

SCHOOL CHOICE

ISSUES

IN THE STATE



Parent Choice for Oklahoma:
Many agree with the concept. Some disagree. And some simply want more information. As the public debate continues to grow louder about how best to provide a quality education to all Oklahoma children, it is critical to know the facts about parent choice, and to have an understanding of how parent choice programs have had an impact on communities, parents and students around the country. All of this analysis is done with one goal in mind: The best possible education for all of Oklahoma's children.

The Fiscal Impact of Tax-Credit Scholarships in Oklahoma

Prepared By:

Brian Gottlob

Senior Fellow

Friedman Foundation for Educational Choice

June 2009

**Study released jointly by the Friedman Foundation for
Educational Choice and the Oklahoma Council of Public Affairs**

A MESSAGE FROM THE FRIEDMAN FOUNDATION:

OUR CHALLENGE TO YOU

Our research adheres to the highest standards of scientific rigor. We know that one reason the school choice movement has achieved such great success is because the empirical evidence really does show that school choice works. More and more people are dropping their opposition to school choice as they become familiar with the large body of high-quality scientific studies that supports it. Having racked up a steady record of success through good science, why would we sabotage our credibility with junk science?

This is our answer to those who say we can't produce credible research because we aren't neutral about school choice. Some people think that good science can only be produced by researchers who have no opinions about the things they study. Like robots, these neutral researchers are supposed to carry out their analyses without actually thinking or caring about the subjects they study.

But what's the point of doing science in the first place if we're never allowed to come to any conclusions? Why would we want to stay neutral when some policies are solidly proven to work, and others are proven to fail?

That's why it's foolish to dismiss all the studies showing that school choice works on grounds that they were conducted by researchers who think that school choice works. If we take that approach, we would have to dismiss all the studies showing that smoking causes cancer, because all of them were conducted by researchers who think that smoking causes cancer. We would end up rejecting all science across the board.

The sensible approach is to accept studies that follow sound scientific methods, and reject those that don't. Science produces reliable empirical information, not because scientists are devoid of opinions and motives, but because the rigorous procedural rules of science prevent the researchers' opinions and motives from determining their results. If research adheres to scientific standards, its results can be relied upon no matter who conducted it. If not, then the biases of the researcher do become relevant, because lack of scientific rigor opens the door for those biases to affect the results.

So if you're skeptical about our research on school choice, this is our challenge to you: prove us wrong. Judge our work by scientific standards and see how it measures up. If you can find anything in our work that doesn't follow sound empirical methods, by all means say so. We welcome any and all scientific critique of our work. But if you can't find anything scientifically wrong with it, don't complain that our findings can't be true just because we're not neutral. That may make a good sound bite, but what lurks behind it is a flat rejection of science.

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Issues in the State

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Executive Summary

Parents of students with disabilities face perhaps the greatest challenges in finding the best education for their child. Any student identified as needing special education is guaranteed to receive a “free and appropriate public education” under federal law. However, decisions about what services each student will receive are largely in the hands of schools. Because the expense of educating special needs children exceeds the state and federal aid that is typically available, school districts often look to minimize the level of services provided. Often, neither the providers nor users of the special education system in public schools are satisfied with these services.

A special needs scholarship program funded by a tax credit would provide a desirable alternative for special education students enrolled in public schools that are not meeting their needs. By allowing parents to use a portion of the public funding associated with their child’s education at a private school of their choice, parents would be able to place their child in the best setting for their unique educational needs.

Our analysis examines the demographics of the special needs population in public and private schools in Oklahoma and estimates the impact on school enrollments providing tax credit funded scholarship grants for special needs students. We develop a model that shows how the expenditures of Oklahoma’s school districts vary with enrollment changes for both regular and special needs children, and show the state and local fiscal impacts of a special needs tuition tax credit program.

Key findings include:

- Over 96,000 public school children in Oklahoma require an Individualized Education Program (IEP).¹ IEP’s are required by law to meet the educational needs of children with special requirements in Oklahoma’s public and private schools.
- About 60 percent of Oklahoma’s special needs children qualify for the federal free and reduced lunch program.
- On average, local school districts spend in excess of \$5,000 more per student with an IEP than they do for a child without an IEP, although there is tremendous variation depending on the severity of a child’s disability. On average, the addition or loss of a student with an IEP changes local school district expenditures (variable expenditures, not including fixed expenditures²) by \$10,169, compared to expenditures of \$4,388 for a student without an IEP.
- Oklahoma provides about \$3,479 per pupil in “foundation” aid based on enrollment levels to students without special needs. The average amount of aid for each special needs student is about \$5,113.
- Local school districts receive about \$1,600 more in state education aid and \$2,931 from all levels of government, on average, for each special needs student, while their expenditures are higher by an average of \$5,781 (higher for smaller school districts and lower for larger districts). As a result, local school districts receive a fiscal benefit and the per pupil resources available to remaining students is increased when special needs students leave a school district.
- We estimate demand for special needs tax credit scholarships among all special needs students in Oklahoma’s public schools will be:
 - 3,443 for scholarships valued at \$5,000 or about 3.6% of special needs students in Oklahoma’s public schools.
 - 6,886 (7.1% of special needs students) at a scholarship value of \$10,000.
 - 10,329 (10.7% of special needs students) for \$15,000 scholarships.
- One-half (50.5%) of the demand for special needs scholarships will come from children who are eligible for the federal free and reduced lunch program.
- The State of Oklahoma receives a net fiscal benefit for a special needs scholarship program with values of \$5,000, but experiences net losses at scholarship values of \$10,000 and \$15,000. Much of the net fiscal loss for the state can be offset by adjusting aspects of the tax credit mechanism, and by adjustments in other program features.
- Local school districts always receive a substantial fiscal benefit from a special needs scholarship program, and as long as the value of special needs scholarships is less than \$15,000, the total net fiscal impacts on state and local government will be positive. Although they lose some state education aid, they retain local and much of the federal aid associated with special needs students.

About the Author

Brian J. Gottlob (bgottlob@poleconresearch.com) is the principal of PoEcon Research. For 17 years Gottlob has analyzed economic, demographic, labor market industry and public policy trends for private sector, government and nonprofit organizations. He has extensive experience in developing econometric models and has completed studies on a range of economic, tax policy, energy, education, and health care issues in New Hampshire, Virginia, Ohio, New Mexico, New York, Texas, Oregon, Michigan, Georgia, Mississippi, West Virginia and Illinois. Gottlob is a senior fellow at the Friedman Foundation for Educational Choice. He has been an instructor at the Whittemore School of Business and Economics at the University New Hampshire, a member of the Advisory Board of the New England Economic Partnership and a member of the National Association of Business Economics. Prior to founding PoEcon, Gottlob was a Vice President for Fiscal and Economic Policy at the Business and Industry Association of New Hampshire. He has an undergraduate degree in economics from the State University of New York and a graduate degree in public policy analysis from the University of New Hampshire.

About the Friedman Foundation for Educational Choice



The Friedman Foundation for Educational, dubbed “the nation’s leading voucher advocates” by the Wall Street Journal, is a nonprofit organization established in 1996. The origins of the foundation lie in the Friedmans’ long-standing concern about the serious deficiencies in America’s elementary and secondary public schools. The best way to improve the quality of education, they believe, is to enable all parents with the freedom to choose the schools that their children attend. The Friedman Foundation builds upon this vision, clarifies its meaning to the public and amplifies the national call for true education reform through school choice.

About the Oklahoma Council of Public Affairs



The Oklahoma Council of Public Affairs (OCPA) is a public policy research organization—a think tank—whose mission is to formulate and promote public policies consistent with the principles of free enterprise and limited government. Through a variety of publications, programs, and public forums, OCPA is helping to improve the quality of life for all Oklahomans by promoting sound solutions to state and local policy questions.

Table of Contents

- Introduction..... 9
- How Oklahoma Funds Public Schools and Students With Special Needs..... 9
- How Enrollments and Special Needs Students Affect School Funding.....10
 - Funding For Special Needs Students..... 10
- How School Expenditures Vary With Enrollment..... 13
- Demographics of Oklahoma’s Special Needs School-Age Children..... 15
 - Special Needs Students Attend Both Public and Private School in Oklahoma..... 16
- Proposals to Increase Educational Options and Opportunities..... 17
- Estimating Program Participation Levels..... 19
 - Business Contributions to Scholarship Organizations..... 19
 - Scholarship Contributions from Individuals..... 19
 - Tuition Prices Influence Demand for Private Schools..... 20
 - Combining Supply and Demand Models to Estimate the Number of Scholarships..... 22
- Fiscal Impact on State Government and Local School Districts..... 24
- Conclusions..... 25
- Endnotes..... 26

Introduction

Parents of students with disabilities face a number of difficult choices in determining how to get the best education for their children. Any student identified as needing special education is guaranteed to receive a “free and appropriate public education” under federal law. However, decisions about what services each student will receive are largely in the hands of schools. The expense of educating special needs is frequently cited as a significant contributor to rapidly rising public school expenditures. Because the expense of educating special needs children often far exceeds the state and federal aid that is typically associated with those children, school districts may look to minimize the level of services provided to special needs students in order to stay within budget constraints. Often, neither the providers nor users of the special education system in public schools are satisfied with the service provided.

A special needs, tuition tax credit funded, scholarship program would provide a desirable alternative for special education students enrolled in public schools that are not meeting their needs. Over the last few years, school choice programs for students with disabilities have been among the fastest growing school choice policies. In 1998, Florida’s McKay Scholarship Program for Students with Disabilities became the first to offer taxpayer-funded vouchers for students identified as disabled. Students designated as disabled could use vouchers to attend a private school or a public school other than the local public school to which they had been assigned. Since it was first implemented in 2000-01 the McKay Scholarship Program has grown from serving 970 students in 100 private schools to serving 19,852 students in 846 private schools, making it the largest school-choice program in the United States. Other states have followed Florida by offering similar voucher programs for disabled students. Special education voucher programs are currently operating in Ohio, Utah, Georgia, and Arizona, and bills to implement or expand these programs are being considered and have passed at least one legislative chamber in several other states.

