Government Privatization and Political Participation: The Case of Charter Schools

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Abstract

Governments around the world have privatized public services in the name of efficiency and citizen empowerment, but some argue that privatization could also affect citizen participation in democratic governance. We explore this possibility by estimating the impact of charter schools (which are publicly funded but privately operated) on school district elections. The analysis indicates that the enrollment of district students in charter schools reduced the number of votes cast in district school board contests and, correspondingly, reduced turnout in the odd-year elections in which those contests are held. This impact is concentrated in districts that serve low-achieving, impoverished, and minority students, leading to a modest decline in the share of voters in those districts who are black and who have children. There is little evidence that charter school expansion affected the outcomes of school board elections or turnout in other elections.

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1 Introduction

Governments around the world have undertaken market-based reforms for decades. Reformers in the United States in particular emphasize that outsourcing service provision to private companies, and giving citizens a choice over the services they consume, should enhance efficiency through citizen empowerment (Handler, 1996). But such reforms could also affect citizens' political engagement by altering their experiences with government (Campbell, 2012; Mettler and Soss, 2004).[1] For example, if privatization lowers citizens' personal stake in government decision-making by limiting elected officials' direct influence over public services, then citizens' incentives to participate in democratic governance may decline. Our analysis tests for such an impact in the context of primary and secondary education.

Claims about the benefits of privatization and citizen choice remain particularly salient in debates over the delivery of primary and secondary education. The governance of public education in the United States has long featured approximately 13,000 locally elected boards that oversee the education of students residing in their districts. As concern over the academic aptitude of U.S. students has grown, however, scholars and policymakers have questioned the ability of local democratic institutions to deliver educational quality (Howell, 2005). Many contend that school districts are public monopolies with little incentive to operate efficiently; that they have been captured by interest groups that do not prioritize students' needs; and that elected school boards lack the capacity to make effective policy and exercise oversight over district operations (e.g., see Chubb and Moe 1988; Moe 2006). These problems are thought to disproportionately affect economically disadvantaged families that are less politically engaged and more likely to be trapped in poorly funded and mismanaged districts. One strategy policymakers have used to address these concerns is to introduce market mechanisms, forcing districts and schools to compete with one another (e.g., via open enrollment policies), with private schools (e.g., via publicly funded vouchers), and with

[1] More generally, this study contributes to the "policy feedback" literature (see Campbell, 2012), particularly as it relates to political participation (see Clinton and Sances, 2017).

charter schools in order to attract students.

Charter schools—the focus of this study—have received the most attention among these options. These schools are publicly funded and operate independently of traditional public school districts. They operate under a contract (or "charter") they develop in collaboration with a state-approved authorizing organization and enjoy more freedom from regulation so that they may serve as laboratories for educational innovation. Although state regulations have increasingly sought to rid the charter sector of poorly performing schools (e.g., see Carlson and Lavertu, 2016), the survival of charter schools rests primarily on their ability to attract students and the government funding that they bring. Thus, they are in direct competition with school districts, and that competition has increased dramatically as the charter sector has grown. Indeed, nationwide the number of students attending charter schools doubled between 2008 and 2014, growing from 1.3 million to 2.6 million—over 5 percent of U.S. public school students (NAPCS, 2017).

There have been numerous studies that assess the impact of attending charter schools on student academic achievement, and there have been some studies that estimate their effects on educational attainment, labor market outcomes, and racial segregation (see Epple, Romano, and Zimmer, 2015).[2] What has received far less attention is the impact of charter schools on school district democracy. It is conceivable that the vitality of local school district democracy might decline as charter schools proliferate, siphoning away students whose parents are relatively informed and engaged in their children's education (Abernathy, 2005; Carnoy, 1993; Henig, 1994). As their stake in the performance of school districts declines,

[2]The impact of charter schools on the achievement of students who attend them is highly variable (e.g., see CREDO, 2015). In Boston, where charter schools have been found to have a positive achievement impact on the children who attend them, there is evidence that improved test scores are not due to gaming such as teaching to the test or focusing on "bubble" students (Cohodes, 2016). There also has been some research on the effect of charter school competition on traditional school districts. For example, the literature has documented improved student achievement in math and reading when districts face charter school competition (see Epple, Romano, and Zimmer, 2015). One mechanism appears to be the shift in district expenditures from support services to instruction and salaries (Terrier and Ridley, 2017). But research also has found evidence that charter school competition leads to fiscal stress (Bifulco and Reback, 2014) and depresses housing valuations, which in turn leads to lower district property tax revenues (Cook, 2018; Imberman, Brehm, and Naretta, 2017).

parents of students who transfer to charter schools may be less likely to participate in school district politics. And, if engagement in school district politics is in fact important for promoting political participation more broadly—for example, if charter school choice programs lead citizens to be more individualistic and less civic minded (Ball, 2005)—the inclination of parents of charter students to participate in democracy more generally might decline. Although some rigorous studies conclude that charter school entry is welfare enhancing (e.g., see Ferreyra and Kosenok, 2018), such analyses generally fail to consider such political externalities.

