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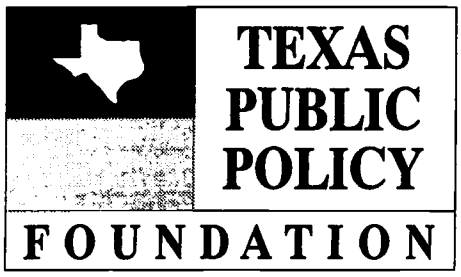
ABSTRACT

This report makes a quantitative and qualitative assessment of four concerns as they apply to school choice in Texas schools: (1) parents of students participating in choice programs select schools for reasons having little to do with academic quality; (2) school-choice plans that allow the use of taxpayer money at private schools will drain resources from the public-school system; (3) there will be few open seats available at private schools that choose to participate in a choice plan; and (4) transportation is a barrier to effective choice plans. The report is divided into four parts: Why Parents Choose Schools; Fiscal Impact of School Choice; Prospects for Private-School Entry; and Access to Transportation. Findings indicate that low-income parents provide widespread support for school choice, that the variable cost of a Texas public-school student is 87 percent to 93 percent of the total annual operating expenses, that the existing supply of private-school vacancies is extremely small in relation to the population of students that will be eligible for school choice, and that transportation will not be a major stumbling block if participating private schools provide the same services as comparable public schools. The document concludes with a strategy for implementing school choice in Texas. Contains 22 references. (RJM)



A TEXAS POLICY STUDY PRODUCED AND PUBLISHED BY THE TEXAS PUBLIC POLICY FOUNDATION AND THE NATIONAL CENTER FOR POLICY ANALYSIS

An Analysis of Public-Private School Choice in Texas

by

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I. EXECUTIVE SUMMARY

Choice. When applied to public education, this simple word provokes a heated political and academic debate. Proponents of school choice claim, in the extreme, that it is the single cure for nearly everything that ails American education. Opponents of choice, with equal conviction, claim that choice is practically un-American and will destroy the public education system. Within the broad range of debate between these two positions, several concerns are raised which, if true, would prove to be valid reasons to be wary of school choice. In summary, these issues are:

1. Parents of students participating in choice programs select schools for reasons having little to do with academic quality. Therefore neither public schools nor private schools will have strong incentives to improve their educational quality.

2. School choice plans that allow the use of taxpayer money at private schools will drain resources from the public school system and make the job of improving the public schools even harder.

3. There will be very few open seats available at private schools that choose to participate in a choice plan; therefore, school choice will have little real impact.

4. Transportation is a barrier to effective choice plans. Either private schools will not supply transportation, making it difficult for most parents to take advantage of choice, or the costs of providing transportation will destroy the economic feasibility of participating in the choice plan.

The purpose of this study was to make a quantitative and qualitative assessment of these four concerns as they apply to school choice plans that have been proposed for Texas schools. Educational vouchers that would enable low-income students to attend the public or private school of their choice were proposed in the 1993 legislative session. Similar proposals have been made in advance of the 1995 legislative session, and Governor Bush has endorsed at least one of these low-income choice plans. It seems particularly relevant, therefore, to examine these criticisms of choice in the context of the type of school choice proposed in Texas.

The findings of our study can be summarized as follows:

1. Low-income parents show widespread support for school choice. Surveys of low-income parents indicate that, contrary to some reports, academic quality is an important motivating factor in their desire to participate in school choice. Our study found that 73% of low-income parents participating in the San Antonio Children's Educational Opportunity program (the "CEO" program), a privately funded voucher program for low-income families, cited academics or discipline and safety as their number one reason for wanting to leave their public school.

   Objective measures of academic quality at the public schools left by the participants in the San Antonio CEO program indicate that their concerns were well founded. At the public school campuses these children used to attend, average failure rates by low-income students on one or more sections of the Texas Assessment of Academic Skills (TAAS) test ranged from 60% in third grade to 79% in eighth grade. Failure rates for individual campuses went as high as 97.7%.

2. On average, the variable cost of a Texas public school student is 87%-93% of the total annual operating expenses. Thus, the 80% vouchers that have been proposed for Texas will not hurt the average public school district's ability to educate the remaining students. At the average district in Texas this would mean a voucher of approximately $3,500. Furthermore, concerns that only the least-expensive-to-educate students will avail themselves of school choice are not borne out by the experience of existing choice experiments.

   There will be a cost, however, to implementation of even a program limited to low-income students, and that is the cost to the state of funding vouchers for the existing population of private school students that meet the low-income criteria of the program. In Texas this cost is at most $156 million per year, or less than 1% of current public school spending. Implementation of a pilot program in the 60 districts with the most low-income students would drop the maximum cost to about $97 million. Lack of universal participation in the choice program by existing private schools is likely to drive this cost lower, probably to less than $50 million.

3. The existing supply of private school vacancies is extremely small in relation to the population of students that will be eligible for school choice. Our estimate is that there is existing capacity for approximately 32,000 additional students in Texas private schools. Even if all of these spaces were made available to choice students, fewer than two percent of the eligible population would find spaces in the first year. Lack of participation by some private schools will further reduce the number of available seats.

   The success of a choice plan, therefore, will depend critically on market expansion -- the willingness and ability of individuals and groups to start new schools and for existing schools to expand their capacity in response to the newly created "buying power" represented by the vouchers. Our analysis indicates that a $3,500 voucher is adequate to elicit expansion of existing private schools and entry of new schools.

4. Transportation will not be a major stumbling block if participating private schools provide the same services as comparable public schools. Our research indicates that this level of transportation service will make attendance at choice schools feasible for most low-income parents, and will not burden participating private schools with unreasonable transportation costs.

   This "level playing field" standard would require participating private schools to transport students living within a reasonable attendance zone from convenient stops. For students attending private schools outside their attendance areas, the private school would be required to transport the students from the public schools that they normally would have attended. Students would get to these transfer points via the public school bus system.

The concerns we examined in this study have some validity in an abstract discussion of "school choice." It is clear from our analysis, however, that when the specific features of real choice proposals for Texas are considered, these issues can be resolved. Low-income parents want choice and they want it for good reasons. Violence and failing academics stand in the way of the quality education low-income families want and deserve. Vouchers set at 80% of per pupil operating expenses will not harm public schools' ability to educate their remaining students, provided these schools have typical ratios of fixed to variable costs. The cost of supplying vouchers to low-income students currently in private school is real, but is a modest percentage

of current Texas public school spending. While the initial supply of private school spaces will be limited, an 80% voucher will be sufficient to elicit expansion of the existing base of private schools and the creation of new schools. Finally, transportation is not an insurmountable hurdle if reasonable, and fair, requirements are placed on participating private schools.

The remaining chapters of this report provide a detailed discussion of the four issues raised above. **Section II** examines the factors that motivate parents, particularly low-income parents, to support school choice. **Section III** examines the financial impact of vouchers on the existing public education system. **Section IV** discusses our findings on space constraints in the existing pool of private schools and the possibilities for capacity expansion. **Section V** provides a discussion of the critical issues of transportation and school choice. We conclude in **Section VI** with the authors' views on implementation of school choice in Texas.

II. WHY PARENTS CHOOSE SCHOOLS

Parents choose schools for many reasons. If most parents choose schools for reasons unrelated to those schools' academic performance, such as convenient location or greater chances that their child will make the football team, then -- so the reasoning goes -- choice will provide little incentive for schools to improve.

The Carnegie Foundation's report on school choice, for example, states that

> At the heart of the argument [for choice] is the expectation that parents will choose schools of higher *academic* quality, thus challenging the low-performing ones to do better. However, this is not the way it seems to be working out. The evidence suggests that when parents do select another school, academic concerns often are not central to the decision.[1]

The Carnegie report cites surveys of participants in public school choice programs in Arizona, Iowa, and Minnesota, and their own survey of why parents might want to change schools. Other writers have pointed out that parents may choose schools because of the socioeconomic level of the students rather than the quality of the school[2], and that parents may have limited information about school quality.[3] Others have expressed concern that school choice will lead to greater racial segregation or social stratification.[4]

Many of the respondents in the programs cited by Carnegie were affluent parents choosing to move between school districts. However, low-income parents are the beneficiaries of the Milwaukee Parental Choice Program, private voucher programs, and the proposed school choice legislation in Texas. These parents face different problems from those encountered by affluent parents, and may therefore have a different mix of reasons for participating in a school choice program. Low-income parents are more likely to be in schools with high academic failure rates, and more problems with discipline and safety. This should affect not only these parents' reasons for leaving public schools, but their general willingness to support school choice. As we will see below, low-income and minority parents support school choice proposals at higher rates than do non-low-income and white parents.

When parents change schools, it is important to ask them why they left their *previous* school as well as why they chose their *current* school. The two questions are likely to yield different answers. We believe that the question, "Why did you leave the school that you did?" entails an implicit comparison between the prior school and the current school, while the question "Why did you choose the school that you did?" may entail a comparison among several academically acceptable alternatives to the child's previous school. In the latter case, issues other than academics may come to the fore. If non-academic reasons are given in response to the second type of question, therefore, we cannot assume that the parents were not concerned about academic quality when the decision was made to change their child's school.

To determine why low-income parents leave the schools that they did, we examined results of other researchers' surveys of parents in low-income voucher programs in Milwaukee, Indianapolis, and San Antonio. In addition, in the fall of 1994 we conducted our own interviews with a sample of parents in the San Antonio Children's Educational Opportunity program (the "CEO" program), a privately funded voucher program for low-income families. Finally, we looked at student failure rates on the Texas Assessment of Academic Skills (TAAS) reading, writing, and mathematics exams in the public schools from which the San Antonio CEO parents removed their children. Our purpose was to see if these parents had rational cause to be concerned about the academic quality of these institutions.

Why Do Low-Income Parents Participate in Choice Programs?

Tables II-1, II-2, II-3, and II-4 show the results of surveys of low-income participants of choice programs in Milwaukee,[5] Indianapolis,[6] and San Antonio.[7] In each case, parents were asked which of a list of reasons were "very important," "important," "somewhat important," or "not important" in their decision to enroll their child in the chosen private school.

"Educational quality of the school" (academics) was at the top of the list in every case, with the highest percentage of parents ranking that reason as "very important." Good school climate and discipline were also high on the list of school characteristics preferred by the parents. Affordability played an important role for the parents in the privately-funded voucher programs, who were responsible for paying part of the school's tuition. A convenient school location was farther down on the list.

Table II-1

Reasons for Participation Rated "Very Important" by Parents in the Publicly-Funded Milwaukee Choice Program

Reason for Participation	Percent of parents rating reason as "very important"
Educational quality of chosen school	**88**
Teaching approach or style	85
Discipline in chosen school	76
General atmosphere in chosen school	74
Class size	72
Financial considerations	69
Special programs in chosen school	69
Location of chosen school	60
Frustration with public schools	60
Other children in chosen school	37

Source: Witte, *et al.*, 1994, Table 4.

Table II-2

Reasons for Participation Rated "Very Important" by Parents in the Privately-Funded Milwaukee Choice Program

Reason for Participation	Percent of parents rating reason as "very important"
Educational quality of chosen school	**89**
Financial considerations	77
Friendly/welcoming spirit in chosen school	73
Discipline in chosen school	72
Frustration with public schools	65
Location of chosen school	60
Availability of the choice program	53
Special programs in chosen schools	48
Other children in chosen school	36

Source: Wahl, 1993.

