gifted and talented students and special education students. Once these extra costs are removed, a base spending allotment per pupil can be ascertained. This allotment figure can then be applied to all districts and the variable characteristic costs can be added back to the base cost depending on the make-up of each district. The strength of this approach is the base is

used to identify a collection of resources as adequate and funds that collection. This system does not imply that districts should be prevented from organizing resources and instructional delivery differently to achieve the same objective (Guthrie and Rothstein, 1999). Further, providing actual evidence that districts can be successful at a certain resource level and illustrating the variety of ways resources can be used in successful districts are other strengths. A weakness of this approach is that it relies on a set of standards of accountability. If a state does not have these standards in place, they must be developed. Another weakness is that the standards can be manipulated in the political process.

The statistical analysis approach may be the most reliable of the approaches because it is the least susceptible to manipulation. It is based on understanding the relationship of observed student outcomes to differences in spending. The policy system, after determining an acceptable level of pupil performance or proficiency, then determines a delivery system dollar amount associated with it (Guthrie & Rothstein, 1999). This approach requires an extreme amount of data at the school and student level in order to be truly useful. Theoretically, each cost associated with a student can be analyzed if the database is large enough. No state has used this approach as a basis to determine a finance system (Augenblick & Myers, 2001). It has been used to identify the weights to use for pupil costs such as special education or vocational education.

The fourth approach is the comprehensive school reform or whole school approach. This is an off-the-shelf blueprint of an entirely new school. There are designs like the Roots and Wings and Success for All programs developed by the Robert Slavin team at John Hopkins University; Atlas Communities, based primarily on the School

Development Program developed by James Comer; and Whole School Design models of the Edison Project (Guthrie & Rothstein, 1999). The premise is these programs represent the best of the best, especially for difficult students, and any school that has the same resources could perform at the same level by putting the approach into place (Augenblick & Myers, 2001). No state has adopted this approach. It may be because the designs are not firmly established or there is not enough research to prove that replication will produce the desired results. These designs may become more useful if research can create a foundation for authenticity.

Research Procedures

This study used the successful schools method for determining adequacy and determining an adequate per pupil funding level for Texas school districts. This approach identified 149 school districts where student performance met desired targets, and then sought to establish the level of resources expended by those identified school districts in an effort to calculate costs (Augenblick, et al., 2002, Verstegen, 2004). The procedures involved were the following series of steps:

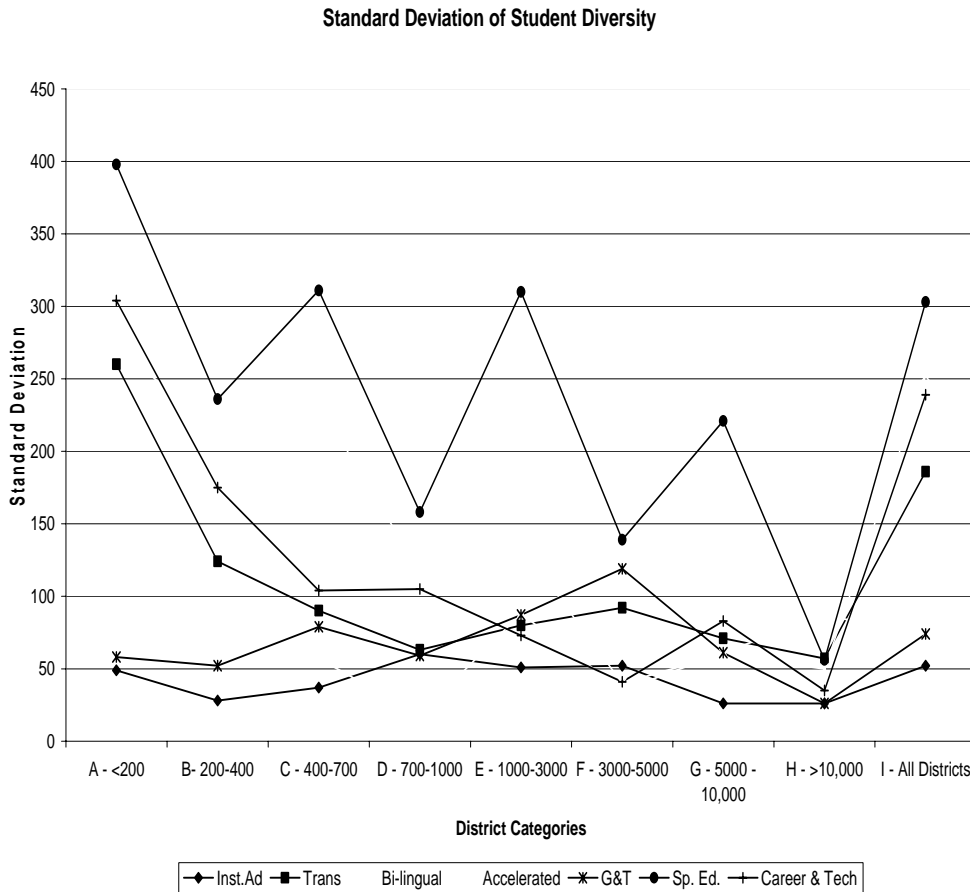
1. Identify exemplary schools via internet and the Texas Education Agency web site.
2. Collect numeric Public Education Information Management System (PEIMS) data of expenditures for identified districts via internet request from the Texas Education Agency (TEA) research division.
3. Divide districts into enrollment groups.
4. Calculate per pupil expenditures using collected data from step 2 with an EXCEL spreadsheet.