Florida’s McKay special needs scholarship program appears to have increased satisfaction and reduced antagonism between parents and school systems. The number of special education mediations per 1,000 students has decreased and the number of state complaints and state complaint orders issued has been reduced, as have the number of due process hearing requests. Because due process hearings are the required gateway to lawsuits, expensive legal actions also appear to have dropped after parents discovered an alternative to taking their own school to court. At the same time, at an average scholarship cost of \$7,295 in 2007-08, the Florida McKay Scholarship Program delivered increased parental satisfaction at a cost that is well below the average public school expenditure per special needs student, producing savings for state and local governments.

High quality empirical studies have documented the educational benefits of school choice programs for participating students as well as those students who remain in public schools.³ Most recently, an evaluation of the McKay special needs scholarship program found similar educational benefits to participants in that program as well as students who remain in the public schools.⁴

Our analysis begins with a brief discussion of how Oklahoma funds elementary and secondary education. We examine the demographics of the special needs population in public and private schools in Oklahoma and estimate the impact on public and private school enrollments of a program that provides tax credit funded scholarship grants for special needs students. We develop a model that shows how the expenditures of Oklahoma’s school districts vary with changes in student enrollment for both regular and special needs children, and describe the fiscal impact of a special needs tuition tax credit program on Oklahoma’s state budget and local school districts.

How Oklahoma Funds Public Schools and Students With Special Needs

The expense of educating children in Oklahoma is a responsibility shared between all levels of government. The state provides the largest share of funding for common schools annually, and education represents the largest single item in the annual state budget. According to the Oklahoma Cost Accounting System, state lawmakers appropriated more than \$2.6 billion for elementary and secondary schools for the 2006-07 school year, representing 65 percent of the total revenue of Oklahoma’s public schools. Local and county funds totaling \$955 million accounted for another 23 percent of public school revenue. Finally, the federal government supplied about 12 percent or \$477 million, including \$124 million in funding for students with special disabilities.

The basic state support mechanism for Oklahoma schools includes a two-tiered equalization program. The first component is a foundation formula with a transportation supplement. The second tier is the salary incentive aid, a modified guaranteed yield formula. Key features of Oklahoma’s state education finance program include:

- State aid is appropriated to school districts with a primary goal of increasing the equality of resources available for educating each child across school districts. Thus, in the aggregate, state support for local schools is distributed in inverse proportion to local ability to raise revenue.
- The primary source of state aid for local school districts, equaling 80% of the state aid for local schools, is distributed via the Foundation and Salary Incentive aid program.

- State aid is enrollment driven, with weighted average daily membership (ADM) used as the formula unit of funding. The foundation aid program for a given local district includes a legislatively determined statewide base support factor (\$1,642 for FY 2008-09) multiplied by the district's weighted ADM.
- The salary incentive aid component of the Oklahoma funding system (fundamentally a guaranteed yield formula) constitutes a second tier resource equalization program. The local portion of the program was derived from an annual levy up to 20 mills⁵ for each local district. In FY 2008-09 the state guaranteed \$78.97 per weighted ADM.
- State aid is also distributed via 17 categorical grant programs, some of which are dependent on enrollment levels of particular categories of students.
- The local foundation program income for the district is subtracted from this product. This income includes a district ad valorem tax levy on real property, a county wide levy, and collections from several dedicated revenue sources. State foundation aid results from the subtraction of the local foundation program income from the total foundation program.

How Enrollments And Special Needs Students Affect School Funding

The relationship between enrollment levels and school funding is a question of particular importance for determining the fiscal impact of school choice programs. Funding from different sources responds to changes in enrollment in different ways. While most school funding that comes from the state varies with enrollment, local school funding does not.

Over 90 percent of state support for public schools in Oklahoma is calculated on the basis of some measure of enrollment. The foundation aid and salary incentive portion of aid account for 90 percent of state funding for schools. These programs are directly calculated on the basis of weighted ADM and thus vary directly as a district adds or loses students, either among the general student population or among specific categories of students (such as students with special needs, economically disadvantaged students, or students with some other characteristics for which these state funding programs provide enhanced funding).

Some of the remaining 10 percent of state aid that is provided via 17 categorical funding programs is determined directly or indirectly by enrollment – however, dollar figures are not directly a function of the number of students in a district. Based on data from the Oklahoma Department of Education, we assume that about \$2.36 billion of state education aid in 2006-07 was distributed on the basis of some type of enrollment-based calculation, while \$262 million does not vary with enrollment. In calculating state aid based on enrollment, districts are allowed to choose either the current or prior year's enrollment (ADM), whichever yields the larger amount of state aid. Thus districts are protected from unexpected declines in state aid because of a drop in enrollment and given at least one year to adjust before a loss of state revenue occurs. The loss of a student who has left a school district for any reason has the same effect on a district. Enrollment has relatively little effect on local revenue in the short term but over time, enrollment changes may prompt larger adjustments to local revenues. In terms of either local or state sources of revenue, local districts do not experience significant reductions in revenues in the short-term as enrollments decline.

Some revenues from federal sources are affected by enrollment levels but they are calculated on the basis of complex formulas that include provisions which result in funding not varying directly with enrollments. Federal funds for special needs students are distributed through the Individuals with Disabilities Education Act (IDEA). This law contains a grant formula that depends on the number of students in a district identified as receiving special education services and the statewide average spending per student. However, districts are guaranteed to receive at least 85 percent of their prior-year allocation, even if the number of eligible students declines. Finally, each state, regardless of size, is guaranteed to receive at least a certain minimum share of the total appropriation. As a result of these hold-harmless and small-state provisions, the amount of money a school district ultimately receives is only very loosely related to the actual number of students in that district identified as having special education needs. For the sake of this analysis, we will assume that 15 percent of a district's per-student IDEA funding will go away when a special education student leaves an Oklahoma public school to attend a private school. This is the most conservative assumption we can make, because districts are guaranteed to receive at least 85 percent of their prior year funding even if its number of special education students declines. Because federal funding for schools is dispersed across a large number of funding streams, it is difficult to determine the exact percentage of federal funding that varies with enrollment.

Table 1 uses 2006-07 funding levels as reported by the Oklahoma Department of Public Instruction to present a basic scenario of how funding changes as enrollments change.

Funding For Special Needs Students

There are no categorical state aid programs in Oklahoma to allocate funds for students with special needs; rather, special needs students are given additional weighting in the formulas that calculate ADM for distributing foundation aid on the basis of enrollment. There are 12 categories of special needs that are given weights ranging from a low of .05 for a speech impaired student, to 3.80 for blind, deaf, or visually impaired students. These weights acknowledge that special needs students place additional resource requirements on

local school districts. The weights also acknowledge that there is tremendous variation in the additional resources required to educate special needs students, depending upon the nature of their disability.

Table 1

Oklahoma Public School Operating Revenue* - FY2006-07			
	Amount	Per Student	Percent
STATE SOURCES			
Funding Determined by Enrollment	\$2,361,490,403	\$3,731	90.0%
Categorical Aid Not Dependent on Enrollment	\$262,387,823	\$415	10.0%
TOTAL STATE SOURCES	\$2,623,878,225	\$4,146	64.5%
LOCAL SOURCES (INCL. COUNTY)	\$957,526,284	\$1,513	23.5%
FEDERAL SOURCES	\$485,104,243	\$766	11.9%
TOTAL*	\$4,066,508,752	\$6,425	100%

* Revenue other than for operating expenses (from Building and Sinking Funds) equals \$798 per pupil Source: Author's calculations based on Oklahoma Dept. of Education Annual Report for FY 2006-07

Oklahoma does not report finance data on the percentage of state aid to local school districts that result from the additional weight giving to special needs students. The state does, however, report on the number of special needs students by type of disability. Using this data we can approximate the amount of state aid allocated, on average, for special needs students compared to the overall average aid per pupil. We multiplied the reported number of special needs students in each disability category by the weights assigned to each category for 2006-07. Table 2 compares the overall statewide average of per pupil operating revenue with our estimated average per pupil funding for special needs students.

Table 2

Per Pupil Operating Revenue - FY2006-07			
	Statewide Avg. Per Non-Special Needs Student	Special Needs Students	Difference
STATE SOURCES			
Funding Based on Enrollment	\$3,479	\$5,133	\$1,654
Categorical Aid Not Dependent on Enrollment	\$415	\$415	\$0
TOTAL STATE SOURCES	\$3,894	\$5,548	\$1,654
LOCAL SOURCES	\$1,513	\$1,513	\$0
FEDERAL SOURCES	\$573	\$1,850	\$1,277
TOTAL	\$5,980	\$8,911	\$2,931
TOTAL FROM NON-LOCAL SOURCES	\$4,467	\$7,398	

Source: Author's calculations based on Oklahoma Department of Education Annual Report for FY 2006-07

A large percentage of special needs students who have a learning disability or a speech impairment are given low weights (.4 for students with learning disabilities, meaning that each student generates 40% more in enrollment-based state aid, and .05 - or an additional 5 percent in per pupil state aid - for the approximately 14,000 students with speech impairments). Students with learning disabilities and students with speech impairments accounted for 62 percent of the special needs students in Oklahoma public schools.

Table 2 shows that, on average (but with large variations depending on the level of disability) for each special needs student, the state of Oklahoma provides about \$5,548 in education aid. Of the \$5,548, about 92 percent, or \$5,113, is responsive to changes in enrollment levels. Thus if nothing else changed, when a new special needs student enters a school district, a district would, on average, receive \$5,113 in additional state funding via the State's foundation and other enrollment based forms of education aid payments. This amount of aid for special needs students is just \$1,654 more per student than the amount received for students without special needs. Again, these are aggregated averages, and the amount of aid associated with each special needs student depends primarily on the nature and severity of their disability.

Conversely, when a student leaves a district, state per-student funding is reduced. However, Oklahoma’s school finance laws allow school districts the option to base their calculations for determining state enrollment-based education aid on the prior year’s enrollment levels. Thus, districts with enrollment declines are cushioned against the loss of state aid and given time to adjust budgets to accommodate enrollment declines. This hold harmless provision or ‘cushion’ preventing revenue declines would occur with an enrollment decline whether or not it was resulting from a special needs tuition scholarship program. In effect, the state of Oklahoma continues to provide state education aid to districts for students who no longer attend public schools. Moreover, in situations where a student leaves one local school district to attend another district with increasing enrollments, the state may actually provide aid to two different school districts for the same student in the same year.

