NEPC Review: The Effects of the Florida Tax Credit Scholarship Program on College Enrollment and Graduation: An Update (Urban Institute, February 2019)

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March 2019

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Executive Summary

This Urban Institute research report is aimed at assessing the impact of the Florida Tax Credit (FTC) scholarship program on college enrollment and graduation. Through matched comparisons, the study finds consistently positive effects of the program for both two-year and four-year colleges, with relatively stronger effects for four-year private college enrollment and for students who stayed in the program longer. This review acknowledges the study's contributions, using expanded data tracking to inform school voucher policy debates, but the review also raises three critical questions about the validity of some methods, findings and conclusions. First is the problem of selection bias. The study's attempt to match FTC and non-FTC students resulted in the non-FTC comparison group having two to three times more students receiving reduced-price lunch. This is on top of the acknowledged problem that choosers could be more advantaged in unmeasured aspects than nonchoosers, and that this tends to result in an upward bias (positive effects on achievement). Second, without real achievement benefits, the estimated impact of FTC on college enrollment may reflect college matching effects rather than true program effects on students' college readiness. Third, the FTC program's reporting of much greater effects on college enrollment than on graduation suggests that the conditional FTC effect on college completion (i.e., conditional on college entry) could be null or even negative. These concerns call into question the use and misuse of this study by voucher advocates; proper use of the study begins with an understanding of its limitations and sees the need for confirmatory research and future exploration of potential mechanisms driving any increased college attainment.

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I. Introduction

School choice policies, particularly school voucher programs that support private school attendance via public funding, remain among the most controversial issues in educational policy. The Florida Tax Credit (FTC) scholarship program, a voucher-like approach that provides private school scholarships to more than 100,000 lower-income students annually, is the largest program of its kind in the country. This new report, entitled, *The Effects of the Florida Tax Credit Scholarship Program on College Enrollment and Graduation: An Update*[1] is written by Matthew Chingos, Tomas Monarrez, and Daniel Kuehn at the Urban Institute.

The report builds on their prior research and adds new empirical evidence to the existing literature of school voucher program effects by investigating the effect of the FTC program with expanded data on college enrollment and graduation. The study's quasi-experimental design applies matched comparison analysis of the FTC participant and nonparticipant data.

This review takes a critical look into the research methods and evidence in the context of the larger literature, including previous studies of school voucher programs as well as public vs. private school effects.

II. Findings and Conclusions of the Report

The new Urban Institute study finds statistically significantly positive effects of the FTC program on two outcomes: college enrollment and college graduation. The authors report

that "FTC participants are more likely than similar nonparticipants to enroll in both two-year and four-year colleges, including both public and private nonprofit four-year colleges." While students who entered FTC in elementary or middle school were six percentage points more likely to enroll in college, students who entered the program later, in high school, were 10 percentage points more likely to enroll. Further, they report that "participating in FTC also increases the likelihood that students earn a bachelor's degree, with average increases of 1 to 2 percentage points."

They also note significant heterogeneity of the program effects based on the timing and length of program participation: relatively larger effects with more years of FTC participation and, perhaps counterintuitively, relatively larger effects for students who started the program in high school as opposed to elementary and middle school. They also report variability in the FTC program effect by the type of college enrolled; the reported effect in the four-year sector is concentrated in private (nonprofit) colleges. Finally, and as noted above, the study reports positive impacts on bachelor's degree attainment, with an increase of one to two percentage points. They also find a similar increase in associate's degree attainment for students who entered FTC in elementary or middle school (0.7 percentage points) but no significant impact for those who entered in high school.

The authors conclude that their study informs a growing research base on the effects of publicly funded private school choice programs on college enrollment and graduation, noting that past research shows mixed results among similar school choice programs. They also conclude that, in comparison with their own prior study of FTC program effects within Florida public colleges only, the current study including data from private and out-of-state colleges yields larger positive effects of FTC participation on both college enrollment and degree attainment.

