

**The Equity Impact of  
Arizona's Education Tax Credit Program:  
A Review of the First Three Years  
(1998-2000)**

**Research Report**

**by**

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## **Executive Summary**

### **Research Findings**

In 1997, the Arizona legislature enacted an education tax credit with two components: a private school tuition tax credit and a public school extracurricular activity tax credit. The law grants state taxpayers a dollar-for-dollar credit against their state income tax liability for contributions to School Tuition Organizations (STOs), which in turn, award tuition grants to students to use at private primary or secondary schools. Under the law STOs are to grant 90% or more of their revenue in the form of private school tuition grants. A similar provision provides a \$250 tax credit for donations to public schools for extracurricular activities that require a student fee.

Arizona's private school tuition tax credit program is expensive and does relatively little to help poor students. The primary recipients of private school tuition tax credit money are families whose children are already enrolled in private schools. The financial and non-financial barriers to private schooling and price effects associated with private school tuition makes it unlikely that many poor students move from public to private schools because of assistance from the private school tuition tax credit program. Over the three years of the public school extracurricular activity tax credit, the wealthiest 25% of public schools received more than five times as much money from the program as the poorest 25% of public schools.

### **Recommendations**

- Legislators should consider repealing the Arizona education tax credit law altogether—both the private school tuition tax credit and the public school extracurricular tax credit.
- The information and reporting requirements for school tuition organizations should be strengthened (for example, whether a student receiving a tuition grant is switching from a public to a private school, what public school the student is transferring from, family income, etc.).
- Legislators should amend the Arizona private school tuition tax credit to make eligibility for a tuition grant dependent on level of income.

## **Introduction**

Education tax credits are a relatively new policy instrument that uses the tax system to support school choice. Over the past decade, 12 states have considered various education tax credit proposals. Arizona, Florida, Illinois, Iowa, Minnesota, and Pennsylvania have enacted education tax credits into legislation.<sup>1</sup>

Proponents claim that education tax credits will give low-income students the opportunity to attend private schools and that tax credits will improve all schools, both public and private, by increasing competition between schools for students.<sup>2</sup>

Opponents argue that because access to education tax credit revenue is not equitably distributed, i.e., that children from poor families are less likely to benefit from tax credits than children from higher-income families, and because wealthier families are more likely to take advantage of the tax credit program than low-income families, education tax credits disproportionately help the wealthy more than the poor.<sup>3</sup>

## **History Of Arizona's Education Tax Credit Program**

In Arizona's first regular legislative session in 1997, House bill 2074 entitled "Tax credit: school tuition organization" was passed and signed into law on April 7, 1997 by then Arizona Governor Fife Symington. The new law, Arizona Revised Statutes § 43-1089, created an education tax credit with two components: a private school tuition tax credit and a public school extracurricular activity tax credit.

The law was immediately challenged in a lawsuit (*Kotterman v. Killian*) alleging a violation of the First Amendment's requirement of separation between church and state. The Arizona law (A.R.S. § 43-1089) was upheld by a 3 to 2 vote of the Arizona Supreme

Court in the spring of 1999. The decision was appealed to the U.S. Supreme Court; however, on October 4, 1999, the U.S. Supreme Court declined to review the case, and in doing so, expressed no opinion as to the merits of the appeal.

### **The Structure Of Arizona's Education Tax Credit Program**

Arizona's private school tuition tax credit grants Arizona taxpayers a dollar-for-dollar credit against their state income tax liability for contributions to school tuition organizations (STOs). Under the law, STOs are non-profit organizations that receive tax credit funds and distribute tuition grants to students for use at qualified private primary or secondary schools.<sup>4</sup> The private school tuition tax credit statute currently allows a tax credit of up to \$500 for a single individual/head of household and up to \$625 for married couples filing a joint return. Tax credit claimants are allowed to carry forward the amount of the credit for up to five years.

A.R.S. § 43-1089 puts few limits on how the proceeds from this tax credit may be used. The major restrictions are: that taxpayers claiming this credit may not designate their contribution for their own dependents; that STOs shall distribute at least 90 percent of their annual revenue for "educational scholarships" or "tuition grants;" and that STOs shall make scholarships or grants available to students of more than one school.<sup>5</sup>

A similar tax credit, currently limited to \$250, is available for public schools. These tax credit funds, however, may only be used for extracurricular activities that require a student fee. Examples provided in the statute include band uniforms, equipment, or uniforms for varsity athletic activities, and scientific laboratory materials<sup>6</sup>. Initially, public schools did not qualify to receive tax credit funds because the legislative bill

restricted the tax credit to “a nongovernmental primary or secondary school of the parents choice.”<sup>7</sup> As a compromise with opponents of the legislative bill, the legislation as enacted included a \$200 tax credit for K-12 public schools. Tax credit proponents described the public school tax credit as being designed to attract greater support for the measure in the legislature and with the public.<sup>8</sup>

Both the private school tuition tax credit and the public school extracurricular activity tax credit may be claimed each year. Therefore, a married couple filing jointly may claim up to \$875 per year.<sup>9</sup>

### **Purpose Of The Private School Tuition Tax Credit**

In an April 9, 2000 story, *The Arizona Republic* reported, “supporters of the credit for private schools scholarships, including Rep. Mark Anderson, R-Mesa, who sponsored the legislation, touted it as a way to send kids to private school *who otherwise couldn't afford to go.*” [italics added]<sup>10</sup> Lisa Graham Keegan, former Arizona State Superintendent of Public Instruction, wrote:

With its [Arizona Supreme Court] ruling that Arizona's private school tuition tax credit was constitutional at both the state and federal level, the court had affirmed that true educational choice--choice involving public, private, and religious schools--could be accomplished in a manner which was responsive to the needs of *disadvantaged students and their families* without encroaching on fundamental First Amendment issues.... Predictably, this approach to allowing *disadvantaged students* such access to funds for private education created an uproar among the educational bureaucracies.... The tuition tax credit allows us to further expand choice to include private education, which is a venue that has not traditionally been available to *poor and disadvantaged families.* [italics added]<sup>11</sup>

Arizona Supreme Court Chief Justice Thomas B. Zlaket, in the 3-2 majority opinion upholding the tax credit statute, wrote: “until now, *low income parents* may have been

coerced into accepting public education.... Arizona's tax credit achieves a higher degree of parity by making private schools more accessible and providing alternatives to public education.” [italics added]<sup>12</sup>

In its ruling, the Arizona Supreme Court adopted the argument that Arizona’s private school tuition tax credit law was enacted to promote educational equity by providing financial assistance to low-income families whose children currently attend public schools and who wish to send their children to private schools. Therefore, the success of Arizona’s private school tuition tax credit law should be judged by how well it meets this standard.

### **The Revenue Consequences Of Arizona’s Tax Credit Legislation**

To government budget analysts, fiscal instruments such as tax credits and tax deductions are considered tax expenditures. Tax expenditures are specific exceptions from the tax code designed to support specific entities, activities, behaviors, or classes of persons.<sup>13</sup> Surrey and McDaniel characterized tax expenditures in this way:

Whatever their form, these departures from the normative tax structure represent government spending for favored activities or groups, effected through the tax system rather than through direct grants, loans, or other forms of governmental assistance.... These tax reductions in effect represent monetary assistance provided by the government (p. 3).<sup>14</sup>

In considering the fiscal impact of Arizona’s private school tuition tax credit law, it is important to understand the difference between a *tax deduction* and a *tax credit*. Since tax deductions for general charitable giving reduce taxable income upon which tax liability is calculated, the government and the individual share in the costs of charitable giving. In this way, tax deductions act to increase the level of private philanthropic giving.

