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Will Democracy Endure Private School Choice? The Effect of the Milwaukee Parental Choice Program on Adult Voting Behavior

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Abstract
Do students who experience school choice grow up to be more engaged members of civil society? Looking at voting behavior is one way to answer this question. We employ probit regression analysis to compare the adult voting activity of students who participated in the Milwaukee Parental Choice Program, a private school voucher program, to their matched public school counterparts. Using a sophisticated matching algorithm, we create a traditional public school student comparison group using data from the state-mandated evaluation of the program. We find that by the time the students were 19–26 years old, no evidence indicates that private school voucher students were more or less likely to vote in 2012 or 2016 than public school students. Our results are robust to all models and are consistent for all subgroups. These findings suggest that the private benefits attained by students using voucher programs do not come with any social costs associated with diminished voting behavior.

JEL Codes: I28, I20
Keywords: school choice, private schooling, democratic education, political participation, civic education, school vouchers

I. Introduction

President Donald Trump called for an expansion of private school choice through a $20 billion increase in federally funded access to private schooling for the eleven million children living in poverty in 2017 (Camera 2017). Shortly after he was elected president of the United States, he appointed a supporter of private school choice, Betsy DeVos, as the secretary of education. During the same period,

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public interest in the idea of school choice reached an all-time high according to Google Trends.

Growing interest in the possibility of change in the nation's education system comes with growing fears regarding what critics call the "privatization" of education. One of the most often-cited fears, discussed since the inception of the common schooling movement in the United States, is that democratic society would not function properly without traditional public schools instilling children with a uniform set of civic values. The so-called father of traditional American public schooling, Horace Mann (1855), and others (Dewey 1916; Rush 1786) arguably helped convince the nation to expand government-run schooling in the nineteenth century.

Today, some education scholars follow Mann's beliefs, arguing that common schools are necessary to teach children from diverse backgrounds how to become proper citizens in a democracy (Gutmann 1999). Other individuals, such as the president of the American Federation of Teachers, Randi Weingarten, claim that private school choice programs "undermine our democracy" (Edelman and Weingarten 2017). She, along with other school choice opponents, claims that self-interested schooling selections would segregate society by income and race while failing to teach citizenship skills (Richardson 2017). Likewise, people selecting their own schools may not choose institutions that specialize in shaping skills that accrue large benefits to third parties. In other words, self-interested customers of schooling may underconsume citizenship skills that have large positive externalities (Coase 1937; Pigou [1920] 1932).

One citizenship skill is to serve the rest of society by voting. An individual's vote is not likely to change their own lives substantially, and individuals know that their single vote has almost no chance of determining the outcome of an election. They also know that it is costly to acquire the information necessary to make an educated and responsible voting decision (Somin 2016). Indeed, if voting activity is purely explained by weighing private costs and benefits, it would be considered irrational for most people to go to the voting booth on Election Day (Caplan 2011). However, there are also private benefits associated with participating in the democratic process. Voting and being well-informed about the political landscape can elevate one's social status and provide personal satisfaction.

That people show up to vote at all is evidence that individuals consider how their decision to participate democratically affects the rest of society. But how much do individual decisions take into

account these types of positive externalities? Of course, if individual decisions do not consider all the positive externalities associated with civic education, they may not perfectly choose schools that maximize democratic participation. Families might send their children to schools that focus on shaping math and reading skills rather than civics. However, the possible existence of positive externalities of civic skills does not necessarily mean that government-run schools will produce better civic education than the private market.

In this study, we examine whether the private school choice program in Milwaukee altered voting behavior in the two most recent presidential elections. Since private schools have a financial incentive to shape character skills, and a previous study finds that the Milwaukee voucher program increases self-reports of planning to vote (Fleming, Mitchell, and McNally 2014), we expect that actual voting activity will be higher for people that participated in the program than for those that attended traditional public schools, a hypothesis that runs contrary to prevailing democratic theory.

