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Whether to Approve an Education Savings Account Program in Texas: Preventing Crime Does Pay

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WHETHER TO APPROVE AN EDUCATION SAVINGS ACCOUNT PROGRAM IN TEXAS: PREVENTING CRIME DOES PAY

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Abstract

Decision-makers in Texas have proposed an Education Savings Account (ESA) that would allow all families to take a fraction of their public education financing to a school of their choice. If the ESA funding amount exceeds the school tuition level, families would be able to use these funds for other educational expenses such as tutoring, textbooks, educational therapy, online learning, and college costs. While this is may be viewed as obvious benefits to individual children and their families, the impacts on society overall are less clear.

We estimate the impact of the proposed ESA on criminality from 2016 to 2035. We use crime reduction estimates from our previous study of the impact of the longest-standing private school voucher program in the United States, along with existing estimates of the social costs of misdemeanors and felonies, in order to monetize and forecast impacts for the ESA in Texas. We find that a universally-accessible ESA could have large benefits to the state of Texas through reduced crime over the first 20 years of the program. Specifically, we estimate that the first cohort of high school students to experience four years of a universal ESA program in Texas would produce 749 fewer felonies and misdemeanors by the time they become 22 years old, resulting in about $7 million in benefits to society by 2025. The cumulative social benefits would amount to $74 million by the end of 2030 and $194 million by the end of 2035.

Keywords: education savings account, school choice, education reform, crime prevention, program evaluation, civic education

Introduction

School choice takes various forms in the U.S. and abroad. Tuition-free public school choice options include charter schools, magnet schools and access to particular traditional public schools through residential choice. Private school choice options are available in over half the U.S. states and over a dozen countries through vouchers, tax-credit scholarships, individual tax credits/deductions and education savings accounts (ESAs).

ESAs have been enacted in five states in the U.S.: Arizona in 2011, Florida in 2014, and Mississippi, Nevada, and Tennessee in 2015. Policy makers in Texas have proposed a universal ESA which would place all children's public education funding into savings accounts to be used by parents solely for the child's educational expenditures (Huffines and Colyandro, 2016; Grusendorf and Scherer, 2016). Approved uses of these funds include private school tuition and fees, online learning, tutoring services, and higher education expenses. By permitting parents to customize their child's education, ESAs are expected to increase the educational outcomes of students. Since a better education enhances the social and citizenship skills of students, it could decrease their likelihood of committing crimes. Research finds that school choice programs such as these actually reduce the incidences of criminal behavior in young adults (DeAngelis and Wolf, 2016; Deming, 2011; Dills & Hernández-Julián, 2011).

While the overall crime rate recently has dropped in Texas (McCullough, 2016), the state still hovers around the top 20 percent in the country in property crimes per capita and the top 30 percent in violent crimes per capita (Compare 50).Texas' average rank was 6th for property crimes per capita and 13th for violent crimes per capita during the period 2000 to 2014.

In this study, we use results from existing research to estimate the impact of a universal ESA on criminal activity in Texas. Drawing upon our study of the crime reduction effects of the

Milwaukee Parental Choice Program ([DeAngelis and Wolf, 2016](#)), we forecast that a universal ESA in Texas could reduce the number of felonies and misdemeanors committed by the K-12 students enrolled in the program in the first year by around 749 by the time they are 22-25 years old. This reduction in crime would decrease social costs by almost $7 million.[1] These benefits would grow dramatically over the first five and ten years of the program.

Background

There is an abundance of research on school choice programs around the world. Most studies focus on how choice affects standardized test scores, high school graduation, and college enrollment. Shakeel, Anderson, and Wolf (2016) conducted a meta-analysis of the test score impacts of school voucher programs across the globe and found overall statistically significant positive results, especially after three or more years of the program.