Arizona's private school tuition tax credit, unlike a tax deduction, provides a dollar-for-dollar reduction in the tax liability to those who utilize it. For this reason, taxpayers using Arizona's private school tuition tax credit do not incur any private cost whatsoever. As a result, Arizona's private school tuition tax credit does not act to promote additional private charitable or philanthropic giving. Instead, Arizona's private school tuition tax credit functions to allow self-selected taxpayers to redirect funds to a private entity of their choosing that would otherwise flow into state accounts.

The cost to Arizona in lost tax revenue from the Arizona education tax credit program over its first three years has been significant. The total tax revenue lost to any other governmental purpose is approximately \$74.3 million for the first three years of the program. If one conservatively estimates 2001 education tax credits claimed at the same dollar amount as in 2000, then the four-year program cost to the state will be approximately \$109.4 million.

**Table 1: Total tax credits taken under Arizona's Education Tax Credit Program 1998-2000**

	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>Total</b>
<b>Public Schools</b>	\$8,990,042	\$14,775,353	\$17,514,774	\$41,280,169
<b>Private Schools</b>	\$1,816,299	\$13,706,611	\$17,542,662	\$33,065,572
<b>Total</b>	\$10,541,559	\$28,481,964	\$35,057,436	\$74,345,741

Source: Arizona Department of Revenue

### **The Attractiveness Of Tax Expenditures**

One of the reasons that tax expenditures, such as Arizona's private school tuition tax credit, are attractive to legislators is that they allow legislators to support programs without having the impact of their actions subjected to the sort of public notice and scrutiny that is typically applied to direct spending programs. Perhaps for this reason the Arizona legislature has made wide use of tax expenditures, having passed more than 100

such exemptions to the state sales tax over the past 10 years.<sup>15</sup> In the case of Arizona's private school tuition tax credit, the use of school tuition organizations (STOs) as intermediaries allows the state to ensure that tax dollars go to private and religious schools without the use of direct appropriations or expenditures. This indirect process attempts to satisfy constitutional objections based on the First Amendment concern of separation of church and state. For this reason, critics sometimes refer to tuition tax credits as "in essence a voucher in sheep's clothing."<sup>16</sup>

In general terms, supporters of education tax credits have often argued that parents of children in private schools are being taxed twice, in that they must pay taxes that go to public schools as well as pay their own child's private tuition.<sup>17</sup> In this view, an education tax credit merely helps to remedy an unfair situation for the parents of private school students. This argument raises significant policy issues. Logically, the argument could be extended to anything that government provides but is available privately.<sup>18</sup> For example, although a portion of a person's taxes pay for law enforcement, if a person lives in a gated community with a private security service, should that person receive a tax credit for the police services that he or she obtains from private sources? If a person chooses to drink bottled water instead of drinking municipal water from the tap, should that person receive a tax credit for the bottled water they purchase from private sources?<sup>19</sup>

Strictly speaking, the Arizona private school tuition tax credit doesn't go directly to the parent paying tuition for his or her children to attend a private school. However, the practical effect is almost the same. The private school tuition tax credit may be taken by any taxpayer, with or without a child in school. A taxpayer writes a check to a school tuition organization (STO). The amount sent to the STO is refunded back to the taxpayer,



dollar-for-dollar, by reducing the taxpayer's state income tax owed. Parents apply to STOs for tuition grants to send their children to particular private schools. The STOs decide which applicants receive grants and how much the applicant will receive. The private school tuition tax credit law allows taxpayers claiming a credit to designate their tax credit funds for a specific student as long as the designee is not the taxpayer's dependent. This permits families to designate their tax credits for an acquaintance's child with the understanding that the acquaintance will reciprocate. It is not clear how widespread the practice of cross-designation is, but *The Arizona Republic* reported that in some STOs that allow funds to be earmarked for specific students, the funds are "going almost exclusively to children already in private school, regardless of financial need."<sup>20</sup>

Whether or not government should be providing financial aid for goods and services purchased privately, but available publicly, involves differing conceptions of the role of government. It is likely, however, to become increasingly important for Arizonans to have an open and thorough debate over these competing visions.

Constitutional and ideological issues aside, a structural problem with Arizona's private school tuition tax credit program is that there is no limit on how much money the program could cost the state in a given year. The extent to which the private school tuition tax credit is taken in a particular year is unknown until the tax year is over and the credits taken are counted up. An open-ended, indeterminate program that diverts tax revenue away from the state treasury may not be prudent, especially in times of fiscal need.<sup>21</sup>

**Does Arizona's Private School Tuition Tax Credit Harm Public Schools And The**

## **Students They Serve?**

It has been argued that market forces resulting from competition for students between public and private schools would help drive public school improvement. Tax credit opponents argue, however, that public school improvements would likely be attenuated by diminishing funds. They reason that the marginal costs of adding additional students to a school are expected to be less than the state aid paid per student in cases where additional classrooms or teachers are not needed to accommodate the increases in enrollment. Reductions in enrollment will have the opposite effect. Schools cannot reduce fixed costs in an amount equal to losses in state aid when a handful of students leave several different classrooms. As a result, public schools' finances are stretched further and their ability to educate their remaining students is weakened. Thus far, the empirical evidence is inadequate to make a definitive assessment of whether public schools are being harmed as a result of Arizona's private school tuition tax credit program.

## **Is Arizona's Private School Tuition Tax Credit Likely To Provide Increased Access To Private Schools For Poor Children?**

For families who want to enroll their children in private schools, there are several barriers that must be overcome.

- Tuition cost is, of course, a major barrier for low-income families who want to enroll their children in private schools.
- A second barrier are the costs associated with private schools that are not included in the tuition charges, such as: fees for books, supplies, uniforms,

and extracurricular activities. These ancillary costs add to the financial difficulty for low-income families.

- A third barrier confronted by poor families who wish to enroll their children in private schools is that private schools, unlike public schools, are allowed selectivity in admissions. Criteria used for private school admission are often factors such as previous academic performance (test scores), personal skills/achievements, and connections to the school (siblings attending, etc.). These criteria operate against children living in poverty.
- The fourth barrier faced by low-income families who want to enroll their children in private schools is that they may be the “wrong” religion for the school they want their children to attend. The Arizona private school tuition tax credit statute prohibits schools from discrimination on the basis of race, color, handicap, familial status, or national origin.<sup>22</sup> The law does not prohibit discrimination on the basis of religion.<sup>23</sup> Currently, many school tuition organizations (STOs) distribute scholarships only to schools affiliated with specific religions or religious beliefs.
- A fifth barrier facing poor families that wish to send their children to private schools is transportation. Private schools do not commonly provide transportation services to their students. For those who require some sort of transportation to school (those further than walking or bicycling distance), there are additional monetary costs (school transportation fees, public transit fees, etc.) as well as nonmonetary costs (additional time

costs to the parents and/or students).

Tuition is thus, only one of a number of barriers, some financial and some non-financial that, taken together, put private schools beyond the reach of poor families.<sup>24</sup> Since it provides only tuition support, Arizona's private school tuition tax credit might be expected to disproportionately benefit more well-off students, rather than low-income children as its supporters intended.

