



AMERICAN FEDERATION *for* CHILDREN

School Choice Competition vs. New Education Spending

Estimating the Academic Benefits for Public School Students

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EXECUTIVE SUMMARY

How should states invest limited education dollars to raise student achievement at scale? This research synthesis compares two approaches in the context of the state of Florida: scaling their private school choice program, which introduces competitive pressure on public schools, versus increasing K-12 education spending directly. Drawing on the most rigorous evaluation of the competitive effects of private school choice to date – a fifteen year study of Florida’s tax credit scholarship program by Figlio, Hart, and Karbownik (2023) – and the leading meta-analysis of the effects of additional school spending on student achievement by Jackson and Mackevicius (2024), I estimate the relative return on investment of each approach for **public school students**.

The results are striking: scaling the tax credit scholarship program from 15,000 to over 100,000 students produced achievement gains for public school students that were – conservatively – over **11x larger** than if that same funding had been used to increase state K-12 education budgets instead. Critics warned that expanding the state tax credits available to fund private school scholarships would come at the expense of public schools across the state. The best evidence we have suggests otherwise. Florida’s policy environment benefited both public and private school students, as the effects of competition created a return on investment an order of magnitude larger than simply spending more. Creating and growing private school choice in Florida significantly moved the needle, and did so at scale. Policymakers in states considering how to effectively allocate education dollars should view school choice not only as a way to create options for students who need them, but also as a system-level intervention which improves outcomes for all students across the state.

KEY FINDINGS

11.2x More Cost Effective

Scaling the Florida Tax Credit Scholarship Program produced achievement gains for public school students over eleven times larger than equivalent K-12 spending increases.

Total Cost of \$127 / Public school Student / Year

In contrast, to achieve the same effect size via increased spending, education budgets would have needed to increase by \$1,423 per student per year. Over fifteen years, that is \$2.84 Billion vs. \$31.8 billion.

The True Return On Investment is Likely Larger

This analysis makes several conservative assumptions, likely understating the true makes effect of competition. It does not include equilibrium effects (i.e., any competitive effect shared by public school students in both high and low competition areas), cost savings to the state when students switch from public to private schools, or the well- documented tendency for education interventions to produce smaller effects at scale, which would cause spending increases to produce smaller effects than the meta-analytic average. In contrast, this did not happen with competitive effects in Florida, as the strength of the effect grew with program size.

INTRODUCTION

Over the past two decades, Florida has built the most extensive school choice education system in the country. Beginning with a modest tax credit scholarship program that served 15,000 private school students in the 2002-03 school year, there are now over half a million students enrolled in Florida's programs. At its inception, only students from higher-poverty households were eligible. In stark contrast, the current Empowerment Scholarship education savings account (ESA) program is open to any K-12 student in the state.¹ As of 2020, there were no states with so-called universal school choice programs open to all students. With the passage of the \$1 billion Texas Education Freedom Account program in the spring of 2025, there are now seventeen.

With such tremendous growth in a short period of time, many education advocates have asked: how has scaling this program from a small, targeted scholarship program designed primarily for low-income students to a large, statewide program affected students in the traditional public schools? And how might that impact compare to the often proposed counterfactual – that state governments spend those same resources on increasing funding for public education? Is scaling school choice an effective use of taxpayer funds? To this point, little to no evidence exists on the relative return on investment of these approaches.

This research synthesis provides the first substantive answer. It brings together new research on the competitive effects of school choice and research on the effects of school spending to address this important question. I estimate the return on investment that Florida saw for its public school students' achievement growth as compared to the achievement growth we might have expected if Florida had instead pursued a more traditional strategy of increasing public school expenditures. Using the highest quality research findings in both areas, I find that scaling the Florida Tax Credit Scholarship program resulted in achievement gains for public school students that were at least **11 times larger** than what the best school spending research would predict if that same funding were instead used to increase general K-12 education spending. In contrast to the fearful predictions of some that this scholarship program would destroy public education, this apples-to-apples comparison demonstrates that it instead proved to be an incredibly cost-effective method of raising public school achievement, particularly at scale.

CUMULATIVE COST TO PRODUCE THE SAME ACHIEVEMENT GAIN

What would it cost to match the FTC Scholarship competitive effect (~120 days of additional learning) for the same number of public school students over the same 15 year period?



Calculations based on Figlio et al. (2023) competitive effect (0.166 SD, reading, 15 years) and Jackson & Mackevicius (2024) spending effect (0.0079 SD per \$1,000/pupil/year in 2018\$). 11.2x ratio uses counterfactual of students in K-12 schools in Florida facing above-median competition (22.4M student-years). Per-pupil figures are annual averages over 15 years in 2018 dollars. See Supplementary Calculations spreadsheet.

