



Poverty in Texas: Financial Impact from ESAs

by Michael Q. McShane

Abstract

If Texas were to institute a universal Education Savings Account (ESA) program, Dr. Patrick Wolf of the University of Arkansas argues that by 2022 it would generate an additional 11,809 high school graduates. Having more high-school educated students would be good for Texas. These individuals would, on average, make more money (and thus pay more in taxes), be less likely to get into contact with the criminal justice system or end up on public assistance, and would live longer, healthier lives. This paper looks into the long term fiscal effects of the rise in the number of high school graduates from the program. In total, it estimates over \$5 billion in benefits shared by participants of the program and society at large.

Introduction

Increasing the high school graduation rate from around 10 percent in 1910 to 75 percent by 1980 was one of the great drivers of American prosperity in the 20th century.¹ As we emerged from World War II with almost all of the other great economic powers of the world still reeling from its devastation, we were primed and ready to go with an educated workforce and an economy ready to take off.

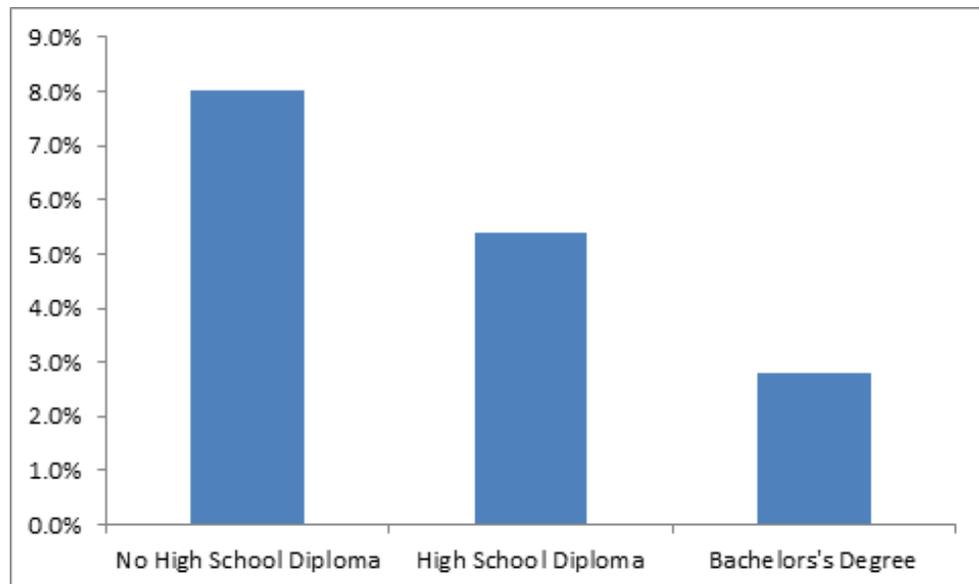
As that economy has continued to grow and mature, the need for a high school diploma has only grown. Today, young persons who fail to finish high school are almost certainly destined to a less prosperous and fulfilling life than they would have had if they had successfully graduated.

The data bear this out. **Figure 1** shows the Bureau of Labor Statistics' (BLS) unemployment rate calculations for 2015, broken down by level of educational attainment. While those with a bachelor's degree saw only a 2.8 percent unemployment rate and those with a high school diploma

Key Points

- A universal ESA program in Texas could generate an additional 11,809 high school graduates by 2022.
- This increased graduation rate could result in \$5 billion in economic benefits to ESA participants and society as a whole.
- Indirect benefits to the community—higher tax revenues, less dependence on public assistance, and less crime—are estimated at \$1 billion.
- DC's Opportunity Scholarship Program, which cost at the time about \$70 million per year, was estimated to yield \$183 million in economic benefits, or \$2.62 per dollar spent.

Figure 1- Unemployment rate (2015) by educational attainment.



Source: [Bureau of Labor Statistics](#)