5. Remove identified districts from data set based on variance.
6. Subtract per pupil expenditures based on diversity multipliers.
7. Analyze the data from step 3 with descriptive statistics using SPSS.

Findings

Descriptive statistical analyses were conducted on the numeric data, specifically on the mean gross per pupil expenditures and adjusted per pupil expenditures. The adjusted per pupil expenditures were calculated by removing the student diversity per pupil expenditures from the gross per pupil expenditures. Figure 1 reports the number of school districts, the minimum expenditures, the maximum expenditures, the mean expenditures and the standard deviation for those groups within each of the enrollment categories.

Figure 1 *Student Diversity Groups*

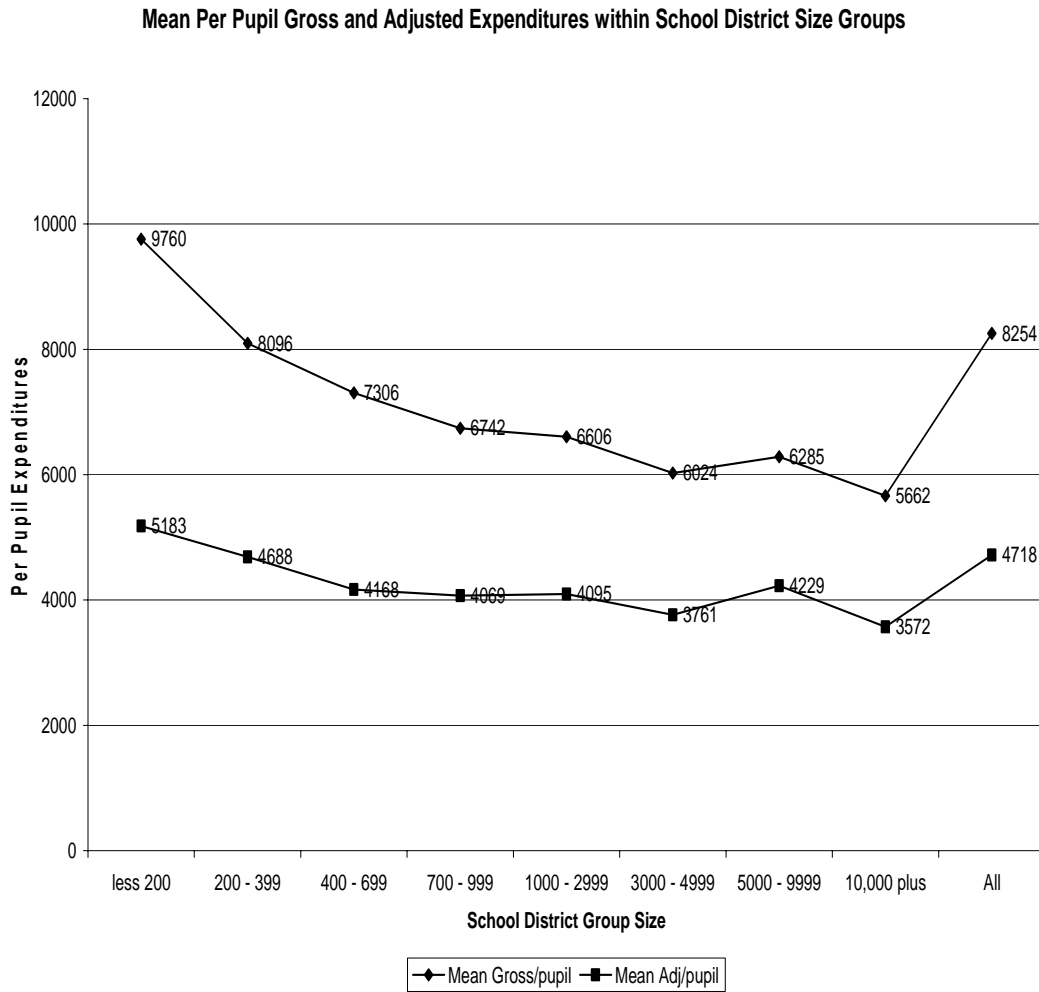


Analyses of Figure 1 reflected the importance of accounting for student diversity because of the high standards of deviation which shows a large variance within the diversity categories. Special education, accelerated education, and career and technology education account for the largest standards of deviation. It is noted that enrollment also has an extreme standard deviation.