Federal regulations for funding under the Individuals With Disabilities Education Act (IDEA) guarantee that local school districts receive at least 85 percent of their prior-year allocation, even if the number of eligible students declines. Other federal revenues are also affected by enrollment levels, whether this includes special needs students or not. Many of these revenue funds are only loosely affected by year-to-year changes in enrollment levels. We conservatively estimate that 85 percent of federal revenues (or \$1,573 per student) remain with a school district when a special needs student leaves a district in Oklahoma.

Finally, the entire \$1,513 of revenue from local sources is retained in the district. In the long run, all revenue is at least potentially variable with enrollment; with the exact extent dependent upon the decisions of local school boards and those that approve their budgets, but the shorter-term impacts are often of greatest concern. Table 3 shows how Oklahoma’s aggregate and per-student school district revenues would have been affected if enrollment in the 2006-07 school year had been lower by 2,000 students⁶ as a result of a modest special needs scholarship program that resulted in about 2% of Oklahoma’s special needs students migrating from public schools to private schools.

As we have noted, school districts in Oklahoma are given the option to use the prior year’s enrollment figures in making enrollment-based state aid calculations. Not all districts would choose this option and eventually the state revenue associated with students who leave a school district will not be counted for purposes of distributing state aid. To simplify these variables for purposes of illustrating the revenue impacts of a special needs tuition tax credit scholarship, we assume that the state education aid associated with each special needs student is lost by a school district as soon as a student leaves the district. In addition, we assume that 85 percent of the federal aid associated with each special needs student remains in the district, based on current IDEA regulations.

Table 3

Change in Oklahoma School District 2006-07 Revenues				
Resulting From a Decline in Special Need Student Enrollment (Enrollment Decline From 633,005 to 631,005)				
Revenue Source	Amount	Change from Actual 2006-07 Revenue	Per Student Revenue	Change Per Student
STATE SOURCES				
Funding Based on Enrollment	\$2,350,915,150	(\$10,266,000)	\$3,726	\$5
Categorical Aid and Equalization	\$262,697,075	\$0	\$416	\$1
TOTAL STATE SOURCES	\$2,613,612,225	(\$10,266,000)	\$4,142	\$6
LOCAL SOURCES	\$957,526,284	\$0	\$1,517	\$4
FEDERAL SOURCES	\$484,549,134	(\$555,109)	\$768	\$2
TOTAL	\$4,055,687,643	(\$10,821,109)	\$10,750	\$12

Table 3 shows that the loss of 2,000 special needs students will reduce state aid to school districts by over \$10,000,000 because these students receive higher levels of state aid per pupil. Nevertheless, the aggregate state aid per pupil still rises by the small sum of \$6 per pupil. Factoring in local revenue which does not change and federal revenue of which 15 percent of the funding associated with special needs students will be lost, total revenues per pupil increase by \$12 per student in Oklahoma public schools.

This additional per pupil funding available to students who remain in the public schools is minimal, but it is important in illustrating that a scholarship program that allows special needs students to migrate to private schools does not “drain resources from public schools.”

The implications of this analysis are:

- Under the current system of Oklahoma public school funding, an average decline in special needs student enrollments - while resulting in a decline in total revenues - actually produces a small increase in the resources available for educating each student who remains in the district.

- Smaller public school enrollments can result in savings for the state of Oklahoma without reducing the per-student revenues available to local school districts.

This analysis demonstrates that school districts do not decrease the resources available for educating each student when students receive special needs scholarships to attend private schools. For many districts however, the primary benefit of a special needs scholarship program is that it helps to minimize the population of students that require the largest expenditures of resources to educate, while reducing disputes over individual education plans (IEPs) and increasing parental satisfaction. Districts are likely to receive a significant reduction in expenditures when the population of special needs students is reduced.

As long as the revenue loss associated with each special needs student who leaves a school district is lower than the amount by which total school district expenditures are reduced when a student leaves, a local school district cannot be made worse off financially by the loss of a student. The next section of this report examines the local school district expenditure implications of increases and decreases in Oklahoma’s public schools of special needs students as well as students without special education needs.

How School Expenditures Vary With Enrollment

Evaluating the fiscal impact of special needs student enrollment changes on Oklahoma school districts requires not only an understanding of how state education aid to communities is affected, but also some estimate of how expenditures of school districts change in response to enrollment changes.

When special needs students leave a school district in Oklahoma, the district loses state aid and a small percentage of federal aid associated with those children, but expenses associated with educating the children also decline. For special needs children, those expenses are likely to significantly exceed the revenue associated with each special needs student. One criticism of school choice is that the loss of students is not accompanied by a concomitant decrease in expenses. While that may be true in the very short term (less than one school year) or with very small enrollment changes, it is much less likely to be true in the education of many special needs students because much of the educational services these students receive is delivered via personnel who do not serve the student population as a whole. In some instances where a student requires his or her own full-time aide or teacher, the entire per-student expenditure could be eliminated if that student receives and uses a scholarship. But in cases where resources are being shared across disability categories, all the costs attributed to that one student may be transferred to another disability category after that student leaves, with no reduction in overall costs. For this reason, it often is argued that it is impossible to forecast how costs will change as students come and go. However, econometric techniques can be used to determine how expenditures (not costs) change with the addition or subtraction of different categories of students.

Increasingly, studies have demonstrated that local school district expenditures are sensitive to declines in enrollment.⁷ To date, however, little of that research has been focused on the sensitivity of district expenditures to changes in special needs student enrollments.

Using detailed school district data on the revenues and expenditures of Oklahoma school districts from the U.S. Department of Education “Common Core of Data,”⁸ we employed an econometric approach to estimate the variable expenditures associated with educating each special needs student in Oklahoma, as well as the expenditures associated with students who do not have special needs. We used detailed school district financial data from all districts for the 1995-96 through 2005-06 school years to determine to what extent current expenditures (those expenditures most directly related to day to day instructional expenditures, excluding capital expenses, debt service, transportation, and enterprise funds) are variable (that is, responsive to the addition or loss of students in a district) and to what extent they are fixed.⁹ For this study we considered variable expenditures to be expenses that are variable over a period of at least a year. This analysis will test the expectation that school districts can and do adjust their expenditures to reflect enrollment levels from one year to the next.

We developed simple linear regression models to estimate the expenditure structure of public schools in Oklahoma. We identified the model with the strongest ability to describe and predict how both total expenditures and ‘general fund’ expenditures of school districts change in response to changes in enrollment. It is expressed by the following equation:

$$ChngExpenditures = \alpha + ChngRegEnrollment + ChngIEP + PctFree + 1995Expend + \epsilon$$

Where: α = Constant

ChngExpenditures = Change in district current expenditures 1995-2006

ChngRegEnrollment = Change in non-special needs enrollment 1995-2006

ChngIEP = Change in special need student enrollment 1995-2006

PctFree = Percentage of students in the district who qualify for the federal free lunch program (a proxy for the wealth of the district)

1995Expend = District current expenditures in 1995-96

ϵ = Error term

We include 1995 expenditures as an explanatory variable because the past preference for the level of spending on schools is likely to be a strong predictor of current and future preferences for spending levels. That is, districts that spend more or less on a per pupil basis relative to other districts are likely to continue a similar relative pattern unless there is a significant change in the demographic composition of a community. The percentage of free lunch eligible students in the district is a proxy variable that measures the socioeconomic (wealth) characteristics of the district population.

We tested a number of variations of this model, including a fixed-effect variation that sought to capture the differences in variable costs per student across districts of different sizes. This variation strongly pointed to differences in variable costs; the impacts on small districts are on average, large (on the order of \$15,000 to \$22,000 per special needs student), while larger districts showed smaller variable expenditures (but still much higher than the variable expenditures associated with non-special needs students). However, we lacked an empirically-determined basis for grouping districts to measure the fixed-effects (the basis for dividing districts into groups to see how district size affects variable expenditures). Because the variable expenditures of very small districts can be dramatically affected by even a single special needs student, which would contribute to an overestimate of special needs expenditures, we dropped the smallest districts (those with less than 100 students) from our analysis.

At the other end of the district size spectrum, Oklahoma’s largest school districts, those with more than 10,000 students, appear much less affected by the addition or loss of special needs students and their inclusion contributes to an underestimate of the expenditures related to special needs students. Large districts are more likely to achieve “economies of scale” in educating special needs students. Because large districts may have significant numbers of special needs students, they typically have greater staffing and infrastructure to educate special needs students and they may experience the high marginal increase in expenditures that small districts often experience with the addition of special needs students. Excluding the smallest and largest districts from our analysis means that our variable expenditures analysis includes 90 percent of Oklahoma’s school districts. Further research should look to develop a fixed-effects model that would allow for inclusion of all districts. In addition, the risk of omitted variable bias is real in any effort to succinctly model educational expenditure changes and the presence of collinearity may make the results less stable than desirable. Despite this, results clearly demonstrate that the variable expenditures associated with special needs students are greater than the revenue that districts receive to educate these students. The best interpretation of our results is that for all but the largest and smallest school districts in Oklahoma, the variable expenditures associated with educating special needs students ranges between \$9,000 and \$11,000.

Model Summary							
Model	R	R Square	Adjusted R Square	Standard Error of the Estimate			
1	0.975	0.951	0.950	642432.76			
ANOVA							
Model		Sum of Square	df	Mean Square	F	Sig.	
1	Regression	3.9E + 15	4	9.7E + 14	2348.456	.000	
	Residual	2.0E + 14	487	4.1E + 11			
	Total	4.1E + 15	491				
Coefficients							
		Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.	Collinearity Statistics
Model		B		Beta			Tolerance VIF
1	(Constant)	-879.4	98838.4		-.009	.993	
	ChngIEP	10169.04	837.6	.232	12.14	.000	.277 3.612
	1995Expend	.481	.012	.754	39.94	.000	.284 3.519
	ChngRegEnroll.	4387.7	190.5	.285	23.04	.000	.664 1.507
	PCTFREE	88425.4	137103.	.007	.645	.519	.940 1.064

a Dependent Variable: ChngExpenditures

The model estimates that the variable current expenditures associated with educating each additional special needs public school student in Oklahoma in the 2005-06 school year were \$10,169 per student, compared to \$4,388 for students not requiring special services. The

model explains 95 percent of the nominal change in school district expenditures between the 1995-96 and 2005-06 school years. A majority of district expenditure data in Oklahoma is reported as spending by individual schools and thus provide a more accurate depiction of how expenditures are affected by changes in enrollment than does data for districts that include many schools. This is because some schools in a district may have experienced enrollment changes different than other schools or the district total. These results are not meant to imply that an increase or decline in a small number of students in a school would necessarily lead to the increases or decreases in school expenditures as implied above. However, in larger numbers and across districts, over time expenditures are highly responsive to enrollment changes.

