
May 2024

EdChoice – A Reason to Rejoice? An Analysis of Competitive Effects of School Voucher Programs in Ohio

Jakob Danninger

Case Western Reserve University, jkd50@case.edu

Sidharth Jindal

Case Western Reserve University, sxj803@case.edu

Laura Harris

Case Western Reserve University, lph21@case.edu

Nathaniel Page

Case Western Reserve University, npp33@case.edu

Follow this and additional works at: <https://commons.case.edu/joe>

Recommended Citation

Danninger, Jakob; Jindal, Sidharth; Harris, Laura; and Page, Nathaniel (2024) "EdChoice – A Reason to Rejoice? An Analysis of Competitive Effects of School Voucher Programs in Ohio," *Case Western Reserve University Journal Of Economics*: Vol. 2: Iss. 1, Article 3.

DOI: <https://doi.org/10.28953/APPL00011120.1005>

Available at: <https://commons.case.edu/joe/vol2/iss1/3>

This Article is brought to you for free and open access by the Weatherhead School of Management at Scholarly Commons @ Case Western Reserve University. It has been accepted for inclusion in Case Western Reserve University Journal Of Economics by an authorized editor of Scholarly Commons @ Case Western Reserve University. For more information, please contact digitalcommons@case.edu.

EdChoice — A Reason to Rejoice? An Analysis of Competitive Effects of School Voucher Programs in Ohio

Jakob Danninger¹

Laura Harris

Sidharth Jindal

Nathaniel Page

Abstract

Ohio's school choice voucher program, known as the EdChoice Scholarship, has been highly controversial since its inception and the recent 2023 expansion has reignited debates. The economic rationale for this policy is that increased competitive pressure creates higher performing public schools. Previous research has found that Florida public schools performed slightly better due to the competitive effects of school choice vouchers. We use data from the Ohio Department of Education and Google Maps API over the years 2009-2018 to estimate the competitive effects of eligible private schools on public school performance after the 2013 income-based EdChoice expansion. This is achieved using a two-way fixed effects model that predicts state exam performance using the number of voucher eligible competitors in a 5 miles radius. Contrary to popular assumptions, we find that increased competitive pressure spurred by the expansion predicts a decrease in school performance. Our findings suggest that the negative effects of losing high-performing students and having diminished spending capabilities due to total lower enrollment overpower the positive effects that increased competition has on school performance.

Introduction

The Education Choice Scholarship (EdChoice) is a program that provides students in Ohio with up to \$8408 dollars that can be used to pay for non-public school tuition. This program has been highly controversial with proponents arguing that EdChoice gives power back to families, levels the educational playing fields, and provides much-needed competition for public schools that will benefit all groups involved. Opponents counter that this program is just another way to defund already struggling public schools and an already struggling public school system, and that EdChoice will lower educational outcomes for all parties involved.

Ohio's EdChoice started with the 1996 Cleveland Scholars Program and allowed all students in the Cleveland Metropolitan School District to attend eligible private schools. The program was expanded statewide in 2006, broadening eligibility to include any student in Ohio who attends a "failing" school district. The Ohio Department of Education defines a "failing" district as a chronically underperforming district who "needs significant support to meet state standards". After seven years, in 2013, the program was expanded to include all students whose families fell below 200% of the federal poverty level (\$62,400 for a family of four), regardless of the status of their school district. Recently, in 2023, the program was expanded so all students qualify; however, to receive the full scholarship participants must fall within 450% of the federal poverty level (\$140,400 for a family of four).

Due to lack of 2023 data, we empirically analyzed the 2013 expansion of EdChoice, assessing the change in competitive effects after the implementation of the statewide policy change. Our findings provide insight into whether

¹ Thank you to our editor Brooke Hathhorn for all her help and guidance!

the competitive effects that EdChoice catalyzes positively or negatively affect public school performance, as well as giving us evidence to predict the long-term competitive effects of the larger 2023 EdChoice expansion.

Literature Review

The Education Choice Scholarship (EdChoice) is a program that provides students in Ohio with up to \$8408 dollars that can be used to pay for non-public school tuition. This program has been highly controversial with proponents arguing that EdChoice gives power back to families, levels the educational playing fields, and provides much-needed competition for public.

Belfield (2006) looked at Cleveland public school students who moved to private schools using the Cleveland Scholarship. Out of those who moved to private schools he found that they did not perform academically better and, in some cases, performed academically worse. Belfield speculates that students who move to private schools do not do better academically, and this can be attributed to the fact that these private schools are dealing with the same financial constraints that public schools face.