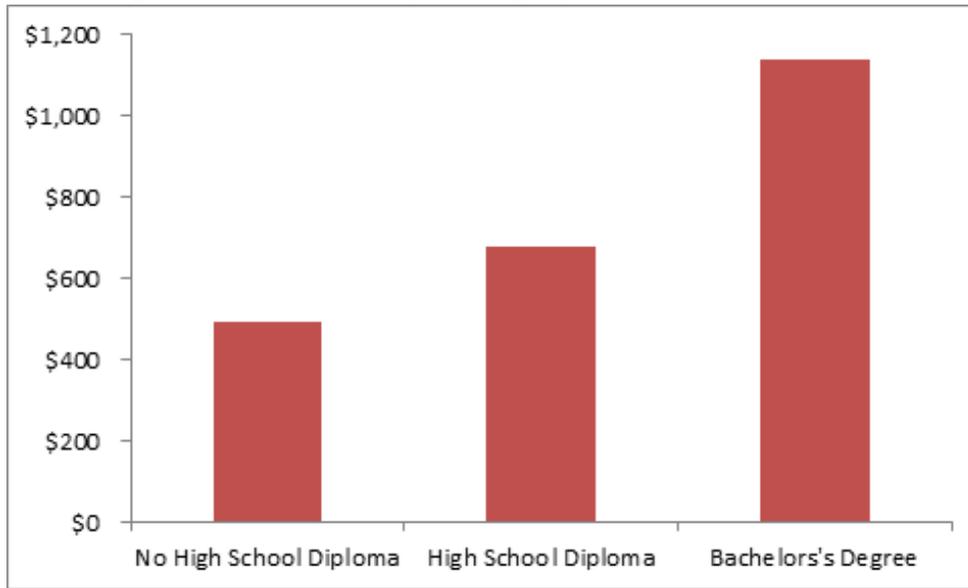
saw a 5.4 percent unemployment rate, those without a high school diploma saw an 8 percent unemployment rate, almost twice the rate of all workers (which was 4.3 percent).²

But it is not just employment or unemployment. The same BLS dataset that created **Figure 1**

also tracks median weekly earnings. Just like we saw in the unemployment rate, higher levels of educational attainment translate into higher earnings. **Figure 2** displays these results, with the median usual weekly earnings being \$1,137 per week for a bachelor's degree holder, \$678 per week for a high school graduate, and only \$493 per week for a high school dropout.³ In a 50-week work year, earnings for a high school dropout only add up to \$24,650, just a hair over the poverty rate for a family of 4 in Texas, which comes in at \$24,008.

In Texas specifically, the U.S. Census Department tracks the poverty level by educational attainment. Given what we already know, it shouldn't come as a surprise that Texans over the age of 25 with less than a high school diploma see a poverty rate nearly double that of high school graduates and over seven times that of college graduates, as **Table 1** shows.

Figure 2 - Median Weekly Earnings by Educational Attainment



Source: [Bureau of Labor Statistics](#)

Individuals with higher levels of education, on average, make more money, live longer, healthier lives, and are less likely to have negative experiences like getting arrested or ending up on public assistance. The research on this is clear and convincing. As Patrick Wolf pointed out in his paper that estimated the increased graduation rate,⁵ economists Ana

Ferrer and W. Craig Riddell have determined that a high school diploma leads to lifetime income that is 9 to 13 percent higher.⁶ And Cecelia Rouse, former chair of President Obama's Council of Economic Advisors, has calculated that a high school diploma is worth about a 16 percentage point difference in employment and \$12,000 per year in income, which translate to \$260,000 in earnings (and \$60,000 in state and federal taxes) over a working lifetime.⁷

But it isn't just about earnings. High school graduates tend to work less physically demanding jobs and have healthier habits, leading to, on average, a life 9.2 years longer than the average dropout.⁸ Economists Lance Lochner and Enrico Moretti also estimated that graduating from high school has a powerful effect on criminal behavior, as students with more options for employment see less need or desire to commit crimes. They are also less likely to be victims of crime.⁹

Table 1 - Texas Poverty Rate by Educational Attainment, 2014 ⁴

EDUCATIONAL ATTAINMENT	Total Number	Number Below Poverty Level	Percentage Below Poverty Level
Population 25 years and over	16,091,951	2,115,830	13.10%
Less than high school graduate	2,911,017	854,954	29.40%
High school graduate (includes equivalency)	4,026,629	603,369	15.00%
Some college, associate's degree	4,725,260	470,442	10.00%
Bachelor's degree or higher	4,429,045	187,065	4.20%

Source: [Bureau of Labor Statistics](#)

So What Does This Have to Do with an ESA Program?

Students who successfully graduate high school, on average, lead better lives than those who don't. They are richer, they are healthier, they are safer, they are more prosperous. Therefore, educational policies that increase high school graduation rates are likely to increase the prosperity of the children who take advantage of them.