Table II-3

Reasons for Participation Rated "Very Important" by Parents in the Privately-Funded Indianapolis Choice Program

Reason for Participation	Percent of parents rating consideration as "very important"	
	Public school parents	Private school parents†
Educational quality of chosen school	**91**	**93**
Financial considerations	83	87
Availability of the choice program	79	82
Discipline in chosen school	77	77
General atmosphere in chosen school	77	85
Location of chosen school	69	67
Frustration with public schools	63	65
Special programs in chosen schools	55	57
Other children in chosen school	35	49

†"Private school parents" are participants whose children were already in private schools when the program began.
Source: Hudson Institute, 1992.

Table II-4

Reasons for Participation Rated "Very Important" by Parents in the San Antonio Public and Private Choice Programs

Reason for Participation	Percent of parents rating consideration as "very important"	
	Public Choosers (Multilingual)	Private Choosers (CEO Program)
Educational quality of chosen school	**76**	**90**
Discipline in chosen school	59	81
Religious Training	NA†	81
General atmosphere in chosen school	56	79
Financial considerations	33	73
Frustration with public schools	18	63
Special programs in chosen schools	70	52
Location of chosen school	33	50
Other children in chosen school	22	39

† The religious training question was asked only of participants in the private CEO program.
Source: Martinez, et al., 1993.

Results of a 1994 Survey of CEO Program Parents

We surveyed a sample of 146 parents in the CEO private voucher program in San Antonio, Texas. We asked the parents about the most important reasons for their decision to remove their children from public school. We asked them separately about their most important reason for selecting the private school in which their child is currently enrolled. Our results are shown in Tables II-5 and II-6.

Table II-5

Reasons Given as "Most Important" by San Antonio CEO Parents for Removing Their Children from Public School

Reasons for Leaving Public School	Percent of parents rating reason as "most important"
Safety/Discipline	42%
Academics	31%
Religion	26%
Other	1%

Note: "Safety/Discipline" is a combination of "Drugs," "Gangs," "Safety," and "Discipline"
Source: LBJ School Survey of San Antonio CEO Parents

Table II-6

Reasons Given as "Most Important" by San Antonio CEO Parents in Selecting Their Private School

Reasons for Selecting Particular Private School	Percent of parents rating reason as "most important"
Academics	32%
Religion	27%
Location	24%
Price	10%
Other	3%
Family	3%
Availability	1%
None	1%

Source: LBJ School Survey of San Antonio CEO Parents

Interestingly enough, the San Antonio parents were more likely to cite discipline and safety as the most important reasons to remove their children from public schools. This may have to do with conditions in San Antonio, a city in which 1,262 reported drive-by shooting incidents occurred in 1993.[8] In any event, we believe that concern over discipline, safety, drugs, and gangs are valid reasons for wanting to remove a child from a school.

In addition, we used 1992-93 test scores to evaluate the academic quality of the schools that the CEO parents left. Students in grades 3, 4, 7, and 8 in these schools took the TAAS (Texas Assessment of Academic Skills) state-mandated reading, writing, and mathematics tests. The results are shown in Table II-7.

Table II-7

Average 1992-93 TAAS Failure Rates in San Antonio Public Schools Which CEO Students Left

	All Students	Low-Income Students	State Average All Students
Grade 3	57%	60%	39%
Grade 4	71%	75%	51%
Grade 7	71%	77%	60%
Grade 8	72%	79%	60%

Students took TAAS tests in reading, writing, and mathematics. These figures show the percentage of students who failed one or more of these tests.
Source: Texas Education Agency, Academic Excellence Indicator System (AEIS)

The figures in the table above represent averages across a number of schools. Individual campus failure rates were as high as 97.7%. It appears that CEO parents had some reason to be concerned about the academic quality of their children's previous public schools.

Support for School Choice Among Low-Income and Minority Parents

There is evidence that low-income Americans support school choice at higher rates than do persons with higher incomes. Likewise, African-American and Hispanic citizens, many of whom are low-income, support school choice at higher rates than do non-Hispanic whites. A 1992 Gallup Poll asked the following question:

> "In some nations, the government allots a certain amount of money for each child for his or her education. The parents can then send the child to any public, parochial, or private school they choose. This is called the voucher system. Would you like to see such an idea adopted in this country?"

While 70% of the total sample answered this question in the affirmative, 73% of low-income respondents (vs. 63% of high-income respondents) answered yes.[9] Similarly, a study of minorities and whites in the Detroit area found that approximately 87% of the minorities (mostly African-Americans) favored choice, while white support was approximately 68%.[10] The authors of the Detroit survey attribute greater minority support for choice both to school quality and to "district resources." District resources, in their analysis, include not only financial resources but also district pass rates on standardized tests and high school graduation rates, common measures of academic performance.

Conclusion

We have seen that support for school choice is greater among low-income parents and among minority populations with a high percentage of low-income members. When asked, low-income choice program participants cite academics and discipline/safety as the most important reasons for leaving their public schools. Academic performance data from the schools left by the San Antonio CEO parents show that these parents have a good reason to want out of those schools. We therefore conclude that a central premise of school choice plans, namely that parents will be motivated by concerns for academic quality, is validated by the evidence in San Antonio and elsewhere.

III. FISCAL IMPACT OF SCHOOL CHOICE

School choice plans call for education funding to follow students to their chosen schools. There is no consensus, however, on the amount of these voucher payments. Furthermore, critics of school choice contend that the payment of these vouchers will drain scarce resources from the public school system, making the job of producing a quality education even harder. This analysis provides a quantitative assessment of the issue of voucher "pricing" and the potential impact on public schools. The basic approach of our work has been to ask the question, "What is the highest voucher amount that will not adversely affect the cost structure of the public school system?"

Two competing factors must be considered in setting the amount of school choice vouchers. On the one hand, voucher amounts should not be so high that the use of the vouchers harms the financial condition of the public schools. This might occur if the vouchers represented more than the variable cost of educating each student. In such a case, each departing student would take away from public education some of the funds used to educate the remaining students.

On the other hand, voucher amounts must be high enough that viable private school options will exist for parents who wish to exercise their right to choose a school for their student. If the voucher amount is less than it reasonably costs to educate a child in the private sector, then few choices for students will emerge. Those choices that do exist do will provide lesser quality services for students or require parents to supplement the voucher amount with personal funds.

Methodology: Identifying Fixed and Variable Costs

Our theoretical premise is that a voucher amount that is equal to or less than the variable cost per student will not impair the school district's ability to educate the remaining students. This is true because a student leaving the public system with a voucher of X dollars will also take away at least X dollars of costs. Thus, the public school district will be no worse off than before the student transferred. If a voucher that is less than variable cost, the departure of some students subsidizes the education of the remaining students.

The challenge, therefore, is to determine the split between fixed and variable costs in Texas public schools. Our approach to this task has been to look at reasonably "long run" variable costs. These would be costs that are variable over a period of more than one year. This is appropriate since a choice/voucher plan would represent a structural change in the level of enrollments in public vs. private schools. In addition, the analysis recognizes that the process of capacity expansion in private schools will not occur instantaneously, thus allowing public schools time to adjust.

The model used to estimate the cost structure of Texas public schools is a simple linear regression of the form:

$$\begin{pmatrix}\text{Total}\\ \text{Operating}\\ \text{Expenses for}\\ \text{Campus i}\end{pmatrix} = \begin{pmatrix}\text{Statewide}\\ \text{Average}\\ \text{Fixed}\\ \text{Operating}\\ \text{Expense}\end{pmatrix} + \begin{pmatrix}\text{Statewide}\\ \text{Average}\\ \text{Variable}\\ \text{Operating}\\ \text{Expense}\end{pmatrix} * \begin{pmatrix}\text{Enrollment}\\ \text{Campus i}\end{pmatrix} + \begin{pmatrix}\text{Unique}\\ \text{Costs for}\\ \text{Campus i}\end{pmatrix}$$

The data used in our analysis comes from several sources supplied by the Texas Education Agency (TEA). Campus-by-campus operating expenses were obtained from the Public Education Information Management System (PEIMS). The figures used in the models were 1991-1992 actual operating expenses. Campus-level enrollments were obtained from the Academic Excellence Indicator System (AEIS) for the same school year. District-level data was taken from the same PEIMS financial files as well as the SNAPSHOTS 1991-1992 report from the TEA.

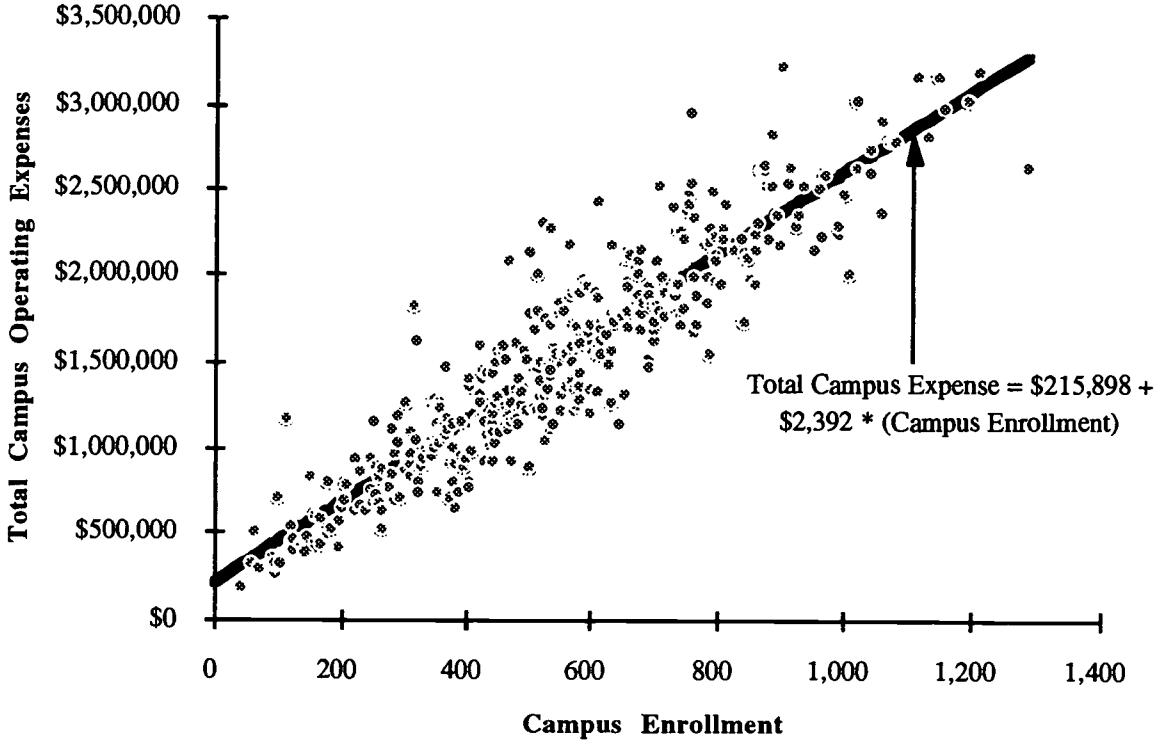
Five separate models were used to estimate the overall cost structure for the average student. First, three campus-level models were estimated, one each for elementary schools, middle schools, and high schools. This was done to test our hypothesis that the cost structure is different between these three types of campuses. The campus-level models consisted of 2966 elementary schools, 1022 middle schools, and 1240 high schools. A district-level model was then used to estimate the structure of costs that occur at the district level or are not allocated by the financial systems to an individual campus. These costs include such items as the central administrative office and district curriculum development staffs. The district-level model contained 988 observations.[11]

Figure III-1 illustrates how our regression model was used to estimate campus costs for elementary schools. The slope of the line (the average increment in total cost when enrollment increases by one student) is our estimate of variable cost; the place where the line crosses the *y*-axis is the estimated fixed cost. The existence of a substantial number of very small campuses gives us greater confidence in our estimate of fixed cost, and the wide variation in school sizes increases our confidence in the accuracy of the variable cost estimate.