Only a few studies have examined the intersection between school choice programs and crime. David Deming (2011) compared the adult criminal activity of winners and losers of the 2002 charter school admissions lottery in Charlotte-Mecklenburg County, North Carolina. He found a large reduction in criminal activity of about 50 percent for a high-risk group of male students if they gained access to charter schools. Dills and Hernández-Julián (2011) examined how parents' ability to select their child's public school by moving, generally called "residential school choice," influenced criminal activity. They found that a moderately large increase in residential school choice was associated with a 40 percent decrease in juvenile crime.

We evaluated the effects of the oldest urban school voucher program, the Milwaukee Parental Choice Program (MPCP), on crime ([DeAngelis and Wolf, 2016](#)). We took 1,089 MPCP students who were in either 8th or 9th grade in 2006 and matched them with 1,089 similar public

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[1] All social cost estimates are in 2016 dollars.

school students. Each matched student was similar regarding grade, race, gender, English Language Learner status, baseline math and reading test scores, and neighborhood. The match on baseline test scores and neighborhood were especially important because students with similar achievement levels and who live in the same neighborhood tend to have similar propensities to commit crimes. Additionally, research has shown that this particular matching procedure is one of the best at replicating experimental results (Bifulco). We searched for each of the 2,178 students in a comprehensive Wisconsin state database of criminal records when they were around 22-25 years old and found that participation in the MPCP throughout high school was associated with a 79 percent reduction in the likelihood that a given student would commit any felonies and a 66 percent reduction in the likelihood that a student would commit any misdemeanors.

Data and Methods

We use our estimates of the crime reduction impact of the MPCP to determine the potential effect of an ESA program on the criminal activity of Texas students. It is reasonable to draw upon the Milwaukee school choice program effects in this case because, even though ESAs allow parents to choose to use their child's educational funds to purchase more than just private school tuition, most parents use ESAs to cover private school tuition, especially in the first years of such programs (Butcher and Burke, 2016).

The forecasted social benefit of launching a universal ESA program in Texas in the fall of 2017 due to the program's estimated crime reduction can be summarized as:

Social Benefit = *Public School Enrollment * Program Participation Rate * Consistent User Rate*

* Crime Reduction Rate * Average Cost of a Crime

Public School Enrollment is estimated for 2017-18 in Texas based on the U.S. Census Bureau's Digest of Education Statistics, table 203.20, and the assumption that the school age population will increase by 1 percent each year. *Program Participation Rate* is set at 5 percent of all students in the first year of the program (2017-18), doubling to 10 percent the second year and growing by 1 percentage point each subsequent year, as happened when the DC Opportunity Scholarship program was launched in 2004-5 and also when the Milwaukee program was expanded to religious schools in 1998-99 (Wolf et al., 2008; Wolf, 2012). *Consistent User Rate* represents the proportion of ESA participants who will remain in the program for four consecutive years and is set at 44 percent based on the Milwaukee Parental Choice Program (DeAngelis and Wolf, 2016). We assume that students who participate in the program for less than the full four years of high school experience no reduction in their likelihood of committing crimes in the future—a very conservative assumption.

    Crime Reduction Rate is 3.44 percentage points (representing a 79 percent reduction) for felonies and 4.76 percentage points (representing a 66 percent reduction) for misdemeanors, again drawing upon the Milwaukee school choice crime reduction study (DeAngelis and Wolf, 2016). *Average Cost of a Crime* is set conservatively as $20,000 for each prevented felony and $1,700 for each prevented misdemeanor (McCollister, French, & Fang, 2010; Levine and Siegel, 2011). We estimate the social benefit of reductions in felonies and reductions in misdemeanors separately and then combine the two benefits into a total program social benefit. See the Appendix for additional details regarding our forecasting methodology.

Results

Felony Reduction

Out of the 5,399,800 students projected to enroll in public schools in the fall of 2017, we assume that 5 percent will participate in the ESA program and that 44 percent of the participants will persist in it over four years. In other words, 118,796 participating students will persist throughout the program. If we assume that these persisting students are equally distributed across all K-12 levels, about 9,138 of them would be in 9th grade in the baseline year of 2017. These will be the first students able to get a full four-year high school experience in the program. After the first four years of the program, we assume that 9,138 of these students will exit as adults. These same students would not become 22 years old until 2025. Since 2025 is the first year that the first set of full dose students could benefit from the program, it is our first year of realized results.