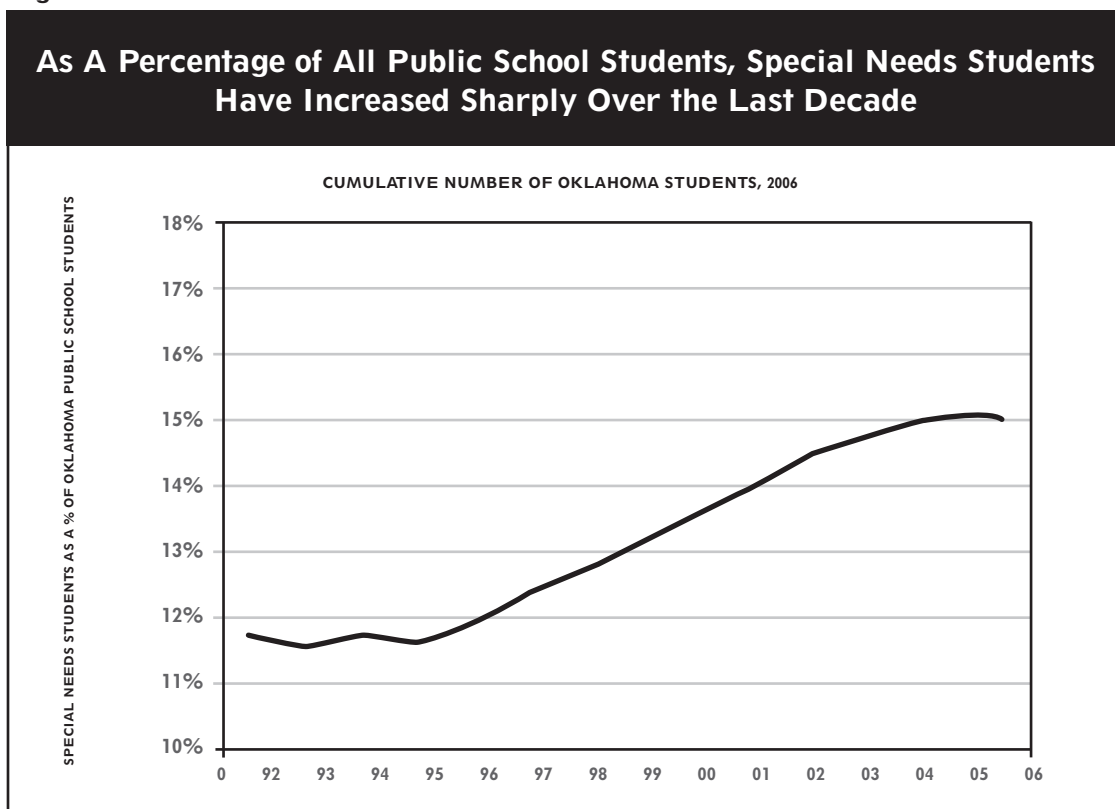
Because the change in expenditures associated with each special needs student who enters or leaves Oklahoma’s public schools is greater than the loss of revenue per student, the loss of students from a school district would have a net positive impact on local school district finances. At the same time, the district would (on average) see a decrease in current expenditures of \$10,169. Thus, at least in the short run, school districts are financially better off when special needs student enrollment declines in an Oklahoma school district. Special education enrollment declines do result in a loss of a majority of state education aid (but in most cases not in the first year after the enrollment decline) and larger amounts of state education aid than if a non-special needs student left a school district, but most federal aid is retained and all local revenues are retained.

Each year thousands of school children migrate between school districts; individual districts lose and gain students; and local districts regularly adjust their expenditures to accommodate these changes. Our analysis of U.S. Census Bureau data suggests that 12.4 percent of Oklahoma school age children in 2008 lived in a different home or apartment than they did in 2007.¹⁰ This implies that about 79,000 public school students change residences each year, and it is likely that a significant percentage of those who move do so in a way that requires changing schools and/or districts. The number far exceeds the number who would participate in a special needs tax-credit scholarship program. Our analysis shows that concerns over the potential fiscal impacts of such a scholarship program on local school districts not only are overstated, but they fail to understand the fundamental local district fiscal effect of expanding school choice for special needs students in Oklahoma; an increase in the resources available for each student who remains in the school district and a large reduction in expenditures.

Demographics of Oklahoma’s Special Needs School-Age Children

Just under 96,000 public school students in Oklahoma have special needs that require the development of an individualized education plan (IEP). That number has increased significantly over the past decade, rising from less than 12 percent of all public school students in Oklahoma to over 15 percent (Figure 1).

Figure 1



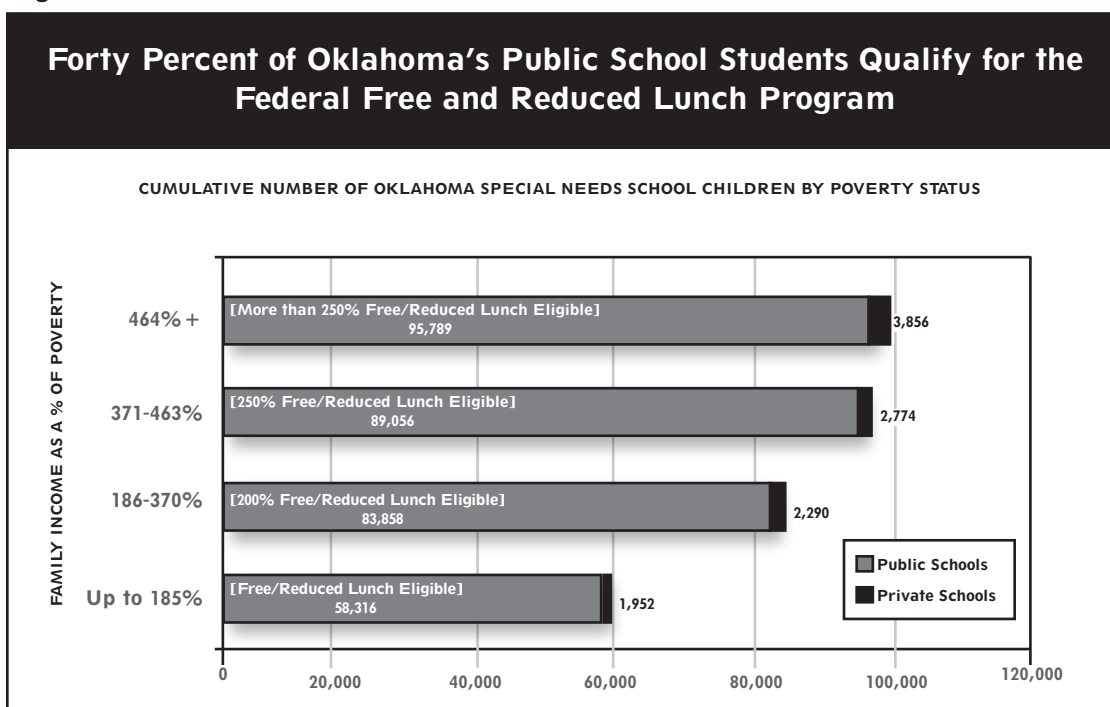
Source: U.S. Dept. of Education, National Center for Education Statistics, “Common Core of Data”

Special Needs Students Attend Both Public and Private School in Oklahoma

One concern about a tax credit financed special needs scholarship is that private schools are less willing to educate children with special needs. Data on the number of special needs students in public schools are readily available from state and federal agencies but data for private schools must be estimated. For this study we examined data from the U.S. Census Bureau’s “American Community Survey” for Oklahoma to estimate the number of private school students with special needs. Using the same procedure we estimated the number of special needs students in private schools as a check on the method’s ability to produce accurate estimates. The American Community Survey contains questions regarding physical and some cognitive disabilities but does not include special needs such as specific learning disabilities and speech impairments. As a result, the survey understates by about half the actual number of special needs students in Oklahoma’s public schools. We adjusted the ACS data for both public and private school students and arrived at an estimate of 14.8 percent of public school students and 8.8 percent of private school students are special needs students. This implies that about 3,852 special needs students attend Oklahoma private schools. Based on these estimates, private schools educate about 4 percent of Oklahoma’s special needs students and about 7 percent of all students. Special needs students are thus underrepresented in private schools.

Although special needs students attend private schools, they do so in smaller percentages than public schools. However it is not accurate to conclude that the lower percentage attending private schools is a result of private school reluctance to enroll special needs students. While that may be the case with some schools, it likely results from the fact that a relatively high percentage of special needs students are from households at the lower end of the income scale. Examining ACS and other Census data allows us to estimate the distribution of special needs students in public and private school by income category. Figure 2 shows that 60 percent of special needs students in public schools and 50 percent in private schools qualify for the federal free and reduced lunch program, meaning they live in households at or below 185% of federal poverty guidelines.

Figure 2



Source: Author Analysis of U.S. Census Bureau American Community Survey 2007 data for Oklahoma

In the absence of a universal school choice program, parents of special needs children will largely exercise school choice by choosing to live in communities that best match their preferences for educational services or by paying to have their children attend private schools. Special needs students disproportionately come from households with moderate and low income, making the choice of community or private school less available to them. One result of the absence of a special needs choice program is that families and school children segregate themselves along lines of income, parental educational attainment, and race and ethnicity.