### **The Economies Of Private School Demand**

The Arizona private school tuition tax credit program, in effect, attempts to lower the price of private education in Arizona. Economic theory suggests that as a result there will be an increase in demand for private education and a reduced demand for substitutes such as public education. Thus, a reduced price for private schooling is expected to result in increased enrollment in private schools. Economists refer to this as a "price effect," that is, the effect that a change in price has on the amount of a good or service demanded.

James and Levin reason that there is no single price effect associated with a tuition grant. A family's response to a tuition grant depends greatly upon current family wealth. For example, there are probably many families that are wealthy enough to switch to private schools without financial aid, but who are satisfied with their children's public schooling.<sup>25</sup> We may also assume that many low-income families, even with the financial assistance of an STO tuition grant, would still not be able to afford to enroll their children in private schools. If this is the case, then it follows that most of the increased enrollment demand for private schooling will take place in the middle-income range.

Thus, price effect mechanisms coupled with the various financial and non-

financial barriers that poor families face suggest that Arizona’s private school tuition tax credit will disproportionately benefit well-off students rather than lower-income students.

**Assessing The Benefits And Costs Of The Private School Tuition Tax Credit**

In the following sections, estimates of the efficiency with which the Arizona tuition tax credit program assists students to leave public schools and enroll in private schools are calculated. Estimates of the number of poor students benefiting from the tax credit program are also calculated. These estimates will allow a judgment to be made regarding the efficiency and equity of the private school tuition tax credit component of the Arizona education tax credit program.

Through checks of private schools’ websites and telephone calls to private schools, tuition charges for 96 private schools in Arizona were obtained. Private school tuition costs for 2000-2001 are listed in Table 2.

**Table 2: Private School Tuition in Arizona 2000-2001**

	<b>N</b>	<b>Median</b>	<b>Mean</b>	<b>Standard Deviation</b>
<b>Elementary Schools</b>	44	\$3,175	\$3,994	\$1,447
<b>Middle/Jr. High Schools</b>	35	\$3,600	\$4,561	\$2,439
<b>High Schools</b>	17	\$5,850	\$6,664	\$2,979

Sources: Schools’ websites and phone calls to schools

Table 3 illustrates the per capita tuition grant amount awarded for each of the three years of the program. In 2000, the per capita tuition grant award amount was \$855.81.

**Table 3: STO Tuition Grant Data 1998-2000**

	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>3-year Program Totals</b>
<b>Number of tuition grants awarded</b>	326	3,726	15,238	19,290

<b>Total amount awarded</b>	\$147,470	\$2,377,319	\$13,040,812	\$15,565,601
<b>Per Capita amount awarded</b>	\$452.36 <sup>26</sup>	\$638.04	\$855.81	\$806.93

Source: Arizona Department of Revenue

Taking the median tuition charge for elementary schools and dividing by the per capita tuition grant amount shows that the year 2000 per capita tuition grant amount of about \$856 covered approximately 27 percent of the median tuition charge of \$3,175 for private elementary schools in Arizona. For the higher tuitions of middle/junior high schools and high schools, \$856 would correspond to about 19 percent and 15 percent respectively (see Table 4).

**Table 4: Percentage of Private School Tuition Covered by \$856 Per Capita Award Amount 2000**

	<b>Median tuition cost 2000-2001</b>	<b>Percentage of tuition covered by Per capita award amount</b>
<b>Elementary Schools</b>	\$3,175	27.0%
<b>Middle/Jr. High Schools</b>	\$3,600	18.8%
<b>High Schools</b>	\$5,850	14.6%

Sources: Arizona Department of Revenue, schools' websites and phone calls to schools , and author's calculations

Applying the price effect mechanism to the relatively low amount of the per capita tuition grant suggests that few poor families will be able to move their children from a public school to a private school by means of Arizona's private school tuition tax credit program.

The U.S. Department of Education's National Center for Education Statistics (NCES) estimated that in the fall of 1999 (latest estimate available) there were 44,060 students enrolled in private elementary and secondary schools in Arizona.<sup>27</sup> NCES estimates indicate that private school enrollment in Arizona has been very stable over the past several years (41,957 in 1993 and 44,991 in 1997).<sup>28</sup> Considering that the 19,290 students who received tuition grants in the three years from 1998 to 2000 (15,238 in

2000) represent nearly 44 percent of the annual Arizona private school enrollment, it is likely that a substantial proportion of these tuition grants were provided to students already enrolled in private schools. Thus, a considerable percentage of the tuition grants awarded by STOs are likely to be going to families with children already enrolled in private schools.<sup>29</sup> A precise percentage is impossible to calculate because STOs are not required to report the number of tuition grants going to students that are transferring from public to private schools.

### **How Many Poor Children Are Helped To Leave Public Schools By Arizona's Private School Tuition Tax Credit?**

Target efficiency is a criterion measure used by economists to judge the efficiency of public spending programs. For the Arizona private school tuition tax credit, target efficiency quantifies the proportion of the total cost of the private school tuition tax credit that moved children from public schools to private schools. Thus, the target efficiency of the private school tax credit in increasing private school access is defined as the proportion of the total cost of the tuition tax credit received by families who actually switch from public schools to private schools. Note: these families are not necessarily low-income families. Children that move from public schools to private schools are referred to as “switchers.”<sup>30</sup> Money from the Arizona private school tuition tax credit program received by families whose children *do not* switch from public to private schools are obviously students already enrolled in private schools. Therefore, high target efficiencies indicate that greater proportions of tuition tax credit resources are going to switchers and lower target efficiencies mean that smaller proportions of tuition tax credit

resources are going to switchers.

According to Belfield, target efficiencies for tuition tax credits tend to be very low, meaning that tuition tax credits appear to primarily benefit those already enrolled in private schools. Belfield's literature review reveals that target efficiencies have been estimated by various researchers to range from less than 5 percent to no more than 15 percent.<sup>31</sup> That is, only 5 to 15 percent of tuition tax credit revenue recipients will be switchers. The Cato Institute, a strong advocate of tuition tax credits, estimated a range for the target efficiency of Arizona's private school tuition tax credits at between 15 and 30 percent. For its calculations and projections, however, the Cato Institute paper utilized 20 percent as the target efficiency for Arizona's private school tuition tax credits.<sup>32</sup> Thus, the full range of estimates for the target efficiency of tuition tax credits runs from less than 5 percent up to 30 percent. For this analysis, the Cato Institute's target efficiency estimate of 20 percent will be used.

The private school tuition tax credit component of Arizona's education tax credit statute requires that at least 90 percent of a school tuition organization's (STO) proceeds be spent in the form of tuition grants. Therefore, as much as 10 percent of the funds received by an STO may be used to cover the costs such as establishing and incorporating the STO as a non-profit organization, office equipment, employee time, office supplies, and marketing and advertising fees. A survey of STOs conducted by Damore indicated a mixed view of whether 10 percent was an adequate amount for administrative purposes. Of 27 STOs that responded, 11 STOs stated that the amount was more than enough, 10 stated that the amount was about the right amount, and six STOs indicated that the amount was inadequate.<sup>33</sup> It is likely that STOs receiving small amounts under the



program might judge 10 percent as inadequate, while those STOs receiving greater amounts are likely to indicate 10 percent as adequate or more than enough. For example, the Catholic Tuition Organization of the Diocese of Phoenix received more than \$5.4 million in 2000 and is entitled to use up to \$543,721 for administrative purposes while the STO receiving the least (Patagonia Scholarship Fund), took in \$5,800 and may use a maximum of \$580 for its administrative costs.