Based on a 3.44 percentage point reduction in felonies committed, we estimate that 314 fewer felonies will be committed by the students who have persisted through the program and become at least 22 years old by the year 2025.[2] By 2030, we estimate that 3,283 fewer felonies will be committed by the persisting students who have exited the program and become at least 22 years old. By 2035, we estimate that 8,682 fewer felonies will be committed by the students persisting through the program. These results, and their 95 percent confidence intervals, are presented in **Figure 1**.

Due to the reduction of 314 felonies committed by the first cohort of students who persist in the program throughout high school, costs to society would decrease by about $6 million in 2025. By 2030 and 2035, social costs avoided through the decrease in participant criminal activity would cumulate to $66 million and $174 million, respectively. These results, and their 95 percent confidence intervals, can be found in **Figure 2**.

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[2] We looked up criminal records when the students were between 22 and 25 years old (DeAngelis and Wolf), so we do not know exactly when the crimes were committed. Since students would have committed these crimes sometime during the first seven years of their adulthood, we expect that our future estimates are the most accurate.

Figure 1: Reduction in Felonies Over Time Through Full Texas ESA Participation

Felony Reduction

- 2025: 314
- 2030: 3,283
- 2035: 8,682
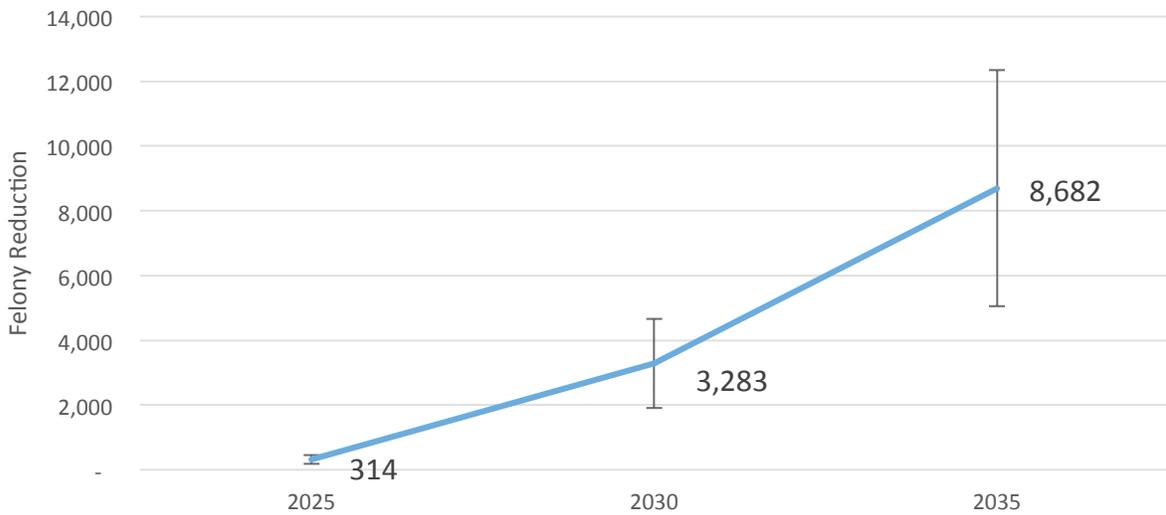
Figure 2: Reduction in Felony Costs to Society Over Time Through Full Texas ESA Participation

Cost Reduction (Millions of 2016 Dollars)