II. Theory

Critics of private school choice programs have claimed that such programs could crack the foundations of a democratic society. Some education scholars argue that public schooling is required to inculcate the uniform citizenship skills required for a stable democratic society (Gutmann 1999; Apple and Beane 2007). That way, common schools could teach a diverse set of children to get along with one another and to respect authority figures (Mann 1855). It is argued that without a uniform set of values taught through public schooling, a democratic society will not function properly (Saltman 2000; Molnar 2013). After all, if private schools do not focus on shaping a population that is obedient to the state, students may be more likely to break the law when they grow up. Further, if children are not forced to get along with others in common schools, they may grow up to be less tolerant of groups with whom they do not agree.

Alternatively, private school choice programs could promote civic values such as voter participation through increased educational quality, an improved match between educator and student (DeAngelis and Holmes Erickson 2018), and a higher likelihood of engaging in political discussions at school (DeAngelis 2017). Within the current system, traditional public schools hold a near monopoly on public resources. The monopoly power—exercised by the residentially assigned public schools—results in weak incentives to

produce high-quality educational products at efficient costs (Hoxby 2007; Chubb and Moe 1988).

Indeed, public officials have an incentive to maximize budgets (Niskanen 1971). If a public official spends less than the budgeted amount, they will be financially harmed the following year by receiving less funding. If the official spends as much as possible, they will be rewarded the following year in two ways: (1) increased bargaining power for the need for more funding, and (2) the ability to gloat to constituents about all of the public resources they received.

Additionally, the public finance monopoly results in a scenario where private schools must attempt to compete with a *free* good. Because of this severe power imbalance in the education sector, traditional public schools do not face substantial financial costs for low performance. Since civic skills are included in the quality of an educational experience, a power imbalance such as the one that exists in the education system today can result in a dysfunctional society. Yet if the individuals within a society value civic skills, they can seek out schools that inculcate these values within a system that allows families to select their educational product (Friedman and Friedman 1990).

Last, private schools may have a stronger incentive to foster discussions about controversial subjects such as politics if families choose schools based in part on schools' abilities to improve debate skills and civics education. If children are more likely to debate sensitive subjects in their K–12 experience, they may be more likely to care about politics as adults. If they find that they disagree with others on important political topics in the classroom, and if they care about public policy, then they will have a robust incentive to go out and vote when they become adults. In addition, students and educators in private schools may be more open about discussing topics that would appear controversial in the public sphere. Since selection into and out of private schools is voluntary, and based on interests, students may feel more encouraged to discuss alternative viewpoints.

By contrast, students in a public school setting may be more likely to fear insulting or offending teachers or other groups of students since students are grouped by zip code rather than by interests, so the controversial discussion may not happen at all (Berkman and Plutzer 2010). Better school climates and cultures in the private sector may also make students and teachers feel more comfortable discussing controversial topics such as politics

(DeAngelis and Lueken 2019; Shakeel and DeAngelis 2018). Moreover, traditional public schools are largely incentivized by standardized test scores, so their teachers would be completely rational if they did not focus too much on sensitive subjects such as politics that don't appear on standardized tests. After all, it can be quite stressful to focus on provocative political topics in the classroom, especially when the difficult discussions do not necessarily translate into the standardized math or reading test scores that are the basis for public school accountability. Less regulation in the private education sector may allow private school leaders and teachers to focus more on shaping civic skills (Grube and Anderson 2018; Shakeel and DeAngelis 2017).

III. The Milwaukee Parental Choice Program

The Milwaukee Parental Choice Program (MPCP) is the longest-standing modern private school voucher program in the United States (EdChoice 2019). The MPCP began in 1990 as a voucher program highly targeted to disadvantaged families based on household income. At first, the MPCP was limited to 1.5 percent of Milwaukee Public Schools (MPS) enrollment, or about 500 students, and only seven nonreligious private schools were allowed to participate (Witte 2000). In 1996, the program started to raise its enrollment cap until the cap was eventually eliminated in 2012. The MPCP grew steadily and, by the 2014–15 school year, enrolled about a quarter of all K–12 students in the city.

In the baseline study year of 2006, the voucher was worth up to $6,501 per year, or about 40 percent less than the average per pupil expenditure in Milwaukee Public Schools (Costrell 2009). To qualify for a voucher, applicants had to live in the city of Milwaukee, be entering grades K–12, and have a family income at or below 175 percent of the poverty level, an amount slightly below the ceiling to qualify for the federal lunch program.