On the other hand, some argue that school choice could increase social capital and enhance civic engagement by forcing parents to become better informed about public services (Schneider et al., 1997; but see Cox and Witko, 2008). For example, there is some survey evidence indicating that parents who participate in school voucher programs become more informed and politically active as a result (Fleming 2014), and Lovenheim and Walsh (2018) find that school choice greatly increases the extent to which parents seek school quality information online.[3]

To our knowledge, however, there is no research that convincingly documents the immediate impact of charter schools on political participation and electoral outcomes. We address this gap by examining the electoral impact of introducing charter schools in Ohio from 1999 to 2011—a period in which the state experienced a rapid increase in charter enrollments, from under 10,000 students in 1999 to over 100,000 students in 2011 (NAPCS, 2017). We use a unique measure of charter entry—one that captures how many charter school students would have been enrolled in district schools—as well as a difference-in-differences design that plausibly enables us to estimate the causal impact of introducing charter schools on district school board contests. In particular, we estimate the impact of charter school enrollment on

[3]There is also no evidence that students who participate in school choice programs to attend private schools are less likely to be politically active later in life (e.g., Carlson, Chingos, and Campbell, 2017; DeAngelis and Wolf, 2018). Indeed, if school choice programs increase academic achievement and attainment, then one should expect increased political participation later in life. Bergman's (2016) study of a randomized school desegregation program finds exactly that.

votes cast in school board elections, as well as on overall voter turnout in odd-year November elections when school board contests are held (along with other, primarily local, contests).[4]

The results indicate that a 1 percentage point increase in charter school enrollments (about 40 students for a district of average size) is associated with approximately 2.5-4 percent decline in the number of votes cast in school board contests (about 100-160 fewer votes cast per open school board seat). Further analysis indicates that the primary mechanism is a reduction in voter turnout in odd-year elections featuring school board contests—a reduction which we link to fewer new voters, as opposed to a reduction in voters who participated in prior odd-year elections. These turnout effects are concentrated in districts that serve low-achieving, impoverished, and minority students, and, among these districts, charter enrollments lead to a lower share of voters who are black and who have children. A variety of other analyses provide evidence consistent with the notion that the impact of charter schools on political participation is causal and due to district residents' reduced stake in the governance of traditional district schools.

The impact on electoral outcomes appears minimal, however. We find little evidence that charter school enrollments affected the electoral fortunes of incumbent school board candidates or the overall turnover rates of school board members. It is important to emphasize that our research design permits us to capture only the short-run effects of charter schools, however. That is, we estimate the effect of charter school enrollments in August on elections that occur months later. Although this is a feature that allows us to plausibly link charter school enrollments to district-wide political participation, it does not allow us to speak to long-term dynamics whereby the impact of charter schools might accumulate over time.

Overall, the analysis provides what is, to our knowledge, the first convincing empirical test of dynamics that scholars and political commentators have primarily speculated about. In the following sections, we describe our case and data, motivate our empirical strategy, present the results, and discuss their implications.

[4]The analysis focuses on 265 school districts operating in Ohio's most heavily populated areas.

2 The Governance of Ohio Public Schools

Ohio is divided into 612 public school districts responsible for delivering primary and secondary education. Elected school boards govern all but one of these districts. Their members—five or seven, depending on the size of the district—are elected to four-year, staggered terms in November elections that are held in odd-numbered years and feature other (primarily local) contests.[5] School boards guide districts on a variety of matters, including those related to strategic planning, the allocation of resources, and the establishment of procedures for hiring and evaluating teachers and administrators. Importantly, school boards also negotiate with teachers unions to establish collective bargaining agreements that determine many aspects of school management, and they may have a significant impact on day-to-day operations simply through their power to appoint, dismiss, or otherwise influence district superintendents and treasurers.

In 1997, a change in Ohio law enabled public and non-profit entities to "charter" independent schools (called "community schools" in Ohio) within school district boundaries.[6] Charter school enrollment grew rapidly in Ohio primarily because of a series of legislative acts between 1999 and 2005 that allowed them to open in large urban districts (particularly Akron, Canton, Cincinnati, Cleveland, Columbus, Dayton, Toledo, and Youngstown) and, more generally, districts that received the lowest performance designations—"academic emergency" or "academic watch"—on their state report cards. Lawmakers targeted these largely impoverished districts ostensibly to provide their students with better schooling options, as state report cards indicated poor performance on state tests.[7]

A defining feature of charter schools is that they are relatively unconstrained by

[5]The vast majority of districts have either 2 or 3 open seats per election, whereas a few large districts have 3 or 4 open seats.