- 2025: $6
- 2030: $66
- 2035: $174
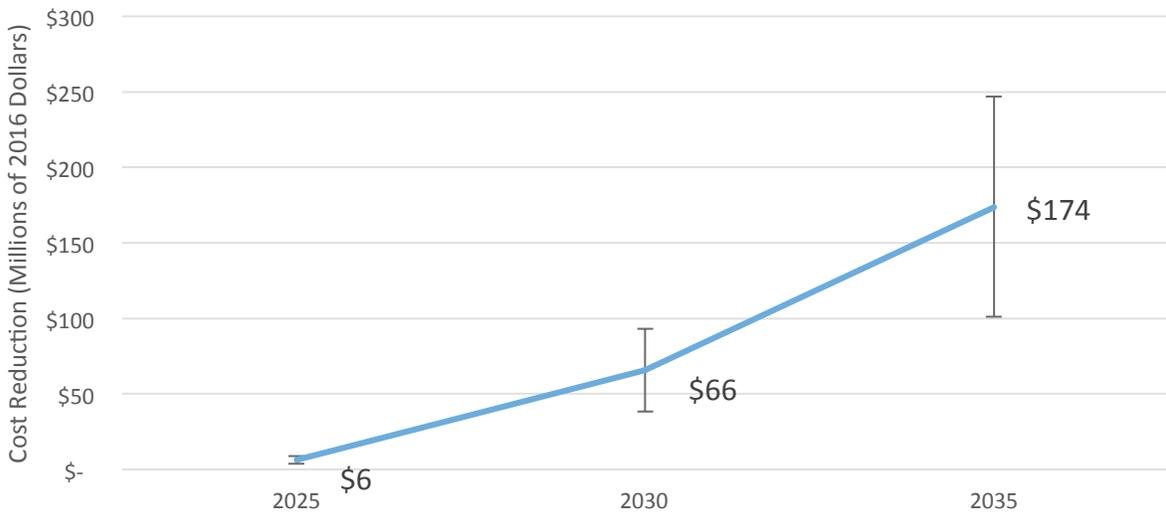
Misdemeanor Reduction

Based on a 4.76 percentage point reduction in the number of misdemeanors committed by the first 9,138 students persisting in the program throughout high school, we estimate that the

number of misdemeanors will decrease by 435 by 2025. By 2030 and 2035, that number will

cumulate to 4,542 and 12,014, respectively. These results, and their 95 percent confidence

intervals, can be found in **Figure 3**.

Figure 3: Reduction in Misdemeanors Over Time Through Full Texas ESA Participation
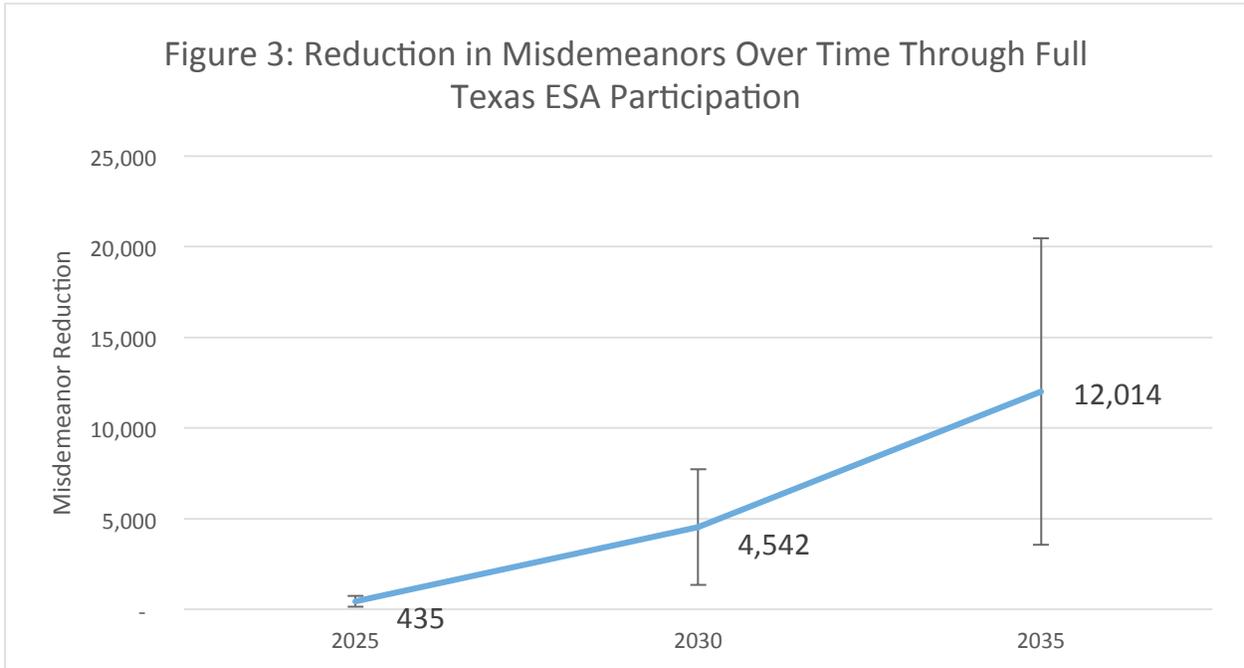
If we assume that a misdemeanor costs $1,700 to society, on average, a 6,126 reduction in the