A second district-level model was required to estimate the costs of summer school programs. This was necessary because PEIMS does not allocate summer school costs to any one campus. Therefore the data only allow calculation of summer school costs for an entire district. Thus, summer school costs were assumed to be allocated evenly across all students in the district.

In all models we omit debt service expenditures, implicitly treating all debt payments as 100% fixed. From a theoretical standpoint this is probably an overstatement. Even though debt obligations are long-term, a district with fewer public school students would be faced with less need for capital expansion and therefore debt service costs would become variable over time. To be conservative, however, we chose to treat all debt and capital payments as fixed costs.

Figure III-1
Fixed vs. Variable Cost Model
Elementary Campus Costs



Note: Points displayed are a random subset of the 2,966 campuses used in the regression
Source: PEIMS Actual Data for 1991-92, LBJ School Analysis

Model Results

The results of our cost structure analyses are summarized in Table III-1. Fixed versus variable cost percentages are shown for each of the three types of campuses. District-level costs are allocated to each campus on a per student basis. The results show that variable costs range from a low of 87% in high schools to a high of 93% in middle schools. In absolute dollars, average per pupil variable costs for 1992-93 ranged from $3,248 at elementary campuses to $3,510 and $3,727 at middle schools and high schools respectively.

The ratio of fixed to variable costs changes with the size of the school district and the size of each campus. The results presented in Table III-1 are for the "average" district and the "average" campus of each type. For campuses and districts larger than those shown in Table III-1, the variable cost percentage is higher. Conversely, smaller districts and smaller campuses have a higher percentage of fixed costs.

TABLE III-1

Summary Results of Public School Cost Models
(results reflect 1991-92 spending levels)

	Elementary School	Middle School	High School
Average Campus Size	546	654	721
Variable Costs†	$3,248	$3,510	$3,727
Fixed Costs††	$453	$263	$570
Total Per Pupil Costs	$3,700	$3,773	$4,297
Percent of total cost fixed	12%	7%	13%
Percent of total cost variable	88%	93%	87%

† Includes costs that rise or fall with enrollment, such as teacher salaries, books, supplies and student transportation.
†† Includes costs that vary little with enrollment such as some administrative costs, building maintenance, and utility costs.
Source: LBJ School analysis.

Table III-2 illustrates that the ratio of fixed to variable costs is not very sensitive to the size of the district, except for very small districts. Even if the choice plan is implemented in districts whose size is close to or below 2,000 students, a voucher amount of less than 80% will still be below average variable costs.

TABLE III-2

Variable Cost Sensitivity to District Size

District Size	Variable Cost Percentage		
	Elementary	Middle	High School
2,000	82%	87%	82%
5,000	86%	92%	85%
10,000	88%	93%	87%
14,000	88%	93%	87%
20,000	88%	94%	87%
50,000	89%	94%	88%
100,000	89%	94%	88%

Note: Variable cost percentages are calculated at average campus sizes.
Source: LBJ School analysis

In addition to the effects of district and campus size on variable cost percentages, some schools may have above-average ratios of fixed to variable cost. Choice may also contribute to the uncertainty of already volatile enrollments, creating additional adjustment costs for public schools. The ratio of fixed to variable costs is likely to be highest if only few students leave from each grade level.[12] The loss of only a few students, however, is unlikely to have a substantial effect, in absolute dollar terms, on the overall budget of a campus. Furthermore,

schools can minimize these adjustment costs by encouraging transfers, thus concentrating enrollment changes where they will have the least fiscal impact.

This analysis should not be interpreted as implying that public school personnel should be indifferent to the loss of students as a result of choice. In fact, it is a central premise of school choice that public schools will react to competition by improving their environments and their results. Clearly the possibility of "downsizing" provides an incentive to teachers and administrators to become more responsive to the needs of low-income students.

Our conclusion is that a voucher which enables 80% of the student's local, state, and federal dollars to follow the student will not harm the public schools, as long as the departing students are representative of the total public school population. If the departing student population contains a larger proportion of the more expensive-to-educate students, then the departure of those students will make the public schools' job easier.[13] This issue is discussed in more detail below.

The value of an 80% voucher would vary by district, but would have averaged about $3,500 for the 1992-1993 school year. Voucher amounts in districts with higher per-pupil spending would be higher than $3,500. For example, in 1992-93 Austin Independent School District spent an average of $4,439 per pupil versus the state average of $4,214, or about 5% higher. This would have resulted in an 80% voucher of $3,551 for 1992-93 versus a state average voucher of $3,371.

Do Low-Income Schools Have Different Ratios of Fixed to Variable Cost?

The model results presented above indicate the levels of fixed and variable costs for the average campus of each type (elementary, middle school, and high school). Since the proposed choice legislation for Texas is targeted to low-income students, a relevant question is whether these results are valid for districts and campuses that have the highest concentrations of low-income students in the state. We tested the sensitivity of the model to changes in low-income composition by segmenting the elementary school and district level data sets into quartiles based on the percentage of low-income students at the campus (or district).

In the average district, elementary schools in the top quartile (those with the most low-income students) have variable costs ratios of 82% versus the overall average of 88% reported in Table III-1. In the extreme case of an elementary school in the top quartile that is also in a district in the top quartile of low-income concentration, the variable cost percentage drops to 80%. This suggests that on average, an 80% voucher will still be at or below the variable cost level of even highly low-income districts and campuses.[14] For campuses in the first, second, and third quartiles of low-income density, variable cost percentages ranged from 88% to 90%.

Fixed versus Variable Transportation Costs

Our models, by including transportation costs in each district's operating expenses, capture the fixed and variable cost behavior of pupil transportation. Whatever portion of transportation costs is fixed is embedded in the average fixed costs reported in Table III-1. Similarly, the variable costs of transportation are embedded in the average variable costs per pupil. Our model does not report the ratios for transportation alone. It is possible, however, that the choice program may leave the public schools with some obligation to transport voucher students. For example, the public schools may be required to transport students who wish to attend a private school at least as far as the public school to which they otherwise would be assigned. In such a case, the public school district would retain 100% of the costs it would otherwise incur in transporting that particular student. This is tantamount to assuming transportation costs are 100% fixed.

We tested the effects of such a scenario (100% fixed transportation costs) and found that variable cost percentages dropped from 88% to 85% for elementary schools. Middle schools and high schools exhibited a similar 3 percentage point drop to 90% and 85%, respectively. The dollar effect of treating transportation costs as 100% fixed is to drop the amount of average variable cost by approximately $100 per student, adding that same $100 per student to the fixed costs that would be retained by the public school.[15] Note that these average variable costs are still well above the 80% voucher that has been proposed for Texas. Thus the average public school would retain enough funds to cover the cost of providing transportation to a choice student's assigned public school.

Will Private Schools Attract Only the Least Expensive-To-Educate Students?

The fixed and variable costs estimated in the previous two sections represent averages across all students. However, all students are not equally expensive to educate. Students who need remedial programs or are discipline problems require extra expenditures to meet these needs. This creates problems for public schools if private schools attract mostly cheap-to-educate students.[16]

It is not clear which types of students will take the most advantage of choice. The Milwaukee Parental Choice Program is the only publicly funded voucher program in the country where vouchers can be used at private schools. The evidence from Milwaukee is mixed, but does not provide clear support for the hypothesis that private schools will get the easiest-to-educate students.[17] On the one hand, choice students come from slightly smaller families, with better-educated and more involved parents who have higher expectations of the students. This should make the choice students easier to educate. On the other hand, the academic achievement levels of the choice students when they left public school were slightly lower than the average for low-income Milwaukee Public School students. In addition, choice families were more likely to be single-parent (76%) than low-income Milwaukee Public School families as a whole (65%)[18].

In the Milwaukee program, participating private schools are not allowed to discriminate among students based on prior academic achievement or behavioral records. This limits the private schools' ability to take only the easier-to-educate students. Proposed choice legislation in Texas contains similar provisions. It is also important to note that the Texas proposals are for low-income students only. Both federal Chapter 1 program and state compensatory education programs recognize that these students need additional resources and provide for supplemental funding in the school finance formulae. As such, the only students eligible for the choice

program will be the "more expensive to educate" children. There still may be a large variation in the resource needs within the pool of eligible low-income students, but the standard argument that vouchers will be used most by well-to-do children who are less expensive to educate is clearly not applicable in the case of Texas.

The Cost of Vouchers for Low-Income Students Currently in Private Schools

School choice plans call for education funding to follow students to their chosen schools. What about low-income students who already attend private school? Some proposals seek to exclude these students from eligibility, while others make the vouchers immediately available to existing private school students. Even if the initial choice plan provides vouchers only to existing public school students, over several years the state will effectively be exposed to the cost of the existing private school population.[19] If vouchers become available to existing low-income private school students, what will be the cost to the state?

We used 1990 Census data to estimate the size of the Texas low-income population currently attending private schools. These data can be used to estimate the share of the age 6-17 population, by income category, who are in public school, private school, or not in school. Applying these shares to projected 1994-95 Texas school enrollments produces the results shown in Table III-3. Table III-4 gives the cost of funding the state's private school students using different income cutoffs. For example, making an 80% voucher available to all students eligible for free or reduced-price lunch would cost the state a maximum of $156 million per year, or slightly less than 1% of the $19 billion in total annual Texas spending on elementary and secondary education.

Table III-3

Estimated Student Population for 1993-1994

Income Level	Enrollment at or below specific income level				
	Public	% of Total	Private	% of Total	Total
All Income Levels	3,608,262	95%	195,803	5%	3,804,065
300% of Poverty	2,516,996	97%	87,918	3%	2,604,913
185% of Poverty	1,713,225	97%	44,273	3%	1,757,499
130% of Poverty	1,215,028	98%	25,676	2%	1,240,704
100% of Poverty	947,393	98%	17,851	2%	965,244

Sources: 1990 Census; Texas Education Agency; LBJ School analysis

The figure of $156 million (like the others in Table III-4), is an upper bound on the costs of funding vouchers for eligible students already in private schools. The school choice legislation that has been proposed for Texas calls for a pilot program at 60 districts statewide. Without knowing which districts would be selected for the pilot, we can estimate the maximum number of eligible private school students under the pilot by looking at the districts in the state with the sixty largest low-income populations. These sixty districts enroll 62% of the state's low-income students. Assuming private school usage by low-income students follows the same pattern, the maximum cost of vouchers for existing private school students would be $97 million.

Table III-4

Estimated 1993-1994 Maximum Cost to Fund Existing Private School Students†

Eligibility Level	Maximum Cost ($ millions) of 80% Voucher
All Income Levels	$690
300% of Poverty	$310
185% of Poverty††	**$156**
130% of Poverty	$91
100% of Poverty	$63

Assumes statewide average per pupil operating costs of $4,408

† Actual costs will be lower due to lack of universal participation among private schools and implementation at only a subset of Texas school districts. A pilot program at the 60 largest districts will probably cost no more than $50 to $75 million.

†† Eligibility level for federal Free and Reduced Price Lunch program.