[6]Ohio charter schools are authorized by non-profit private organizations, state and local education agencies, and higher education institutions. Although traditional school districts are among the local education agencies that authorize charter schools, there are also other local agencies (e.g., career-technical districts and regional service centers) that serve as authorizers. Indeed, only a small fraction of charter schools are authorized by traditional school districts.

[7]That said, charter schools can and do enroll students who do not reside in the districts in which the schools are located.

school district politics and bureaucracy and, thus, are relatively free to innovate. Importantly, they also compete with school districts for students. Funding for charter schools comes primarily from state per-pupil transfers to school districts, which districts must then transfer to charter schools if students residing within their boundaries choose to enroll. Parents whose children enroll in charter schools retain a financial stake in the democratic governance of the district in which they reside because they contribute to local district revenues—primarily through district property taxes and, sometimes, income taxes. However, unless a tax referendum is on the ballot, the parents of students who transfer to charter schools likely have a significantly lowered stake in school district governance.[8]

3 School District Data

We combined multiple data sources to create a panel of Ohio school districts from 1999 through 2011, which captures the period of rapid charter school expansion in Ohio.[9] First, we collected data on odd-year school board elections held in Ohio's largest metropolitan areas—Cleveland/Akron, Cincinnati, Columbus, and Dayton. These data include the names of school board candidates, the number of votes each candidate received, and whether they served as school board members prior to or after the election. Although not all county election boards responded with all of the records we requested, we have a relatively balanced panel of school board election data across 265 of Ohio's 612 school districts.[10]

[8] Although the quality of a district's traditional public schools may have an effect on housing values, research indicates that Ohio voters are inclined to vote down local tax referenda in response to poor district performance (Kogan, Lavertu, and Peskowitz, 2016).

[9] As we show below, charter school growth slows beginning in 2005, but concerns about charter school quality led growth to plateau and, eventually, contract after 2011.

[10] There are over 200 districts we observe continuously from 2001 to 2011. Coverage declines as one moves back in time, however, with a low of 145 districts in 1999. That is due in part to Ohio law, which only requires county election boards to retain election records for 7 years. Due to financial constraints, we sent requests for election records only to Ohio's largest counties. We found that they were more likely to have the capacity to fulfill our records requests and keep the records beyond the statutory minimum retention period. We also wanted to capture Ohio's most heavily populated areas. Because the records capture Ohio's largest school districts, they also cover the areas with the greatest charter school expansion. Additionally, as we illustrate below, the turnout effects we detect are driven by districts serving disproportionately minority students, and nearly all districts with high minority populations reside in counties from which we requested records.

Second, we obtained from a private vendor—Catalist, LLC—counts and demographic characteristics of voters participating in these elections from 2000 to 2011 across 544 districts. From 2002 to 2011, these data also enable us to generate counts of voters who did or did not vote in the prior odd-year election. These data are based on historical voter files acquired in 2016. In particular, the portion of the analysis using these data examines the historical voting behavior of people residing in their respective districts as of 2016. Nevertheless, as Kogan, Lavertu, and Peskowitz (2018) demonstrate across multiple states, these data capture historical trends in the electorate within schools districts. To further validate these data in our particular context, we obtained from the Ohio Secretary of State's office official vote counts for tax referenda held during November elections (2003-2011) and found a correlation of 0.98 between referendum vote counts and the historical district voter counts based on the 2016 voter file. This correlation actually increases slightly if we limit the sample to earlier years (e.g., 2003-2006). In terms of differences in absolute counts, the median difference between the voter counts and votes cast in tax elections is -0.06 percent, with an inter-quartile range of -4.5 to 4.9 percent.

Third, we obtained publicly available data on Ohio school districts, including their enrollments in October of odd-numbered years, the demographic characteristics of their students, and the annual performance ratings that the state assigns to them. The performance ratings are based on a relatively complicated algorithm that changed over the course of the panel, but they primarily capture student proficiency rates and, thus, are highly correlated with district poverty rates. The ratings, ordered from worst to best, include "academic emergency," "academic watch," "continuous improvement," "effective," "excellent," and, in later years, "excellent with distinction." As we note above, these ratings played a significant role in charter expansion. They also received substantial attention when they were released just prior to the start of each school year, beginning after the implementation of federal accountability legislation in 2003.