number of misd

emeanors committed by the first cohort of students will result in a social cost savings of about $1

million by 2025. By 2030 and 2035, this cost savings will grow to $8 million and $20 million,

respectively. These results, and their 95 percent confidence intervals, can be found in **Figure 4**.

Figure 4: Reduction in Misdemeanor Costs to Society Over Time Through Full Texas ESA Participation
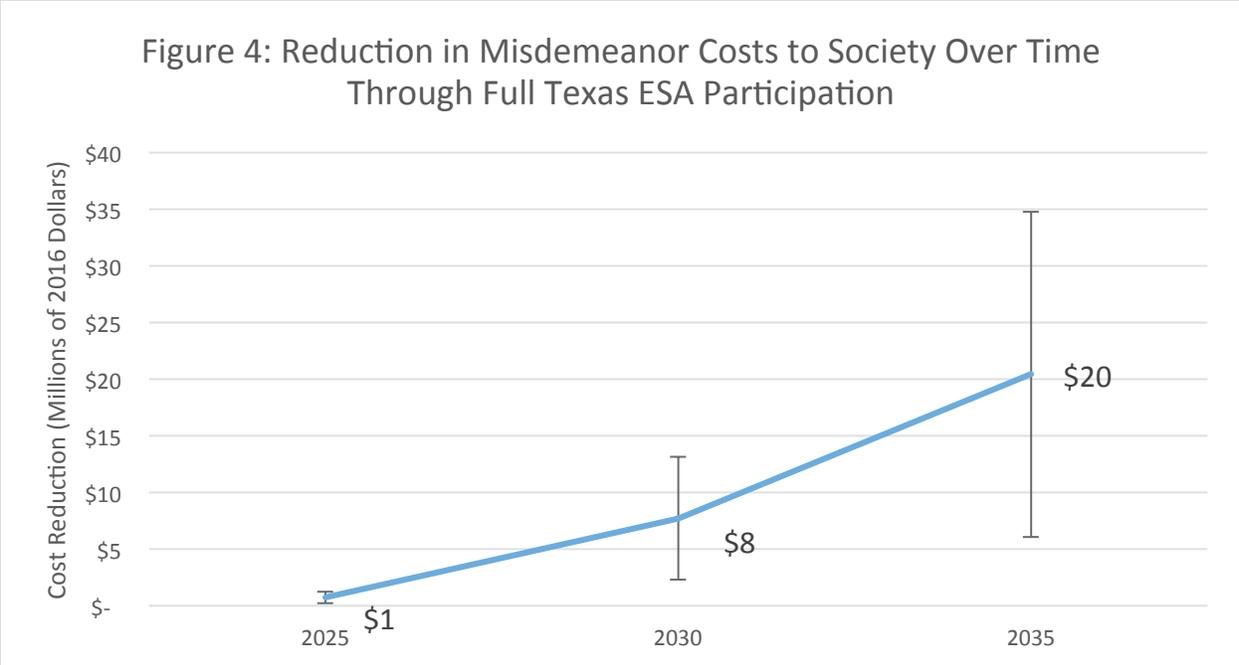
Table 1: Projected Cumulative Social Benefits with ESA in Texas