A disproportionate number of special needs children come from lower income households making it even more difficult for many parents of special needs children to choose an educational setting that best meets their needs. The demand for private schooling in Oklahoma increases significantly in line with family income. Figure 3 shows that:

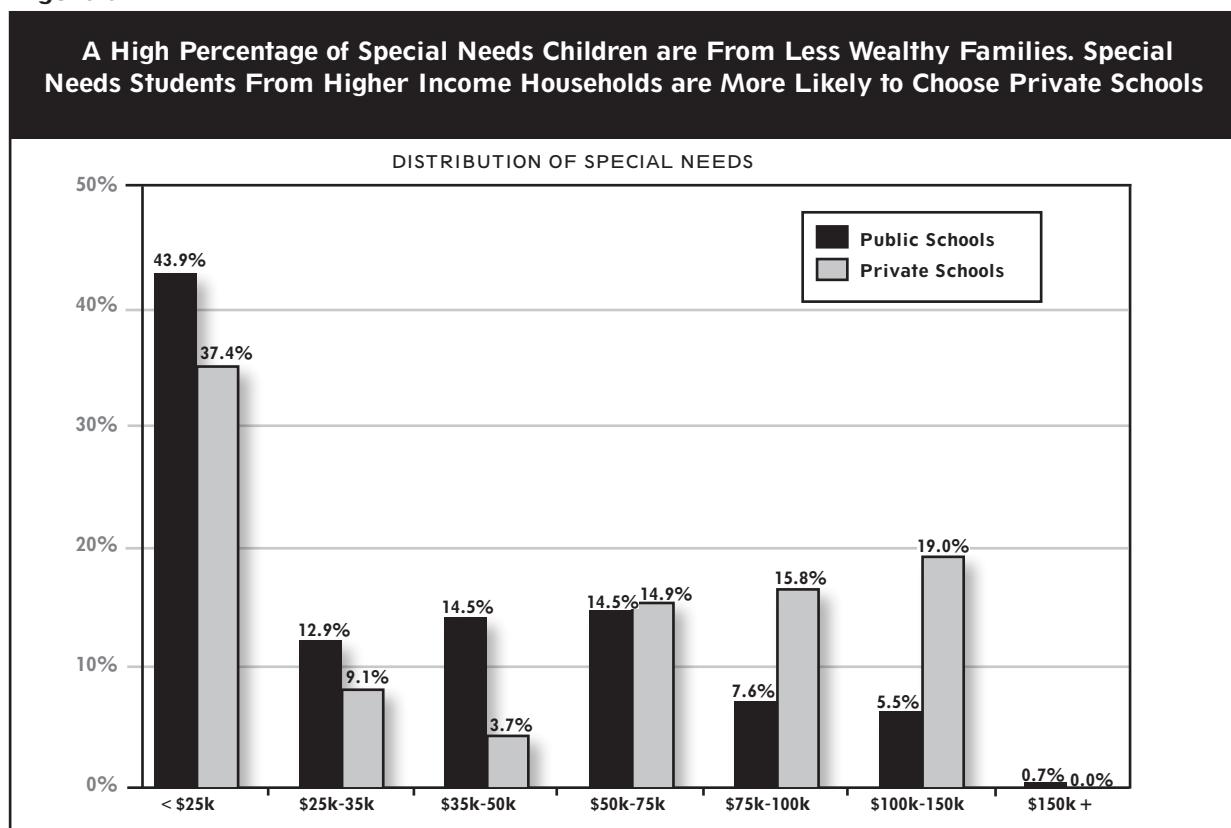
- Special needs children in Oklahoma are disproportionately from families at the lower end of the income spectrum.

- As family income increases, parents of special needs children are more likely to choose private schools to educate their children.
- Without increased efforts to introduce more choice in educating special needs students, the largest percentage of families with special needs children will be unable to find the educational setting that best meets the needs of their children.

Table 4

2008 Poverty and Free/Reduced Lunch Income Guidelines					
Family Size	Poverty	Free and Reduced Lunch Eligibility	% of Free and Reduced Lunch		
			200%	250%	300%
1	\$10,400	\$19,240	\$38,480	\$48,100	\$57,720
2	\$14,000	\$25,900	\$51,800	\$64,750	\$77,700
3	\$17,600	\$32,560	\$65,120	\$81,400	\$97,680
4	\$21,200	\$39,220	\$78,440	\$98,050	\$117,660
5	\$24,800	\$45,880	\$91,760	\$114,700	\$137,640
6	\$28,400	\$52,540	\$105,080	\$131,350	\$157,620
7	\$32,000	\$59,200	\$118,400	\$148,000	\$177,600

Figure 3



Source: Author analysis of US Census "American Community Survey" 2007 data

Proposals to Increase Educational Options and Opportunities

Along with economic, demographic, and other factors, the satisfaction with the services provided to special needs children in public schools influences the demand for private schooling in a state and a community. Special needs education can be costly for school districts and efforts to control these expenses can clash with the desires of parents to have the needs of their children met. However, efforts to limit expenditures can also be costly for school districts. A child identified as having a special education need is protected by the federal

Individuals with Disabilities Education Act (IDEA) that confers rights not afforded to students without disabilities.

The number of families of special needs children filing complaints and mediations over the services provided to their children has been a significant issue in Oklahoma and throughout the country. Because the complaint and mediation processes are the required gateway to lawsuits, expensive legal actions can and do result when parents are not satisfied with the services their children receive from the public schools. Oklahoma could achieve a number of important fiscal and educational objectives by increasing the options parents of special needs children have for educating their children. Tax-credit funded scholarships are one method of increasing the options parents of special needs children have that is gaining popularity across the country. A scholarship program for students with disabilities in Oklahoma could be financed through state tax credit funds. The students using these scholarships would be considered to be 'parentally placed private school students' under the Individuals with Disabilities Education Act (IDEA). As such, they have no individual entitlement to a free appropriate public education. IDEA regulations provide that, "No parentally-placed private school child with a disability has an individual right to receive some or all of the special education and related services that the child would receive if enrolled in a public school" [CFR 34 §300.137].

Over the last few years, scholarship programs for students with disabilities have been among the fastest-growing school choice policies. In 1998, Florida's McKay Scholarship Program for Students with Disabilities (McKay) became the first of its kind to offer generous taxpayer-funded vouchers that students identified as disabled could use to attend a private school or a public school other than their local one. From the time it was first implemented statewide in 2000-01, to the 2007-08 school year, McKay has grown from serving 970 students in 100 private schools to serving 19,852 students in 846 private schools, making it the largest school-choice program in the United States for disabled students. Other states have recently followed Florida's lead by offering voucher programs similar to McKay for disabled students. Special-education voucher programs are currently operating in Ohio, Utah, Georgia, and Arizona. In recent years scholarship programs have also passed one or both houses of the Nevada, Wisconsin, and Virginia legislatures.

Research on the effects of special needs scholarships on students who receive them as well as on the schools they leave suggests that "greater exposure to the McKay program increased the ability of public schools in Florida to produce educational gains for disabled students. [R]esults also suggest that the impact of exposure to McKay was greatest among students with minor disabilities—in particular, those in the Specific Learning Disability category, which is by far the largest special-education category in Florida and in the United States. Moreover, in no subgroup within special education was student proficiency harmed, on average, by increased exposure to the McKay program."¹¹

To increase satisfaction, improve educational outcomes, and reduce costs, Oklahoma should consider allowing a tax credit to individuals and business for contributions made to organizations that provide tuition scholarships to families of special needs children who want to attend private school. The educational and fiscal impact of a tax-credit scholarship program would be determined by the amount of contributions to scholarship funds. The higher the contributions to scholarship organizations, the more tax credits would be claimed, but higher contributions would also make more scholarships available. To better understand the implications of a special needs tax-credit funded scholarship program in Oklahoma, our analysis begins by considering the volume of contributions to scholarship organizations that can be expected. We then consider the degree to which the program induces special needs children currently in (or planning to attend) Oklahoma's public schools to migrate to private schools.

During the 2006-07 school year, the state paid, on average, about \$5,548 for every special needs student enrolled in a public school. For the scholarship program to be fiscally neutral or better for the state budget, it must induce enough students to migrate from public to private schools so that savings in state per-student education aid equal or exceed the foregone tax revenue (tax credits) that fund the tuition scholarships.

Forecasting the impact of a special needs tax-credit scholarship program requires that we predict how parents will respond to the availability of scholarships. To estimate the number of students who will receive scholarships and attend private schools, we examined:

- The size of the school-age special needs population in public and private schools.
- The characteristics and differences of the special needs population of school children in public and private schools.
- How those differences likely will affect the demand for scholarships.

Additionally, we analyzed:

- The interactive effects between the volume of scholarship funds available.
- The average dollar value of individual scholarship awards.
- The total number of scholarship awards.
- The impact the migration of public school students to private schools will have on public school enrollments and finances in Oklahoma.

Estimating Program Participation Levels

The fiscal impact of the Oklahoma special needs tax-credit scholarship proposal depends on the volume of contributions and the value of the tax credits claimed by individuals and/or corporations that fund scholarships. To begin our analysis, we consider the volume of contributions we can expect to be claimed.

With a scholarship tax credit, businesses and individuals can choose to pay taxes to be used for general state services or they can contribute to a scholarship granting organization to provide scholarships for students enrolling in private schools or out-of-district public schools. When businesses or individuals make a contribution to the tax credit program they directly target the use of their tax dollars to support education. Given this choice, many businesses and individuals can be expected to contribute to the program. For many business and individuals, the ability to target their funding to educational expenditures would be an attractive option.

Several states offer some type of tuition tax credit or deduction to assist families who want to send their children (special needs as well as students not needing special services) to independent schools. By donating to scholarship organizations and receiving a tax credit in return, individuals and businesses contribute to Oklahoma's public good in an amount equal to what they would have paid had they not contributed to the scholarship organization. Thus, total payment to the public good of Oklahoma by individuals and businesses is not lowered by the tax credit program; rather, contributors to scholarship organizations ensure that their payments go directly to support the special education of Oklahoma students.

In states such as Florida and Pennsylvania, the opportunity to direct tax payments to scholarship programs proved to be a powerful incentive for businesses to contribute, and in each state the initial caps placed on the total amount of business tax credits were reached in the first year of the program. Each state subsequently increased the total allowable tax credits in following years.

Business Contributions to Scholarship Organizations

States that have enacted similar tuition scholarship tax credits have capped the total dollar amount of tax credits available to businesses and individuals. The experience of other states clearly indicates that we can reasonably expect businesses to contribute up to the maximum amount allowed by a cap. There are many reasons Oklahoma may want to provide a tax credit for businesses that contribute directly to educating Oklahoma's special needs children. Doing so would:

- Establish a convenient and consistent mechanism and incentive for businesses to contribute directly to educating Oklahoma's children.
- Target educational expenditures directly to families and children rather than institutions that may reduce the amount of resources that go directly to students.
- Direct resources to students most in need of educational options and least likely to benefit from general increases in school district budgets.
- Give businesses a meaningful and convenient way to address their concerns about the quality of public education and its impact on business and the Oklahoma economy.