III. The Report's Rationale for Its Findings and Conclusions

The authors argue that their study expands on and updates their prior study in two important ways. First, whereas the prior study used enrollment data only from public colleges in Florida, this update draws on National Student Clearinghouse (NSC) data covering almost all US colleges (including private and out-of-state colleges). Second, this update includes college enrollment data through 2018 (rather than 2016), increasing the number of FTC students by more than 50 percent. The authors also note differences relative to their own prior study of the FTC, which found increased enrollment in community colleges and few effects on associate's degree attainment.[2] They argue that the estimated effects are larger in the current study because of positive estimated impacts of FTC participation in enrollment in private nonprofit and out-of-state colleges.

The authors matched each of the 16,111 students in the FTC treatment group to up to five nonparticipating students who were enrolled in the same baseline school, grade, and year and who had similar characteristics, including math and reading scores, language, nativity, race or ethnicity, disability status, age, and free lunch participation. Although they did not

report the details of matching procedures, they pointed out that their study used the same propensity score matching methodology described in Chingos and Kuehn (2017), claiming that "matching on a rich set of pretreatment characteristics allows us to compare students who are similar in many ways except for FTC participation."

IV. The Report's Use of Research Literature

New empirical research should generally be guided by a comprehensive and balanced review of prior research. This policy brief mentions recent studies of similar programs,[3] but it falls short of addressing findings and issues from the broader literature of school choice. Prior research on school voucher programs raised critical questions about the issues of who chooses, why and with what effects?[4]

In the case of FTC, for example, there is some uncertainty arising from prior research regarding the selection and segregation, which the new report's authors might have benefited from addressing before they attempt to match the groups. David Figlio and his colleagues reported negative selection into private schools (i.e., more low-achievers among FTC students) but at the same time some evidence of increasing racial segregation among schools.[5] Given that the FTC program has since expanded, selection may work differently and may thus differently affect racial and social composition of students in both sending and receiving schools. In any case, the Urban Institute study does not address that question.

What is also missing is the distinction between school subtypes within the private sector and a discussion of what accounted for any statistically significant effects in previous research. Such a discussion would be important to consider in understanding what a school effect means and where a private school effect, if any, exists. A review of past studies suggests there may, for example, be a positive effect of Catholic high school enrollment on graduation and college enrollment, but not necessarily academic achievement.[6] In contrast, evidence suggests that Catholic elementary school enrollment is not associated with any positive effect on achievement.[7] In the earlier study of FTC program impact, Figlio found no evidence of academic achievement benefits for FTC participants in comparison with the national norm group.[8] Unfortunately, this Urban Institute study does not address the question of FTC impact on academic achievement. It also does not address possible heterogeneity of effects among different types of private schools (e.g., Catholic, other religious, and independent private schools). The importance of this omission lies primarily in considering a possible mechanism for any benefits regarding later college success.

V. Review of the Report's Methodologies

The study reports that the FTC students and matched non-FTC students have similar baseline characteristics, including gender, race or ethnicity, nativity, language spoken at home, disability status, free lunch participation, age, and standardized baseline test scores. They

use National Student Clearinghouse data to measure whether students had enrolled in any college and by sector (two- versus four-year and public versus private) and they look at degree receipt to identify students who received an associate's or bachelor's degree. They report all FTC treatment effect estimates as marginal effects from probit regressions of the college enrollment and graduation outcomes.

These research methodologies were appropriate for the data under investigation. The study's choice of control variables is consistent with conventional practice, controlling for race/ethnicity, family income (as measured by eligibility for school lunch program), and prior student achievement. But the study did not—and likely could not—control for some critical factors such as family structure (e.g., single parent household), parental education, parental involvement, and parental expectations. Thus, it is not clear whether and how the two groups are truly matched on all kinds of parental influences (how parents behave and their social capital, as opposed to merely who they are). In noting these items, they should be understood as limitations of the study, rather than criticisms of how the study was conducted.