Source: LBJ School analysis

Actual costs to the state, however, are likely to be far lower since vouchers would go only to students attending schools that participate in the program. Many private schools will choose not to participate in the choice program, particularly if it is only a pilot for a few years. In Milwaukee only about half of the eligible private schools participate in that city's choice program.[20] A survey of California private schools conducted in advance of that state's 1994 vote on school choice found that only 45% of private schools indicated they would be "very likely" to accept voucher students.[21] Potential restrictions on private schools in the Texas program, such as a prohibition on charging any tuition above the voucher amount, may drive down private school participation. Actual participation rates are difficult to predict without knowing the exact wording and implementation of the pilot choice legislation, but total costs to the state will drop to less than $50 million if fewer than half of the existing private schools elect to participate.

Conclusion

Tuition vouchers will not impair the effectiveness of the public school system if departing students take with them only the variable cost of their own education. On average, the variable cost of a Texas public school student is 87%-93% of the total annual operating expenses. Thus, the 80% vouchers that have been proposed for Texas will not hurt the average public school district's ability to educate the remaining students. At the average district in Texas this would mean a voucher of approximately $3,500. Furthermore, concerns that only the least-expensive-to-educate students will avail themselves of school choice are not borne out by the experience of existing choice experiments.

There will be a cost, however, to implementation of even a program limited to low-income students. This is the cost to the state of funding vouchers for the existing population of private school students that meet the low-income criteria of the program. In Texas this cost is a maximum of $156 million per year, or less than 1% of current public school spending. Implementation of a pilot program in the 60 districts with the most low-income students would drop the maximum cost to about $97 million. Lack of universal participation in the choice program by existing private schools is likely to drive this cost lower, probably to less than $50 million.

IV. PROSPECTS FOR PRIVATE SCHOOL ENTRY

Advocates of choice contend that it will improve educational opportunities for children in two ways. First, some students will receive immediate benefits from the ability to move from under-performing public schools to private schools with superior academic programs. Second, those students who do not "opt out" will benefit, as the public schools make improvements to their programs in the face of competition from private schools and other public schools. Both of these benefits, however, rest on the assumption that existing public school students will have viable private school options, and that space at these private schools will be sufficient to provide a meaningful number of students with the chance to switch to private school.

Relative to the size of the eligible public school population, however, the number of open seats in existing private schools is small. Our census analysis suggests that there are approximately 200,000 private school students in Texas. Over time, low-income voucher students will be able to compete on an even footing for many of these seats. However, private schools already have most of their seats filled, so the relevant number in the short run is the number of *empty* seats in Texas private schools.

During January 1995 we conducted a telephone survey of private schools in Texas to determine current enrollment and capacity levels. The sample of private schools was randomly selected from a list of 695 names and telephone numbers of private elementary and secondary schools in Texas. The original list of schools was selected from a database of business telephone listings by the 4-digit SIC code for private elementary and secondary schools. A total of 86 usable survey responses were obtained from approximately 140 randomly selected school telephone numbers. Many of the non-respondents were day care facilities or schools that had closed since the telephone directory was published. The 86 responses represented current K-12 enrollment of 18,433 and reported a current capacity of 21,370, or 86% capacity utilization. Extrapolating to a statewide private school enrollment of approximately 200,000 private school students, we arrived at an estimate of approximately 32,000 available spaces.

When we further take into account the fact that many private schools will likely choose not to participate in a choice plan,[22] the number of immediately available spaces for low-income voucher students is probably less than 16,000 statewide. This represents less than 1% of the low-income student population in Texas.[23] The pilot nature of the choice plan will also reduce available capacity since some private schools in the state are likely to fall outside of the 60 selected districts.

It is clear, therefore, that the success of any choice program depends heavily on expansion of the capacity at existing private schools and, more important, the willingness of individuals and groups to start new private schools. The creation of new schools in low-income neighborhoods would also facilitate access by low-income students and reduce transportation costs. What are the prospects, however, for the startup of new schools in response to the voucher-created demand?

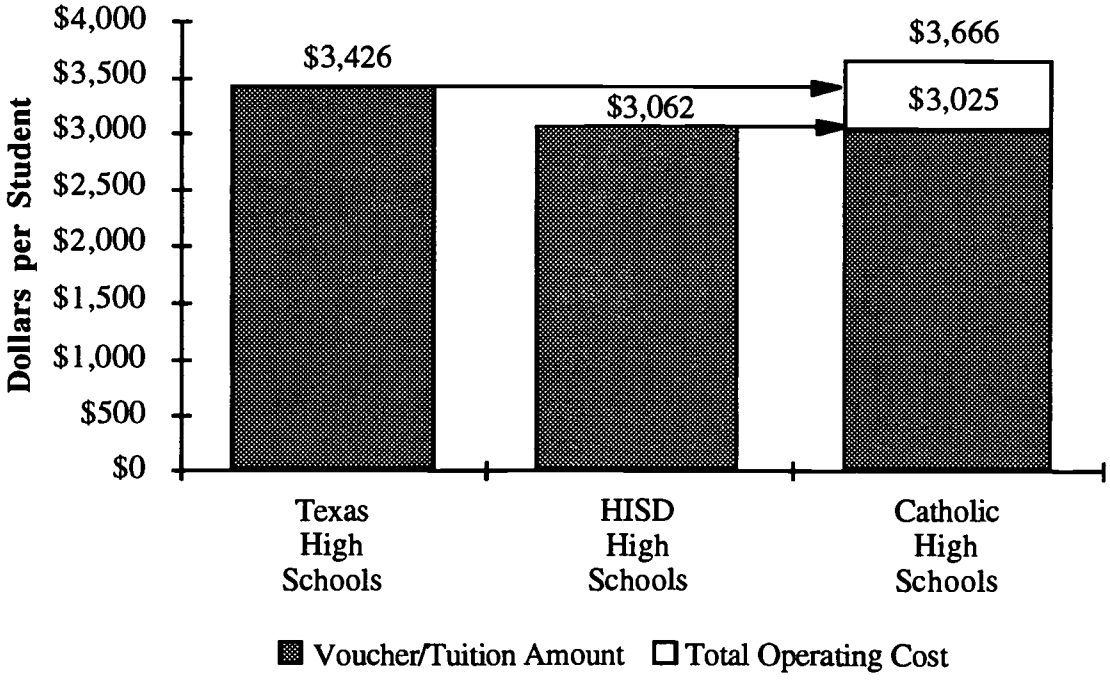
Answering this question requires an analysis of the cost of educating students in existing private schools. Will a $3,500 voucher be sufficient to support a private school? A survey of private school tuitions suggests that most of the private school capacity, especially at the elementary school level, has tuition of less than $3,500. Where market entry is concerned, however, costs must be distinguished from tuition. In most private schools, tuition pays only part of the cost of a student's education, with the balance coming from private donations, endowments, and other independent support. Since the pool of available outside support is probably limited, significant expansion of the private sector is not likely to occur unless the "tuition" (in this case the voucher) covers substantially all of the costs of the school.

Cost of Education in Existing Private Schools

Cost data are difficult to obtain for most private schools, although tuition data are usually readily available. Data on Catholic schools' costs and tuition, however, are available through the National Catholic Educational Association. Figure IV-1 compares 1991-92 national average operating expenses of Catholic high schools with operating costs for Texas high schools in the same year. An 80% voucher would almost cover annual operating costs, but not debt service and capital costs, in new schools with operating expense levels at the Catholic high school average.

Figure IV-1

High School Comparison of 80% Voucher Amounts with Private School Tuition and Costs 1991-1992



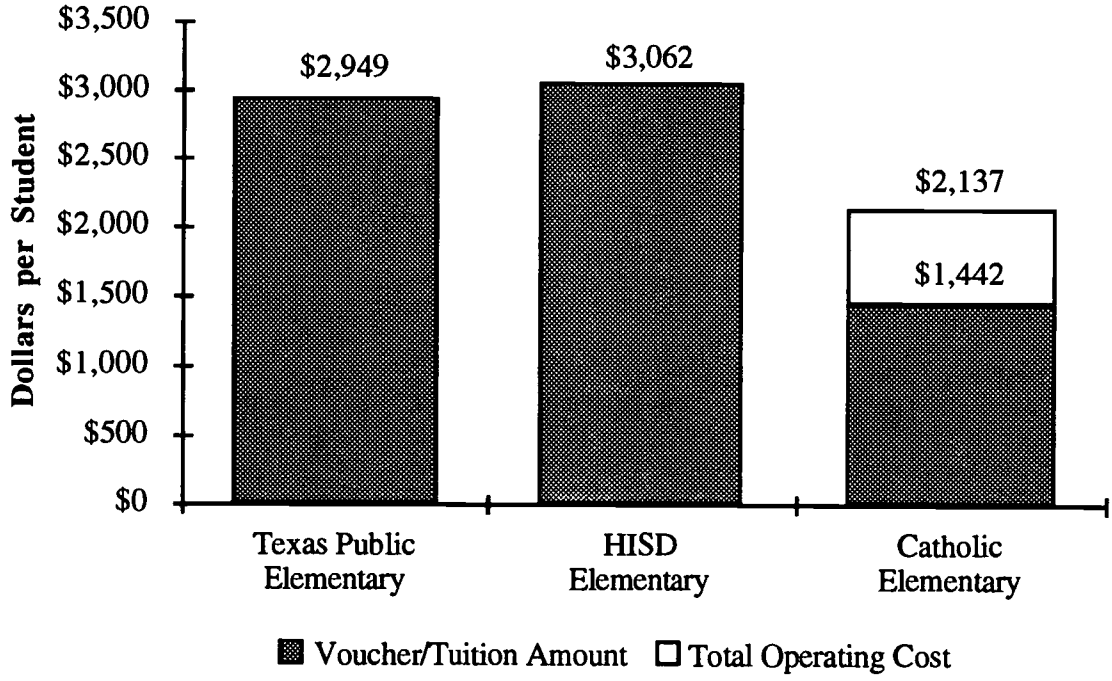
Sources: PEIMS, NCEA, LBJ School Analysis

For elementary schools, Catholic schools have a clear cost advantage over public schools. As shown in Figure IV-2, the national average operating expense of a Catholic elementary school in 1991-92 was approximately 72% of the value of a voucher based on average Texas elementary school costs, and 68% of the amount of a hypothetical voucher in the Houston Independent School District. When an estimate of capital and debt service costs is included in the private school figures, the voucher amounts still provide adequate coverage of total costs. This implies that had an 80% voucher existed in 1991-92, many opportunities would have existed to create elementary schools with costs no greater than the voucher amount.

Based on the greater cost advantage of private schools in grades one through six, we would expect that most of the private school participants in a $3,500 voucher program would be elementary schools. This has been the case in Milwaukee Parental Choice Program, where students can choose among ten elementary and middle schools serving 761 choice students, but the high school choice is limited to two special programs which serve 69 students at risk of dropping out.[24] Some high school expansion, however, is still viable, even without a voucher that covers total cost per pupil. Since a pool of private donations and other support exists for private schools, this base of non-tuition support can be spread over more students if the voucher amount is higher than current average tuitions.

Figure IV-2

Elementary School Comparison of 80% Voucher Amounts with Private School Tuition and Costs 1991-1992



Sources: PEIMS, NCEA, LBJ School Analysis

A second approach to the analysis of private school costs is to examine tuition data and apply estimates of the cost/tuition ratios to arrive at total per pupil costs. Average cost/tuition ratios for Catholic schools are 1.85 to 1 for elementary schools[25] and 1.4 to 1 for high schools.[26] The high ratio for elementary schools is driven largely by low tuition, rather than high costs, as shown in Figure IV-2. A school with tuition below $2,500 and a cost/tuition ratio of 1.4 to 1 would have costs of less than $3,500.