Assuming that 5 percent will be adequate for administrative expenses and that 95 percent of the resources received by STOs will be paid out as tuition grants, it is estimated that at a target efficiency of 20 percent, on average, for every dollar of revenue given out in tuition grants over the three years of the program, about 19 cents went to students who moved from public to private schools. Approximately 76 cents of every dollar appears to have gone to families whose children were already enrolled in private schools (See Table 5).

### **How Much Does It Cost Taxpayers When A Student Switches From A Public School To A Private School?**

Assuming that tuition grant resources are evenly distributed among awardees, the cost per student who switches from a public to a private school is calculated by taking the total private school tuition tax credit program cost (\$15,565,601) and dividing by the product of the estimated target efficiency (20%) and the number of tuition grants awarded under the program (19,290). By this calculation, it is estimated that at a 3-year program cost of more than \$15.5 million, the private school tuition tax credit program has assisted approximately 3,858 students switch from public schools to private schools. Thus, it is

estimated that the Arizona private school tuition tax credit program has cost the state about \$4,035 for each student who switched from public to private school (See Table 5 for a range of estimates based on different target efficiency estimates).

**Table 5: Efficiency Estimates for the Arizona Private School Tuition Tax Credit Under Various Target Efficiency Estimates Assuming 5% Administrative Expenses 1988-2000**

Source	Target efficiency estimate from source	Target efficiency used for author's estimates	Estimated average amount going to school switchers	Estimated number of students switching schools as result of program	Estimated total per student program cost for students who switch schools
Bast (2001)	< 5%	5%	About 4.8 cents per dollar	965	\$16,130
Frey (1983, 1995)	12-13%	12.5%	About 11.9 cents per dollar	2,412	\$6,453
West (1985) and Olsen et al. (2001)	No more than 15%	15%	About 14.3 cents per dollar	2,894	\$5,379
Cato Institute [Lips and Jacoby (2001)]	20% was assumed in Cato Institute paper)	20%	About 19.0 cents per dollar	3,858	\$4,035
Cato Institute [Lips and Jacoby (2001)]	Range of 15-30%	30%	About 28.5 cents per dollar	5,787	\$2,690

Sources: Arizona Department of Revenue, Belfield (2001), Lips and Jacoby (2001), and author's calculations

The stated goal of the Arizona private school tax credit is to provide increased access to private schooling for poor or disadvantaged families. To determine if this goal is being achieved, it is necessary to estimate what proportion of the total amount of the private school tuition tax credit that actually goes to provide increased access to private schools for children of poor families. To judge the efficiency and equity of the Arizona private school tuition tax credit program, an estimate was calculated of the percentage of all low-income public school students that used the tuition tax credit program to switch from public schools to private schools.

According to the U.S. Census Bureau, in 1997, 22.1 percent of related children

ages 5 to 17 in Arizona lived in families in poverty.<sup>34</sup> By multiplying Arizona's total 1997 public K-12 school enrollment of 814,113<sup>35</sup> by the school age poverty percentage of 22.1, it is estimated that there were approximately 179,919 Arizona public school students in poverty in 1997. Multiplying the target efficiency of 20 percent by the total number of tuition grants provided under the program over its 3-year life (19,290), we find that about 3,858 students switched from public to private schools with tuition grants from the program. If we assume that *all* of the students who switched from public to private schools were poor, then Arizona's private school tuition tax credit program assisted approximately 3,858 poor students out of a total population of poor K-12 public school students of 179,919. This means that the private school tuition tax credit has helped about 2.1 percent of the poor students attending public schools at a cost to the state of about \$15.5 million. Note that it is highly unlikely that *all* students receiving tuition grants were from low-income families. Therefore, 2.1 percent no doubt considerably overstates the percentage of poor public school students that this program has helped.

### **Does Arizona's Private School Tuition Tax Credit Promote Equity?**

Critics of Arizona's private school tuition tax credit program argue that tuition tax credits are unfair because lower-income taxpayers have less access to them than do wealthier taxpayers. Under the law, Arizona's private school tuition tax credit is available to all taxpayers willing to send funds to a school tuition organization and claim the tax credit on their Arizona individual income tax returns. It is clear that all taxpayers do have formal equal access. Critics argue, however, that because low-income taxpayers have less income, they are less likely to have the money available to send to an STO in order to

later claim it on their tax returns. To consider the argument that tax credits are unfair because they are less accessible by lower-income individuals and families and more accessible by wealthier individuals and families, we can review the available data on the distribution of Arizona’s private school tuition tax credit by the tax credit claimant’s level of income. The data on private school tax credit claimants is based on the Arizona Department of Revenue’s review of individual tax returns and is available for only the first year of the program (1998). Table 6 presents data on the distribution of 1998 private school tax credits by the claimant's federal adjusted gross income (FAGI). According to the United States Census Bureau, the 1998 median income for a 4-person family in Arizona was estimated to be \$49,397.<sup>36</sup> For this analysis, tax credit claimants were placed into two groups based on their federal adjusted gross income: those with a FAGI below \$50,000 and those with a FAGI above \$50,000, broadly representing lower-income claimants and higher-income claimants respectively. Claimants below \$50,000 FAGI accounted for 19.2 percent of the number of private school tuition tax credits taken and 15.9 percent of the total amount. Those with federal adjusted gross incomes above \$50,000 took 80.8 percent of the number of the tuition tax credits as well as 84.1 percent of the total value of all the private school tuition tax credits taken.

**Table 6: Arizona Private School Tuition Tax Credit Claimants Above And Below \$50,000 Federal Adjusted Gross Income (FAGI) 1998**

	Total	Below \$50,000 FAGI	Above \$50,000 FAGI
<b>Number of credits taken</b>	3,548	682	2,866
<b>Percentage of total number of credits taken</b>	100.0%	19.2%	80.8%
<b>Total amount of credits</b>	\$1,571,100	\$249,655	\$1,321,445
<b>Percentage of total amount of</b>	100.0%	15.9%	84.1%

<b>credits taken</b>			
<b>Mean credit amount</b>	\$442.81	\$366.06	\$461.08

Source: Arizona Department of Education and Arizona Department of Revenue<sup>37</sup>

The data in Table 6 are consistent with previous tax credit research that shows tax expenditures, such as tax credits, are much more likely to be claimed by higher-income individuals than by lower-income individuals. These data support the argument that Arizona taxpayers do not have real equal access to the Arizona private school tuition tax credit.

### **Assessing The Equity Of The Public School Extracurricular Activity Tax Credit**

In the following sections, analyses of the distribution of resources from the Arizona public school extracurricular activity tax credit are provided. The available data on the distribution of Arizona public school extracurricular activity tax credit by the tax credit claimant’s level of income are also examined. These figures will reveal the degree to which the Arizona public school extracurricular activity tax credit component of the Arizona education tax credit program promotes equity.

### **Public Schools Findings**

School-level data records for 1998 through 2000 on the Arizona public school extracurricular activity tax credit and the free and reduced meal program (F/R meal program) were obtained from the Arizona Department of Revenue and the Arizona Department of Education. These two datasets were matched by schools and the records merged. The dataset was sorted in ascending order by school-level F/R meal program percentages. The schools were then grouped into equal number-of-schools-sized quarters.