THE SCHOOL SPENDING APPROACH – THE IMPACT OF INCREASING FUNDING FOR PUBLIC EDUCATION

A large body of evidence now supports the emerging consensus that increased school funding leads to improved student outcomes on average. In a recent meta-analysis of 31 studies across the country, Jackson and Mackevicius (2024) found that over 90% of high-quality, plausibly causal studies found positive effects from additional K-12 spending.² In many ways, this finding is not surprising; we should perhaps expect that access to more resources will help students achieve at higher levels. However, while these effects were generally positive, they remained substantively quite modest in return for the cost. The authors of this meta-analysis concluded that an additional \$1,000 per pupil per year generated about one third of a percentile of additional growth (.008 SD) in standardized test scores. Roughly translated to days of learning, this is approximately 5-6 more days of learning for every \$1,000 spent per pupil per year in 2018 dollars. A contemporaneous review of the school spending research by professor Eric Hanushek – a longtime skeptic of the efficacy of school spending to meaningfully increase academic achievement – also found that students typically score better when they receive more funding, though he emphasizes that how those funds are used matters tremendously for whether the result of the intervention is positive.³

If allocated well, general spending increases can work, albeit at a large cost for very modest improvements in test scores. The magnitude of this modest effect was most recently illustrated by the impact of increased school spending during the COVID-19 pandemic. The federal government injected an additional \$190 billion into the public school system through the Elementary and Secondary School Emergency Relief Fund (ESSER). These funds were then distributed to states and districts using the Title I formula to recover from the crisis. Despite earmarking only 20% of the funds for academic recovery specifically, the overall test score impacts were almost directly in-line with previous research on the effect of school spending generally. Consistent with the Jackson and Mackevicius (2024) meta-analysis, the effect of federal pandemic relief funding (ESSER) on student test scores also found estimates in the range of .005 to .009 of a standard deviation increase per \$1,000 spent per pupil.^{4 5}

More troublingly, several academic recovery efforts undertaken by districts in the wake of the pandemic demonstrated almost zero return on investment. For example, the efforts of four large districts to remediate pandemic related learning-loss illustrates the challenges faced in deploying extra funding for increased learning gains. Researchers found that ESSER funds deployed for extra tutoring and small-group instruction at scale resulted in no detectable effects – students remained over half a year behind in math and more than a third of year behind in reading in 2022 (as compared to their grade level peers in 2019).⁶ Researchers studying the impacts of ESSER funding overall concluded that it would take an additional \$450 to \$650 billion (or an extra \$9,000 to \$13,000 per student) just to return students to pre-pandemic (2019) levels of achievement if using the increased spending method.⁷ For context, the total amount spent on private school choice programs around the country – which now fund over 1 million students – is approaching \$10 billion as of the 2024-25 school year. Advocates of the increased school spending approach have yet to fully grapple with the implications of this research for the practical realities facing state and federal budgets.

THE SCHOOL CHOICE COMPETITION APPROACH – SCALING THE FLORIDA TAX CREDIT SCHOLARSHIP PROGRAM

After three decades of research, a now large body of evidence has examined the introduction and expansion of private school choice programs on the test scores of public school students. At least twenty-nine studies have examined the competitive effects of school choice: 26 found positive effects, 1 found no effect, and only 2 contained any negative effect.⁸ The largest meta-analysis on the subject also found positive effects of competition from private school choice at the school level.⁹ Beyond the shorter-run outcomes like test scores, there is now evidence that these competitive effects extend to long-run outcomes like college enrollment and graduation as well. A recently published study on the Ohio EdChoice program found that students in public schools whose students were deemed eligible for the voucher program enrolled in college and graduated with a bachelor's degree at higher rates than students in public schools that were narrowly ineligible for the EdChoice voucher.¹⁰ Despite voices in the public debate who forecast that these programs would harm students who remained in traditional public schools, the competitive effect research literature does not support that conclusion. Instead, the introduction of competitive pressure and accountability helped create the conditions for systemic improvement for students who remained behind.

A 2023 paper examining the competitive effects of private school choice in Florida is the most methodologically rigorous paper to examine these effects at scale.¹¹ Most studies of the competitive effects of voucher programs rely on data on relatively small voucher programs and cover only a few school years. In contrast, Professor David Figlio and his co-authors studied Florida's tax credit scholarship program over the program's first fifteen years, capturing its creation and expansion. This study covers the time period of 2003 to 2017, during which the FTC scholarship program grew an initial enrollment of just over 15,000 students to nearly 110,000 by the 2017-18 school year.¹² This rapid growth was enabled by a statutory escalator provision included in the FTC program's law. Every year in which the amount of tax credits claimed passed the threshold of 90% of the cap, the cap automatically increased by 25% the following year to fund additional student demand. Student eligibility for the program was limited to those from families making less than 185% of the federal poverty line (~\$43,000 for a family of four in 2001), which is the standard used to qualify for the federal Free and Reduced Price Lunch program. This income eligibility threshold increased slowly over time to less than 260% of the federal poverty level by 2017. Due to demand, nominal funding for tax credits rose from approximately \$50 million in 2003 to \$539 million in 2017. Despite this growth, enrollment in the FTC scholarship program represented just 3.6% of public school enrollment by 2017.¹³

By linking detailed state birth records to student-level public school records, they analyzed outcomes for Florida public school students exposed to higher levels of competition across this time period. To identify which public school students this program primarily affected, the authors created a competitive pressure index which contains information on the proximity, density, enrollment, and diversity of options of private schools in the local area surrounding each public school. They then split the state by schools in areas with above- and below-median levels of competition. Because schools in

areas of higher competition are typically in more densely populated areas, the total number of students in schools exposed to above-median levels of competition represents 55.8% of public school students across the state. Using quasi-experimental methods, they found that the scaling up of Florida's school choice program produced test score and behavioral benefits for these students in nearby public schools.