Starting in 2017, students coming from families at or below 300 percent of the poverty level—$73,800 for a family of four—were eligible for the program. Over 28,000 students and 121 schools participated in the program in 2017, and 75 percent of Milwaukee families were eligible for the program based on income (EdChoice 2019). The maximum voucher value was $7,969 for grades 9–12 and $7,323 for grades K–8, or a little over half of what is available for children in traditional public schools. Schools participating in the program must admit eligible students at random, administer state

standardized tests, allow students to opt out of religious activities, and employ teachers who have a teaching license or a bachelor's degree.

IV. Literature Review

The evidence on the impacts of private school choice programs on student achievement is extensive. While the exact results depend on the specific program, the overall evidence indicates that private school choice programs have small positive impacts on student test scores. Shakeel, Anderson, and Wolf's (2016) meta-analysis and systematic review of nineteen experimental studies of voucher programs across the globe finds small positive impacts on student achievement overall. In particular, they find the largest effects for reading scores, publicly funded programs, and programs located outside of the United States.

Out of the seventeen existing experimental studies on the impacts of US voucher programs on student achievement, only two find negative effects (Abdulkadiroğlu et al. 2018; Dynarski et al. 2017). Eleven of the seventeen studies find positive impacts for some or all students (e.g., Cowen 2008; Greene 2001; Wolf et al. 2013), while four find no effects (Bitler et al. 2013; Bettinger and Slonim 2006; Krueger and Zhu 2004; Mills and Wolf 2017). In addition, voucher programs tend to produce test score effects that improve with time (Shakeel, Anderson, and Wolf 2016). For example, while the voucher programs in Louisiana and Indiana negatively affect student test scores in initial years, choice students tend to catch up to their peers in public schools after three years (Mills and Wolf 2017; Waddington and Berends 2018). Both of the experimental studies on the voucher program in Milwaukee find positive impacts (Greene, Peterson, and Du 1999; Rouse 1998), with the more recent study of the MPCP showing that the program improves student standardized math scores by eleven points and reading scores by six points (Greene, Peterson, and Du 1999).

Although the evidence on test scores is quite robust, it appears not to align closely with the less extensive evidence on arguably more important long-term outcomes such as graduation rates, criminal activity, and income (DeAngelis 2018; Greene 2016). In fact, Hitt, McShane, and Wolf (2018) report that "there is a weak relationship between impacts on test scores and later attainment outcomes" for school choice programs in the United States. The state-mandated evaluations of the DC Opportunity Scholarship Program and the

MPCP find little or no student achievement gains alongside large increases in high school graduation (Cowen et al. 2013; Wolf et al. 2013) and crime reduction (DeAngelis and Wolf 2016; DeAngelis and Wolf 2019). Additionally, the evaluation of the New York School Choice Scholarships Foundation finds modest student test score improvements alongside more substantial college enrollment gains (Chingos and Peterson 2015). This observed trend is not restricted to private school choice programs. At least six charter school studies have shown a nontrivial disconnect between short- and long-term outcomes (Abdulkadiroğlu et al. 2016; Angrist et al. 2016; Booker et al. 2014; Dobbie and Fryer 2016; Clark et al. 2015; Unterman et al. 2016).

If short-run standardized test scores are not strong proxies for the outcomes society actually cares about, it is important that researchers shift attention toward long-term outcomes, and that public officials recognize the unintended consequences of state standardized testing requirements (DeAngelis, Wolf, and Burke 2018). Overall, the evidence indicates that private school choice programs increase high school graduation rates (Cowen et al. 2013; Wolf et al. 2013), save the state and local school districts money (Costrell 2009; Scafidi 2012; Trivitt and DeAngelis 2016; Trivitt and DeAngelis 2017), and increase performance in public schools as a result of competitive effects (Egalite 2013; Egalite and Wolf 2016).