This process yielded four groups of schools by relative wealth. For each year, the percentage of students receiving F/R meal assistance ranged from 1 to 100 percent. Summary tables were developed for several items of interest (school characteristics, school basis contribution data, and student basis contribution data). Schools for which there was no tax credit contribution listing and/or no free/reduced meal program data were not included in this analysis. After combining the two data records, the analysis captured 66.2 percent of the money going to the public schools from the public school extracurricular activity tax credit in 1998, 68.9 percent in 1999, and 74.8 percent in 2000. Overall, it should be noted that the results, while reflecting program growth, were relatively stable over the three years of the program. Characteristics of the school quarters formed on the basis of F/R meal program percentages are shown in Table 7.

**Table 7: Characteristics of Public School Quarters 1998 –2000**

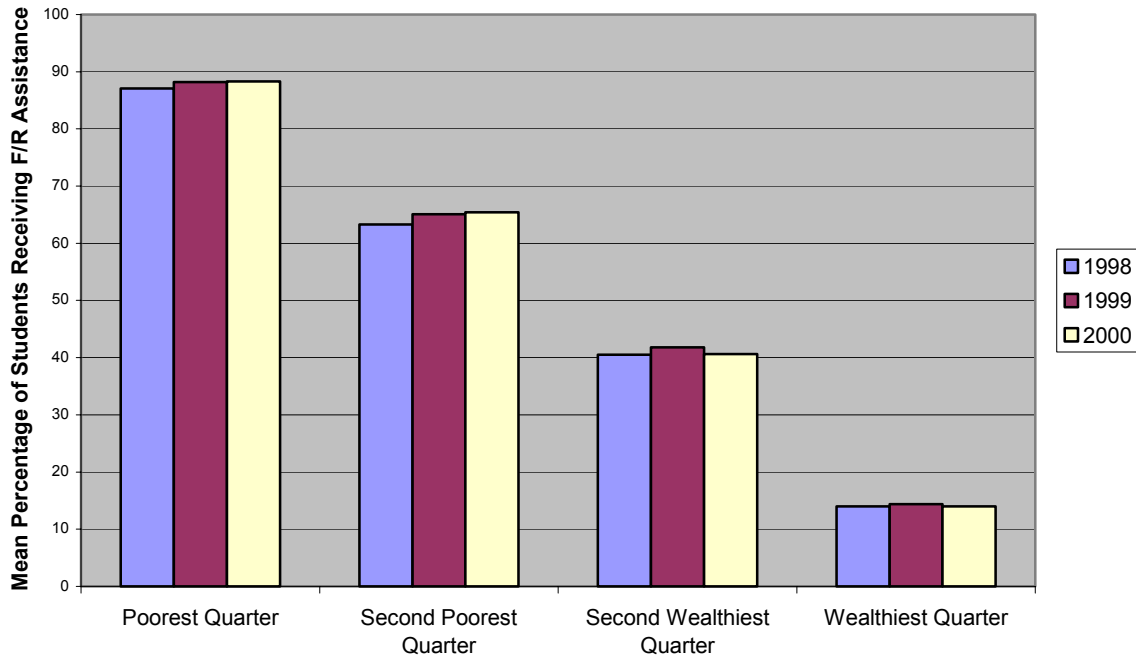
	1998	1999	2000
<b>Number of Schools</b>			
All Schools	932	1,008	1,036
Poorest Quarter	233	252	259
Second Poorest Quarter	233	252	259
Second Wealthiest Quarter	233	252	259
Wealthiest Quarter	233	252	259
<b>School Enrollment</b>			
All Schools	674,945	714,591	744,009
Poorest Quarter	143,181	155,579	167,404
Second Poorest Quarter	165,274	166,568	157,280
Second Wealthiest Quarter	168,495	177,680	182,422
Wealthiest Quarter	197,995	214,764	236,903
<b>Percent of Total School Enrollment</b>			
All Schools	100.0	100.0	100.0
Poorest Quarter	21.2	21.8	22.5
Second Poorest Quarter	24.5	23.3	21.1
Second Wealthiest Quarter	25.0	24.9	24.5
Wealthiest Quarter	29.3	30.1	31.8
<b>Mean Percentage of Students Eligible for F/R Meal Program</b>			
All Schools	51.3	52.4	52.1
Poorest Quarter	87.2	88.2	88.3
Second Poorest Quarter	63.4	65.1	65.4
Second Wealthiest Quarter	40.6	41.8	40.6
Wealthiest Quarter	14.1	14.4	14.0
<b>Range of Percentage of Students Eligible for F/R Meal Program</b>			
All Schools	1-100%	1-100%	1- 100%
Poorest Quarter	75-100%	76-100%	77-100%
Second Poorest Quarter	53-75%	54-76%	53-77%
Second Wealthiest Quarter	27-53%	28-54%	27-53%
Wealthiest Quarter	1-27%	1-28%	1- 27%

Sources: Arizona Department of Education, Arizona Department of Revenue, and author's calculations

Table 7 shows the extent of the differences in mean F/R meal percentages between the quarters. The mean percentages of students eligible for the F/R meal program represent relative differences in poverty for a school's student body. The overall mean percentage of students in this dataset eligible for the F/R meal program was 51.3 percent (SD=28.01) in 1998, 52.4 percent (SD=28.28) in 1999, and 52.1 percent (SD=28.66) in 2000. When viewed by quarters, the mean percentage of students eligible for the F/R meal program ranged from 14.1 percent (SD=7.36) in the wealthiest quarter to 87.2 percent (SD=6.94) in the poorest quarter in 1998, from 14.4 percent (SD=7.70) in the wealthiest quarter to 88.2 percent (SD=6.43) in the poorest quarter in 1999, and from 14.0 percent (SD=7.59)

in the wealthiest quarter to 88.3 percent (SD=6.68) in the poorest quarter in 2000 (See Chart 1).

**Chart 1: Mean Percentage of Students in Quarters Receiving F/R Meal Program Assistance**



Sources: Arizona Department of Education, Arizona Department of Revenue, and author's calculations