Over time, the magnitude of the test score effects became quite large. After fifteen years, students in schools with above-median competition were 120 days of learning ahead (.166 SD) in reading, or two-thirds of a school year. Importantly, this effect was even larger for low-income public school students. These students were over 140 days of learning ahead (.196 SD) after only twelve years of competition with the tax credit program.¹⁴ This is arguably a conservative estimate of the program's impact as well. Minimally, any average effect of competition on all schools (above and below median) are not captured by the study design. Beyond test scores, schools facing more competition also had lower student suspension rates and fewer student absences. The researchers conclude that these positive effects are policy relevant, particularly given the number of students exposed to this competitive effect.

There are several plausible mechanisms driving the results found in the competitive effects literature. The most theorized mechanism is a direct competitive response: when public schools face the prospect of losing students and the state per-pupil funding attached to their attendance, they have incentives to improve. As a result, schools may allocate resources more efficiently, become more responsive to parent concerns, adopt new instructional strategies, invest in teacher development, or differentiate their educational offerings to better attract and retain families. In a system where families previously had little say in where their child attended school, introducing even a modest degree of choice can fundamentally alter the incentive structure facing school and district level leaders.

In one of the best studies of this school-level response to competition and increased accountability in Florida, researchers surveyed a census (i.e., nearly every) elementary school principal in the state in 2002 and 2004. Using data from before and after the adoption of the tax credit scholarship program, they found that public school elementary principals in schools receiving an "F" grade in Florida's accountability system made meaningful changes to their instructional policies and practices.¹⁵ Schools whose student population became eligible for the scholarship program focused their resources on helping low-performing students, lengthened instructional time through practices such as extended school days, after-school tutoring, and summer programs, reorganized school scheduling and procedures to increase efficiency, and increased collaborative planning time for teachers. These policy changes explained a portion of the reading and math gains observed at the time and persisted into middle school as well, providing evidence for the longevity of competitive effects.

Student movement also creates new combinations of grade level peers across sending and receiving schools. For example, in an evaluation of Indiana’s voucher program, students with a history of disciplinary incidents disproportionately transferred to private schools using the program as compared to demographically similar students from their same public school.¹⁶ In the first fifteen years of the Florida tax credit scholarship program, students from low-income families (as measured by Medicaid status at birth) and children of immigrants disproportionately switched into private schools using the scholarship, creating a small but notable shift in the demographics of public schools.¹⁷ Contrary to popular narratives about voucher programs as “cream skimming” the best students from public schools and leaving the harder to educate students behind, these studies provide evidence that parents select out of public schools for a reason. More specifically, moving schools can be a challenging and difficult process usually only undertaken if parents believe there is a strong need for an improved fit for their child socially, behaviorally, or academically. Creating that better match would then improve classroom environments for their former public school classmates and benefit the student utilizing school choice. Parents may seek specific curricula, extracurriculars, advanced or remedial course availability, or peer-group changes, which could then contribute to positive academic gains. Additionally, whenever students switch out of public schools using a school choice program, nearby public schools experience modest decreases in average class size, which is also linked to increased student achievement.¹⁸

DATA & METHODS

The student data for this analysis are drawn from longitudinal records of student enrollment available through the National Center for Educational Statistics (NCES) Common Core of Data and the state of Florida Department of Education. Public school enrollment data drawn from the FL Department of Education (FL DOE) Fall Membership counts, which report PreK–12 enrollment as of October of each school year. Over the study period, enrollment ranged from approximately 2,541,814 (2002–03) to 2,817,076 (2016–17) students. Because the FL DOE Fall Membership counts report PreK–12 enrollment rather than K–12, a small adjustment is required. Importantly, the FL DOE counts do not include most Voluntary Prekindergarten students, which are primarily delivered through private providers. Only PreK students enrolled in public preschool programs appear in the data. Based on FL DOE enrollment breakdowns by grade level, these public PreK students constitute approximately 2.2% of total fall membership. Small adjustments are made to remove PreK students from the enrollment counts for this analysis (see Appendix). NCES data are also used as a robustness check in the Supplementary Calculations spreadsheet. The NCES totals are very similar to the FL DOE figures and produce identical cost-effectiveness multipliers across all three counterfactual scenarios (see Appendix, Table 2).