According to the Oklahoma Department of Revenue, over \$1 billion dollars in corporate income and gross production taxes (excise taxes on oil and gas extractions) were collected in FY 2005-06.¹² These numbers suggest that a tuition tax credit program that capped credits at \$10 million would allow Oklahoma corporations to offset about 1 percent of their corporate or gross production tax liability. If credits also are available to individuals as a credit against personal income taxes, competition for available credits is likely.

Scholarship Contributions from Individuals

If \$10 million in available credits were claimed by individuals, the nearly \$3 billion in income tax liability for Oklahoma residents would be reduced by about 0.33%.¹³

To estimate the volume of contributions and tax credits that would be claimed by individuals we developed a model that uses data on the charitable contributions of Oklahoma residents derived from the Internal Revenue Service's Statistics of Income, historical survey research data on the percentage of charitable contributions that are directed to educational organizations, and analyses of the experience of other states with tuition tax credits.

Historically, about 20 percent of taxpayers have indicated that they contribute to educational organizations; about 30 percent of their total contributions go to education organizations.¹⁴ In the most recent year for which contribution data are available (2006), 117,396 Oklahoma residents who itemized their deductions claimed charitable contribution tax deductions of \$416 million, equal to just over 2 percent of their total AGI of about \$20.4 billion.¹⁵

Arizona has more than eight years of experience with an individual tax-credit scholarship program (more recently Arizona has also enacted a corporate tax-credit scholarship program). In Arizona, individual contributions to scholarship organizations equal just over 1 percent of the total volume of charitable contributions in the state, and equal about 3 percent of the total AGI of Arizona residents.¹⁶

We applied Oklahoma’s historical rate of charitable giving to projections of the AGI of state residents to estimate the overall level of charitable contributions from individuals in the state for each year to 2016. We then applied ratios derived from Arizona’s experience to produce two estimates (based on scholarship contributions as a percentage of all charitable contributions in Oklahoma and scholarship contributions as a percentage of total AGI) of total contributions to student scholarship organizations. Our final estimate was an average of the two projections. Table 5 presents our estimate of contributions from individual taxpayers by AGI in Oklahoma from 2009 to 2016.¹⁷ The table indicates that individual taxpayers could be expected to claim tax credits for contributions in amounts that exceed the capped amount if credits are capped at \$10 million.

The figures in Table 5 represent the amount of contributions that can be expected in the absence of a cap on available tax credits. Because contributions from corporations can be expected to be greater than those from individuals, the actual amount of contributions claimed by individuals would depend upon how credits are allocated between corporations and individuals.

Table 5

Projected Tax Credits Claimed by Individuals by Taxpayer Income								
Income	2009	2010	2011	2012	2013	2014	2015	2016
< \$20k	\$460,301	\$474,110	\$488,334	\$502,984	\$518,073	\$533,615	\$549,624	\$566,112
\$20-30k	\$636,729	\$655,831	\$675,505	\$695,771	\$716,644	\$738,143	\$760,287	\$783,096
\$30-50k	\$1,916,219	\$1,973,705	\$2,032,916	\$2,093,904	\$2,156,721	\$2,221,423	\$2,288,065	\$2,356,707
\$50-75k	\$2,960,738	\$3,049,560	\$3,141,047	\$3,235,279	\$3,332,337	\$3,432,307	\$3,535,276	\$3,641,335
\$75-100k	\$2,342,977	\$2,413,266	\$2,485,664	\$2,560,234	\$2,637,041	\$2,716,152	\$2,797,637	\$2,881,566
\$100-150k	\$2,254,526	\$2,322,162	\$2,391,827	\$2,463,582	\$2,537,489	\$2,613,614	\$2,692,022	\$2,772,783
\$150-200k	\$954,018	\$982,639	\$1,012,118	\$1,042,481	\$1,073,756	\$1,105,968	\$1,139,147	\$1,173,322
\$200-500k	\$1,759,268	\$1,812,046	\$1,866,407	\$1,922,399	\$1,980,071	\$2,039,473	\$2,100,658	\$2,163,677
\$500k-1M	\$797,774	\$821,708	\$846,359	\$871,750	\$897,902	\$924,839	\$952,584	\$981,162
1M >	\$2,144,881	\$2,209,227	\$2,275,504	\$2,343,769	\$2,414,082	\$2,486,504	\$2,561,100	\$2,637,932
Total	\$16,227,430	\$16,714,253	\$17,215,681	\$17,732,151	\$18,264,116	\$18,812,039	\$19,376,401	\$19,957,693

Tuition Prices Influence Demand for Private Schools

The impact that a special needs tax-credit scholarship program would have on public and private school demographics in Oklahoma, as well as on state and local finances, depends on the dollar amount of contributions, the decisions of scholarship organizations and the response of families of children in public schools to the availability of scholarships. These are difficult to forecast since there has been little research on the price elasticity of demand for private schooling among special needs students. Program design elements and eligibility criteria would combine to influence the participation of Oklahoma families.

To estimate the response of Oklahoma families to the availability of tax-credit scholarships, we developed a model of the demand for private schooling among special needs students based on a number of variables:

- The income-eligibility requirements for program participation;
- The average dollar value of tuition scholarships; and
- The expected price elasticity of demand for private schooling among special needs students according to income level.

Tax-credit scholarships lower the price of private schools for students who receive them. A number of studies have estimated the increase in demand for private schooling as a result of changes in the price of the schools for the overall student population, but to date we are not aware of studies of the demand among special needs students. The most widely cited studies of the impact of changes in the price of private schools on demand (the price elasticity of demand) among the overall student population indicate that the demand for private schools increases as the price to families declines (and the demand decreases as the price rises) - a negative price elasticity. The range of estimates between these studies is large, however: Chiswick and Koutroumanes (1996) estimate a price elasticity of about -0.5, suggesting that a 10 percent decline in the price of private schools would lead to a 5 percent increase in demand, while Gwarntey

and Stroup (1997) estimate a price elasticity of -1.1, suggesting that a 10 percent decline in the price of private schools would lead to an increase in demand of 11 percent.¹⁸ A 1994 study by university economists in Georgia estimated the elasticity of demand for private schooling in rural areas of that state to be -1.07.¹⁹

Both the participation rate and fiscal impact of a scholarship program would be strongly influenced by the dollar value of the scholarships. To demonstrate the effect of changing the dollar value of scholarships, we consider a range of scholarship values including \$5,000, \$10,000 and \$15,000.

Figure 4 presents our estimate of participation in a scholarship program in Oklahoma at different scholarship values if all students were eligible regardless of income and if scholarships were of the same value regardless of family income. The chart shows that as many as 10,329 special needs students in Oklahoma’s public schools, or about 11 percent of all special needs students in public schools, would seek to participate in a scholarship program with these design features. However, at a cost of \$15,000 per scholarship, almost \$155 million in tax credits would be needed to fund that level of scholarship demand. To further put that level of demand into perspective, the largest special needs tax credit scholarship program in the country, Florida’s McKay Scholarships for Students With Disabilities Program, awarded 19,852 scholarships in 2007-08, or about 5 percent of that state’s special needs student population at an average value of \$7,295.

If scholarship values were instead set at \$5,000, demand would be significantly lower; 3,443 special needs students or about 3.6 percent of the special needs students in Oklahoma’s public schools. Still, this level of demand would require over \$17 million in tax credits. A program that initially makes \$10 million of tax credit funded scholarships available will thus not be able to meet anticipated scholarship demand. If tax credit funds for scholarships are capped at \$10 million, then only 2,000 scholarships could be provided or just 58 percent of forecast demand.