The evidence on the impacts of private school choice programs on democratic society overall is quite scarce, but the abundance of the rigorous empirical evidence indicates that private school choice improves civic outcomes. There are two reviews of the empirical evidence on how school choice impacts democratic outcomes such as citizenship skills, civic engagement, tolerance of others, and criminal activity. The most recent review (DeAngelis 2017) of the eleven quasi-experimental and experimental studies on the effects of private school choice on civic outcomes finds that effects are null to positive for tolerance (Campbell 2002; Fleming, Mitchell, and McNally 2014; Howell and Peterson 2006; Mills et al. 2016; Peterson and Campbell 2001; Wolf, Peterson, and West 2001), null to positive for civic engagement (Bettinger and Slonim 2006; Carlson, Chingos, and Campbell 2017; Fleming 2014; Fleming, Mitchell, and McNally 2014), and positive for crime reduction (DeAngelis and Wolf 2016; DeAngelis and Wolf 2019). Wolf's (2007) meta-analysis and review of twenty-one quantitative studies on the subject, in which he used a less stringent methodology screen than DeAngelis (2017), also finds that

school choice largely improves civic outcomes. Twenty-two out of twenty-three findings from experimental or other statistically rigorous studies indicate that choice schools perform on par with, or better than, traditional public schools in shaping democratic outcomes. The same result emerges from less rigorous empirical studies as well; only two out of thirty-six findings indicate that traditional public schools have an advantage in improving civic skills.

The only experiment examining the relationship between voucher participation and actual voting activity, set in New York City, does not find any impacts overall or for subgroups (Carlson, Chingos, and Campbell 2017). However, the previous study of the MPCP's impact on voter interest, using data from the state-mandated evaluation of the program, finds moderately large positive effects. Specifically, the MPCP students have an 11 percentage point—or 20 percent—higher likelihood than their matched public school peers of reporting that they would certainly vote in future elections (Fleming, Mitchell, and McNally 2014). If students are much more likely to report that they will vote in future elections while they are in the program, we should expect them to have higher voter participation as adults. Our current study is the first to rigorously assess the impacts of the Milwaukee voucher program on actual voting activity using student-level data.

If actual voting activity does not reveal that voucher students engage in more political activity, as found in New York City, two possible explanations exist: (1) the previous study captures the voucher program's ability to shape the skill of understanding social expectations but does not further motivate students to fulfill those expectations, or (2) the program actually shapes the skills necessary to boost civic participation but the effects fade out by the time the children become adults.

V. Data and Matching

We use matched student-level data from the state-mandated evaluation of the MPCP. While schools participating in the program are required to admit students via lottery when they are oversubscribed, school leaders in Milwaukee typically recruit voucher students until they have filled all of their seats. As a result, most school admissions do not require a lottery in Milwaukee. Consequently, we are highly restricted in our ability to experimentally study this voucher program (Cowen et al. 2013).

Instead, we used a sophisticated matching procedure in an attempt to replicate an experimental setting. Specifically, we

generated comparable groups by using an algorithm that matched voucher (MPCP) students with Milwaukee Public School students based on grade, neighborhood, race, gender, English Language Learner (ELL) status, and math and reading test scores (Witte et al. 2008). Researchers took the entire census of 801 MPCP students who were in ninth grade in the fall of 2006, along with a randomly-selected representative sample of 290 MPCP students in eighth grade during the same year, to organize a total MPCP student sample of 1,091. Each MPCP student was matched to an MPS student in their exact grade and census tract, since census tracts define neighborhoods in Milwaukee. We further restricted matches to MPS students that were in the same 5 percent bandwidth of 2006 math and reading test scores. Finally, the specific MPS student that served as the match for each MPCP student was selected based on the nearest-neighbor propensity score calculated by student race, gender, ELL status, and test score. All but two students were successfully matched, so the final program sample consisted of 1,089 students exposed to the voucher program in 2006 and a matched group of 1,089 similar comparison students in MPS in 2006, for a total sample of 2,178.

The match on geographic location was essential since an appropriately common concern with any program evaluation is the fact that participants choose to receive treatment for unobservable reasons. Importantly, families that live in the same neighborhoods tend to share similar unmeasured background characteristics such as motivation level and morality that may have otherwise biased our examination of the MPCP (Ahlbrandt 2013). Previous research shows that nonexperimental matching designs that consider geographic location can come close to replicating gold-standard experimental results (Bifulco 2012).