Figure 2 is a graphic representation of the data in relation to gross per pupil expenditures and adjusted expenditures. This graph is the end result of what a successful schools model of adequacy can provide in terms of linking the goals of a state finance system (Exemplary Schools) to district costs (Gross Expenditures) and then allowing for the diverse differences with student populations (Adjusted Gross Expenditures).

Figure 2

Representation of Data in Relation to Gross per Pupil Expenditures and Adjusted Expenditures



Findings and Interpretation

Figure 1 indicated that when student diversity is accounted for the base cost for school districts levels at an enrollment of 400 students per district and remains steady through to the districts with 10,000 students. The average base cost for districts with an enrollment of 400 to greater than 10,000 would be approximately \$4,000 per student. This average basic expenditure number does not tell us anything about how the districts

spend their money. It does represent, on average, the amount of money districts need to provide an education for the average student to meet the successful school goals. It must be remembered that this base amount does not cover student diversity needs. It does not include federal money and is only addressing state and local money spent per pupil. It is important to note that when gross spending is calculated for those same districts (an enrollment of more than 400 students through districts with 10,000), the average per pupil amount is increased from approximately \$4,000 per pupil to approximately \$6,500 per pupil.

The data suggest that an adequacy number can be obtained through empirical methodology. There are decisions of desired goals, diversity weights and cost inputs that policy makers must make in order to obtain a base line per pupil expenditure. This study identified \$4,000 for the 2001-02 school year as the base-line per pupil expenditure.

Conclusions and Recommendations

Adequacy funding methodology is new to school finance. It is as much art as it is science and there is much more empirical data that needs to be gathered to improve upon the current methodologies. However, what is important to remember is that as nebulous as adequacy may be it is still better than current models of funding that do not have the basic premise of adequacy as a foundation. This basic premise is to start with a goal and then fund that goal while allowing for student diversity.

This paper argues to policy makers that a successful schools model of finance is appropriate for public policy. The final base line figure derived this study was not the most important aspect of the study, especially considering it was based on dated data. But more importantly, the study establishes a review of the process to demonstrate that a goal-

oriented base line cost can be obtained through an empirical process that gives the taxpayer or other stakeholder a reason why an amount of money is being used to fund schools.

This study also suggested that there can be a link between funding accountability and student academic accountability. From this, one can infer that if the base line figure funding the district was obtained empirically from a successful schools model, then perhaps all districts receiving that same basic funding have the potential to achieve an exemplary school.

It cannot be inferred from this study that the base line cost and the allowances for student diversity will provide all of the goals that a school district would have. However, it does suggest school districts that met the accountability standard of exemplary were able to meet the standards with the base line expenditure derived from this study. Few would argue that the AEIS indicator represents the sum total of expectations of schools (Baker & Taylor, 2004). However, the AEIS indicators have been used in the past by Texas policy makers and as such, serve to offer researchers a roadmap to available and familiar measures of educational outcomes (Baker & Taylor, 2004).

Concluding Remarks

The purpose of this research was to determine the base-line per pupil cost for a school district in Texas in order to identify an adequate method of per pupil funding level that is outcome driven.

Analyses of the findings suggest that a combination of the models be used in order to create a base line cost that would fund the diverse needs of a state like Texas. Using a backward vision model such as the successful schools model would create a foundation amount that gives credence to the base funding because of the inference it allows through

the accountability of the successful schools. An econometric model should be used to better identify the diversity costs with a state as widely diverse as Texas. A professional judgment model should be used because it is a forward vision model that looks into what future costs might be and make allowance for new goals, new programs, new technologies and inflation costs. The whole schools approach would be included to provide up-to-date empirical research and give a broader base of data for making a policy decision of what is the base line cost.

When these four models are combined, the stakeholders of public education could then have a system which links spending to the state's educational goals and students' real needs. This identifies resources to attain high standards set by parents and taxpayers and ensures that all schools can provide those resources. Combining the four funding models recognizes different challenges for different students and meets those diverse needs.

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