Effect sizes for both the competition and spending approaches are drawn from published research in highly ranked, peer-reviewed journals in economics by leading scholars in both areas.¹⁹ The primary source for the effect size of additional school spending on public school achievement growth is drawn from Jackson and Mackevicius (2024), published in the *American Economic Journal: Applied Economics*. This meta-analysis synthesized 31 studies of the effect of school spending on student achievement, requiring each included study to use a credibly causal identification strategy.²⁰ They report an average effect of 0.0079 standard deviations per \$1,000 per pupil per year, expressed in 2018 dollars. This estimate has become the most frequently cited consensus estimate of school spending effects in the education economics literature and is broadly consistent with recent evaluations of ESSER (pandemic-era) spending, which found effects in the range of 0.0049–0.0086 SD per \$1,000 per pupil.²¹

The primary source for the competitive effect of the Florida Tax Credit (FTC) Scholarship program is Figlio, Hart, and Karbownik (2023), published in the *American Economic Journal: Economic Policy*. In this paper, Figlio et al. linked Florida state birth records to student-level public school administrative records, creating a near-universal panel of public school students in tested grades. For each public school, they created a competitive pressure index based on the proximity, density, enrollment capacity, and diversity of nearby private school options, and classified schools into above-median and below-median competitive pressure areas. Approximately 55.8% of Florida public school students attended schools in above-median competitive pressure areas, based on the ratio of 3,890,161 student-years in above-median schools to 6,971,914 total student-years in the study sample.²² The key finding used in this analysis is the endpoint effect for reading achievement: after 15 years, public school students in above-median competitive pressure areas experienced a 0.166 standard deviation improvement in reading scores relative to students in below-median areas.

Annual funding data for the FTC program were obtained from Figlio et al. (2023). All nominal dollar amounts were converted to constant 2018 dollars using Bureau of Labor Statistics Consumer Price Index for All Urban Consumers (CPI-U) deflators. The cumulative total over the 15-year study period is \$2,837,658,352 in 2018 dollars (approximately \$2.5 billion in nominal terms) to create an inflation-adjusted equivalent to the cost per \$1,000 finding from the Jackson and Mackevicius (2024) school spending paper. The \$2.84 billion represents the cumulative cost of the FTC program and serves as the resource base against which both the competitive effects and the spending counterfactuals are evaluated.

These data are then used to construct three policy counterfactuals, each representing a hypothetical school spending decision the state legislature could have made instead of funding tax credits for the FTC scholarship program. The Supplementary Calculations spreadsheet in the files associated with this research synthesis policy brief document all calculations done to produce the results for this document.

The core of the analysis is a year-by-year calculation: for each year t in the study period (2003-2017), the analysis asks: if the lost revenue due to making tax credits available for the FTC scholarship program that year had instead been distributed as a per-pupil spending increase to the relevant student population, what achievement gain would Jackson and Mackevicius's spending effect imply? For each year t , the effect is calculated in the following way:

$$\textit{Per-Pupil Spending Increase} = \textit{FTC Funding} / \textit{Enrollment}$$

$$\textit{Expected Achievement Gain} = \textit{Per-Pupil Spending Increase} \times (0.0079 / 1,000)$$

The cumulative counterfactual effect is the sum of these annual effects across all 15 years. The effectiveness multiplier is then the ratio of the observed competitive effect (0.166 SD) to the cumulative counterfactual spending effect. Three scenarios are constructed, each distributing the same \$2.84 billion across progressively narrower student populations. These counterfactuals and corresponding student populations are described in the findings, the cost-effectiveness counterfactuals table below, and in the policy brief appendix. All calculations are shown in the Supplementary Calculations spreadsheet. The preferred counterfactual is Counterfactual #2, which takes the cumulative \$2.84 billion spent on the tax credit program over 15 years and instead allocates it to all K-12 students in schools facing above median levels of competition across the state. This is the same treatment group from the Figlio analysis, to which the average competitive effect extends. In this counterfactual, each affected student would receive \$127 more in education funding for fifteen years. This per-pupil spending hypothetical is then translated into effects on student test scores. This creates a cost-effectiveness comparison for the purpose of evaluating which policy produces a higher return on investment.²³

FINDINGS

I find that – over a 15-year period from 2003 to 2017 – making \$2.8 billion available in state tax credits to scale the FTC scholarship program resulted in achievement gains for public school students that were, conservatively, **eleven times larger** than if that tax revenue had instead been spent on increasing revenues for K-12 public school students subject to above median levels of competition. Growing the tax credit scholarship program in Florida improved public school student achievement at scale and did so in a much more cost-effective way than simply increasing the state K-12 education budget. The school choice approach contributed to an additional 120 days of learning – or 2/3 of a school year more – in reading as compared to the 6 additional days of learning via the school spending approach for the same amount of total funding. To achieve that same 120 day test score gain via the school spending approach, it would have **cost Florida a total of \$31.8 billion** over that same fifteen years – more than an order of magnitude more expensive.

COST-EFFECTIVENESS COUNTERFACTUALS

Under three assumptions, how much more effective is scaling school choice over 15 years than increasing education funding by the same amount?