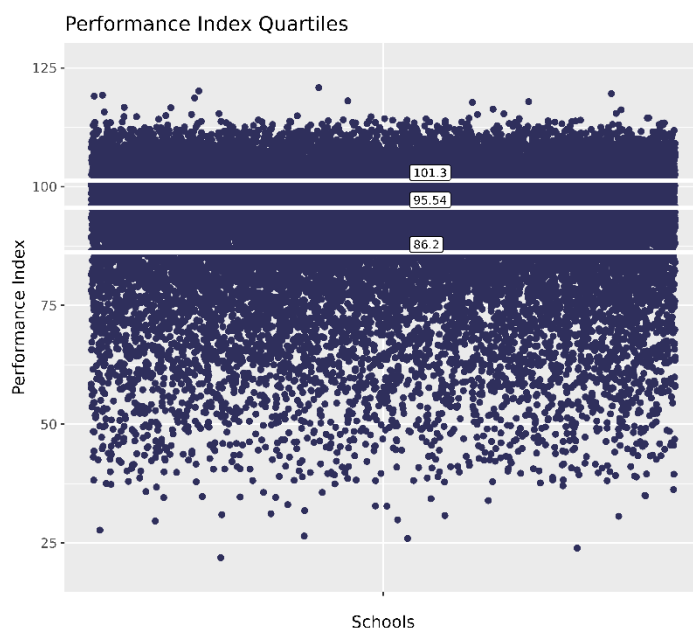
Figlio and Hart (2010) analyzed whether the introduction of private school vouchers in Florida led to public schools performing better due to competition. This was done using a regression of public-school test scores on a competition index which is based of the number and type of private school competitors within five miles of each public school. Figlio found that for every mile closer a private school was, public schools performed about 0.015 standard deviations better. Overall, Figlio speculates that the three reasons these effects could be observed are firstly the competition provided by vouchers leads public schools to change to more effective policies/practices, secondly private schools are shows to attract underperforming students from public schools leading to public schools having a greater positive peer effect, and lastly if only a few students leave public schools the per student resources may go up due to the indivisibility of teachers.

Data

The data we use is sourced from the Ohio Department of Education and the Google Maps API. The ODE has school building specific data regarding performance index scores, which is a scoring system to measure a school's overall academic performance and is determined by state exam results. The ODE also releases a list of voucher eligible private schools. The Google Maps API is then used to cross reference the location of public schools to their private school competitors, and this is used to build a map of how many private schools directly compete with each public school. The number of voucher eligible private school competitors within 5 miles of a public school is used to measure how much competition each public-school faces.

Table 1. Key Variable Summary Statistics (2013)

Variable	n	Mean	SD	Min	Max
Performance Index	3319	92.29	14.26	33.33	118.2
Competition Score	3319	2.86	3.53	0	22

Figure 1. Quartiles for School Performance Index (2013)

Hypothesis

We hypothesize that the 2013 EdChoice expansion will have a positive competitive effect on public school performance in line with the findings of Figlio & Hart (2010). However, the size of the impact is likely to be small due to reductions in district spending (which is determined by enrollment size) offsetting much of the benefits of the increased level of competition.

Methodology

To measure the competitive effects of the 2013 EdChoice income-based expansion, we employ a two-way fixed effects model. This model novelly uses location data to construct a competition score faced by Ohio public schools. We estimate the effects using a model of the following form:

$$Perf_{it} = \beta_0 + \beta_1 EdChoice_t + \beta_2 Competition_i + \beta_3 EdChoice_t * Competition_i + \delta_i + \gamma_t + \nu_{it} + \varepsilon_{it}$$

where $Perf_{it}$ is Performance index, β_3 is the treatment effect, δ_i are school fixed effects, γ_t are time fixed effects (year), ν_{it} are controls for enrollment and typology, $EdChoice_t$ is a dummy variable indicating whether or not the EdChoice expansion has been implemented in the given year t , $Competition_i$ is the number of voucher eligible private schools within a five-mile radius of a given school i .

Our outcome variable $Perf_{it}$ is school performance, measured by the student performance index reported by the Ohio Department of Education. $\beta_2 Competition_i$, gives us the relationship between a school's competition and their predicted school performance. Our variable of interest is β_3 , the interaction between $EdChoice_t$ & $Competition_i$. This coefficient gives us the change in competitive effect after the 2013 EdChoice expansion. If the EdChoice expansion had positive competitive effects on public school performances, we would expect a positive β_3 value.