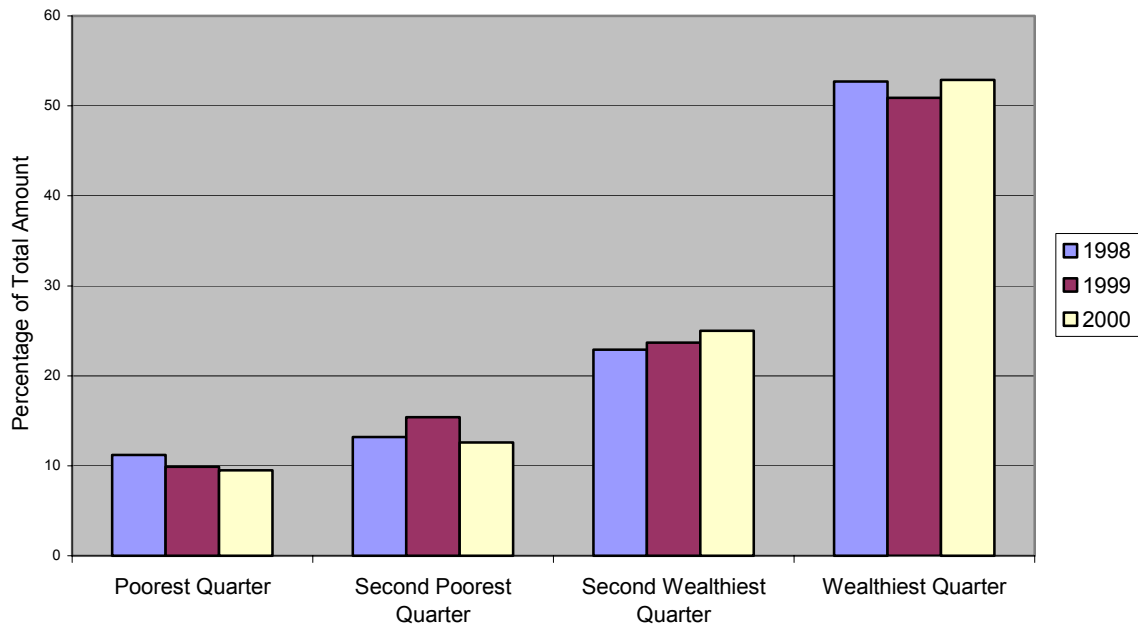
The Arizona public school extracurricular activity tax credit data and the free and reduced meal program data, when merged, accounted for a total of \$29,236,422 of the public school extracurricular tax credit taken (70.8% of total) from 1998 to 2000.

Over the three years of the program, the wealthiest 25% of public schools received 148,195 individual tax credits taken (58.6 percent of the total) while the poorest 25% of public schools received 16,626 individual tax credits or 6.6 percent of the public school extracurricular activity tax credits taken (See Table 8 for further details).



The data on the dollar amounts that public schools received tells a similar story of wealthier public schools receiving a disproportionately large share of the resources from this program. From 1998 to 2000, the wealthiest quarter of public schools received 52.2 percent of the resources provided while the poorest quarter of public schools received 10.0 percent of the money from the public school extracurricular activity tax credit program (See Chart 2 and Table 8).

**Chart 2: Distribution of Funds from Public School Extracurricular Activity Tax Credit to School Quarters 1998-2000**



Sources: Arizona Department of Education, Arizona Department of Revenue, and author's calculations

The resource distribution pattern from 1998 to 2000 resulted in public schools in the wealthiest quarter receiving a per school mean of \$20,517 and public schools in the poorest quarter receiving a mean amount of \$3,913 per school (See Table 8).

**Table 8: School Basis Donation Data 1998-2000**

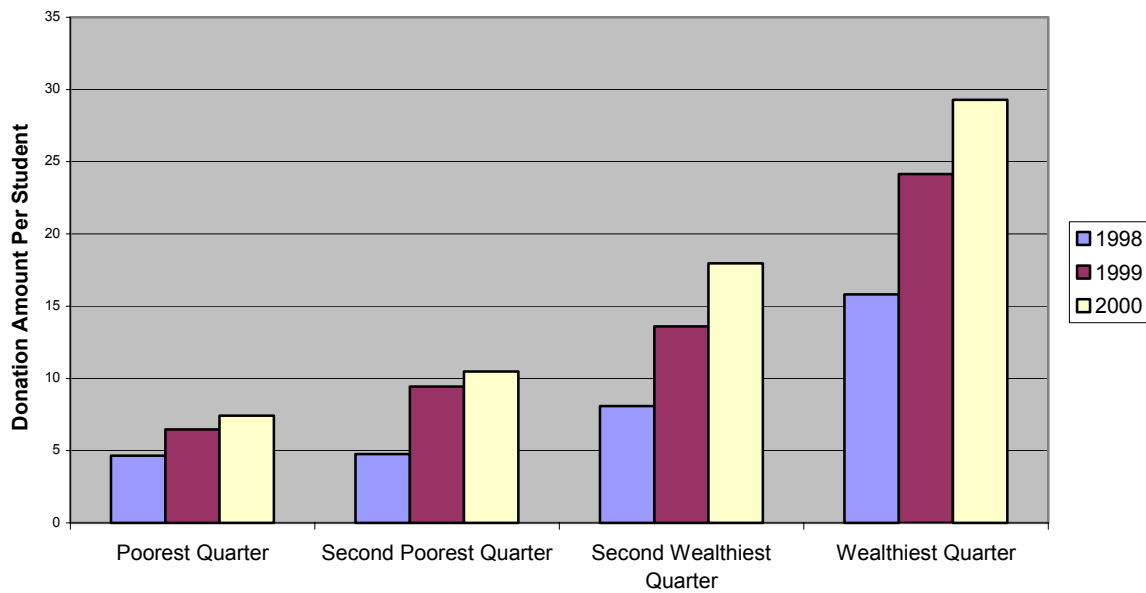
	1998	1999	2000	3-Year Program Total
<b>Tax credit amount</b>				
All Schools	\$5,953,253	\$10,176,918	\$13,106,251	\$29,236,422
Poorest Quarter	\$662,272	\$1,004,889	\$1,243,841	\$2,911,002
Second Poorest Quarter	\$784,627	\$1,571,594	\$1,647,398	\$4,003,619
Second Wealthiest Quarter	\$1,362,890	\$2,415,892	\$3,278,621	\$7,057,403
Wealthiest Quarter	\$3,143,465	\$5,184,543	\$6,936,390	\$15,264,398
<b>Percentage of total tax credit amount</b>				
All Schools	100.0	100.0	100.0	100.0
Poorest Quarter	11.1	9.9	9.5	10.0
Second Poorest Quarter	13.2	15.4	12.6	13.7
Second Wealthiest Quarter	22.9	23.7	25.0	24.1
Wealthiest Quarter	52.8	50.9	52.9	52.2
<b>Number of tax credits</b>				
All Schools	53,292	78,580	120,894	252,766
Poorest Quarter	4,092	5,762	6,772	16,626
Second Poorest Quarter	6,204	11,101	11,298	28,603
Second Wealthiest Quarter	13,240	19,069	27,033	59,342
Wealthiest Quarter	29,756	42,648	75,791	148,195
<b>Percentage of total tax credits</b>				
All Schools	100.0	100.0	100.0	100.0
Poorest Quarter	7.7	7.3	5.6	6.6
Second Poorest Quarter	11.6	14.1	9.3	11.3
Second Wealthiest Quarter	24.8	24.3	22.4	23.5
Wealthiest Quarter	55.8	54.3	62.7	58.6
<b>Mean per school tax credit amount</b>				
All Schools	\$6,727	\$10,096	\$12,651	\$9,824
Poorest Quarter	\$3,231	\$3,988	\$4,802	\$3,913
Second Poorest Quarter	\$3,503	\$6,236	\$6,361	\$5,381
Second Wealthiest Quarter	\$6,030	\$9,587	\$12,659	\$9,486
Wealthiest Quarter	\$13,667	\$20,574	\$26,781	\$20,517

Sources: Arizona Department of Education, Arizona Department of Revenue, and author's calculations

Similar disparities are evident when the data are presented on a per student basis. Comparing the 3-year program totals for the poorest and wealthiest quarters shows that public schools in the poorest quarter received an average of \$6.24 per enrolled student while the public schools in the wealthiest quarter received an average of \$23.50, approximately 3.76 times more than the schools in the poorest quarter (See Table 9). The per student amounts for the public school quarters for each year (1998, 1999, and 2000) are shown in Chart 3. The disparity between the poorest and wealthiest quarters' per student amounts has increased with each year of the program. In 1998, the schools in the

wealthiest quarter received 3.43 times as much as the schools in the poorest quarter. In 1999, those in the wealthiest quarter received 3.73 times as much as those in the poorest quarter. By 2000, the public schools in the wealthiest quarter received 3.94 times as much as the poorest quarter's schools (See Table 9).