After students were matched, their parents were surveyed by telephone to gather important family background information such as family income, mother's and father's education, and whether both parents lived in the home. The telephone survey was administered by researchers at Westat's survey call center in two waves—an initial wave in November to December of 2006 and a follow-up wave limited to initial nonrespondents in November–December 2007. The survey instrument, described in detail in Witte et al. (2008), drew upon questions asked of participants in previous school voucher evaluations in Milwaukee; New York City; Dayton, Ohio; and Washington, DC, with some refinements by the research team. A

total of 69 percent of parents in both the MPCP and MPS samples eventually responded—a very high response rate for a telephone survey. The response rate for MPCP parents was 73 percent while the rate for MPS parents was 66 percent. In the analysis below, we use response weights to correct for any baseline differences. For our more complete model estimations, we use this subsample of 1,506 students whose parents were survey respondents so that we can control for family background characteristics that might otherwise bias our estimation of the voucher program effect on voting activity.

For our three dependent variables of interest, we searched publicly available voting records for each student from the state of Wisconsin Elections Commission. Specifically, we were able to find these records online at the My Vote Wisconsin website using the student's name and date of birth. Over a three-day period in December 2016, researchers who were blind to the treatment status of each student recorded whether the student was registered to vote and whether they voted in the 2012 or 2016 elections. By 2012, the matched students were between 19 and 22 years of age, and by 2016, they were between 23 and 26 years of age.

Table 1 below shows the observable differences between MPCP and MPS students after the baseline match. Overall, students differed on only two characteristics included in the 2006 match. MPCP students' baseline reading score averaged around a tenth of a standard deviation higher than their matched MPS students. However, MPCP students' math test scores were about 7 percent of a standard deviation lower than their matched MPS peers. Additionally, MPCP students were more likely to have a parent that frequently attended religious services. However, MPCP students were 13 percentage points less likely to be in the highest income group and 7 percentage points less likely to have a parent that graduated from high school, indicating that MPCP students may have been a less socioeconomically advantaged group than their matched MPS peers.

Table 1: Statistics on model covariates

Variable	MPCP in 2006	MPS in 2006	*N*
Female	0.5672	0.5298	2,170
Black	0.7025	0.6966	2,170
Hispanic	0.1891	0.1760	2,170
Math in 2006	–0.0346	0.0396*	2,170
Reading in 2006	0.1223**	0.0179	2,170
Income > 50k	0.0470	0.1758***	1,378
35k < Income < 50k	0.1436	0.1391	1,378
25k < Income < 35k	0.2169**	0.1483	1,378
Parent HS Grad	0.2569	0.3302**	1,378
Parent Some College	0.3619	0.3165	1,378
Parent Completed College	0.1602	0.1284	1,378
Both Parents in Household	0.3398	0.3211	1,378
Parent Frequent Churchgoer	0.6395***	0.5000	1,378
Registered in 2016	0.5236	0.5591	2,170
Voted in 2012	0.4782	0.4977	2,170
Voted in 2016	0.2410	0.2356	2,170

Notes: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. All figures are the proportions of observations with the described characteristic except test scores, which are expressed in z-score units; *N* varies by characteristic due to different rates of missing data, with the largest difference between the more complete student background and voting data drawn from administrative sources and the less complete family background data drawn from the telephone survey. "Churchgoer" is shorthand for attending any denomination of religious service.

Three statistically significant differences indicate that the matched MPS students were more advantaged, while only one statistically significant difference suggests that the MPCP students were more advantaged. While more statistically significant differences suggest that the MPS students were more advantaged, the overall direction of the selection bias, if it exists, is unclear. The MPCP students could have parents that are more interested in their children's education, but they could also be those most in need of an enhanced education. Nonetheless, we control for all of these characteristics in each of our analytical models. Table 1 also indicates no differences on the three measures of voter participation in 2012 or 2016. Table 2 includes descriptive statistics of each variable used in our models.