Results

We find evidence that public schools see substantially lower performance with higher levels of competition. Crucially, we also find evidence that after the EdChoice expansion, which spurred higher levels of competition

between public and non-public schools, higher levels of competition predict a further reduction in public school performance. Our results suggest that per each additional eligible private school within a five-mile radius of a public school, the public school's performance is predicted to decrease by .2475 points ($\beta_2 Competition_i$). This is statistically significant at the 1% significance level. For a public school with five competitors, their predicted performance would decrease by 1.2375 points. Our coefficient on β_3 , the interaction between EdChoice and Competition, suggest that after the 2013 EdChoice expansion, the performance of public schools is predicted to decrease by an additional .0765 points per each additional competitor. For a public school with five competitors, their predicted performance would decrease by an additional .3825 points after the EdChoice expansion. This result is statistically significant at the 5% significance level.

Table 2. Fixed effects regression results

	School Performance
Constant	101.1*** (.6963)
EdChoice	-5.367*** (.1307)
Competition	-.2475*** (.0558)
EdChoice*Competition	-.0765** (.0379)
n = 3319; * p<0.10, ** p<0.05, *** p<0.001	

To make these results more concrete, let us imagine that we are the public school with the median performance score (50th percentile). If this school were to have five competitors, it's predicted school performance would descend to the 47.9th percentile. If this school were to have ten competitors, it would descend to the 45.9th percentile. Our sample consisted of 3319 public schools. If this median school had five competitors, it would fall 43 spots in absolute performance score rankings. If this median school had ten competitors, it would fall 78 spots in absolute performance score rankings. We feel that these interpretations should help readers in understanding the magnitude of our coefficients of interest.

Conclusion and Policy Implications

A contentious point of debate in the discussions around EdChoice surround whether the program increases the performance of public schools through spurring competition, or whether the program decreases the performance of public schools by siphoning away their top students and lowering their total spending capabilities. Proponents argue this competition stimulus will put strong pressure on administrators, teachers, and schools to elevate their game and increase school performance to avoid losing students to private schools. Conversely, opponents argue that losing a number of high performing students will get rid of the beneficial peer effects that these students provide as well as lowering the total funds that the school will have access to. The state allocates funds to public schools based on the number of enrolled students, so losing students to non-public schools lowers the total expenditures public schools can make. This inhibits their ability to make large capital investments like upgrading or replacing school infrastructure, constructing, or renovating athletic facilities, and specialized educational programs.

Our results provide evidence to support the latter explanation, leading us to conjecture that the competitive effects of EdChoice negatively impact public school performance. It is important to note these findings do not constitute a rebuke of the EdChoice program or school choice programs more broadly. More narrowly, we find that the elevated competition resulting from the 2013 EdChoice expansion negatively impacted public school performance. There are many other considerations in this policy decision, including parental choice, equity and access in education, school diversity, and long-term non-academic student outcomes. Finally, our results allow us to make predictions about the 2023 EdChoice expansion. Because the expansion is much broader than previous iterations, we expect more potent competitive effects, leading us to predict a more substantial negative impact on public school performance.

Bibliography

- Figlio, D., & Hart, C. M. (2010). *Competitive Effects of Means-Tested School Vouchers*.
<https://doi.org/10.3386/w16056>
- Belfield. (2006). Vouchers and the Cleveland Scholarship Program: Little Progress So Far. *Federal Reserve Bank of Cleveland*.
- Tebben. (2022, January 5). School district coalition files lawsuit challenging Ohio's private school voucher program. *Ohio Capital Journal*.
- Jewell, R. W. (1989). School and School District Size Relationships. *Education and Urban Society*, 21(2), 140–153.
<https://doi.org/10.1177/0013124589021002003>
- Lavertu, & Gregg. (2022). The Ohio EdChoice Program's impact on school district enrollments, finances, and academics. *Thomas B. Fordham Institute*.
- Lueken. (2021). Fiscal Effects of School Choice - Analyzing the costs and savings of private school choice programs in America. . *EdChoice*.
- Ohio - Cleveland Scholarship Program. (2024, February 19). Retrieved from <https://www.edchoice.org/school-choice/programs/ohio-cleveland-scholarship-program/>
- Ohio - Income-Based Scholarship Program. (2024, February 19). Retrieved from <https://www.edchoice.org/school-choice/programs/ohio-income-based-scholarship-program/>