Enter school choice. One of the clearest, demonstrable links between private school choice programs and education outcomes is the increase in high school graduation rates. In the four quality studies that have investigated the question, all have found positive benefits for some or all participating students. The largest gains were seen in Wolf et al.'s study of the DC Opportunity Scholarship Program that saw a 12 percentage point graduation rate difference between lottery winners and lottery losers and a 21 percentage point difference when looking at scholarship users and non-users.¹⁰ Cowen et al.'s study of Milwaukee found a more modest 4- to 7-point graduation rate advantage for scholarship students,¹¹ while John Robert Warren's 2011 study of Milwaukee found a slightly stronger 12 percentage point advantage.¹² The final qualifying study, Matt Chingos and Paul Peterson's examination of a private scholarship program in New York City, didn't find a statistically distinguishable result for the entire sample of students, but it did find positive results for African-Americans, who saw an 8 percentage point boost.¹³

Dr. Wolf and I were able to complete a cost/benefit analysis of the DC Opportunity Scholarship Program, relying on the returns to increased high school graduates as the primary economic benefit. We estimated that there were 421 additional graduates in Washington, D.C., created by the program. We combined the work of the various economists who have estimated the financial returns to a high school diploma and concluded that the average high school graduate sees \$347,519 in accrued benefits throughout the course of their life as a result of their diploma, and society writ large sees \$87,240 in benefits. Putting all of these numbers together means that the DC Opportunity Scholarship Program, which cost at the time about \$70 million per year, should yield \$183 million in economic benefits, or \$2.62 for every dollar spent.¹⁴ That is a significant return.

Dr. Wolf has already projected what a universal ESA program could mean for high school graduation rates in the state of Texas, so to estimate the financial benefits of that program, we just have to do some simple arithmetic. If we

take the projected number of new graduates as a result of the program and multiply that number by the expected benefits of graduation, we can get some idea as to the financial impact. This paper uses the same method that the above paper on the DC Opportunity Scholarship Program used, which was vetted and approved by blind peer reviewers associated with *Education Finance and Policy*, one of the top journals in education finance and policy.

Estimating the Financial Benefit of a Universal ESA Program in Texas

Having dispensed with our analytic framework, it's time to do some math. Using the estimates of financial benefit from Dr. Wolf's and my peer-reviewed journal article,¹⁵ and Dr. Wolf's estimates of the increased number of graduates, we can come up with a projection of how much more money program participants will earn and appreciate as a result of the program. We can also estimate how much the better lives those participants will live will impact the finances of their community. **Table 2** spells out the numbers.

Table 2 - Financial Impact Projections for Hypothetical ESA Program in Texas

Additional Number of Graduates	11,809
Graduates X \$347,519 (Private Benefit)	\$4,103,851,871
Graduates X \$87,240 (Public Benefit)	\$1,030,217,160
Total Benefit (Public + Private)	\$5,134,069,031

With 11,809 new graduates as a result of the program, those individuals would see over \$4 billion in combined benefits in terms of higher wages and longer and healthier lives. Those longer, healthier, and more prosperous lives would have knock-on effects in the community—higher tax revenues, less dependence on public assistance, and less crime—to the tune of over \$1 billion.

As Yogi Berra is quoted as saying, "It's tough to make predictions, especially about the future." To encourage responsible analysis, this paper includes some brackets around the potential effects of the hypothetical ESA program. In our "Juice"¹⁶ paper, Dr. Wolf and I used both other economists' and our own modifications of the various discount and growth rates that are part of making long-term financial calculations like these to create upper and lower bound estimates of the financial effect of graduation. At the low end, the private return

to a high school diploma is only \$157,074, and the public benefit is only \$53,341. While a total return of \$210,415 per person is nothing to sneeze at, it is less compelling as a result than our central estimate. On the high end, however, with strong growth, and particularly higher estimates of the health benefits of a high school education, the total private benefit is a whopping \$775,930. Combined with a public benefit of \$117,256, we see a total higher bound estimate of \$893,186. This is a substantial number.

To see how these bounds might affect the impact estimates of this program, I multiplied those predicted effects by the predicted number of graduates to turn out lower and upper bounds. I also ran the numbers with Dr. Wolf's graduation projections plus and minus 10 percent (so 12,990 and 10,628 graduates respectively) to get an even wider set of possible

According to the data presented in **Table 1**, 29.4 percent of Texans without a high school diploma live in poverty while only 15 percent of Texans with a high school diploma do. This means that, in rough terms, the 11,809 graduates that the proposed ESA program would create would be moving from a 29.4 percent likelihood of being in poverty to a 15 percent likelihood. Working out the math, that would mean that, absent the program, 3,472 of those individuals would be expected to live in poverty. With the program, only 1,771 would be, meaning that the program could be expected to lift around 1,701 people from below the poverty line to above it.

In the context of the entire state, 1,771 individuals might not be a large number, but in real human terms, that is a large and meaningful difference in the lives of those 1,771 people.