In 1990-91 approximately 69% of the nation's private-school students attended schools whose tuitions were below $2,500.[27] Two-thirds of these students attended Catholic schools. This is a result of the large size of the Catholic school system and the fact that Catholic school tuitions are generally very low. Non-Catholic schools, however, also present significant options for voucher students. As indicated in Table IV-1, over half (52%) of all non-Catholic private school students attended schools with tuitions at or below $2,500. Given low inflation in costs since 1991, it is reasonable to assume that a large percentage of private schools still have total costs below the voucher amount of $3,500.

Table IV-1

U.S. Private School Enrollments by Tuition Level and Type of School 1990-1991

Number of Students

Tuition Level	Catholic	Other Religious	Non-Sectarian	All Private Schools
Less than $1,000	685,588	128,657	73,696	887,941
$1,000 to $2,499	1,433,672	798,719	73,013	2,305,404
$2,500 to $4,999	398,334	393,589	175,776	967,699
$5,000 or more	-	144,838	325,674	470,512
All Tuition Levels	2,517,594	1,465,803	648,159	4,631,556

Percent of National Private School Enrollment

Tuition Level	Catholic	Other Religious	Non-Sectarian	All Private Schools
Less than $1,000	15%	3%	2%	19%
$1,000 to $2,499	31%	17%	2%	50%
$2,500 to $4,999	9%	8%	4%	21%
$5,000 or more	0%	3%	7%	10%
All Tuition Levels	54%	32%	14%	100%

Source: Table 60, "Digest of Education Statistics: 1993," U.S. Department of Education, Office of Research and Improvement (NCES 93-292)

The low cost of many private schools may surprise those whose image of private school is based on elite schools, many of which belong to the National Association of Independent Schools (NAIS). These independent schools indeed are more expensive, both in tuition and total costs. Median tuitions at NAIS schools range from $6,578 for first grade to $8,855 for twelfth grade[28], and average expenditure per student is $7,456 for elementary and $9,501 for secondary.[29] However, less than 10% of the nation's private school students attend an NAIS school.[30]

We recognize that if the expansion in private school capacity is large, private school costs may rise closer to the public school level. A major reason why private schools are cheaper is that they pay their employees less. Expansion of private school capacity could result in the exhaustion of the lowest-cost pool of teacher labor and force private schools to pay more to attract additional teachers. Moreover, one attractive feature of private schools for some

teachers is their selectivity. This advantage will not exist for private schools which must admit students under the same conditions as the public schools.

However, we would still not expect the private school cost advantage to disappear. One reason is that private schools are able to hire from a larger pool of potential teachers, including those who lack public school teaching credentials. We also believe that lack of political pressures to save jobs may make private schools more efficient in their use of non-classroom and administrative employees.

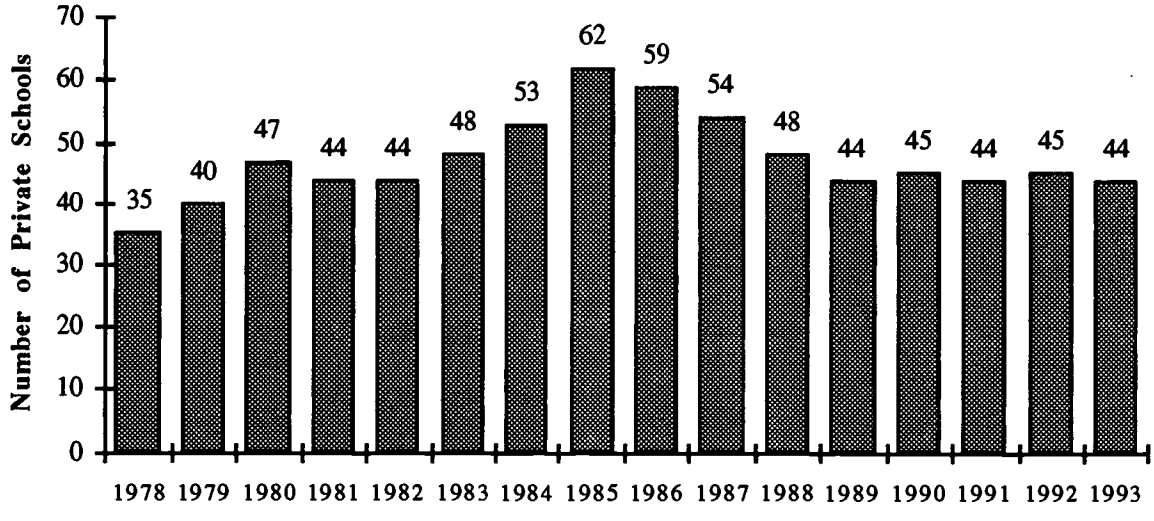
Entry and Exit of Private Schools

In the absence of barriers imposed by governmental regulation, entry and exit of private schools should be relatively easy. Schools can start small, serving perhaps one or two grade levels at inception, and facilities can be rented to avoid large capital expenditures. Physical capacity at existing schools can expand through the use of portable buildings, much the same way public schools frequently cope with sudden or temporary changes in enrollment.

To get a sense of how quickly the supply of private schools can adjust to changes in demand, we used the Yellow Pages from the Austin and San Antonio telephone directories to estimate the number of private schools in existence in each year between 1978 and 1993. This process probably underestimates the number of private schools, as some small schools may not be listed in the Yellow Pages. The results of this analysis are shown in Figure IV-3 and Figure IV-4. The declining number of private schools in 1986-89 appears to reflect the effects of a recession in the Austin and San Antonio economies in those years.

Figure IV-3

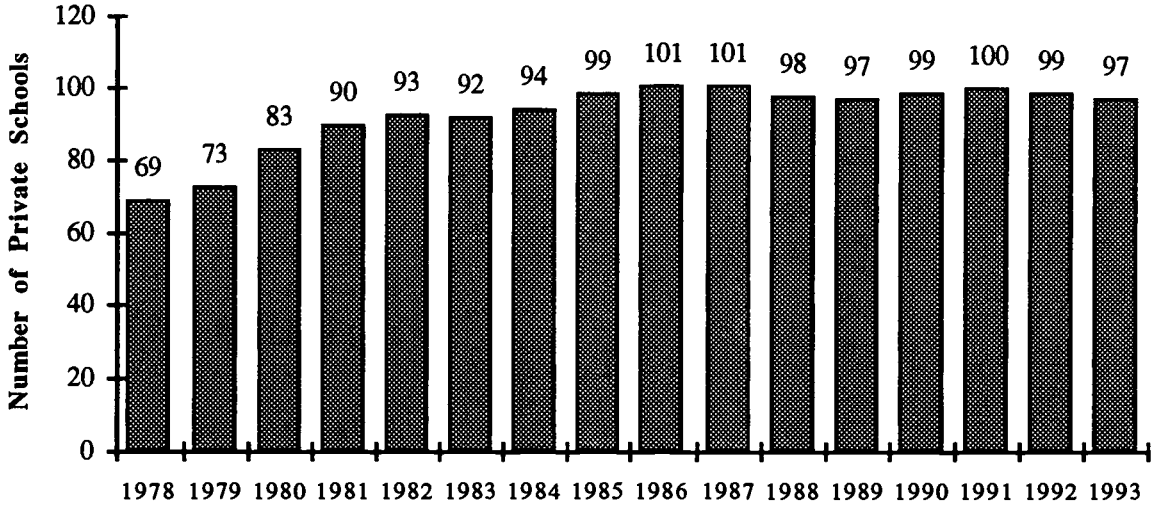
Private School Yellow Pages Listings
AUSTIN



Source: Southwestern Bell Yellow Pages Directories, 1978 through 1993

Figure IV-4

Private School Yellow Pages Listings
SAN ANTONIO



Source: Southwestern Bell Yellow Pages Directories, 1978 through 1993

Conclusion

This research findings discussed in this chapter indicate that an 80% voucher falls within the cost range of many existing private schools. This bodes well for the prospects for the startup of new schools and is critical to the success of a voucher plan. Without significant school expansion and entry, only a small percentage of eligible students will find spaces in private schools. However, actual entry is difficult to predict. One factor that may inhibit entry is the experimental nature of the voucher program itself. Private schools may be reluctant to commit capital to expand capacity if the demand for that capacity may disappear after only a few years. A second factor which might inhibit entry would be the imposition of transportation costs on private schools that greatly exceed the costs imposed on similarly-situated public schools. The next section addresses the issue of transportation of choice students in more detail.

V. ACCESS TO TRANSPORTATION

New schools will not open unless their founders anticipate that an adequate number of students will be able to get to the school building every day. This implies that schools created to serve the new voucher demand would most likely be located in low-income neighborhoods. The greater the amount of market entry by new schools, the larger will be the choice of nearby schools available to the typical low-income neighborhood resident. This is an advantage that public-private school choice plans have over programs that limit choice to public schools only.

Nonetheless, some low-income parents will wish to put their children in private schools that are located outside their own neighborhoods. Our survey of parents in the privately-funded voucher program in Austin and San Antonio found that when students changed from public to private school, the percentage of students who traveled to school by car increased from 58% to 90%. In a survey of parents who dropped out of the Milwaukee Parental Choice Program, 19% of the respondents cited difficulties with transportation as their principal reason for leaving.[31] These facts imply that assistance with transportation will be necessary for some low-income students who lack access to cars.

Yet placing costly transportation demands on private schools -- such as, for example, a requirement that any participating private school be prepared to pick up any student in the county at his or her doorstep -- will certainly inhibit participation in the choice program by existing schools and prevent entry by new private schools. That could reduce low-income students' access to educational opportunities.

Public School Service Levels as a Model for Private School Requirements

Existing public schools provide transportation to many students at reasonable cost by providing transportation in some circumstances and denying transportation in others. A reasonable approach, therefore, is to require voucher-accepting private schools to provide the same transportation services as do the local public schools in similar circumstances. The "similar circumstances" might depend on the flexibility private schools are allowed in their admissions policies for voucher students. If some private schools are allowed to declare themselves as "neighborhood schools," giving first preference to students living within a reasonable attendance zone, then the private school should be required to provide transportation to all voucher students within that zone who are more than two miles from the campus. This is the same level of service provided to regular program students by Texas public schools.[32]

If, as is more likely, private schools are required to accept applications from all students in a district, we must turn to the service levels provided to transfer students or magnet school students for a comparable situation in the public school system. To determine what such a "level playing field" requirement would look like, we interviewed school officials in the eight largest Texas school districts, inquiring about district policies for transportation of regular, transfer, and magnet school students. These districts, in descending order of size, are Houston, Dallas, Fort Worth, Austin, El Paso, San Antonio, Northside, and Ysleta.

We found that all of these districts follow similar policies for regular students and voluntary transfers. For regular students, transportation is provided only to those pupils residing within the attendance boundary of the school but who are more than two miles from the campus. For voluntary transfers, students are required to provide their own transportation to school.[33] Two basic methods are used for getting students to magnet schools. In one, the district provides transportation from a series of special bus stops around the district. Students are responsible for getting to and from these appointed stops. Houston, Austin, San Antonio, and Northside

follow this model. Alternatively, districts pick up magnet school students at the public schools to which they would be assigned based on their residence location. Dallas, Fort Worth, and El Paso use this model. Ysleta uses a combination of the two.

It could be argued that the most closely analogous situation to a choice student is that of a voluntary transfer by a student from one public school to another. Many school districts grant such transfers when they are requested, provided space is available at the school in question. As discussed above, public schools do not provide transportation in such circumstances, making it the responsibility of the parents to get the student to the chosen school. Using this logic, private schools participating in the voucher program who accept public school "transfers" from an entire district (or possibly more than a district) should not be required to provide transportation.