Figure 4

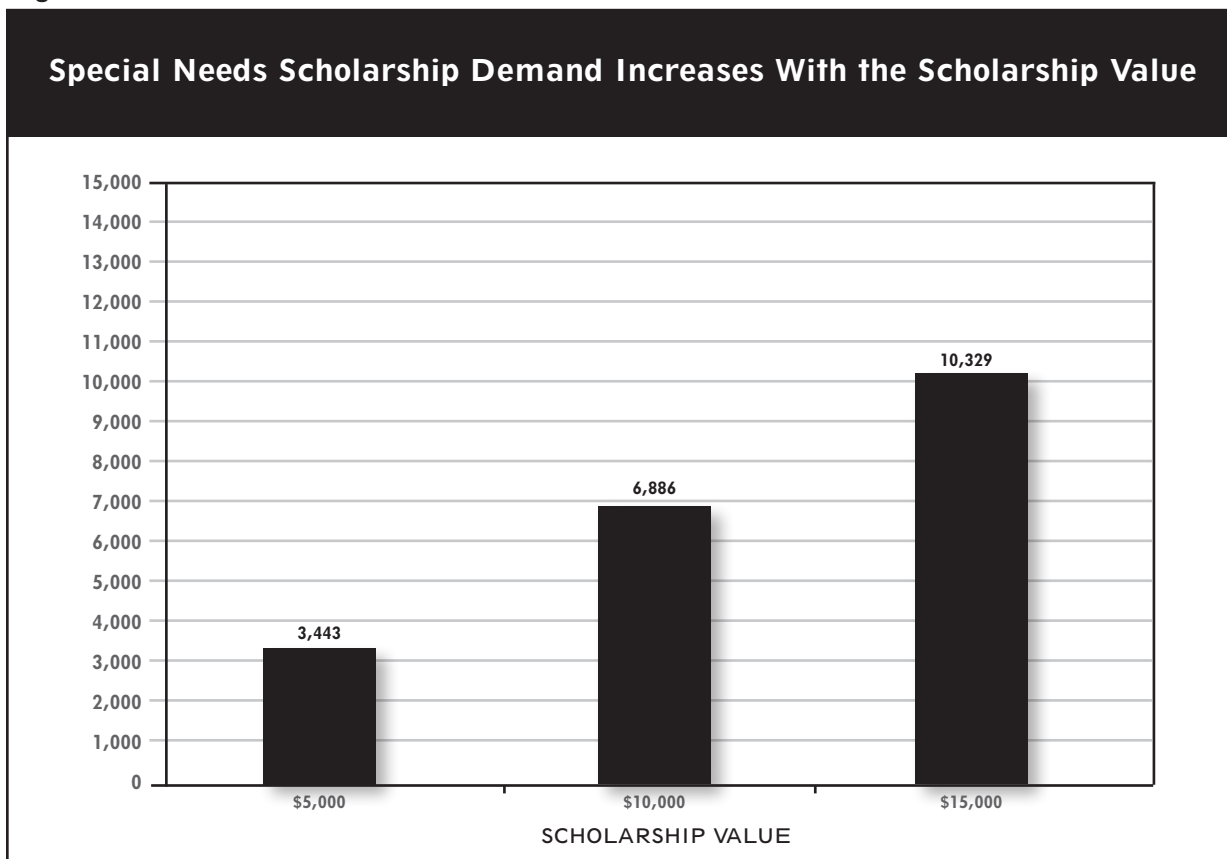


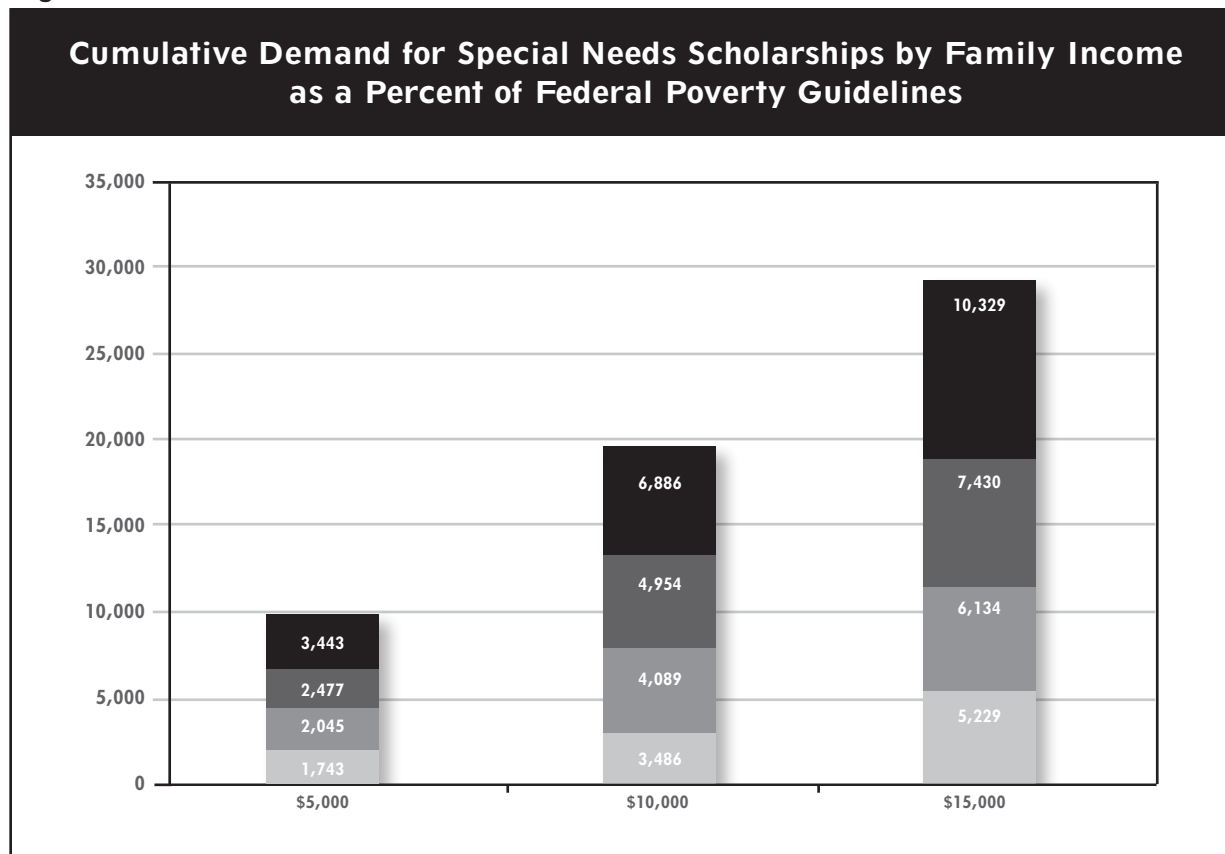
Figure 4 assumes that eligibility for scholarships is available to all children, regardless of family income. However, if a special needs scholarship program were enacted in Oklahoma it might restrict eligibility - by means testing or in some other manner. For fiscal reasons that will be highlighted later in this study, it is beneficial for the state to make as many public school children eligible for scholarships as possible to encourage maximum migration from the public to private schools. Depending on the dollar value of scholarships, means testing or a reduction in the value of scholarships as income rises can have a negative effect on the fiscal impact of a tax-credit scholarship program.

Figure 5 shows the impact on estimated demand for scholarships among public school students if eligibility is means tested. The means tests are based on eligibility for the federal free and reduced-price lunch program as highlighted in Table 4. Eligibility ranges

from the standard set for the free and reduced-price lunch program (185 percent of federal poverty guidelines) to three times the family income that would make a student eligible for free or reduced lunches (about 555 percent of federal poverty guidelines).

The figure shows that at any scholarship value, means testing can dramatically reduce program participation because fewer special needs public school students are eligible. As importantly, the elasticity of demand for private schooling is lower among lower-income special needs families, meaning they are less likely to participate in a scholarship program than higher-income families regardless of the value of the scholarship. As we document in subsequent sections of this study, reducing eligibility among public school families actually results in lower fiscal benefits (or even fiscal losses) for the program. Thus, more restrictive means testing does not improve the fiscal impact of a program

Figure 5



Source: Author Estimates Using US Census Bureau "American Community Survey" 2007 data for Oklahoma

Combining Supply and Demand Models to Estimate the Number of Scholarships

The experience of states such as Arizona suggests that the number of scholarship applicants (i.e. demand) would be greater than the available number of scholarships. In Oklahoma, the supply of scholarship money likely would be limited in each year, and it likely would not be sufficient to award scholarships to all applicants. Based on national surveys of the average cost of private schooling we have estimated that the average price of private school tuition in Oklahoma is approximately \$7,000 (with tremendous variation between elite independent private schools which educate a small number of private school students, and school subsidies by church or other affiliations). A scholarship of \$5,000 would reduce tuition by 71 percent on average. Using a reasonable estimate of price elasticity of -.75, and the demonstrated preference of special needs families of different income levels to attend private schools in Oklahoma (derived from American Community and Census Bureau data) a 71 percent decline in private school tuition should increase demand for private schools among special needs students by about 3,433. However, if tax credit funding is capped at \$10 million then only 2,000 scholarships would be available or about 58 percent of demand. If scholarships are valued at \$10,000, demand rises to 6,886 students and the supply of available funds will only meet 29 percent of demand.

Table 6 presents the cumulative distribution of projected scholarship demand by income for scholarship values of \$5,000, \$10,000 and \$15,000. As has been noted, our analysis suggests that scholarships would induce a higher rate of public school migration if the value of scholarships is increased and means testing for program eligibility is less restrictive.

Table 6

Cumulative Scholarship Demand Among Public School Special Needs Students			
Income Eligibility (% Of Free/Reduced Lunch)	SCHOLARSHIP VALUE		
	\$5,000	\$10,000	\$15,000
185%	1,743	3,486	5,229
200%	2,045	4,089	6,134
250%	2,477	4,954	7,430
300% +	3,443	6,886	10,329

Table 7 translates the estimates of scholarship demand in Table 6 into the context of the public school population and shows that, at an average scholarship value of \$5,000, about 3.6 percent of special needs students in Oklahoma’s public schools would seek scholarships if no income limits were established for scholarship eligibility. At scholarship values of \$15,000, almost 11% of Oklahoma’s special needs students would seek scholarships.²⁰ Scholarship values and means testing of eligibility have substantial impacts on scholarship demand.

Table 7

Cumulative Scholarship Demand Among Public School Special Needs Students			
Income Eligibility (% Of Free/Reduced Lunch)	SCHOLARSHIP VALUE		
	\$5,000	\$10,000	\$15,000
185%	1.8%	3.6%	5.5%
200%	2.1%	4.3%	6.4%
250%	2.6%	5.2%	7.8%
300% +	3.6%	7.2%	10.8%

Table 8 shows the cumulative percentage of scholarship demand that can be satisfied with tax-credit scholarships if \$10 million of tax credits are allocated to scholarship organizations. The table shows that, if funds are limited to \$10 million, a special needs tax-credit scholarship program could satisfy demand for scholarships among public school students only if the average value of scholarships is \$5,000 (reducing demand and increasing the number of scholarships available) and more restrictive income criteria are used. Unfortunately, even in this situation the demand is met only because fewer public school families would seek scholarships at such low values. The shaded area of Table 8 highlights combinations of income eligibility and scholarship size where the availability of scholarships would exceed supply. The table highlights how even at relatively lower scholarships values, demand for scholarships will likely exceed supply and that capping credits at \$20 million would provide a better balance between scholarship supply and scholarship demand by special needs families.

Table 8

Special Needs Scholarship Supply as a % of Demand ((\$10 million Cap on Credits)			
Income Eligibility (% Of Free/Reduced Lunch)	SCHOLARSHIP VALUE		
	\$5,000	\$10,000	\$15,000
185%	114.8%	28.7%	12.8%
200%	97.8%	24.5%	10.9%
250%	80.7%	20.2%	9.0%
300% +	58.1%	14.5%	6.5%

The darker shaded area of Table 8 shows the combination of scholarship value and income eligibility that will allow supply to meet expected demand. The lighter shaded area indicates those combinations whereby doubling the supply of scholarships by (increasing the cap on tax credits to \$20 million,) will allow supply to meet or exceed demand levels. As an alternative, increasing the cap on credits to \$20 million could allow for a larger scholarship value and still not meet demand, but increase it significantly. As an example, if the cap allowed for \$20 million to be distributed in scholarships and the average scholarship value was \$10,000, then about half of the demand for scholarships could be met if income limits were set at two times federal free and reduced lunch poverty guidelines. If no income limits were set, then a \$20 million cap could satisfy 29 percent of the demand for \$10,000 scholarships.