**Chart 3: Public School Extracurricular Activity Tax Credit Funds to School Quarters On A Per Student Basis 1998-2000**



Sources: Arizona Department of Education, Arizona Department of Revenue, and author's calculations

**Table 9: Public School Extracurricular Activity Tax Credit Data On A Student Basis 1998-2000**

	1998	1999	2000	3-Year Program Total
<b>Donation Amount per student</b>				
All Schools	\$8.82	\$14.24	\$17.62	\$13.70
Poorest Quarter	\$4.63	\$6.46	\$7.43	6.24
Second Poorest Quarter	\$4.75	\$9.44	\$10.47	\$8.19
Second Wealthiest Quarter	\$8.09	\$13.60	\$17.97	\$13.35
Wealthiest Quarter	\$15.88	\$24.14	\$29.28	\$23.50
<b>Number of students per donation received</b>				
All Schools	12.7	9.1	6.2	8.4
Poorest Quarter	35.0	27.0	24.7	28.0
Second Poorest Quarter	26.6	15.0	13.9	17.1
Second Wealthiest Quarter	12.7	9.3	6.7	8.9
Wealthiest Quarter	6.7	5.0	3.1	4.4

Sources: Arizona Department of Education, Arizona Department of Revenue, and author's calculations

As was the case with Arizona's private school tuition tax credit program, critics argue that the public school extracurricular activity tax credit is similarly unfair because lower-income taxpayers have less real access to the credits than do wealthier taxpayers. The available data on public school extracurricular activity tax credit claimants is based on the Arizona Department of Revenue's review of 1998 individual tax returns. An analysis of the distribution of Arizona's public school extracurricular activity tax credit by the tax credit claimant's federal adjusted gross income (FAGI) indicates that claimants below \$50,000 FAGI accounted for 23.9 percent of the number of public school extracurricular activity tax credits taken and the 22.9 percent of the total amount. Those with FAGIs above \$50,000 took 76.1 percent of the number of the public school extracurricular activity tax credits as well as 77.1 percent of the total value of all the public school tax credits taken (See Table 10).

**Table 10: Arizona Public School Extracurricular Activity Tax Credit Claimants Above And Below \$50,000 Federal Adjusted Gross Income (FAGI) 1998**

	<b>Total</b>	<b>Below \$50,000 FAGI</b>	<b>Above \$50,000 FAGI</b>
Number of credits taken	36,479	8,703	27,776
Percentage of total number of credits taken	100.0%	23.9%	76.1%
Total amount of credits taken	\$6,636,201	\$1,518,920	\$5,117,281
Percentage of total amount of credits taken	100.0%	22.9%	77.1%
Mean credit amount	\$181.92	\$174.53	\$184.23

Sources: Arizona Department of Education and Arizona Department of Revenue<sup>38</sup>

### **The Need For Information**

At several points during the research, analysis, and writing of this report, it was clear that there was a lack of information available with regard to school tuition organizations' (STOs') receipt and use of funds from the private school tuition tax credit program. Although the Arizona Department of Revenue encourages STOs to report private school tuition tax credit claimants' names and amounts, and their (STOs) allocations of tuition grants,<sup>39</sup> reporting is not required under A.R.S.§ 43-1089, the private school tuition tax credit law. Georganna Meyer, Chief Economist at the Arizona Department of Revenue, confirmed that information reporting by STOs is completely voluntary and if STOs do not report, there is nothing that the state can do to compel them to provide information.<sup>40</sup> Even the information that the Arizona Department of Revenue encourages STOs to provide is inadequate to precisely evaluate the costs and benefits associated with the private school tuition tax credit program. Although some have touted the brevity of the statute as a plus, the lack of any meaningful reporting requirements is clearly a weakness of the law.<sup>41</sup>

## **Findings**

### **Private School Tuition Tax Credit**

1. Arizona's private school tuition tax credit program is expensive and does little to help poor students. The primary recipients of private school tuition tax credit money are families whose children are already enrolled in private schools. It is estimated that approximately 76 percent of private school tuition tax credit grants are going to current private school students.
2. The financial and non-financial barriers to private schooling and price effects associated with private school tuition makes it unlikely that many poor students move from public to private schools because of assistance from the private school tuition tax credit program.
3. Although all families have *formal* access to Arizona's private school tuition tax credit program, actual participation is positively associated with income. For a variety of reasons, those with higher incomes participate in the program in much higher numbers than families with lower incomes.
4. The lack of meaningful reporting requirements in Arizona's private school tuition tax credit law make it difficult to precisely calculate the private school tuition tax credit program effects.

### **Public School Extracurricular Activity Tax Credit**

1. Schools serving low-income children are receiving relatively little from this program. Arizona's wealthiest schools receive a disproportionately high percentage of the money gathered. Over the three years of the

program, public schools in the wealthiest quarter received more than five times as much money from the program as public schools in the poorest quarter.

2. As is the case with the private school tuition tax credit, data on public school extracurricular tax credit claimants indicates that actual participation is positively associated with income, that is, those with higher incomes participate in the tax credit program to a greater extent than those with lower incomes.

## **Recommendations**

Arizona's private school tuition tax credit is not achieving its goal of providing poor families opportunities to enroll their children in private schools. Funds from Arizona's public school extracurricular tax credit are disproportionately going to wealthier schools. Legislators should consider repealing the Arizona education tax credit law altogether—both the private school tuition tax credit and the public school extracurricular tax credit. The program is expensive and inefficient at reaching low-income students.

1. The information and reporting requirements for school tuition organizations (STOs) should be strengthened (for example, whether the student receiving a tuition grant is switching from a public to a private school, what public school the student is transferring from, family income, etc.). With more complete information from STOs, researchers will be able to more precisely evaluate the costs and benefits associated with the private school tuition tax credit program.

2. Legislators should amend the Arizona private school tuition tax credit to make eligibility for a tuition grant dependent on level of income through a means test. This would ensure that low-income families and students would benefit from this tuition tax credit program. Means testing would improve the efficiency and equity of this program.