Finally, following Cook (2018), we used publicly available district financial reports to

calculate the extent of charter school enrollment—our measure of government privatization.[11] These reports record the number of students residing in a school district (i) who elected to "transfer" to a charter school in the fall of a given calender year (t), enabling us to create the following district-level measure of privatization:

$$Charters_{it} = \frac{CharterTransfers_{it}}{DistrictEnrollment_{it} + CharterTransfers_{it}} * 100 \quad (1)$$

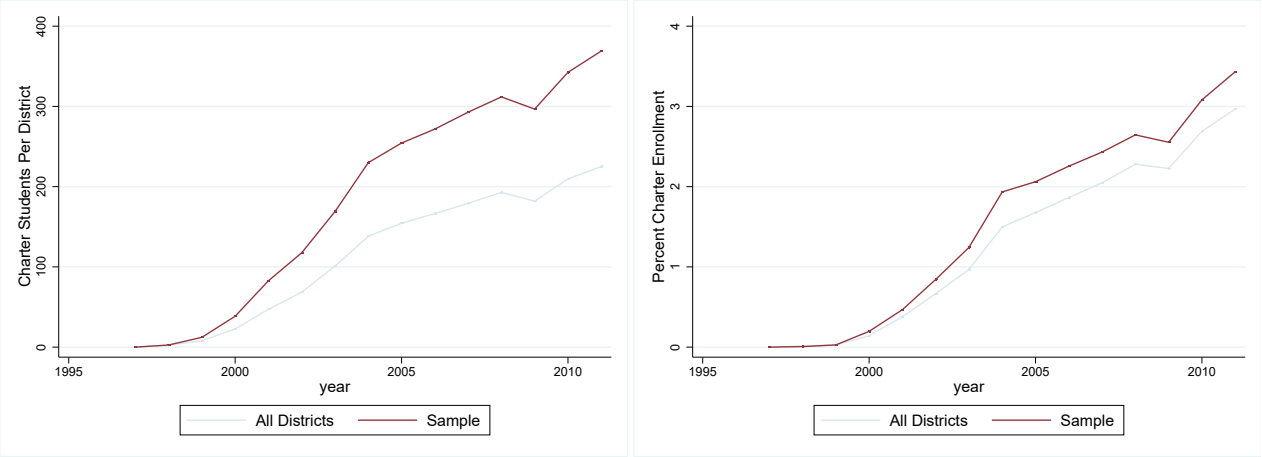
It is important to emphasize that "transfers" captures the total number of charter school students coming from a particular district, as opposed to the number of additional students who switched sectors in a given year. Thus, $Charters$ captures charter penetration as a percentage of the enrollment districts would have had in the absence of charter schools.

Figure 1 plots the mean counts of charter school students per district (the figure on the left) and the variable $Charters$ (the figure on the right). The graph on the left indicates that the growth of charter school enrollment is more pronounced in our sample of 265 districts than other Ohio districts, but the graph on the right indicates that this difference becomes negligible once we scale enrollments by the number of public school students residing within a district's boundaries. In other words, although the districts on which we focus are bigger, charter school enrollment as a percentage of total district enrollment is comparable. Figure 1 also illustrates that after the rapid increase in charter enrollments between 1999 and 2004, growth levels off a bit and there is a decline in 2009. Indeed, due to charter school accountability reforms, some districts experience overall declines in charter enrollments after 2004. If the effects of increases and decreases in charter enrollment are asymmetric—for example, if returning to traditional public schools after an initial transfer does not translate to a comparable re-engagement in school district politics—then estimated effects in later years could understate the impact of charter transfers on voter turnout. Thus, the period between 1999 and 2004 most clearly provides us with an opportunity to identify the impact

[11] These reports allow us to measure transfers to both brick-and-mortar and digital charter schools. See Cook (2018).

of charter school entry on school district elections.