Many Low-Income Families Will Need Transportation

We must acknowledge, however, that many families, especially low-income families, would be burdened by having to provide their own transportation. In some cases, this burden will be enough that the private school in question is not a viable choice. We surveyed 190 parents of San Antonio CEO students who switched from public to private schools to find out how they got to school before and after they entered the choice program. Table V-1 shows the changes in these students' method of transportation. Approximately 80% of the students who previously walked or rode the bus to their local public school are taken to private school by car.[34]

Table V-1

Summary Results of Survey on San Antonio CEO Student Transportation

Method	Transportation to Former Public School	Transportation to Present Private School
Walk	24%	4%
Drive	58%	90%
City Bus	2%	2%
School Bus	14%	3%
Other	0%	1%
Not Given	2%	1%
Total	100%	100%

(Totals do not add to 100% because of rounding)
Source: LBJ School Survey of San Antonio CEO Parents

In the Milwaukee Parental Choice Program, which does not refund transportation costs until the end of the school year, 175 students out of 526 dropped out of the program between January and September of 1992, and 149 out of 586 students left the program between January and September of 1993. Parents of these students were surveyed to find out their reasons for leaving the program. Of the 123 students whose parents returned surveys, 24, or about 19%, cited difficulties with transportation as their principal reason for dropping out of the program.[35]

Since a major goal of school choice is to increase the opportunities for high-quality education to low-income students, some level of transportation support should be required. The question is how to do this without destroying the economic viability of the choice program in general. This is an especially critical question if participating private schools are required to accept students from anywhere in a district or county. We turn to public magnet schools as a possible model for transportation requirements that are both economical and yet allow a campus to serve an entire district.

Like the private schools, the magnet schools have attendance zones that consist of entire school districts, and in some cases entire counties. As discussed above, magnet schools strike a compromise between full transportation service and cost containment by providing transportation from a limited number of stops throughout a district. In some cases these stops are simply the home schools of the magnet school students. In other cases, the district has strategically placed pickup points around the district to minimize cost and maximize convenience to the magnet school students.

The "magnet school model" seems like a reasonable requirement to place on any voucher-accepting private school that cannot limit acceptances by an attendance zone. In both the "attendance zone" and "magnet school" cases, voucher-accepting private schools should be able to handle the costs of providing transportation at that level. The voucher amount, coming as it does from annual per pupil operating costs of the district, has embedded in it the variable cost of providing transportation in each district. However, aggregate transportation costs are likely to increase as students switch from neighborhood public schools to private schools which accept students from an entire district. Under our proposal, this increase in costs would be borne by the private schools. Some voucher-accepting private schools may wish to contract with the public school district or with an independent company to provide these additional transportation services. In this way they can take advantage of the economies of scale provided by a larger transportation system.

Conclusion

The experience of existing school choice programs shows that large numbers of low-income students can find their way to private school even if transportation is not provided by the school, or if transportation costs are not reimbursed until the end of the year. However, transportation appears to be a problem for a significant number of students. A solution for these students is to allow them to walk or ride to the public school campus which they otherwise would have attended, then require the private school to pick them up at that campus. This resembles the transportation system used by magnet schools in Dallas, Fort Worth and El Paso. An alternative (or additional model) is to allow a participating private school to declare itself a "neighborhood school," in which case it would be allowed to define a reasonable attendance zone. In return, the private school would be required to give preference in admission to students living within the zone, and to provide transportation to any student living within the zone but more than two miles from the school.

VI. CONCLUSIONS

We agree that many of the concerns raised about school choice have some validity in the abstract. It is possible to construct choice proposals that cause many of the objections of choice opponents to be well-founded. It is clear from our analysis, however, that when the specific features of choice that have been proposed for Texas are considered, those concerns are not warranted.

Low-income school choice will not produce the major earthquake predicted by its strongest opponents and proponents. Limitations on existing private school capacity and the time required for this capacity to expand will cause the effects of choice to be gradual. Furthermore, we expect that most people will continue to prefer their neighborhood public schools when the academic quality of those institutions is sound. Even so, we believe that low-income choice will have a beneficial impact that will outweigh the limited costs associated with the proposed pilot program. Disadvantaged students will be able to escape from the worst, most violence-ridden schools. Innovate private schools will open that will produce lessons on how to work effectively with disadvantaged students. Public school administrators and boards of trustees will be under greater pressure to improve academic quality and to create safe learning environments.

Our analysis provides several insights for policy makers involved in the shaping of school choice legislation in Texas and in other states:

- Entry of new private schools and expansion of existing private schools is critical to the success of a choice program. Voucher amounts must therefore be large enough to cover substantially all of the costs of operating private schools. Our analysis suggests that this is possible without harming public schools.

- Regulation of private schools must be weighed against the risk that excessive controls will reduce the number of schools willing to participate, thus limiting the pool of immediately available seats for choice students and limiting entry of innovative new schools.

- Transportation requirements on participating private schools should be reasonable and should not exceed the service levels provided by comparable public schools. Private schools should be allowed and encouraged to contract with the public school district or with established transportation providers. In addition, policy makers should consider such innovations as allowing participating private schools to declare themselves "neighborhood schools" to encourage entry of schools in disadvantaged neighborhoods while minimizing transportation costs.

- Evaluation of the success of choice programs must recognize that the numbers of students switching from public school to private school will initially be small. Low participation rates should not be taken as *prima facie* evidence of the failure of a choice program unless such rates are well below the number of private school spaces offered to prospective choice students.

- Evaluation of the effectiveness of choice must focus not only on the performance of private schools in educating students who leave public school, but also on the effects of the choice program on the public school system itself. Have the public schools becoming more responsive to the needs and desires of parents? Have school environments become more safe? Has academic achievement improved?

Finally, we hope that experience with a pilot low-income school choice program in Texas will greatly expand the knowledge base required to analyze school choice proposals nationwide.

NOTES

[1] Carnegie (1992), pp. 12-13, emphasis in original.

[2] Willms and Echols (1992), pp. 339-350; Willms and Echols (1993), Chapter 2; and Wells and Crain (1992), Chapter 4.

[3] Willms and Echols (1992); Willms and Echols (1993); Kozol (1992), pp. 88-92.

[4] Astin (1992), pp. 255-260; Ambler (1994) pp. 454-476.

[5] Milwaukee has two voucher programs: the publicly-funded Milwaukee Parental Choice Program, and the privately-funded PAVE (Parents Advancing Values in Education) program. Witte et al. (1994), Table 4; Wahl (1993).

[6] Hudson Institute (1992).

[7] Martinez, *et al* (1993).

[8] Duff (1994), p. 134.

[9] NCEA (1992), p. 100.

[10] Lee, *et al* (1994), pp. 434-457.

[11] Descriptive statistics for each of the data sets used in the financial models are provided in Appendix A.

[12] For example, if only one or two students leave a grade level, the public school is less likely to be able to reduce the number of teachers without the remaining classes at that grade becoming too large. In some cases, however, the departure of one or two students will allow a school to consolidate classrooms, thus saving considerable expense.

[13] Most federal dollars are spent as part of the Chapter 1/Title I program, and do not follow students directly; the private school receiving the student must apply separately for the money. From the public schools' revenue standpoint, these programs are 100% variable. In a separate model discussed in Appendix B, we analyze the effects of federal programs on average fixed and variable cost levels.

[14] A more detailed discussion of the low-income sensitivity analysis is presented in Appendix B.

[15] A more detailed discussion of the transportation sensitivity analysis is presented in Appendix B.

[16] To use a hypothetical example, suppose the variable cost of educating the students in District *X* is equal to the voucher amount of $3,500. Half the students in the district, however, may be educated well at a variable cost of $2,500; the other half require $4,500 to receive an equally effective education. This could occur if the parents of the $2,500 students are providing the equivalent of an additional $2,000 of educational services at home. In this scenario, a public school system seeking to provide an equally effective education to all students will spend $2,500 in variable costs per head on the cheap-to-educate students, and $4,500 on the expensive students. This provides an incentive in a choice system for parents of the cheaper group to move their students to private schools willing to spend the full $3,500 on their children. If this happens, then the public schools are left with the task of educating $4,500 students at a cost of $3,500 per head.

[17] The Milwaukee Parental Choice Program is the nation's only program offering full tuition for low-income students to attend private schools. Privately-funded voucher programs typically require parents to pay part of the private school tuition. 830 students were enrolled in the Milwaukee program in September of 1994. Witte, *et al* (1994), Table 1.

[18] Witte, *et al* (1994), Table 5c.

[19] Although the state may try to withhold vouchers from students who are in private school at the time the choice plan goes into effect, the incoming class of first graders (ignoring preschool for the moment) will all qualify, even if they intended to attend private school in the absence of a voucher plan. Thus, each year public funds flow to a new group of students who would have been ineligible for public money in the absence of a voucher plan. Within five years all low-income students in private elementary schools will be eligible, since none of them was attending a private elementary school when the choice plan went into effect. Thus, the issue of the existing pool of private school students is one of "you can pay me now, or you can pay me later."

[20] 12 schools participate out of a total of 23 eligible private schools. Telephone interview by Chrys Dougherty with Sue Freeze, Wisconsin Department of Public Instruction, January 31, 1995.

[21] Dianda and Corwin (1993), p. 4.

[22] See the discussion in the prior chapter concerning the likely participation of private schools in a choice plan.

[23] The Texas Education Agency uses eligibility for the federal Free and Reduced Price lunch program as its indicator of low-income status. The federal eligibility for these programs is 185% of poverty level. In 1992-93 there were approximately 1.5 million Texas public school students who qualified as low-income.

[24] Telephone interview by Chrys Dougherty with Sue Freeze, Wisconsin Department of Public Instruction, January 6, 1995.

[25] Kealey (1994), p. 18

[26] Guerra (1993), p. 18

[27] NCES (1993), Table 60.

[28] NAIS (1992), p.19.

[29] NAIS (1992), p. 114.

[30] NAIS (1992), p. 69.

[31] Witte, *et al* (1994), Table 19.

[32] Texas public schools provide much more extensive transportation to students who qualify for special education status.

[33] Dallas ISD provides transportation to voluntary transfer students when they qualify as "majority-to-minority" transfers. These transfers and the transportation provided are part of DISD's desegregation program. Even in these cases, transportation to the transfer school is provided only from the campus to which the student normally would have been assigned.

[34] The CEO experience does not tell us about possible transportation problems for low-income students whose parents did not apply to the program. In addition, the CEO program did not survey parents of students who dropped out to determine their reasons for leaving. However, the program does demonstrate that even a choice program that does not offer transportation can benefit a significant number of low-income students.

[35] Witte, *et al* (1994), Table 19.