Effect on Public School Population	All K-12 Students	Above-Median K-12 (Preferred)	Above-Median Grades 3-8
INVESTMENT			
Total Program Cost	\$2.84 billion	\$2.84 billion	\$2.84 billion
Public School Student-Years	40.1 million	22.4 million	10.3 million
Per Public School Student Annual Cost	\$71	\$127	\$275
SCALING SCHOOL CHOICE			
Cumulative Impact (SD)	0.166	0.166	0.166
Percentile Points	6.1	6.1	6.1
Days of Learning	~120	~120	~120
EQUIVALENT EDUCATION SPENDING INCREASE			
Cumulative Impact (SD)	0.008	0.015	0.032
Percentile Points	0.3	0.5	1.2
Days of Learning	~6	~11	~23
Cost-Effectiveness Multiplier	20.1×	11.2×	5.2×

Counterfactuals assume the additional funding is only spent on the public school student population identified (all of K-12, above-median K-12, and above-median grades 3-8). Counterfactual #2, which compares scaling school choice to increasing spending only for public school students in K-12 schools facing above-median competition, is the preferred specification because it directly compares the effect on the same underlying student population. Counterfactual #1 spreads funding out to every K-12 student (more than school choice comparison) and Counterfactual #3 spreads it to too few (Grades 3-8 only). The true cost-effectiveness ratio is likely between 11.2× and 20.1×. All dollars adjusted for inflation to 2018. Percentile point conversion uses the Von Hippel (2024) conversion. Days of learning assumes an average of 0.25 standard deviations gained per 180 school days a year (Bloom et al., 2008).

STRESS-TESTING THESE RESULTS

Any policy comparison with results this striking should invite scrutiny. The most natural concern is that somehow the assumptions underlying the analysis inflate the competitive effect found in Florida, particularly the assumptions about relative student achievement between high and low competition schools. Could the competitive effect finding from Florida reflect decline in rural schools over this period rather than real improvement, making urban schools look even better by comparison? Student achievement data from the National Assessment of Educational Progress (NAEP) data allow for a direct test of this concern. During the study period (2003–2017), Florida’s rural students made significant gains on NAEP reading and math assessments across both 4th and 8th grade, outpacing national trends for rural students.²⁴ This pattern is inconsistent with the decline hypothesis. Instead, it suggests that achievement gains were broadly distributed across the state, and that school choice competition accelerated progress in higher-competition areas above and beyond the statewide trend.

FLORIDA VS. NATIONAL NAEP SCORES: CITY AND RURAL

NAEP scale scores over the FTC scholarship program period (2003–2017)



Source: National Assessment of Educational Progress (NAEP), National Center for Education Statistics. City and rural locale classifications.

FLORIDA IN NATIONAL CONTEXT

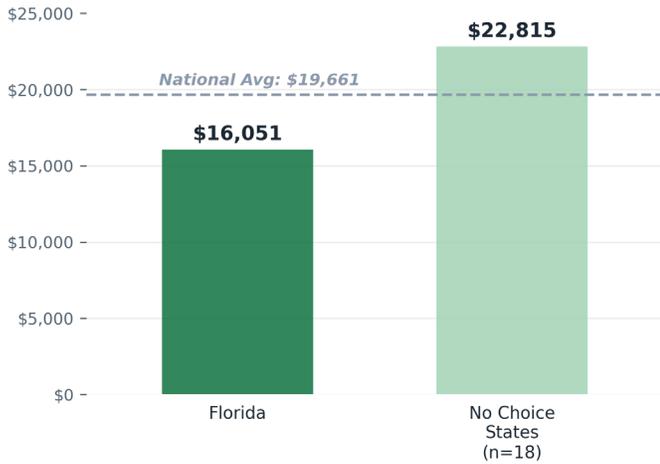
Another concern is that funding school choice must come at the expense of public schools since every dollar directed towards private school scholarships is a dollar taken from the students left behind. What about states that have taken the school spending approach who have allocated significantly more to public education funding over the last twenty years and have not created any private school choice programs? Looking at spending (adjusted for differences between states) across states, Florida spends significantly less per-pupil and has increased its overall education spending much less than both the national average and no-choice states over the past twenty years.²⁵

Despite this resource disadvantage, Florida's students are performing remarkably well. Reading and math scores from the 2024 NAEP (adjusted for between-state student demographic differences), show that Florida's 4th and 8th grade students are outperforming both the national average and no-choice states, perhaps in part because they are also funding private school choice for over 500,000 students as of this school year.²⁶

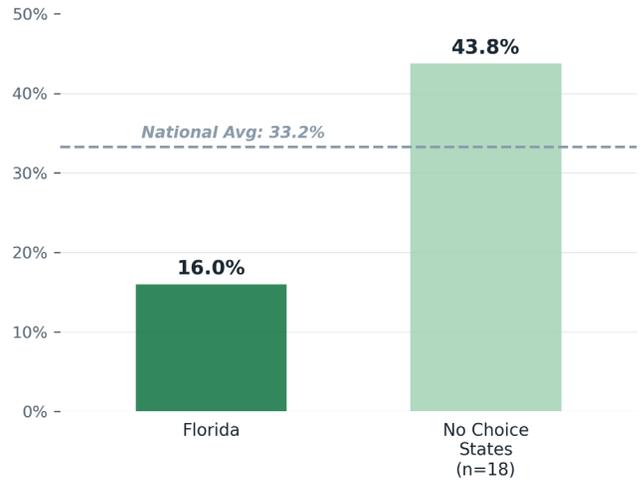
FLORIDA VS. NO-CHOICE STATES

Per-pupil spending (CWIFT-adjusted) and demographically adjusted 2024 NAEP outcomes