Fiscal Impact on State Government and Local School Districts

The most important factor in determining the fiscal impact of a scholarship program is the degree to which scholarships induce students attending or planning to attend Oklahoma's public schools to migrate to private schools, and at what expense. During the 2006-07 school year, Oklahoma state government paid about \$5,548 in education aid to school districts for every special needs student enrolled in public school. We conservatively estimate that \$5,113 in aid is directly dependent on enrollment levels. A tuition scholarship program will save the state money to the extent that it induces students to migrate from public to private schools at a low enough cost in foregone tax revenue to generate savings in state per-student education aid. At a \$5,000 scholarship, every special needs student who participates will likely generate a small savings for the state. If however, the distribution of students who participate in the scholarship program is skewed more heavily to students with more severe disabilities (those students who require larger state education aid payments to local school districts) then the "average" state aid savings used here will understate the actual savings by the state. Until there is more research on the characteristics of students who participate in special needs scholarship programs, however, these variables will be difficult to account for in any estimate of fiscal impacts.

At higher scholarship values fewer students receive scholarships and the cost of each special needs tax credit scholarship (the tax revenue foregone or awarded as credits) is more (on average) than the state will save on state aid when the student migrates to a private school. One way to address that issue and realize greater savings is to more closely match the value of the special needs scholarship with the severity of a student's disability. That way, the savings to the state of Oklahoma would be much closer to the expenditure associated with each scholarship.

Even if the state of Oklahoma experiences a small increase in cost as a result of a special needs scholarship program, the state-level costs are more than made up for in savings at the local level. The primary benefits of a special needs scholarship program are the increased satisfaction of families who have a greater ability to choose the best placement for their children, but also local school districts see a reduction in the most resource-intensive and costly students in their districts. School systems across the country have long argued that the expenses associated with educating special needs children are not offset by the increased funding they receive in state and federal aid for each special needs child. Our research on the variable expenditures associated with changes in special needs enrollments seems to support that.

Table 9 shows the fiscal impact of a special needs tuition tax-credit scholarship program on state government and school districts in Oklahoma, under a program where credits are initially capped at \$10 million and scholarships are awarded at values of either \$5,000, \$10,000 or \$15,000, and where there are no income limits for public school special needs students. The table shows that the state of Oklahoma would realize a small fiscal gain at scholarship values of \$5,000, but would see an increase in costs at values of \$10,000 and \$15,000. However, the table also shows that at the local level, despite a loss of state revenue associated with each student who participates in the scholarship program (for our purposes we assume it is lost in the first year even though it may continue longer), local districts will retain much of the federal revenue associated with each student and all of the local revenue. More importantly, local school districts see a decline in students who require the most expenditures and resources. The net effect for local districts is a substantial fiscal benefit that increases as more students participate in the special needs scholarship program.

Combined, the net fiscal benefit to state and local government of a special needs tuition tax credit program is substantial at all but the high scholarship value of \$15,000. Even at that high scholarship value, net costs of the program are only about \$1 million. At the other end of scholarship values, more than \$17 million in net fiscal benefits accrue to state and local governments from the program. The most salient information to be gleaned from Table 9 is that net fiscal benefits are maximized when program participation is greatest (when the number of special needs students receiving scholarship and migrating to private schools is maximized). Finding the set of scholarship values and eligibility requirements that maximizes participation at the lowest cost possible is the way to increase fiscal benefits and the same time meeting the needs and demands of the most special needs families possible.

Table 9

	Special Needs Scholarship Supply as a % of Demand (\$10 million Cap on Credits)		
	SCHOLARSHIP VALUE		
	\$5,000	\$10,000	\$15,000
Demand for Scholarships	3,443	6,886	10,329
Demand as a % of Public School Special Needs Population	3.60%	7.10%	10.70%
Scholarships Available @ \$10,000,000 Cap	2,000	1,000	667
Available Scholarships as a % of Special Needs Population	2.10%	1.00%	0.70%
Fiscal Impact on State			
Cost of Scholarships	\$10,000,000	\$10,000,000	\$10,000,000
State Aid Savings	\$10,266,000	\$5,133,000	\$3,423,711
Net State Fiscal Impact	\$266,000	(\$4,867,000)	(\$6,576,289)
Impact on Local Districts			
Loss of State Aid	(\$10,266,000)	(\$5,133,000)	(\$3,423,711)
Local and Federal Revenue Retained	\$6,726,727	\$3,363,363	\$2,243,363
Net Revenue Change	(\$3,539,273)	(\$1,769,637)	(\$1,180,348)
Expenditure Reductions	\$20,338,000	\$10,169,000	\$6,782,723
Net Benefit (Cost) to Districts	\$16,798,727	\$8,399,363	\$5,602,375
Total Fiscal Impact (Cost)	\$17,064,727	\$3,532,363	(\$973,914)

Conclusions

Our analysis indicates that school district expenditures are affected much more by enrollments of special needs students than they are by enrollments of students not needing special services. We conclude that a tuition tax credit funded scholarship program would generate significant scholarship demand among the population of special needs students in public schools. Based on the structure of the program and the expenses associated with each student who participates we also conclude that a program could be structured that would yield fiscal benefits to the state of Oklahoma. Additionally, for almost any program structure, special needs tuition tax credits are likely to yield large fiscal benefits to local school districts. Although not the basis of our research, recent research on special education scholarships indicates that increased parental satisfaction and higher levels of student performance result for participants in a special needs scholarship program.

Our analysis makes it clear that a number of scholarship program designs would yield fiscal benefits. While some would produce limited costs, all would create greater educational choices for a group of students and their families who face the greatest challenges in having their educational needs met. By all accounts the Florida McKay Scholarship program for students with disabilities has been a tremendous success. Parent with special needs children face among the greatest challenges trying to obtain a satisfactory education for their children. The increase in parental satisfaction since the McKay program began, its demonstrated success in improving achievement among participants, as well as its ability to prompt public schools to increase their ability to meet the needs of students with disabilities, suggests that it is a model that many states will be following. For a modest investment Oklahoma can achieve these same positive results among special needs students and families by enacting a tuition tax credit funded special needs scholarship program.

Endnotes

- ¹ U.S. Department of Education, National Center for Education Statistics, Common Core of Data. Available at <http://nces.ed.gov/ccd/>.
- ² Variable expenditures are those that change along with the addition or loss of students while fixed expenditures are those that do not vary according to changes in enrollment – a number of expenditures for facilities and maintenance such as heating and electricity for example)
- ³ Rajashri Chakrabarti, "Impact of voucher Design on Public School Performance: Evidence from Florida and Milwaukee voucher Programs," Federal Reserve Bank of New York Staff Report #315, January 2008 (see also 2006 manuscript); Rajashri Chakrabarti, "Can Increasing Private School Participation and Monetary Loss in a voucher Program Affect Public School Performance? Evidence from Milwaukee," forthcoming in *Journal of Public Economics*. Cecilia Rouse, Jane Hannaway, Dan Goldhaber and David Figlio, "Feeling the Florida Heat? How Low-Performing Schools Respond to voucher and Accountability Pressure," National Center for Analysis of Longitudinal Data in Education Research, November 2007.
- ⁴ Jay Greene and Marcus Winters, *The Effect of Special-Education Vouchers on Public School Achievement: Evidence from Florida's McKay Scholarship Program*, Manhattan Institute, April 2008.
- ⁵ A "mill" is one dollar of tax levy per thousand dollar of taxable property value. Thus a rate of 20 mills equals a levy of \$20 per \$1000 of valuation.
- ⁶ We choose 2,000 students because one proposed tuition tax credit program called for a \$10,000,000 initial cap on tax credits which would allow 2,000 scholarships at \$5,000 each, or 1,000 at \$10,000 each.
- ⁷ Brian Gottlob, "The Fiscal Impacts of School Choice in New Hampshire," Friedman Foundation for Educational Choice, February 2004; Cotton Lindsay, "Fiscal Impact of the Universal Scholarship Tax Credit Proposal," South Carolina Policy Council, March 2004; "Estimating Demand and Supply Response to Tuition Tax Credits for Private School Tuition in Utah," Utah State University, December 2004; Brian Gottlob, "The Fiscal Impact of Tuition Tax Credits in New Mexico," Friedman Foundation for Educational Choice, April 2005; Susan Aud and Leon Michos, "Spreading Freedom and Saving Money: The Fiscal Impact of the D.C. Voucher Program," 2006.
- ⁸ We generally prefer to use state provided data files but the Oklahoma Department of Education does not make school finance data available in digital formats unless formal written information requests are made, which Department personnel indicated may take more than a month to process. One result of using "Common Core" data is that the most recent detailed financial data at the district level is from the 2005-06 school year.
- ⁹ We adjusted the data to eliminate districts that had changed composition between 1995 and 2006, to eliminate the possibility that changes in the structure of districts would account for changes in expenditures.
- ¹⁰ Based on data from the U.S. Census Bureau 'American Community Survey 2007' data for Oklahoma
- ¹¹ Jay Greene and Marcus Winters, *The Effect of Special-Education Vouchers on Public School Achievement: Evidence from Florida's McKay Scholarship Program*, Manhattan Institute, April 2008
- ¹² "Annual Report of the Oklahoma Tax Commission."
- ¹³ "Annual Report of The Oklahoma Tax Commission." The most recent year available online is for FY2005, which shows net income taxes of \$2.6 billion. We adjusted this value to an estimated 2008 total.
- ¹⁴ "Giving and Volunteering in the United States," Independent Sector, the Gallup Organization, reports for 1989, 1991, 1993, 1995, and 1997.
- ¹⁵ Available at <http://www.irs.gov/pub/irs-soi/>
- ¹⁶ Author's analysis of Internal Revenue Service Statistics of Income data for Arizona and Arizona tax credit data reported in Lukas, C., "The Arizona Scholarship Tax Credit: Providing Choice For Arizona Taxpayers and Students," Goldwater Institute (No. 186), December 2003.
- ¹⁷ 2006 AGI from IRS "Statistics of Income" was adjusted to reflect an average annual growth rate of 1.5 percent.
- ¹⁸ Chiswick, B. R., and S. Koutroumanes, "An Econometric Estimate of the Demand for Private Schooling," *Research in Labor Economics*, 15:209-237, 1996; and Gwartney, J. D., and R. L. Stroup, *Economics: Private and Public Choice* (8th Edition), South-Western College Publishing, 1997.
- ¹⁹ Andrew Keeler and Warren Kriesel, "School Choice in Rural Georgia: An Empirical Analysis," *Journal of Agriculture and Applied Economics*, December 1994.
- ²⁰ At scholarship values of \$15,000 we have less confidence in our demand estimate because there is little research guidance on demand elasticity when prices are reduced to zero for many consumers. In essence, private schooling would become a "free" good under \$15,000 scholarships and established price elasticity of demand relationships may not apply.

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