	2025	2030	2035
Cumulative Persisting Participants	118,800	349,608	498,671
Δ Felonies	314	3,283	8,682
Social Benefits from Reduced Felonies (Millions)	$6	$66	$174
Δ Misdemeanors	435	4,542	12,014
Social Benefits from Reduced Misdemeanors (Millions)	$1	$8	$20
Δ Felonies and Misdemeanors	749	7,825	20,696
Total Social Benefits (Millions)	$7	$74	$194

Overall

All of the previously discussed results can be found in Table 1. The first cohort of high

school students to experience four years of a Texas universal ESA program would produce 749

fewer felonies and misdemeanors by the time they become 22 years old, resulting in about $7

million in benefits to society by 2025. The cumulative social benefits would amount to $74

million by the end of 2030 and $194 million by the end of 2035.

Table 2: Alternative Projected Cumulative Social Benefits with ESA in Texas

	2025	2030	2035
Cumulative Persisting Participants	118,800	360,103	529,080
Δ Felonies	314	3,329	8,962
Social Benefits from Reduced Felonies (Millions)	$9	$95	$255
Δ Misdemeanors	435	4,607	12,401
Social Benefits from Reduced Misdemeanors (Millions)	$1	$8	$22
Δ Felonies and Misdemeanors	749	7,936	21,364
Total Social Benefits (Millions)	$10	$103	$277

Alternative Estimates

The previously discussed results all rely on extremely conservative assumptions about the

social costs of crimes and the enrollment growth rate. Table 2 illustrates our overall results which

may rely on more realistic assumptions. To be more aligned with the previous literature, we

assume the average cost of a felony to be $28,500 and the average cost of a misdemeanor to be

$1,750. Additionally, we assume that the annual growth in school enrollment is equal to Texas'

historical average of 1.6 percent.

The first cohort of high school students to experience four years of a Texas universal ESA program would produce 749 fewer felonies and misdemeanors by the time they become 22 years old, resulting in about $10 million in benefits to society by 2025. The cumulative social benefits would amount to $103 million by the end of 2030 and $277 million by the end of 2035.

Conclusions and Policy Recommendations

Our results indicate that enacting a universally available Education Savings Account program in Texas could have large benefits tied to crime reduction. Like all policy forecasts, ours is based on some assumptions. We assume that the percentage point reductions in criminal activity that result from this program will mirror those found for the voucher program in Milwaukee. We also assume that the estimates for the social costs of criminal activity by McCollister, French, and Fang (2010) and Levine and Siegel (2011) are accurate. Although we see no reason to doubt these assumptions, we make several attempts to mitigate their impact. We report 95 percent confidence intervals of our results to provide a range of possible outcomes and use conservative estimates for several important variables. While the public school enrollment has been increasing by about 1.6 percent each year, we assume a growth rate of only 1 percent. Even though the program would be universal, we assume a slow growth rate in student participation each year. We also use a much lower estimate of the social cost of a felony than the literature suggests and assume that each criminal only commits a total of one crime.

Our best, conservative estimate is that the state of Texas would save $194 million in social costs by 2035 due to the crime-reducing effects of a universal ESA program launched in 2017. As the saying goes, "crime doesn't pay," but preventing crime through school choice clearly would pay off for Texans.

About the Authors

Corey A. DeAngelis is a Distinguished Doctoral Fellow in the Department of Education Reform at the University of Arkansas in Fayetteville. A native Texan, he earned Bachelor's and Master's degrees in Economics from the University of Texas at San Antonio, in both cases Summa Cum Laude. His research interest is in market-based reform of the education system.

Dr. Patrick J. Wolf is a Distinguished Professor of Education Policy and 21st Century Endowed Chair in School Choice at the University of Arkansas in Fayetteville. He mainly leads or assists with rigorous longitudinal evaluations of private school voucher programs. He received his Ph.D. in Political Science from Harvard University and previously taught at Columbia and Georgetown.