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APPENDIX A - REGRESSION MODEL RESULTS

The model used to estimate the cost structure of Texas public schools is a simple linear regression of the form:

$$y_i = \alpha + \beta x_i + \varepsilon_i$$

where:

y_i is total operating expenditures in the ith campus or district,

x_i is student enrollment in the ith campus or district,

ε_i is a "white noise" error or residual term,

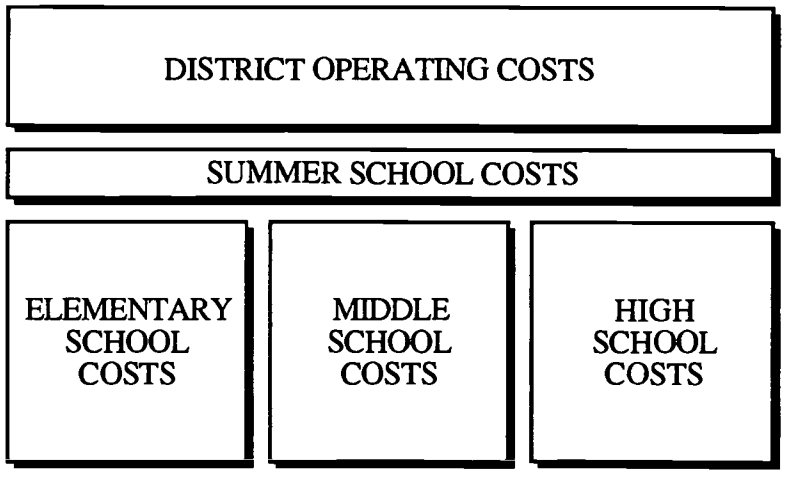
α is a parameter interpreted as an estimate of fixed cost for a campus or district,

and β is a parameter interpreted as the variable cost per student.

The data used in our analysis comes from several sources supplied by the Texas Education Agency (TEA). We obtained campus-by-campus operating expenses from the Public Education Information Management System (PEIMS). The figures used in the models were 1991-1992 actual operating expenses. We obtained campus-level enrollments from the Academic Excellence Indicator System (AEIS) for the same school year. District-level data was taken from the same PEIMS financial files as well as the SNAPSHOTS 1991-1992 report from the TEA.

As depicted in Figure A-1, we used five separate models to estimate the overall cost structure for the average school district. First, three campus-level models were estimated, one each for elementary schools, middle schools, and high schools. This was done to test our hypothesis that the cost structure is different between these three types of campuses. A district-level model was then used to estimate the structure of costs that occur at the district level or are not allocated by the financial systems to an individual campus. These costs include such items as the central administrative office and district curriculum development staffs. A second district-level model was required to estimate the costs of summer school programs since PEIMS does not allocate summer school costs to any one campus. We allocated costs obtained from the district-level and summer school models evenly across all students in the district.

FIGURE A-1
Schematic of School Cost Analysis Models



We estimated separate district and summer school cost models for small districts (less than 2,000 students) and for large districts (2,000 students or more). As explained in earlier work on administrative costs by the authors, this segmentation is based on different cost patterns in large and small districts. The resulting combination of an overall district model with two sub-models for large and small districts as well as the similar grouping in the summer school model yields 9 total estimation models. Table A-1 provides descriptive statistics for the variables used in each of these models.[1]

TABLE A-1

Descriptive Statistics - Public School Cost Models

Variable: OPERATING COSTS

Model	N	Mean	Std Dev	Minimum	Maximum
Elementary	2966	1,520,968	629,390	33,617	5,105,118
Middle School	1022	1,870,782	1,039,993	4,228	5,392,944
High School	1240	2,439,128	2,243,380	91	10,662,415
District - All	988	3,203,260	9,176,239	106	154,928,106
District - Small	704	727,742	549,824	106	4,013,299
District - Large	284	9,339,755	15,488,224	777,746	154,928,106
Summer - All	230	182,737	458,061	102	4,406,284
Summer - Small	76	17,282	19,388	487	98,425
Summer - Large	154	264,390	541,803	102	4,406,284

Variable: ENROLLMENT

Model	N	Mean	Std Dev	Minimum	Maximum
Elementary	2966	546	240	10	1,692
Middle School	1022	654	372	9	2,301
High School	1240	721	758	10	3,823
District - All	988	3,492	10,522	11	196,512
District - Small	704	687	508	11	1,994
District - Large	284	10,443	17,816	2,002	196,512
Summer - All	230	9,706	19,351	37	196,512
Summer - Small	76	1,012	553	37	1,963
Summer - Large	154	13,996	22,456	2,078	196,512

[1] J. Chrys Dougherty and Stephen L. Becker, "Proposed Administrative Cost Measure for Texas School Districts," Educational Economic Policy Center, Austin, TX, November 1992.

Table A-2 presents the results of the nine regression models described above. The results reported in the body of the paper utilize the individual campus models in conjunction with the size-specific district and summer school models.[2]

Table A-2

Summary of Regression Results

Model	Intercept	Coefficient	R-square
Elementary Campus	$215,898 ***	$2,392 ***	83.42%
	18.49	*122.16*	
Middle School Campus	$134,565 ***	$2,654 ***	90.00%
	6.46	*95.85*	
High School Campus	$369,373 ***	$2,871 ***	94.23%
	17.50	*142.30*	
District - All	$252,006 ***	$845 ***	93.93%
	3.32	*123.56*	
District - Small	$138,023 ***	$858 ***	62.75%
	6.48	*34.43*	
District - Large	$597,277 *	$837 ***	92.71%
	2.08	*60.01*	
Summer - All	$568	$19 ***	62.87%
	0.03	*19.65*	
Summer - Small	$11,605 *	$6	2.56%
	2.51	*1.39*	
Summer School - Large	$2,047	$19 ***	60.35%
	0.06	*15.21*	

* p<.05, ** p<.01, *** p<.001; t-statistics in italics

[2] The data sets used in our analysis of public school costs are available from the authors upon request. Inquiries should be directed to Prof. Chrys Dougherty, LBJ School of Public Affairs, Drawer Y, University Station, Austin, Texas, 78713.

APPENDIX B - SENSITIVITY ANALYSES

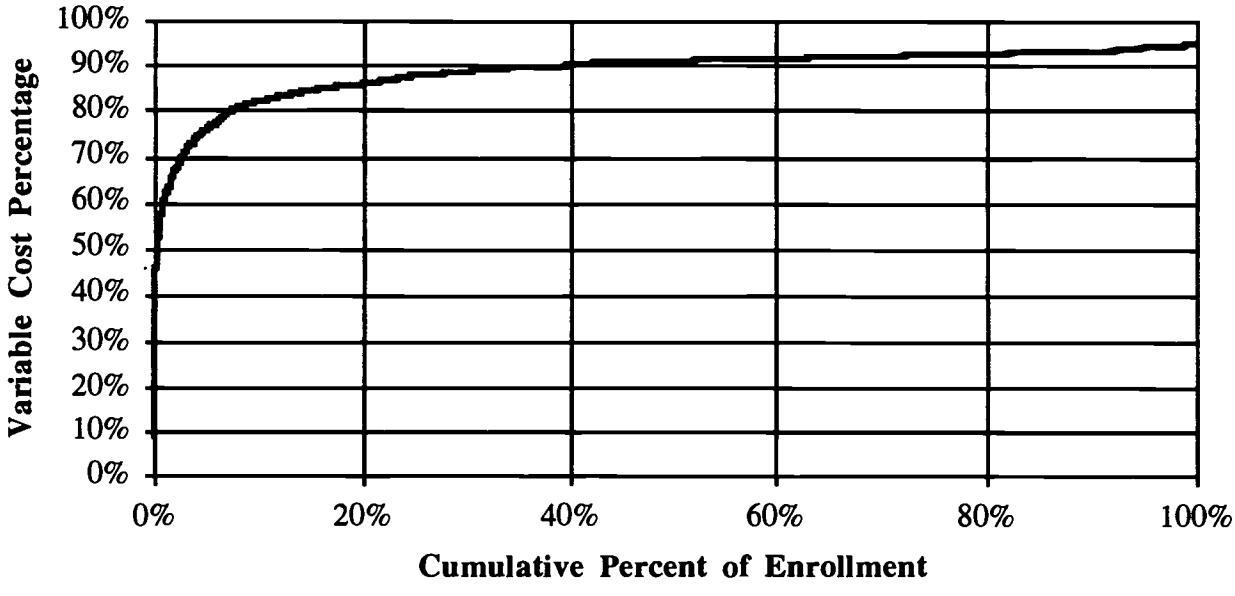
We conducted several analyses to test the sensitivity of our conclusions to various factors such as the size of a district or the concentration of low-income students at a campus. These analyses were discussed in the body of the paper. This appendix provides the quantitative details behind these analyses

Effect of District and Campus Size on Fixed-to-Variable Cost Ratios

By definition, as the size of a campus decreases, the proportion of fixed cost in the total cost of the campus increases. At an enrollment of zero, the campus budget would be 100% fixed costs. As enrollment increases, variable costs become a larger and larger proportion of the total cost of the campus. The same holds true for district level costs as the enrollment of the entire district increases or decreases. In Table III-2 in the body of this report we demonstrated that variable costs dropped from an average of 88% for elementary schools in an average sized district to 82% in a district of only 2,000 students.

To conduct a more thorough analysis of variable cost sensitivity to district and campus size, we calculated the variable cost percentages for every campus in Texas, using values predicted by the models described in Appendix A. The cumulative distribution of these variable cost percentages in shown in Figure B-1. As indicated in the figure, 8% of the state's students attend districts with variable costs below 80%. Stated conversely, 92% of all students in Texas public schools attend campuses and districts whose modeled variable cost percentage is over the proposed 80% voucher level. Also reading from the figure, we see that 50% of the state's students attend districts with variable costs above 90%.

Figure B-1
Distribution of Predicted Variable Cost Percentage by District



Stratification of Campuses and District by Low-Income Percentage

Since the proposed choice legislation for Texas is targeted to low-income students, a relevant question is whether these results are valid for districts and campuses that have the highest concentrations of low-income students in the state. We segmented the elementary school and district level data sets into quartiles based on the percentage of low-income students at the campus (or district). This results in the creation of 16 different groups of campuses classified by campus and district quartile. We estimated the four elementary campus models corresponding to each of the four campus-level quartiles. We then estimated four district models corresponding to the four district-level quartiles. We used the results of these two analyses to estimate the sixteen combinations of district and campus quartile. The results of this stratification are summarized in Table B-1.

Table B-1

Sensitivity of Elementary Campus Variable Cost to % Low Income

(Higher quartiles correspond to higher % of low income students)

District Quartile	Campus Quartile by % Low-Income			
	First	Second	Third	Fourth
First	90%	91%	92%	83%
Second	85%	87%	88%	79%
Third	88%	89%	90%	81%
Fourth	86%	88%	88%	80%

Source: LBJ School analysis

Transportation as 100% Fixed Costs to the Public School

By including transportation costs in each district's operating expenses, our models capture the fixed and variable cost behavior of pupil transportation. Implementation of the choice program, however, may require the public school district to continue to transport choice students to the public schools they otherwise would have attended. In such a case, the public school district would retain 100% of the costs it would otherwise incur in transporting that particular student. This is tantamount to assuming transportation costs are 100% fixed.

We tested the effects of such a scenario (100% fixed transportation costs) by extracting transportation costs from district operating costs and the district-level model on all other expenditures. The effect of this was to add $103 to the fixed cost of the average district. The results of this analysis are summarized in Table B-2.

TABLE B-2
Public School Cost Model with Transportation Costs Treated as 100% Fixed

	Elementary School	Middle School	High School
Average Campus Size	546	654	721
Variable Costs	$3,152	$3,414	$3,631
Fixed Costs	$549	$359	$666
Total Per Pupil Costs	$3,701	$3,773	$4,297
Percent of total cost fixed	15%	10%	15%
Percent of total cost variable	85%	90%	85%

Source: LBJ School analysis.

Effect of Federal Chapter 1 Spending on Fixed and Variable Costs

When a low-income choice student leaves his or her public school for a private school, it is not clear whether the school district can continue to include that student in its applications for Federal Chapter 1 funds. If so, the district would include those funds in the payment made to the participating private school. It is more likely, however, that participating private schools will have to apply for Chapter 1 funds on their own. In such a case, the school district will lose 100% of the Chapter 1 funding associated with a Chapter 1 student who moves to a private school under the choice plan.