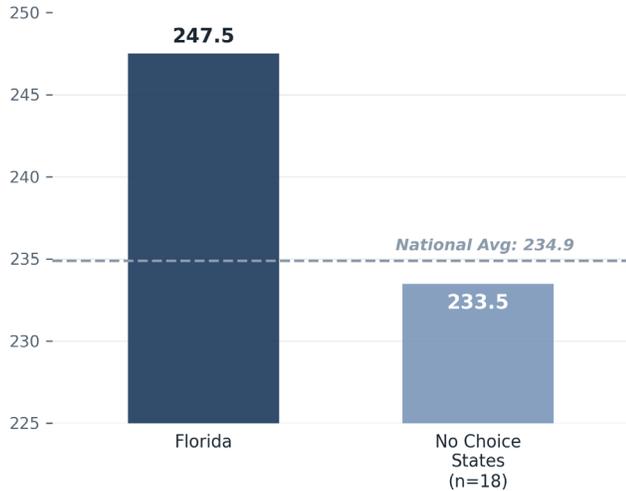
**Per-Pupil Spending (2023)
(CWIFT Adjusted)**



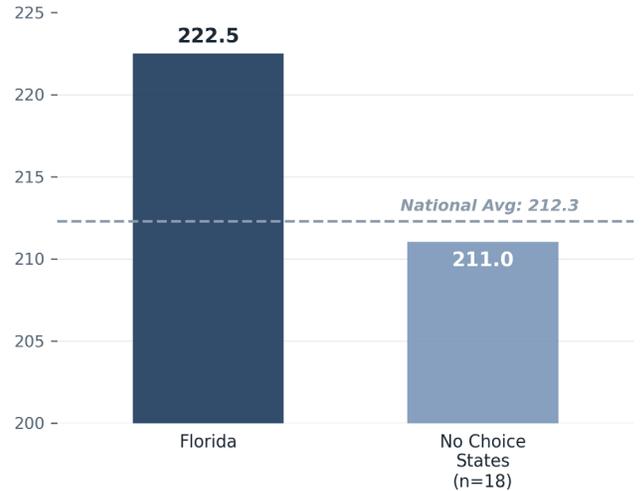
**Spending Growth
(2002-2023)**



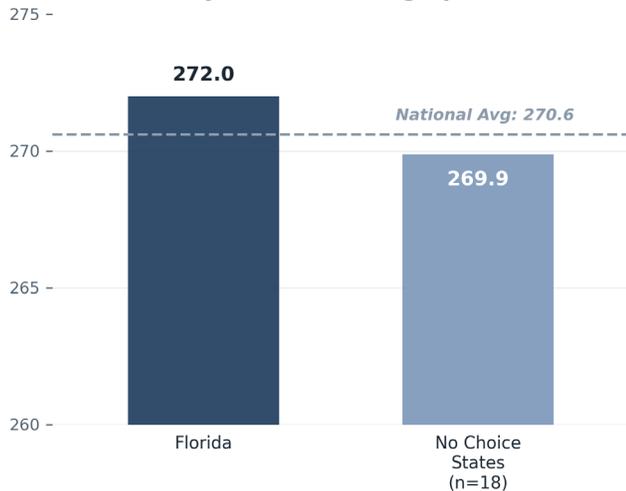
**4th Grade Math
(Adjusted for Demographics)**



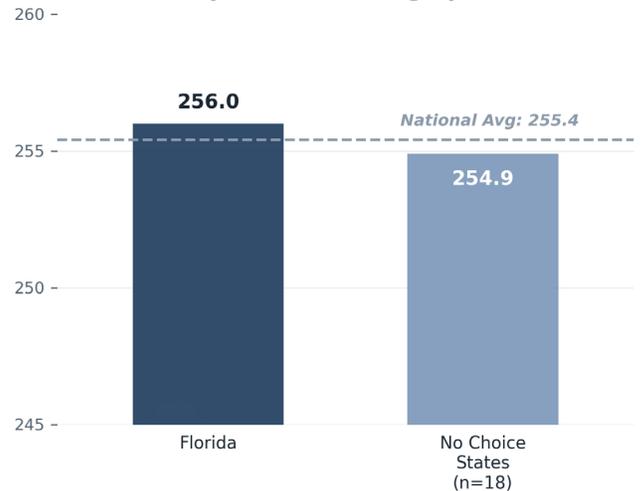
**4th Grade Reading
(Adjusted for Demographics)**



**8th Grade Math
(Adjusted for Demographics)**



**8th Grade Reading
(Adjusted for Demographics)**



Sources: Reason Foundation School Spending Spotlight (spending, adjusted via NCES Comparable Wage Index for Teachers); Urban Institute, America's Gradebook, demographically adjusted 2024 NAEP scores. ~10-12 NAEP points ≈ 1 grade level.