Figure 1: Charter School Enrollments

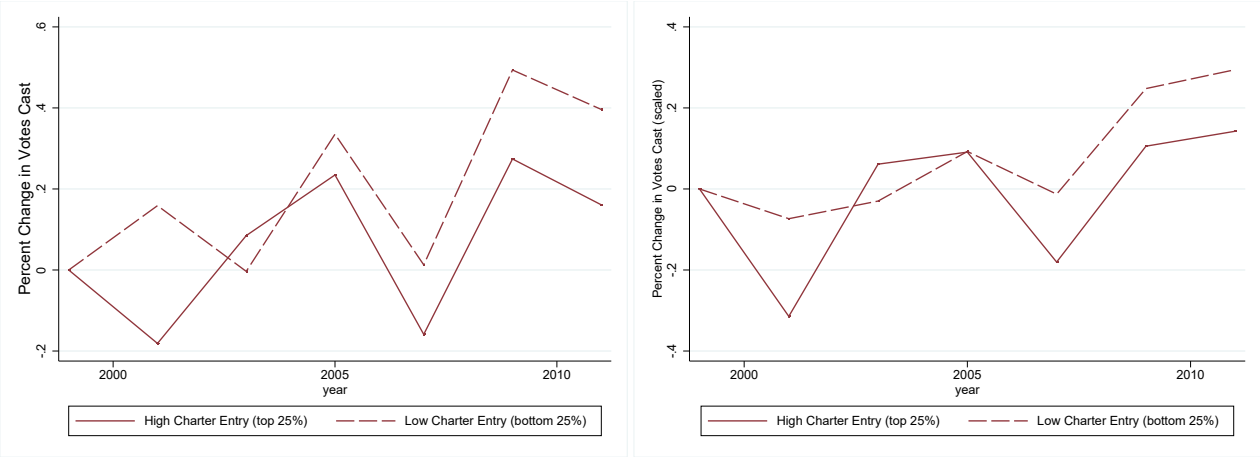


Note: The figure on the left plots the mean counts of charter school students per district. The figure on the right plots the mean percentage of district public school students in charter schools (i.e., the variable *Charters*). The darker, red lines capture trends in our sample of 265 districts, whereas the lighter, grey lines capture trends across all Ohio districts.

Figure 2 plots the approximate percent change within districts in the number of votes cast in school board elections, using 1999 as a baseline.[12] The graph on the left plots the percent change in total votes cast, whereas the graph on the right plots the percent change in votes cast per open school board seat, scaled by Census estimates of a district's adult population. The graph on the right reveals that by 2011 districts in the lower quartile in terms of charter enrollments (as of 2011) experienced increases in votes cast (scaled by population) of around 30 percent. On the other hand, votes cast in districts in the upper quartile in terms of charter enrollments experienced turnout increases of around 15 percent. The figure also reveals that during the 2003-2005 period—one in which federal accountability systems kicked in, leading to the dissemination of school quality metrics that also served as a primary determinant of charter school expansion—initial differences in turnout were temporarily muted.

[12]We refer to "approximate" percent changes because the figures in fact capture the difference in logged voter counts between a given year and the baseline of 1999. We refer to "percent changes" for ease of exposition.

Figure 2: Percent Change in Votes Cast in School Board Elections



Note: The figure on the left plots the mean percent change (within districts) in votes cast in school board elections since 1999. The figure on the right plots the mean percent change in votes cast per open school board seat (within districts) scaled by Census estimates of the adult population. The upper and lower quartiles are based on district charter enrollment in 2011.

Table 1: Summary Statistics for School Board Sample – Odd Years, 1999-2011

Variable	Obs	Mean	Std. Dev.	Min	Max
Votes cast per school board seat	1521	4114.028	5871.635	2	81319
Votes cast divided by adult population	1521	.215	.077	0	.743
Voter counts	1480	6456.149	9153.252	328	116807
Voter counts divided by adult population	1480	.33	.109	.054	.726
Non-voters who voted two years prior	1234	1756.176	3487.519	58	69741
Voters who who voted two years prior	1234	4386.024	5848.69	209	66769
Students in traditional public schools	1847	4039.474	6317.037	444	75827
Students who transferred to charter schools	1847	211.38	1221.08	0	20527.47
Charters (percent charter students)	1847	1.749	2.629	0	21.97
District ever received two lowest ratings	1847	.344	.475	0	1

Table 1 provides descriptive statistics for key variables relating to votes cast, voter turnout, and school district and charter enrollments. There are fewer observations for voter counts and counts of voters and non-voters who voted two years prior because these data are available beginning in 2001 and 2003, respectively.

4 Empirical Strategy

We employ a difference-in-differences design, comparing political participation between districts that experienced differential changes in charter school enrollment over time. More specifically, we focus on the impact of charter school enrollments as of August of an odd year, just prior to the November election, as compared to other odd years in the same district. We implement this difference-in-differences design using the following Ordinary Least Squares (OLS) model:

$$y_{ict} = \beta Charters_{it} + Rating_{i,t-1}\sigma_1 + Rating_{i,t-2}\sigma_2 + \gamma_{ct} + \phi_i + \epsilon_{ict} \tag{2}$$

where y_{ict} is the electoral outcome for district i in election year t and commuting zone c, γ_{ct} are commuting-zone-by-election-year fixed effects, ϕ_i are district fixed effects, $Rating_{i,t-1}$ and $Rating_{i,t-2}$ are 1x6 vectors of indicators for the six possible performance ratings one and two years prior, respectively, and $Charters_{it}$ is the proportion of a district's public school students enrolled in a charter school. In the results below, we report standard errors clustered by district, and our parameter of interest is β, which should capture the impact of a one percentage point increase in charter school enrollments within a district on our outcomes of interest.