Furthermore, the study chose to examine the average program effect but did not examine whether certain groups of students benefited more or less by being at one school type rather than another. This decision points to the need for further research, in light of prior work such as Bryk and Lee's study of Catholic schools showing the stronger positive school effects for disadvantaged students,[9] and Howell and Peterson's studies of randomized school voucher trials in New York City, Dayton, and Washington DC, which only reported positive effects (at least in limited instances, and for certain model specifications) for Black students.[10]

VI. Review of the Validity of the Findings And Conclusions

There are three major issues that threaten the validity of the findings and conclusions of the recent Urban Institute report. First of all, propensity score matching relies exclusively on observed data to remove potential selection bias, and thus any unobserved (and thus unknown) differences between FTC and non-FTC groups remain a threat to internal validity. While the study included most of the well-known student and family background characteristics for matching, its matching of FTC and non-FTC students did not seem to work properly in terms of students' family poverty status as measured by eligibility for free- and reduced-price lunch. Table 2 of the report shows non-FTC students (the comparison group) with two to three times more students qualifying for reduced-price lunch. So among the younger-grade FTC group, 15 percent are clearly more advantaged (not qualifying for either free- or reduced-price lunch) and among the older-grade FTC group, 23 percent are clearly more advantaged. In the comparison non-FTC group, there are zero students falling into this more advantaged category. Although it is not clear how robust the study results are against this matching imbalance, prior research has shown that students' eligibility for reduced-price lunch as well as free lunch signifies educational disadvantages beyond their low-income family status; it affects academic achievement via the influences of parental aspiration and engagement for child education.[11]

The related—but different—concern here is one that the reports' authors themselves acknowledge in passing: "participants and nonparticipants could differ in unmeasured ways, such as parental engagement, family religiosity, or experiences in public school. If these unmeasured characteristics differ, on average, between the treatment and comparison groups and are associated with student outcomes, our results will be biased" (p. 4). To understand why this is important, consider Hank Levin's (1998) conclusion based on an extensive review of school choice studies.[12] Three of Levin's findings are particularly relevant:

1. choosers will be more advantaged both educationally and economically than non-choosers;

2. for choosers, an important criterion will be the socioeconomic status (SES) of other students, leading to increased segregation; and

3. both peer and contextual effects of higher SES students will have positive effects on achievement, with the vouchers leading to the greater inequalities in educational outcomes.

That is, while the authors note the *possibility* of bias, Levin points to the *strong likelihood* of bias and emphasizes that the direction of the bias is in favor of purported benefits of the vouchers.

Aside from such selection biases, the FTC program's effects on students' academic achievement were not examined and thus the reasons for any college enrollment effect remain unknown. The study matched the two groups' baseline reading and math achievement test scores, but it did not follow up on the students' achievement test score gains or losses after the program.

It is possible that one group—FTC students or non-FTC students—had better test score growth. But if one assumes the equivalence of test score gains between public and private schools at both measured levels (elementary and high school)—which is a reasonable assumption based on prior research mentioned in the previous section—then the report's estimated impact of FTC on college enrollment may reflect something other than improved learning. A good guess here would be college matching effects (due to the gaps in college matching success between public and private sectors), rather than true program effects on students' college readiness.

This point raises a question: why do students in Catholic and some other private schools seem to have better chances of going to colleges, even when their academic achievement as measured by standardized test scores is not significantly better than public counterparts? The answer may be found in the research evidence of overall private sector advantages over public schools in the college matching process. Lee, et al (2017) showed that specific types of high schools, including Catholic and independent private schools as well as selective (test-in) public schools, are better able to maximize success in the college admissions process by enabling otherwise equally qualified students to attend more four-year, competitive colleges and universities (see Figure 1).[13]