11x IS A CONSERVATIVE ESTIMATE

There are several reasons to believe that the 11.2x cost-effectiveness multiplier understates the true effect of scaling school choice in Florida. First, the Figlio et al. (2023) study measured competitive effects by comparing schools in areas with higher levels of competition to those in lower areas of competition. Therefore, any improvement shared by all schools across the state – which includes those schools in the comparison group – is unaccounted for in this research design. This is what economists call equilibrium effects. The authors' own supplementary analyses show evidence of significant equilibrium effects. They found that low-competition schools located within high-competition school districts also had policy relevant improvements in student test scores. The true competitive effect is therefore certainly larger than the estimate used in this analysis.

Second, the analysis includes no fiscal savings. When students leave the public system for private schools, the public school retains the difference between its per-pupil funding and the scholarship cost. These additional savings would reduce the net cost of the FTC program and increase the multiplier. Lueken (2024) recently analyzed 48 private school choice programs across 25 states and found that programs become cost-neutral when roughly 57% of participants are students who would otherwise have attended public schools, which generated \$19.4 billion and \$45.6 billion in cumulative fiscal savings for taxpayers through FY 2022.²⁷

Third, the spending effect of 0.0079 SD per \$1,000 per pupil per year is drawn from a meta-analysis of school spending studies conducted mostly at the district level over relatively short intervention periods of roughly three to five years. My analysis makes the conservative assumption that this effect scales linearly over 15 years. However, there is much less evidence that permanent spending increases continue to produce linear returns on student achievement beyond a decade. Moreover, I assume no decay in the magnitude of the spending effect at a statewide scale for a treatment group that constitutes a majority of K-12 students in the state. This is despite the fact that both ESSER evaluations – which measured additional spending to every school district – found smaller effects on reading than the Jackson and Mackevicius (2024) meta-analytic average, with one paper finding no detectable effect on reading scores at all.²⁸ These assumptions bias the multiplier downward by overstating what spending at scale would realistically achieve.

Finally, we might expect the competitive effects to be even larger in the present day. The Figlio et al. (2023) study period ends in 2017, but the Florida legislature subsequently expanded the FTC program and created additional choice programs, including three different education savings account (ESA) programs: Family Empowerment Scholarships for Educational Options (FES-EO – private school scholarships), Family Empowerment Scholarships for Unique Abilities (students with special needs), and the Personalized Education Program (students educated at home).

The FES-EO program has universal eligibility and funding, meaning any student in the state can apply and receive an ESA scholarship. The programs now collectively enroll more than half a million students. If the competitive effects continued to increase beyond the 15-year study window, as suggested by the trend in the Figlio et al. (2023) study, this analysis understates the full long-run competitive impact. However, the advent of ESAs – both in Florida and around the country – do make it more difficult to study competitive effects. ESA programs often enable new education experiments like microschoools or increased homeschooling, which provide new options and competition inducing alternatives even in less populated (i.e., low-competition) areas, as documented in Florida by Ron Matus and Dava Hankerson in *Rerouting the Myths of Rural Education Choice* (2024).²⁹ Taken together, each of these conservative assumptions biases the effectiveness multiplier downward, meaning 11.2x represents a likely floor rather than a ceiling for the true cost-effectiveness advantage of scaling school choice.