The commuting zone fixed effects capture the local economies in which people work and live, which enables us to make comparisons among individuals operating in similar economic environments.[13] Our identifying assumption, therefore, is that districts within commuting zones have common trends in the outcomes of interest—particularly in terms of votes cast per open board seat and voter counts. There are a variety of reasons why this assumption might not hold. For example, districts that declined in quality might have experienced larger increases in charter school enrollments, and declines in educational quality might also have led voters to move to other districts or disengage politically. (This possibility motivated

[13]We obtained year 2000 commuting zone data from the Department of Agriculture's website.

our inclusion of controls for lagged district performance ratings in some specifications.) More generally, if there are differential population trends between districts that have high and low shares of charter enrollments, then changes in votes cast or voter counts might be due to inter-district migration, as opposed to changes in political participation behaviors among a fixed set of district residents.[14]

With these concerns in mind, we conducted a number of validity checks and sensitivity analyses. First, across all years and subsets of years (e.g., 1999-2005 versus 2005-2011), we sought to determine whether population trends are correlated with differential charter entry. To check for this, we estimated the above model with the following dependent variables: Census estimates of the school-age population, Census estimates of the adult population, and district enrollments (see Tables A1-A3 in Appendix A). The analysis indicates that, in odd years across 1999-2011, there are no differential population trends in specifications with school district performance ratings and district-specific time trends, and district enrollment declines by nearly as much as one would anticipate for every 1 percent increase in charter school enrollments (i.e., around 1 percent). Additionally, to test the sensitivity of our estimates, below we present the results of models with and without controls for district trends and ratings, as well as the results of models in which votes cast and voter counts are scaled by estimates of the adult population. Finally, we estimated models that include leads and lags of $Charters$. In our primary set of results for votes cast in school board elections, it is clear that only charter school entry in year t is predictive of changes in votes cast. These validity and sensitivity checks lend us some confidence that one can interpret the estimated impact of charter entry as causal in this context.

It appears that there are some potential problems if we wish to examine the impact of charter entry on voter turnout in even-year elections featuring state and federal contests, however. For early years (1999-2005) we do not find the expected decline in enrollment in

[14]Such migration is less likely to be a problem for our measure of voter counts, as those are based on the 2016 voter file. If there is migration between districts, this would simply introduce noise in our turnout measure.

traditional public schools (see Tables A4-A6 in Appendix A). This result suggests student population trends. However, there appears to be no such problem in 2005-2011 (see Table A6). Although we have little statistical power in this period to examine even-year turnout effects, we implement a sort of "triple difference" (DDD) design that allows us to do so.[15] The triple-difference design enables us to estimate the impact of charter expansion in both odd and even years, which enhances our statistical power sufficiently to examine turnout dynamics in later years.

We implemented this strategy by interacting the charter enrollment variable with an indicator of whether the year is odd (1) or even (0), and adding that to our main specification:

$$y_{ict} = \alpha Charters_{it} \times OddYear_t + \beta Charters_{it} + Rating_{i,t-1}\sigma_1 + Rating_{i,t-2}\sigma_2 + \gamma_{ct} + \phi_i + \epsilon_{ict} \quad (3)$$

In this model, α captures the odd-year impact of charter entry relative to the even year effect (β). This analysis confirms that our estimates of voter turnout effects hold across the entire period (i.e., prior and after 2005) and reveals no effect in even-year elections featuring state and federal contests.

5 Results

We proceed as follows when presenting the results. First, based on our primary difference-in-differences (DD) strategy, we present estimates of the impact of charter school expansion on the number of votes cast in school board elections. Second, based on the same strategy, we examine the extent to which there is a corresponding effect on voter turnout in odd-year elections featuring school board elections and other (primarily local) contests. Third, we use the triple difference (DDD) design to further explore turnout effects in both odd and even years during 2005-2011. Throughout, we present the results of models with and without

[15] Although we refer to this as a "triple difference" design below, that is not really the identification strategy because we do not assume that even-year effects are null. However, because the even-year effects turn out to be null, we feel comfortable referring to the design as DDD.

lagged district performance ratings ("ratings"), district-specific time trends ("trends"), and the number of candidates running for school board seats ("candidates") to examine the extent to which our estimates are sensitive to their inclusion.[16] Finally, we discuss the results of additional analyses examining impacts on the demographic composition of voters and election outcomes, as well as variation in impacts across districts serving different types of students.