Table 3 - Alternate Scenario Financial Impact Projections for Hypothetical ESA Program in Texas

	Amount	Number of Grads -10%	Central Estimate	Number of Grads + 10%
Lower Bound Return Estimate (Private)	\$157,074	\$1,669,382,472	\$1,854,886,866	\$2,040,391,260
Lower Bound Return Estimate (Public)	\$53,341	\$566,908,148	\$629,903,869	\$692,899,590
Total Lower Bound Estimate	\$210,415	\$2,236,290,620	\$2,484,790,735	\$2,733,290,850
Central Estimate (Private)	\$347,519	\$3,719,800,000	\$4,103,851,871	\$4,546,500,000
Central Estimate (Public)	\$87,240	\$924,636,000	\$1,030,217,160	\$1,130,130,000
Total Central Estimate	\$434,759	\$4,620,618,652	\$5,134,069,031	\$5,647,519,410
Upper Bound Return Estimate (Private)	\$775,930	\$8,246,584,040	\$9,162,957,370	\$10,079,330,700
Upper Bound Return Estimate (Public)	\$117,256	\$1,246,196,768	\$1,384,676,104	\$1,523,155,440
Total Upper Bound Estimate	\$893,186	\$9,492,780,808	\$10,547,633,474	\$11,602,486,140

outcomes. **Table 3** displays all of these results.

At the absolute lowest end (lower than predicted graduation rates and lower than predicted returns to a high school diploma), we see the financial benefit of this program only in the \$2.2 billion range. At the opposite end (with higher than predicted graduation rates and higher than predicted returns to a high school diploma) we see a total benefit of over \$11.6 billion.

Estimating the Effect on Poverty Rates

Texas is a large state. Making meaningful movements on statewide indicators like the poverty rate is an enormous undertaking, but just because we recognize that fact, we should not lose sight of the meaningful improvements to the quality of individuals' lives that becoming more educated and climbing out of poverty might have.

College Readiness

In addition to simply examining high school graduation rates, it is important to think about student success in higher education after graduation. As Dr. Matthew Ladner has argued, while Texas' graduation rate is on the rise, its "Achilles' heel" (to borrow his term) is college readiness.¹⁷ As Ladner points out:

Texas ACT scores indicate that only 13 percent of Hispanic students, 8 percent of black students, and 41 percent of Anglo students are college ready. Although Hispanic students now constitute a majority population of Texas public schools, only 19 percent of Hispanic and black students are proficient or better in reading according to the National Assessment of Educational Progress.

Even if these students are graduating, they are not ready to succeed in college. If an ESA program could both increase

the graduation rate and ensure that those students were ready for college, the monetary gains in increased income (and the knock-on effects of that income on taxes, the economy, and the rest of the community) would be even larger than the estimates that I have made here. With respect to the number of Texans living in poverty, only 10 percent of Texans with some college live in poverty and only 4.2 percent of Texans who have at least a bachelor's degree live in poverty. Should any of the new graduates created by this program go on to have success in college, that would only serve to increase the value of the figures provided here. In this way, the estimates solely looking at the high school graduation rate likely underestimate the full financial effect of the program.

Conclusion

Some analyses are harder than others. When benefits to programs are unclear or hard to quantify, it can be a challenge to assign positive or negative impacts to a given intervention. When it comes to graduation though, and programs that have a clear, demonstrable effect on graduation, the analysis gets much simpler. Estimates of the positive effects of high

school graduation have been calculated by economists from across the political spectrum, and are buttressed by macro-level trends in employment, earnings, and poverty rates. Individuals with high school diplomas do better in life than those without them. They make more money, they live longer, they are less likely to commit or be the victim of crimes, and they are less likely to end up on public assistance.

The proposed ESA program would create a substantially large number of new graduates. These graduates will, on average, experience the benefits outlined above, and those benefits can be quantified. Looking right at the center of the various estimates offered in this analysis, we see a total benefit to the people of the state of Texas, to both the individual students who participate and their fellow community members, of \$5.13 billion. Even more conservative estimates point to over \$2 billion in benefits.

Even in a state the size of Texas, \$5 billion is a lot of money. Programs that can generate such a return are definitely worth our consideration. ★

Endnotes

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¹⁴Patrick J. Wolf, and Michael McShane. "Is the Juice Worth the Squeeze? A Benefit/Cost Analysis of the District of Columbia Opportunity Scholarship Program." *Education Finance and Policy* 8, no. 1 (Winter 2013): 74-99.

¹⁵Patrick J. Wolf, and Michael McShane. "Is the Juice Worth the Squeeze? A Benefit/Cost Analysis of the District of Columbia Opportunity Scholarship Program." *Education Finance and Policy* 8, no. 1 (Winter 2013).

¹⁶Ibid.

¹⁷Matthew Ladner, "[The Achilles Heel of Texas: Improving College Eligibility Rates Through K-12 Education Savings Accounts](#)," Texas Public Policy Foundation (September 2016).

About the Author



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