Table 2: Descriptive statistics

Variable	*N*	Mean	Std. Dev.	Min.	Max.
MPCP in 2006	2,178	.50	.50	0	1
9th Grade	2,178	.74	.44	0	1
Black	2,178	.70	.46	0	1
Hispanic	2,178	.18	.39	0	1
Female	2,178	.55	.50	0	1
Income > 50	1,401	.11	.31	0	1
35 < Income < 50	1,401	.14	.35	0	1
25 < Income < 35	1,401	.18	.39	0	1
Parent HS Grad	1,506	.29	.45	0	1
Parent Some College	1,506	.33	.47	0	1
Parent Completed College	1,506	.15	.35	0	1
Math Z-Score	2,178	.00	.87	–3	3
Reading Z-Score	2,178	.07	.90	–3	2.5
Both Parents in Household	1,502	.34	.47	0	1
Parent Frequent Churchgoer	1,500	.58	.49	0	1
Registered in 2016	2,170	.54	.50	0	1
Voted in 2012	2,170	.49	.50	0	1
Voted in 2016	2,170	.24	.43	0	1

Notes: All figures are the proportions of observations with the described characteristic except test scores, which are expressed in z-score units. "Churchgoer" is shorthand for attending any denomination of religious service.

VI. Methods

Because our three dependent variables of interest are binary, we employ a probit regression model of the form:

$$\text{VoterActivity}_i = \beta_0 + \beta_1 \text{MPCP06}_i + \beta_2 X_i + \beta_3 Z_i + \beta_4 \text{test}_{2006i} + \varepsilon_i$$

Our dependent variable of interest, *VoterActivity*, takes on the value of 1 if the student engaged in the voting activity in time period *t* and 0 otherwise. We perform a separate probit regression for each of our three outcome variables: whether the student was registered to vote in 2016, whether the student voted in 2012, and whether the student voted in 2016.

Our binary explanatory variable of interest, *MPCP06*, takes on the value of 1 if a given student, *i*, was exposed to the voucher program at baseline and 0 otherwise. Students are classified as "exposed" to the program if they were enrolled in a private school using a voucher in the fall of 2006, regardless of where they attended school after that point. Fall 2006 was the point at which the MPCP students were matched to MPS students. Using that point as a measure of "exposure" to the treatment of private schooling through a voucher renders our analysis similar to an "intent-to-treat" analysis

in the context of an experiment, where subsequent student sorting is controlled for by being ignored. The outcomes for 2006 MPCP students who later switch to MPS or drop out of school altogether are averaged in with the outcomes for 2006 MPCP students who stay in the voucher program through high school.

Similarly, the outcomes for 2006 MPS students who subsequently enroll in the MPCP or drop out of school entirely are averaged in with the outcomes for 2006 MPS students who stay in the public school district throughout high school. Essentially, we control for possible student self-selection bias through 2006 via the matching protocol and then control for possible student self-selection bias after 2006 through using exposure to MPCP in 2006 as our variable of interest.

Although we use a rigorous matching procedure that may be able to replicate experimental results (Bifulco 2012), we present models with parent and student-level controls. We include vector X of student-level controls and vector Z of parent-level controls. These include student grade, race, gender, churchgoing activity, parent income, parent education, and whether or not both parents lived in the household.

We use robust standard errors in all probit models due to the heteroskedastic nature of models with binary dependent variables. We cluster robust standard errors by census tract since students within the same geographic region are similar on unobservable characteristics. We also employ linear probability models as robustness checks for our results.

VII. Results

Table 3 below presents our overall results for our two main models. Our results based on the entire matched sample with student-level controls can be found in columns one through three while the results based on the subsample with all student and parent-level controls can be found in columns four through six.

Overall, neither model indicates that voucher program participation is associated with more or less voting activity in 2012 or 2016. Our model that only uses student-level controls indicates that MPCP students were 4.6 percentage points less likely to be registered to vote in 2016. Since the incidence rate of voter registration in 2016 was 50 percent, voucher students were 9.2 percent less likely to be registered to vote in 2016. The divergence between effects on registration and effects on actual voting activity could be partially

explained by the voter registration initiative (the League of Women Voters' High School Voter Education and Registration Project of Milwaukee County) in Milwaukee Public Schools that started at the end of 2015. However, the registration effect attenuates to zero in our model, which includes all control variables.[1] Conditional on voter registration status, voucher students were no less or more likely to vote in 2012 or 2016 than their public school peers. All statistical significance levels and estimates presented are robust to linear probability models with standard errors clustered at the census tract level.