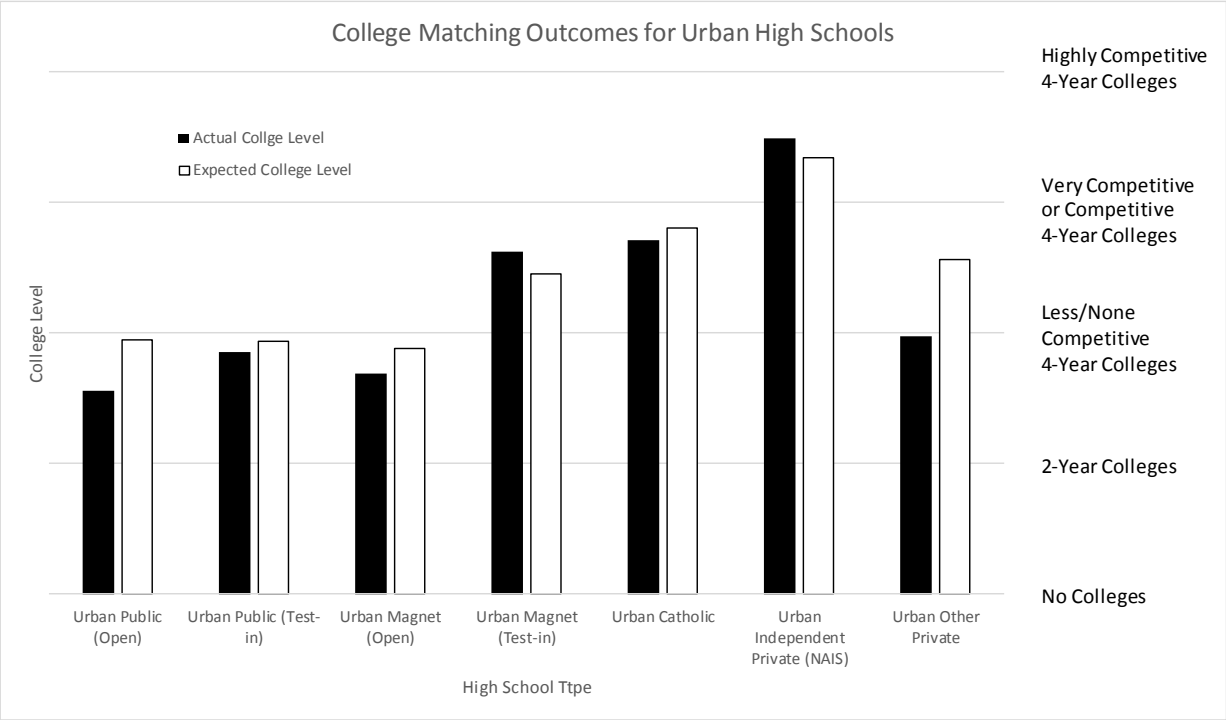

Figure 1 Actual vs. expected levels of college enrollment among different types of urban high schools in the nation; expected levels were estimated based on students; academic qualifications including high school grades and college entrance exam scores (see Lee et al., 2017 for details).

A final validity issue with the report's findings about FTC program's effects on college graduation involves the choice to focus on students designated as expecting to graduate from high school. The reported effects can be exaggerated and misleading because the comparison was not made only among students who actually entered colleges but instead among all of these expecting-to-graduate students. This distinction is important because the report presents relatively smaller effects of FTC on college graduation (one to two percentage points) in comparison with college enrollment effects (6-10 percentage points), which suggests that the initial FTC program effects for college entrance, if any, may have dissipated during the course of college education. If the comparison were restricted to college entrants, then the conditional FTC effect on college completion (i.e., conditional on college entry) could be null or even negative.

VII. Usefulness of the Report for Guidance of Policy and Practice

In light of the controversies on the effects of school choice, this report is timely and policy relevant. Through expanded data tracking, it helps bring new evidence to inform school choice debates. While this report does not directly address the underlying question, "Is pri-

vate school more effective than public school?", this also leaves many questions unanswered such as, "How does it work better?" and "Better for whom, all students or specific subgroups, and for what purpose?" If FTC students do have significantly better success of college enrollment than non-FTC students with similar characteristics, the reason remains to be investigated and fully explained. This study takes a purely outcome-driven approach, leaving the underlying student selection mechanism, school organization and schooling process hidden away in a black box. In this respect, the findings do not give very useful guidelines for policy and practice.