## References and Notes

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- <sup>1</sup> Mackinac Center for Public Policy (2001). States to recently consider or enact K-12 education tax credit legislation. Graphic from Michigan education report. [On-line]. Available: [www.mackinac.org/media/images/2001/mer2001-03e.gif](http://www.mackinac.org/media/images/2001/mer2001-03e.gif).
- <sup>2</sup> Lips, C. and Jacoby, J. (2001, September 17). The Arizona education tax credit: Giving parents choices, saving taxpayers money. No. 414. Cato Institute. p.2.
- <sup>3</sup> Weinberg, D. H. (1987). The distributional implications of tax expenditures and comprehensive income taxation. *National Tax Journal*, 40, pp. 237-253. That tax expenditures do not offer the same real opportunities to lower-income individuals and families is well-established in tax research. For example, Weinberg estimated that in FY 1985 more than one-half of the tax expenditures (credits and deductions) taken through the individual income tax system went to the 20 percent of families with the highest incomes.
- <sup>4</sup> Arizona Revised Statutes § 43-1089.
- <sup>5</sup> Arizona Revised Statutes § 43-1089.
- <sup>6</sup> Arizona Revised Statutes § 43-1089.01
- <sup>7</sup> [Arizona Revised Statutes § 43-1089 (E) (1), (2)]
- <sup>8</sup> Keegan, L. G. (2001, December 18). Tuition tax credits: A model for school choice. National Center for Policy Analysis. Brief analysis No. 384. Keegan states that “the inclusion of tax incentives to directly assist public schools helped sell the program not only to the Legislature but also to the public.”
- <sup>9</sup> Arizona Department of Revenue. School Tax Credits. Publication 707. p. 2.
- <sup>10</sup> Bland, K. (2000, April 9). School tax credits wide open to abuse. *The Arizona Republic*, pp. A1, A22.
- <sup>11</sup> Keegan, L. G. (2001). Tuition tax credits. Education Leaders Council [On-line]. Available: <http://www.educationleaders.org/issues/010401keegan.htm>
- <sup>12</sup> *Kotterman v. Killian*, No. CV-97-0412-SA (1999).
- <sup>13</sup> Surrey, S. S. and McDaniel, P. R. (1985) *Tax expenditures*. Cambridge: Harvard University Press. p. 3.
- <sup>14</sup> Surrey, S. S. and McDaniel, P. R. (1985) *Tax expenditures*. Cambridge: Harvard University Press. p. 3.
- <sup>15</sup> Scutari, C. (2002, February 28). Union wants raises for state employees on ballot. *The Arizona Republic*. [On-line]. Available: <http://arizonarepublic.com/special12/articles/0228NORAISE28.html>.
- <sup>16</sup> Moses, M. S. (2000, August 1). The Arizona education tax credit and hidden considerations of justice: why we ought to fight poverty, not taxes. [On-line]. Available: <http://epaa.asu.edu/epaa/v8n37.html>.
- <sup>17</sup> James, T. and Levin, H. M. (1983) *Public dollars for private schools*. Philadelphia: Temple University Press. p. 45.
- <sup>18</sup> James, T. and Levin, H. M. (1983) *Public dollars for private schools*. Philadelphia: Temple University Press. Pp. 104-105.
- <sup>19</sup> James, T. and Levin, H. M. (1983) *Public dollars for private schools*. Philadelphia: Temple University Press. Pp. 104-105.
- <sup>20</sup> Bland, K. (2000, April 9). School tax credits wide open to abuse. *The Arizona Republic*, p. A22.
- <sup>21</sup> Surrey, S. S. and McDaniel, P. R. (1985) *Tax Expenditures*. Cambridge: Harvard University Press. p. 102.
- <sup>22</sup> Arizona Department of Revenue. School Tax Credits. Publication 707. p. 8.
- <sup>23</sup> Welner, K. G. (2000, July 30). Taxing the establishment clause: The revolutionary decision of the Arizona supreme court in *Kotterman v. Killian*. [On-line]. Available: <http://epaa.asu.edu/epaa/v8n36.html>.
- <sup>24</sup> James, T. and Levin, H. M. (1983) *Public dollars for private schools*. Philadelphia: Temple University Press. p. 44.
- <sup>25</sup> James, T. and Levin, H. M. (1983) *Public dollars for private schools*. Philadelphia: Temple University Press. Pp. 93-94.
- <sup>26</sup> The total amount of tuition grants awarded to students in 1998 was \$167,650. However, one STO (Institute for Better Education), while providing their total tuition grant amount, failed to provide the number of tuition grants awarded. Therefore, calculating the mean amount per tuition grant with the tuition grant amount (\$20,180) from the Institute for Better Education included significantly overstates the mean amount per tuition grant in 1998.
- <sup>27</sup> National Center for Education Statistics. Digest of Education Statistics 2001. (2002, March 1). Table 63- Private elementary and secondary schools, enrollment, teachers, and high school graduates, by state: 1991 to 1999. [On-line]. Available: <http://nces.ed.gov/pubs2002/2002130b.pdf>

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- <sup>28</sup> National Center for Education Statistics. Digest of Education Statistics 2001. (2002, March 1). Table 63- Private elementary and secondary schools, enrollment, teachers, and high school graduates, by state: 1991 to 1999. [On-line]. Available: <http://nces.ed.gov/pubs2002/2002130b.pdf>
- <sup>29</sup> James, T. and Levin, H. M. (1983) Public dollars for private schools. Philadelphia: Temple University Press. p. 108.
- <sup>30</sup> Frey, D. E. (1983). Tuition tax credits for private education: An economic analysis. Ames, IA: Iowa State University Press. pp. 94-95.
- <sup>31</sup> Belfield, C. R. (2001). Tuition tax credits: what do we know so far? Occasional paper No. 33. National Center for the study of privatization in education. Teachers College, Columbia University. Belfield cited studies relating to tuition tax credit target efficiencies by Frey (1983 and 1995), West (1985), Olsen et al. (2001), and Bast (2001). The target efficiencies ranged from less than 5% to no more than 15%. Belfield characterized the simulations' results as "reasonably consistent."
- <sup>32</sup> Lips, C. and Jacoby, J. (2001, September 17). The Arizona education tax credit: Giving parents choices, saving taxpayers money. No. 414. Cato Institute. p.8. Although the Cato Institute paper provided an estimated range for target efficiency, they state that they based their estimate, in part, on estimates from STOs that account for only 13 percent of all scholarships. This calls into question the representativeness of the sampling of STOs that went into producing the data for their target efficiency estimate.
- <sup>33</sup> Damore, G. P. (2001) Operationalization of Arizona K-12 schools tuition tax credit legislation. Unpublished doctoral dissertation, Northern Arizona University, Flagstaff.
- <sup>34</sup> United States Census Bureau. Model-based income and poverty estimates for Arizona in 1997. [On-line]. Available: <http://www.census.gov/hhes/www/saife/estimate/cty040000.htm>.
- <sup>35</sup> National Center for Education Statistics. Digest of Education Statistics 2001. (2002, March 1). Table 37- Enrollment in public elementary and secondary schools, by level and state: Fall 1986 to fall 2000-- Continued. [On-line]. Available: <http://nces.ed.gov/pubs2002/2002130b.pdf>.
- <sup>36</sup> United States Census Bureau. Median income for 4-person families, by state. [On-line]. Available: <http://www.census.gov/hhes/income/4person.html>
- <sup>37</sup> Meyer, G., and Smith, E. (1999, September 23). Arizona's individual income tax credits for schools. Phoenix: Arizona Department of Revenue.
- <sup>38</sup> Meyer, G., and Smith, E. (1999, September 23). Arizona's individual income tax credits for schools. Phoenix: Arizona Department of Revenue.
- <sup>39</sup> Arizona Department of Revenue. School Tax Credits. Publication 707. p. 11.
- <sup>40</sup> G. Meyer (personal communication, March 20, 2002).
- <sup>41</sup> Keegan, L. G. (2001, December 18). Tuition tax credits: A model for school choice. National Center for Policy Analysis. Brief analysis No. 384. Keegan writes "A key to the success of these programs lies in their relative simplicity....so simple, in fact, that Arizona's entire tax credit program takes up only seven brief paragraphs in the statute..."

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