Control variables mostly behave as expected across models and outcomes. However, in our sample, black students were much more politically active than white students in 2012. In particular, black students were about 12 percentage points more likely to vote in 2012 than white students, perhaps because of the historically unique incumbent candidate for president. This is equivalent to a 24 percent higher likelihood of blacks in our sample voting in 2012 than whites. This large voter participation difference between races disappears to zero for the 2016 presidential election.

Hispanic students were less likely to vote than white students, and women were more likely to vote than men in both elections. Remarkably, women were 12 percentage points more likely to vote than men in 2016, perhaps because voters expected a woman to be elected president for the first time in United States history. Relative to the incidence rate of only 24 percent in 2016, this is an exceptionally large 50 percent higher likelihood of women voting in 2016 than men.

Students with higher baseline reading scores were more likely to vote. Students with more-educated parents were more likely to vote in 2012; however, this effect diminished to zero in 2016, perhaps because individuals are less likely to be influenced by their parents by the time they reach 23 to 26 years of age. Alternatively, this result could be explained by the fact that Donald Trump garnered strong support from less-educated segments of the population (Tyson and Maniam 2016). Unexpectedly, having a two-parent household did not relate to any voting outcome, conceivably because the variable is collinear with income and education.

[1] The result for voter registration could have become statistically insignificant in the model with additional controls either because of stronger identification from more control variables or because of the reduction in sample size.

Table 3: Effect of MPCP on voter activity

	(1)	(2)	(3)	(4)	(5)	(6)
	Registered in 2016	**Voted in 2012**	**Voted in 2016**	**Registered in 2016**	**Voted in 2012**	**Voted in 2016**
MPCP 2006	**–0.046***	**–0.028**	**0.001**	**–0.034**	**–0.021**	**0.005**
	(0.026)	**(0.205)**	**(0.972)**	**(0.208)**	**(0.484)**	**(0.842)**
9th Grade	–0.004	0.004	–0.035	–0.037	–0.032	–0.047
	(0.852)	(0.874)	(0.105)	(0.173)	(0.263)	(0.068)
Black	0.093**	0.128***	–0.038	0.079	0.102*	–0.044
	(0.003)	(0.000)	(0.180)	(0.052)	(0.017)	(0.257)
Hispanic	–0.105**	–0.102**	–0.076*	–0.123*	–0.118*	–0.062
	(0.005)	(0.010)	(0.039)	(0.021)	(0.023)	(0.238)
Female	0.167***	0.173***	0.123***	0.169***	0.183***	0.117***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Math	0.003	0.011	0.004	0.025	0.019	0.010
	(0.814)	(0.508)	(0.780)	(0.153)	(0.308)	(0.527)
Reading	0.049**	0.038**	0.031*	0.044*	0.039*	0.034*
	(0.001)	(0.008)	(0.017)	(0.018)	(0.046)	(0.041)
High Income				0.040	0.050	0.051
				(0.425)	(0.313)	(0.301)
Mid Income				–0.056	–0.079	–0.010
				(0.203)	(0.078)	(0.809)
Low Income				–0.069	–0.078	–0.064
				(0.088)	(0.050)	(0.089)
HS Grad				0.156***	0.134***	0.052
				(0.000)	(0.000)	(0.148)
Some College				0.108**	0.124***	0.029
				(0.004)	(0.001)	(0.398)
College				0.105*	0.118*	0.053
				(0.026)	(0.014)	(0.301)
Both Parents				0.007	0.013	–0.037
				(0.821)	(0.690)	(0.236)
Churchgoer				0.011	–0.020	0.008
				(0.657)	(0.419)	(0.742)
Pseudo R^2	0.0463	0.0506	0.0287	0.0716	0.0756	0.0361
N	2,170	2,170	2,170	1,378	1,378	1,378

Notes: P-values in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Robust standard errors clustered by census tract. Estimates are average marginal effects. Models 1–3 use student-level controls. Models 4–6 use student and parent-level controls. All significance levels and coefficients are robust to linear probability models. "Church" is shorthand for attending any denomination of religious service.