5.1 DD Estimates of Votes Cast in School Board Elections

Table 2 presents the results of models estimating the impact of charter school enrollments on the log of total votes cast in school board elections (columns 1-3) and the log of votes cast per open school board seat (columns 4-6). The first column of Table 2 indicates that, if one excludes lagged district ratings, district time trends, and candidates running per open school board seat, a 1 percentage point increase in charter school enrollments leads to a 2.4 percent decline in votes cast ($p < 0.01$). Controlling for district ratings and candidates per open school board seat (column 2) increases the magnitude of this estimate to -3.1 percent ($p < 0.05$), and including district time trends leads to an estimate of -2.8 percent. Although this last estimate does not reach conventional levels of statistical significance, that it is similar in magnitude greatly enhances our confidence in the validity of our empirical framework. Moreover, columns 4-6 reveal that scaling vote counts by the number of open school board seats does not substantively affect the results. These estimates indicate that a 1 percent increase in charter enrollments leads to between 100 and 120 fewer votes cast per open seat for a district of average size.

In Table 3, we include leads of the *Charters* variable as a validity check, and we

[16]The number of school board candidates per open seat is a "bad control," as charter schools might affect the number of people who run for office. Although charter expansion seems to have no statistically significant effect on the number of candidates running for office (see Appendix B), we lack the power to rule out substantively significant effects. Thus, controlling for the number of candidates running per open seat should enable us to check whether our results are driven by district-specific electoral dynamics that are correlated with both charter school enrollments and votes cast per open seat. We also include the variable in part because voters can only vote for candidates listed on the ballot. If fewer people run than there are available seats (which occurs 29 times in our data), then we might falsely conclude that turnout was lower than it actually was. Finally, the "candidates per seat" variable is a good predictor of votes cast and, thus, often increases the precision of our estimates.

Table 2. Votes Cast in School Board Elections – 1999-2011

	(1) ln(Votes)	(2) ln(Votes)	(3) ln(Votes)	(4) ln(V/Seat)	(5) ln(V/Seat)	(6) ln(V/Seat)
Charters	-0.024***	-0.031**	-0.028	-0.026***	-0.032**	-0.028
	(0.0091)	(0.015)	(0.025)	(0.0088)	(0.014)	(0.021)
N	1522	1521	1521	1521	1521	1521
Ratings	No	Yes	Yes	No	Yes	Yes
Candidates	No	Yes	Yes	No	Yes	Yes
Trends	No	No	Yes	No	No	Yes
Districts	265	264	264	264	264	264

Note: The dependent variable is the log of total votes cast for school board (columns 1-3) or votes cast per open school board seat (columns 4-6). All models include commuting-zone-by-year and district fixed effects. Standard errors clustered by district are in parentheses below the coefficient estimates.* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3. Votes Cast in School Board Elections – 1999-2011

	(1) ln(V/Seat)	(2) ln(V/Seat)	(3) ln(V/Seat)	(4) ln(VS/Pop)	(5) ln(VS/Pop)	(6) ln(VS/Pop)
Charters	-0.039**	-0.045*	-0.040	-0.036**	-0.042	-0.041
	(0.016)	(0.026)	(0.036)	(0.016)	(0.027)	(0.036)
$Charters_{t+1}$	-0.0031	0.0022	0.00046	-0.0025	0.0028	0.00082
	(0.0045)	(0.0052)	(0.0047)	(0.0048)	(0.0054)	(0.0048)
$Charters_{t-1}$	0.011	0.0073	0.0083	0.011	0.0073	0.0082
	(0.0097)	(0.0086)	(0.0091)	(0.0097)	(0.0087)	(0.0090)
N	1255	1255	1255	1255	1255	1255
Ratings	No	Yes	Yes	No	Yes	Yes
Candidates	No	Yes	Yes	No	Yes	Yes
Trends	No	No	Yes	No	No	Yes
Districts	233	233	233	233	233	233

Note: The dependent variable is the log of votes cast per open school board seat (columns 1-3) and log of votes cast per open school board seat scaled by Census population estimates (columns 4-6). All models include commuting-zone-by-year and district fixed effects. Standard errors clustered by district are in parentheses below the coefficient estimates.* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

include lags to control for dynamics related to prior charter school enrollment.[17] If future charter school enrollments explain current votes cast per seat, for example, then there are likely differential trends affecting our results. Additionally, votes cast are scaled by the number of open school board seats (columns 1-3) and scaled by both open school board seats and Census population estimates (columns 4-6). The estimates are consistently around -0.04—that is, a one percentage point increase in charter school enrollments translates to a decline of 4 percent in votes cast per open school board seat. For a district with an average number of votes cast in school board contests, this effect translates to about 160 fewer votes cast per open seat. Importantly, none of the coefficients for the leads of *Charters* are statistically significant. That the lags also are insignificant suggests we that we are indeed capturing immediate impacts of charter expansion. Overall, these results provide convincing evidence that the privatization of public education via charter schools had a negative impact on the number of votes cast in school board seats.