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Appendix

We use data from table 203.20 from the *Digest of Education Statistics* in order to estimate the current fall 2017 student enrollment in Texas.[3] We use a conservative student growth estimate of 1 percent per year to forecast elementary and secondary public school student enrollment in Texas from 2018 to 2027. Actual elementary and secondary public school student enrollment grew at a rate of 1.6 percent per year from the fall of 2008 to the fall of 2013.

To estimate the number of overall program participants in a given year, *i*, who will participate in the choice program throughout high school, we use the following formula:

$$RelevantParticipants_i = PublicEnroll_i * ParticipationRate_i * 0.44$$

Where *PublicEnroll*$_i$ is the total number of students enrolled in public schools in Texas in year i and *ParticipationRate*$_i$ is the percent of public school students who choose to participate in the ESA program. We assume that 5 and 10 percent of public school students will participate in the program in years one and two, respectively. Both the DC Opportunity Scholarship Program and the Milwaukee Parental Choice Program experienced such participation rates when the DC program was launched in 2004-05 and when the Milwaukee program was expanded to include religious schools in 1998-99 (Wolf et al., 2008; Wolf, 2012). We assume a steady growth in the participation rate of one percentage point for each additional year of the program after year two.

Since the results of our prior study apply to the students who remained in the choice program throughout high school (44 percent of the students), we multiply the product of the first two variables by 44 percent. By doing this, we are making the conservative assumption that the other 56 percent of students who leave the choice program prior to graduation will experience no program effect on their propensity to commit crimes.

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[3] Institute of Education Statistics, National Center for Education Statistics. 2016. "Table 203.20. Enrollment in public elementary and secondary schools, by region, state, and jurisdiction: Selected years, fall 1990 through fall 2025." Accessed August 2016.

To estimate the expected crime reduction from 2017 to a given time period, i, we use:

$$CrimeReduction_{ij} = TotalPersist*CrimeChange_j$$

Where the outcome of interest, *CrimeReduction*, is the number of crimes reduced for all students who participated in the program continuously from the year 2017 to the future year, i, for a given type of crime, j. This reduction amount is calculated for felonies and misdemeanors separately in our analysis. The variable, *TotalPersist*, is the total number of students who persisted through the ESA program for at least four years and had turned at least 22 years old by year i. This allows us to report results for all of the persisting students who were previously enrolled in the program, who have exited the program as adults. The last variable, *CrimeChange*, is the percentage point reduction in the likelihood that a given student will commit a certain type of crime, j. Since we assume that the percentage point reductions in Texas will be equal to the reductions in Milwaukee, this variable takes on the value 3.44 percentage points (79 percent) for felonies and 4.76 percentage points (66 percent) for misdemeanors.

To estimate the reduction in social costs tied to the reduction in felonies and misdemeanors, we use the following formula:

$$SocialCostReduction_{ij} = CrimeReduction_i*CrimeCost_j$$

Where the dependent variable of interest, *SocialCostReduction*, is the total reduction in social costs up until a given year, i, that are related to a given type of crime, j. *CrimeCost* is the monetary estimation of the average social cost of the two different types of crime, j.

We use the results from McCollister, French, and Fang (2010) in order to estimate the average social cost of a single felony in our sample. If we exclude their estimates for the top two harmful types of felonies (murder and sexual assault), the average felony is still estimated to be

about $28,500. We choose to use a more conservative estimate of $20,000, which is about 30 percent lower.

In order to estimate the average social cost of a single misdemeanor in our sample, we use results from a report issued by the Police Reform Organizing Project (PROP) which states that each misdemeanor, on average, costs society about $1,800. Instead, we use a slightly lower estimate of $1,700. We should note that these social costs are for a single felony or misdemeanor.

Our analysis uses estimates based on reduction in the likelihood that students will commit any felonies or misdemeanors. We assume that the students who will commit any felonies or misdemeanors will only commit one. Since it is likely that at least some of these students will commit two or more crimes, our social cost estimates may be a lower bound of the true impact.