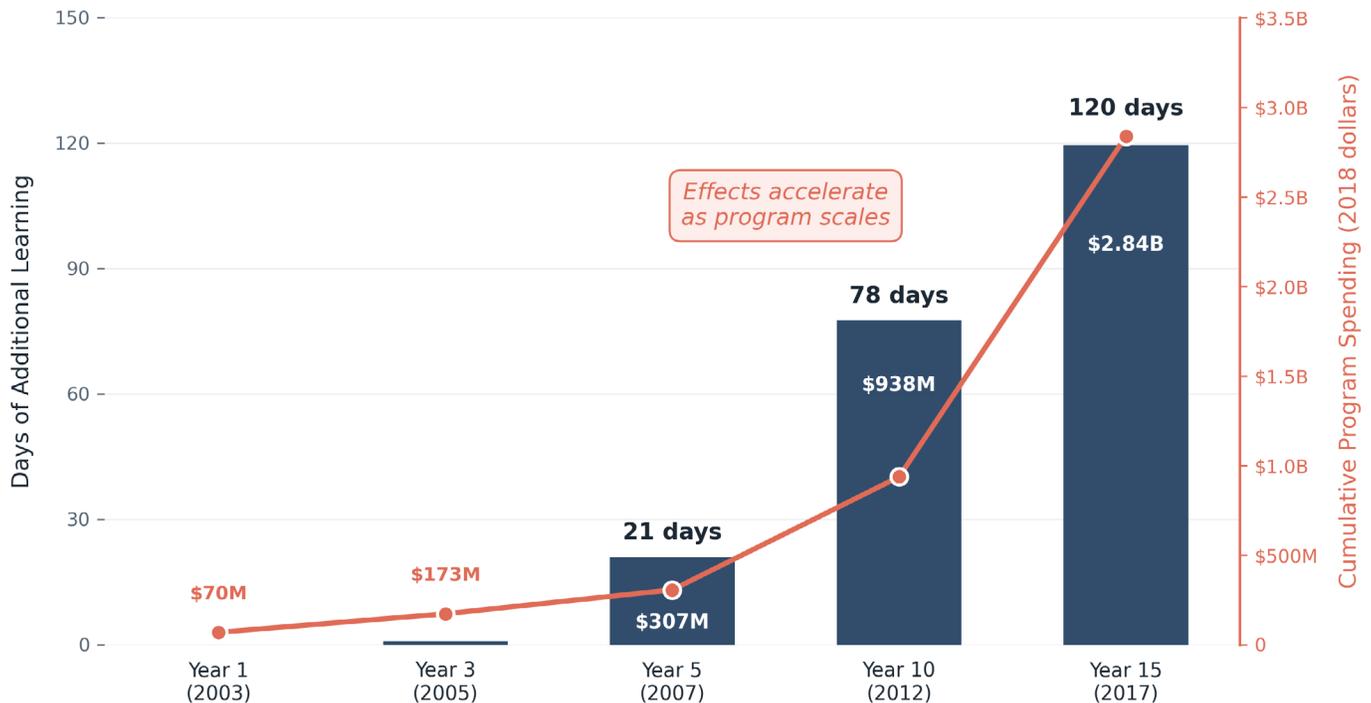
IMPROVING EDUCATIONAL OUTCOMES AT SCALE

Even in comparison to other effective educational interventions – such as smaller class sizes, tutoring, or interventions to support higher teacher quality – expanding private school choice in Florida fares quite well because it scales so successfully. Many educational interventions that have been found to be effective in smaller experimental studies often fail to replicate at scale.³⁰ When programs scale up, costs increase and benefits for students decline because fidelity to implementation becomes much more challenging. In fact, this is a phenomenon frequently observed with one of the most effective (and well liked) educational interventions: individualized tutoring.³¹ Increasing education budgets is an appealing strategy for increasing student achievement because it (potentially) affects large swaths of, if not all, students across a state. However, as the findings from the ESSER experiment suggest, this is no easy task. In sharp contrast, the competitive effect of the FTC scholarship program grew with program scale, with the increase of the effect accelerating in later years of the program. This perhaps helps explain why some of the other research on competitive effects that have found null results, as those studies have only been done on programs in existence for five or fewer years (in addition to other state, program, and data quality differences).

COMPETITIVE EFFECTS GROW OVER TIME

FTC scholarship program:

Cumulative effect on public school achievement vs. program cost



Source: Figlio et al. (2023), reading scores. Days of learning: 0.25 SD = 180 days (Bloom et al., 2008). Cumulative spending from Scale vs. Spend Supplementary Calculations in 2018 dollars. Years 1 and 3 effects are below 1 day of learning (0.0 and 0.8 days, respectively).

Even when other student level educational interventions are reasonably cost-effective on a per-pupil basis, they face this fundamental constraint of scale. For example, consider \$100 million in state education funding. At \$4,300 per student, that budget funds tutoring for 23,000 students, each gaining about 86 days of additional learning – a meaningful impact for those students, but a small fraction of a state’s total enrollment. Allocating the same \$100 million as a general per-pupil spending increase across 2.8 million Florida public school students yields just \$36 per student – enough to produce less than one-quarter of a day of additional learning for each student. That’s about an additional lunch period of learning.

In contrast, the FTC scholarship competitive effect demonstrates the fundamental advantage of changing system-wide incentives. Once competitive pressure induces institutional improvement, there is a near-zero marginal cost per additional beneficiary. Every student who enrolls in a public school in a high-competition area benefits from the improved instruction, smaller class sizes, and stronger institutional culture. This approach then continues to create outsized benefits for future student cohorts entering the system for the first time.

IS SCHOOL CHOICE COMPETITION OR INCREASED SCHOOL SPENDING A ZERO-SUM GAME?

Does education funding work? Certainly, how you use it and the incentives of the system within which you spend it matter tremendously. As I have demonstrated in this research synthesis, funding private school choice need not be a zero-sum game. In Florida, it also funded significant improvement for public school students, for a fraction of the cost. Even with half a million students enrolled across several distinct private school choice programs, Florida's public school students continue to outperform states with no private school choice while spending significantly less. Florida's experience suggests that states without private school choice – including teacher union strongholds like New York, New Jersey, Illinois, Oregon, and my native California – are missing out on a remarkably cost-effective method of academic improvement.

Fortunately, there is now an opportunity to do something about it. The Education Freedom Tax Credit (EFTC), a provision in the One Big Beautiful Bill Act of 2025, begins January 1, 2026. This new federal tax credit scholarship will be available in every state whose governor opts in. For public school advocates, the EFTC gets even better: public school students can also receive scholarships for educational expenses like tutoring and special education services, all at no cost to state budgets. And the EFTC is overwhelmingly popular – national polling from Democrats for Education Reform found that two-thirds of voters favor their governor opting in, with 61% support among Democratic voters and even higher support among Black and Hispanic voters.³²

With over thirty states already embracing school choice, the rest face a clear choice of their own: continue with spending increases alone, or join a growing movement that Florida has proven benefits both its public and private school students.

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