This review of the report as well as related prior research suggests mixed results in that school choice programs may have worked to varying degrees of success in difference places and for different populations. Notably, given some new positive findings such as those of this report, it appears that the target outcomes for school choice advocates may have shifted from academic achievement (during K-12 school) to college enrollment and graduation. Given the limitations of quasi-experimental research methods, however, there are still doubts about the efficacy of statistical matching for fully removing selection biases. Even so, some students who go to certain types of private schools benefit more and thus get the upper hand for college enrollment regardless of their achievement gains. There are some strategies for better college matching (e.g., stronger academic push and support for college applications) that public schools can learn from private sector success in that regard.

This study may prompt further investigations of long-term program effects on college, career and civic outcomes among FTC students. Subsequent studies also need to address questions about impact on non-FTC students who choose to remain in public schools or struggle in private schools and return back to the public school system. Full evaluation of any school choice program requires considering long-term impact on the whole education system as opposed to immediate benefits to only those who choose to stay in the program.

Notes and References

1 Chingos, M.M., Monarrez, T., & Kuehn, D. (2019). *The effects of the Florida tax credit scholarship program on college enrollment and graduation: An update*. Washington, DC: Urban Institute. Retrieved February 25, 2019, from https://www.urban.org/sites/default/files/publication/99728/the_effects_of_the_florida_tax_credit_scholarship_program_on_college_enrollment_and_graduation_2.pdf

2 Chingos, M.M., & Kuehn, D. (2017). *The effects of statewide private school choice on college enrollment and graduation*. Washington, DC: Urban Institute.

3 Over the past two years, the Urban Institute produced several studies estimating the effects of three publicly funded private school choice programs on college enrollment and graduation, with mixed results. They include the Milwaukee Parental Choice Program, with positive effects for 4-year college enrollment but no effect on college graduation (Wolf, Witte, & Kisida 2018), and Washington, DC's Opportunity Scholarship Program, with no effects on both 2-year and 4-year college enrollment (Chingos 2018):

Wolf, P.J., Witte, J.F., & Kisida, B. (2018). *Do voucher students attain higher levels of education? Extended evidence from the Milwaukee Parental Choice program*. Washington, DC: Urban Institute;

Chingos, M.M. (2018). *The effect of the DC school voucher program on college enrollment*. Washington, DC: Urban Institute.

4 See, e.g., Levin, H.M. (1998). Educational vouchers: Effectiveness, choice and costs. *Journal of Policy Analysis and Management*, *17*(3), 373-392.

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9 Bryk, A.S., Lee, V.E., & Holland, P. (1993). *Catholic schools and the common good*. Cambridge, MA: Harvard University Press.

10 Howell, W.G., & Peterson, P.E. (2002). *The education gap: Vouchers and urban schools*. Washington, DC: Brookings Institution Press:

See also Lubienski, C. (2007). *Review of "The ABC's of school choice"*. Tempe, AZ & Boulder, CO: EPRU and EPIC. Retrieved February 25, 2019, from https://nepc.colorado.edu/thinktank/review-abcs-school-choice

11 See Domina, T. et al. (2018). Is free and reduced-price lunch a valid measure of educational disadvantage? *Educational Researcher*, *47*(9), 539-555. The study shows that both free lunch and reduced-price lunch capture elements of educational disadvantage that IRS-reported household income data do not. Under the National School Lunch Program (NSLP) policy, students whose household income is less than 130 percent of

the poverty line qualify for free lunch, whereas students whose household income is between 130 percent and 185 percent of the poverty line qualify for reduced-price lunch.

12 See Levin, H.M. (1998). Educational vouchers: effectiveness, choice and costs. *Journal of Policy Analysis and Management*, *17*(3), 373-392.

13 See Lee, J., Weis, L., Liu, K., & Kang, C. (2017). Which type of high school maximizes students' college match? Unequal pathways to postsecondary destinations for students from varying high school settings. *The Journal of Higher Education, 88*(4), 529-560. DOI: http://dx.doi.org/10.1080/00221546.2016.1272327