To test the effects of this second scenario, we ran our models with and without Chapter 1 expenditures. We also constructed a "Chapter 1 Only" data set that consisted of only those expenditures at the campus or district level that were identified in the accounting system as Chapter 1 related. This allowed us to estimate the effect of removing Chapter 1 spending from our calculation of fixed and variable cost ratios. The results of this analysis are summarized in Table B-3. As shown in the table, variable cost percentages range from 88% to 95% of the remaining state and local expenditures when Chapter 1 operating costs are removed from the models.

TABLE B-3

Public School Cost Model
With Federal Chapter 1 Spending Separated

	Elementary School	Middle School	High School
Average Campus Size	546	654	721
Average # Low-Income	241	135	107
Non-Chapter 1 Spending (per pupil)			
Variable Costs	$3,164	$3,503	$3,718
Fixed Costs	$366	$202	$527
Total Non-Chapter 1 Costs	$3,530	$3,705	$4,245
Chapter 1 Spending (per pupil)			
Variable Costs	$141	$43	$26
Fixed Costs	$9	$5	$6
Total Chapter 1 Costs	$150	$48	$32
% of Non-Chapter 1 Fixed	10%	5%	12%
% of Non-Chapter 1 Variable	90%	95%	88%
% of Chapter 1 Fixed	6%	10%	19%
% of Chapter 1 Variable	94%	90%	81%

Source: LBJ School analysis.

APPENDIX C - PRIVATE SCHOOLS CAPACITY SURVEY

During January 1995 we conducted a telephone survey of private schools in Texas to determine current enrollment and capacity levels. The sample of private schools was randomly selected from a list of 695 names and telephone numbers of private elementary and secondary schools in Texas. The original list of schools was selected from a database of business telephone listings by the 4-digit SIC code for private elementary and secondary schools. A total of 86 usable survey responses were obtained from approximately 140 randomly selected school telephone numbers. The 86 responding schools are listed below:

ADVENT EPISCOPAL SCHOOL	STAFFORD, TX 77477
ALL SAINTS EPISCOPAL SCHOOL	FORT WORTH, TX 76108
AMARILLO CHRISTIAN CTR ACADEMY	AMARILLO, TX 79106
AMERICAN ACADEMY	TRINITY, TX 75862
BENDING OAKS SCHOOL	DALLAS, TX 75243
BEREAN CHRISTIAN SCHOOL	HUMBLE, TX 77396
BETHANY LUTHERAN SCHOOL	HOUSTON, TX 77022
BLESSED SACRAMENT SCHOOL	SAN ANTONIO, TX 78216
CANYON CREEK CHRISTIAN ACAD	RICHARDSON, TX 75080
CENTRAL CATHOLIC SCHOOL	PORT ARTHUR, TX 77642
CHRIST THE KING SCHOOL	DALLAS, TX 75225
COMMUNITY CHAPEL CHRISTIAN SCH	HEMPSTEAD, TX 77445
CONCORDIA LUTHERAN SCHOOL	SAN ANTONIO, TX 78213
CORLEY ACADEMY	DALLAS, TX 75241
CORNERSTONE CHRISTIAN SCHOOL	SAN ANGELO, TX 76902
DUCHESNE ACADEMY SCHOOL	HOUSTON, TX 77024
EAGLEMOUNT CHRISTIAN SCHOOL	LEWISVILLE, TX 75067
EASTLAKE CHRISTIAN SCHOOL	DALLAS, TX 75218
EMMANUEL CHRISTIAN SCHOOL	GONZALES, TX 78629
EPIPHANY EPISCOPAL SCHOOL	KINGSVILLE, TX 78363
FAITH CHRISTIAN SCHOOL	CORPUS CHRISTI, TX 78411
FIRST BAPTIST CHURCH SCHOOL	CALDWELL, TX 77836
FIRST BAPTIST CHURCH SCHOOL	CORPUS CHRISTI, TX 78404
GRACE CHRISTIAN ACADEMY	KILLEEN, TX 76542
GRACE CHRISTIAN SCHOOLS	LONGVIEW, TX 75601
GREAT HILLS CHRISTIAN SCHOOL	AUSTIN, TX 78759
HOLY CROSS ELEMENTARY SCHOOL	BAY CITY, TX 77414
HOLY FAMILY ELEMENTARY SCHOOL	FORT WORTH, TX 76107
HOLY NAME ELEMENTARY SCHOOL	SAN ANTONIO, TX 78223
HOLY TRNTY CATH SCHL	DALLAS, TX 75219
HOUSTON TERRACE BAPTIST SCHOOL	SAN ANTONIO, TX 78220
JESUIT COLLEGE PREP SCHOOL	DALLAS, TX 75244
JEWISH DAY SCHOOL	SAN ANTONIO, TX 78216
KIRBY HALL SCHOOL	AUSTIN, TX 78705
LAKEHILL PREPARATORY SCHOOL	DALLAS, TX 75214
LONG POINT CHRISTIAN SCHOOL	HOUSTON, TX 77055
LUTHERAN TRINITY SCHOOL	AMARILLO, TX 79106
MARY IMMACULATE SCHOOL	DALLAS, TX 75234
MELROSE BAPTIST SCHOOL	HOUSTON, TX 77022
NORTHEAST CHRISTIAN ACADEMY	EL PASO, TX 79924
NORTHWEST CHRISTIAN ACADEMY	FORT WORTH, TX 76114
ODESSA CHRISTIAN SCHOOL	ODESSA, TX 79761
OUR LADY OF THE VALLEY SCHOOL	EL PASO, TX 79907
OUR LADY PERPETUAL HELP SCHOOL	DALLAS, TX 75235
PINE GROVE BAPTIST SCHOOL	HOUSTON, TX 77032
PRESTON HOLLOW WEEKDAY SCHOOL	DALLAS, TX 75230

RAINBOW FARM CHRISTIAN SCHOOL	HOUSTON, TX 77041
REDD SCHOOL	HOUSTON, TX 77069
REDEEMER EPISCOPAL SCHOOL	EAGLE PASS, TX 78852
REDEEMER LUTHERAN SCHOOL	AUSTIN, TX 78757
ROCKWALL CHRISTIAN ACADEMY	ROCKWALL, TX 75087
SACRED HEART ELEMENTARY SCHOOL	CONROE, TX 77301
SACRED HEART SCHOOL	MUENSTER, TX 76252
SOLOMON SCHECHTER ACADEMY	DALLAS, TX 75252
ST ANDREWS EPISCOPAL SCHOOL	GRAND PRAIRIE, TX 75050
ST ANNE TRI PARISH SCHOOL	BEAUMONT, TX 77702
ST BARNABAS EPISCOPAL SCHOOL	HOUSTON, TX 77034
ST CYPRIANS EPISCOPAL SCHOOL	LUFKIN, TX 75904
ST FRANCIS ACADEMY SCHOOL	SAN ANTONIO, TX 78211
ST FRANCIS DE SALES SCHOOL	HOUSTON, TX 77036
ST GERARD ELEMENTARY SCHOOL	SAN ANTONIO, TX 78203
ST GERTRUDE ELEMENTARY SCHOOL	KINGSVILLE, TX 78363
ST JAMES EPISCOPAL SCHOOL	DEL RIO, TX 78841
ST JAMES MONTESSORI SCHOOL	DALLAS, TX 75238
ST JOHNS EPISCOPAL SCHOOL	ODESSA, TX 79760
ST LUKE CATHOLIC SCHOOL	SAN ANTONIO, TX 78228
ST LUKES EPISCOPAL SCHOOL	SAN ANTONIO, TX 78209
ST MARGARET MARY SCHOOL	SAN ANTONIO, TX 78223
ST MARTINS LUTHERAN DAY SCH	AUSTIN, TX 78701
ST MARYS ASSUMPTION SCHOOL	WACO, TX 76701
ST MARYS ELEMENTARY SCHOOL	AMARILLO, TX 79102
ST MARYS EPISCOPAL SCHOOL	BIG SPRING, TX 79720
ST PAUL LUTHERAN SCHOOL	HARLINGEN, TX 78550
ST PETER THE APOSTLE SCHOOL	HOUSTON, TX 77021
ST PHILIPS EPISCOPAL SCHOOL	DALLAS, TX 75215
ST PIUS X ELEMENTARY SCHOOL	CORPUS CHRISTI, TX 78412
ST PIUS X ELEMENTARY SCHOOL	SAN ANTONIO, TX 78209
SUNNYSIDE SCHOOL	BROWNSVILLE, TX 78520
THE SAINT MICHAEL SCHOOL	DALLAS, TX 75225
TRINITY EPISCOPAL SCHOOL	JASPER, TX 75951
TRINITY EPISCOPAL SCHOOL	VICTORIA, TX 77901
UNITED DAY SCHOOL INC	LAREDO, TX 78043
URSULINE ACADEMY SCHOOL	DALLAS, TX 75229
VANGUARD SCHOOL	WACO, TX 76710
WACO CHRISTIAN SCHOOL	WACO, TX 76710
WINSTON SCHOOL	DALLAS, TX 75229

APPENDIX D - SAN ANTONIO CEO PARENT SURVEY

In the fall of 1994 we conducted our own interviews with a sample of parents in the San Antonio Children's Educational Opportunity program (the "CEO" program), a privately funded voucher program for low-income families. We surveyed a sample of 146 parents by telephone during the fall of 1994 using bilingual researchers from the LBJ School of Public Affairs. Parents were randomly selected from the 519 students in the program who had switched from public school to private school. (The CEO program also gives tuition scholarships to 388 low-income children who were already attending private school.) The questionnaire used for this survey is reproduced below. The results of the survey are reported in the body of the paper.

San Antonio CEO Foundation
Parent Survey

1. Name:_____

2. Child's Name:_____

3. Child's Date of Birth:_____

4. How many children in family?_

5. How many of the children in your family are in the CEO program?___

6. What is the name of the public school your child attended before entering the CEO program?_____

7. In what public school district do you live?_____(probably SAISD)

For the previous PUBLIC school:

8. How did your child get to school? (Note: If more than one method used, check all that apply and indicate which method was used most frequently.)
   _____School Bus _____City Bus
   _____Walk/Bicycle _____Parent or Relative Driving
   _____Friend Driving/Carpool _____City Bus

9. How many miles (approximately) did you live from the public school your child attended?_____

10. How long did it take your child to travel to school each day?_____

For the current PRIVATE school:

11. How does your child get to school? (Note: If more than one method used, check all that apply and indicate which method is used most frequently.)
   _____School Bus _____City Bus
   _____Walk/Bicycle _____Parent or Relative Driving
   _____Friend Driving/Carpool _____City Bus

12. How many miles (approximately) do you live from the private school your child attends?_____

13. How long does it take your child to travel to school each day?_____

14. I am going to read a list of reasons that might have been important in your decision to remove your child from public school. Please tell me which one was the MOST IMPORTANT factor in your decision to remove your child from public school. Please tell me which factor was the SECOND MOST IMPORTANT reason. (Interviewer: change the order in which these factors are read with each subsequent call.)

__ 1. Better academic programs
__ 2. Better discipline
__ 3. Decreased drug activity
__ 4. Decreased gang activity
__ 5. Increased safety
__ 6. Religious instruction
__ 7. Other

15. Why did you choose this particular private school? (Interviewer: change the order in which these factors are read with each subsequent call.)

__ 1. Affordable tuition
__ 2. Convenient location
__ 3. Religion
__ 4. Academic quality
__ 5. Other

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