Table 4 shows the results for various subgroups. These results largely mirror those for the overall sample. Subgroup analyses by race, gender, and baseline test scores do not detect any heterogeneous effects of the program on voting in either year. However, the model without parental controls finds that voucher students with below-average math and reading baseline test scores were less likely to be registered to vote in 2016. Specifically, voucher students with below-average math or reading test scores were about 6.8 percentage points less likely to be registered to vote in 2016.

Table 4: Heterogeneous effects of MPCP on voter activity

	(1)	(2)	(3)	(4)	(5)	(6)
	Registered in 2016	**Voted in 2012**	**Voted in 2016**	**Registered in 2016**	**Voted in 2012**	**Voted in 2016**
White	–0.061	–0.067	–0.022	–0.049	–0.042	–0.006
	(0.127)	(0.082)	(0.499)	(0.312)	(0.420)	(0.884)
Black	–0.038	–0.012	0.010	–0.027	–0.013	0.010
	(0.628)	(0.260)	(0.405)	(0.707)	(0.639)	(0.761)
Female	–0.053	–0.031	0.004	–0.060	–0.051	0.002
	(0.711)	(0.867)	(0.763)	(0.239)	(0.160)	(0.836)
Male	–0.037	–0.025	–0.006	–0.003	0.018	0.011
	(0.219)	(0.430)	(0.845)	(0.947)	(0.680)	(0.780)
Low Reading	–0.065*	–0.047	0.014	–0.041	–0.021	0.030
	(0.011)	(0.064)	(0.554)	(0.217)	(0.534)	(0.294)
Low Math	–0.071**	–0.039	0.006	–0.048	–0.024	0.012
	(0.002)	(0.109)	(0.775)	(0.092)	(0.427)	(0.649)
Dropout Parent				–0.047	–0.001	–0.022
				(0.784)	(0.682)	(0.542)
Student Controls	yes	yes	yes	yes	yes	yes
Parent Controls				yes	yes	yes
N	2,170	2,170	2,170	1,378	1,378	1,378

Notes: P-values in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Robust standard errors clustered by census tract. Estimates are average marginal effects. Results in columns 1–3 include student controls, while columns 4–6 also include parental controls.

VIII. Conclusion: Discussion and Policy Implications

While some scholars may suggest that these results conflict with the conclusions made by Fleming, Mitchell, and McNally (2014), we are not particularly surprised. There are two highly plausible explanations for the seemingly contradictory results between the two studies. The other study simply asks these children if they believe that they are going to vote in the future. Consequently, this survey question likely measures something other than political participation. In fact, it is much more likely that this question measures another arguably essential skill for social order: knowing what is implicitly and explicitly expected from the rest of society. It appears that the MPCP has a positive influence on that particular civic skill, but no effect on actual voting activity in 2012 or 2016. Alternatively, it may be that the positive impact on voting interest captured by Fleming, Mitchell, and McNally (2014) simply fades out by the time the students reach nineteen to twenty-six years of age.

Our study largely mirrors the experimental results reported by Carlson, Chingos, and Campbell (2017) for the New York School Choice Scholarships Foundation Program: no impacts on voter activity overall or for any subgroups. Likewise, our study does not find evidence to suggest that access to private schooling through a voucher program diminishes the ability of a democratic society to function properly. Indeed, prior research finds that access to the MPCP results in an improved society through less criminal activity (DeAngelis and Wolf 2016), an understanding of the expectations of society (Fleming, Mitchell, and McNally 2016), more racial integration (Forster 2006; Fuller and Greiveldinger 2002; Fuller and Mitchell 2000), higher test scores (Greene, Peterson, and Du 1999), higher graduation rates (Cowen et al. 2013), and higher levels of college enrollment (Wolf, Witte, and Kisida 2018), without any social costs associated with diminished voting behavior.

Indeed, one could argue a finding that access to private schooling significantly affects voter participation, in either direction, would be cause for concern. If access to religious schools caused an increase in voting activity, there would be much anxiety about how those students ended up voting. If it caused a decrease in voting activity, concerns about a weakening of civic values would be strengthened.

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