5.2 DD Estimates of Voter Turnout in Odd-year Elections

School board contests are held in November of odd years, when other local contests and some statewide issues may also be on the ballot. Although some of the negative impact of charter transfers on votes cast could be due to roll-off—voters skipping school board elections on the ballot (which is highly plausible since these elections are non-partisan and incumbents are not flagged on the ballots)—the magnitude of the effects we detect are such that roll-off can only be a small part of the story.[18] Instead, if the effect sizes we detect above are accurate, the reduction in votes cast would need to be due at least partly to voters sitting out the election altogether. That is the mechanism on which we focus here.

Table 4 presents the results of models estimating the impact of charter enrollments on the log of total voters in odd-year November elections (columns 1-3), and the log of voters

[17]The decline in districts to 233 is due to the inclusion of a lead of the *Charters* variable, which results in losing data from 2011—the year for which we have election data for the greatest number of districts. Controlling for the number of candidates per open seat results in a further decline to 219 districts.

[18]Roll-off is typically minimal in odd-year elections that primarily feature local contests.

Table 4. Voter Turnout in Odd-year Elections – 2001-2011

	(1) ln(Voters)	(2) ln(Voters)	(3) ln(Voters)	(4) ln(Vtrs/Pop)	(5) ln(Vtrs/Pop)	(6) ln(Vtrs/Pop)
$Charters$	-0.010**	-0.017*	-0.017***	-0.0050	-0.017*	-0.015***
	(0.0044)	(0.0088)	(0.0052)	(0.0046)	(0.0093)	(0.0055)
$Charters_{t+1}$			-0.0051			-0.0049
			(0.0035)			(0.0036)
$Charters_{t-1}$			0.0071***			0.0072***
			(0.00088)			(0.00091)
N	1480	1292	1044	1480	1292	1044
Ratings	No	Yes	Yes	No	Yes	Yes
Candidates	No	Yes	Yes	No	Yes	Yes
Trends	No	Yes	No	No	Yes	No
Districts	247	246	219	247	246	219

Note: The dependent variable is the log of the total number of voters in odd-year elections (columns 1-3) and the log of odd-year voter counts scaled by population (columns 4-6). All models include commuting-zone-by-year and district fixed effects. Standard errors clustered by district are in parentheses below the coefficient estimates.* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

scaled by Census population estimates. Estimates from models that include covariates or leads and lags of $Charters$ consistently indicate that a 1 percentage point increase in charter enrollments corresponds to a decline in voter turnout of around 1.5-1.7 percent—around 100 voters.[19] It is noteworthy that although the coefficient on the lead of $Charters$ is close to zero and does not approach statistical significance, the lag is positive and statistically significant.[20] Including the lag essentially allows us to compare the immediate impact of charter enrollments between two districts that had similar levels of prior charter entry. Indeed, it is likely that including the lags and leads captures the same variation as district trends (note the similarity in coefficients between columns 2 and 3, for example). Thus, that our primary results hold with their inclusion is a good sign. However, the lag also seems to suggest both positive and negative short-term effects of charter expansion, which is puzzling. Unfortunately, we seem to lack the statistical power to estimate these lags and leads if we include district time trends. We return to this potential issue below, when reviewing the results of the triple-difference

[19] As in Table 3, the decline in district counts is due to the inclusion of a lead of the $Charters$ variable, as well as the inclusion of the "candper" variable.

[20] We cannot include district time trends along with leads and lags because we have a shorter panel to work with.

design.

Table 5. Voter Turnout in Odd-year Elections – 2003-2011

	(1) ln(Voters)	(2) ln(Voters)	(3) ln(New)	(4) ln(New)	(5) ln(Repeat)	(6) ln(Repeat)
$Charters$	-0.0046	-0.015***	-0.029	-0.030**	0.014	-0.0052
	(0.0091)	(0.0050)	(0.020)	(0.012)	(0.013)	(0.0090)
$Charters_{t+1}$		0.00010		-0.0030		0.0055
		(0.0022)		(0.0091)		(0.0034)
$Charters_{t-1}$		0.012***		0.027***		0.0024
		(0.0021)		(0.0029)		(0.0041)
N	1091	985	1091	985	1091	985
Ratings	Yes	No	Yes	No	Yes	No
Candidates	Yes	No	Yes	No	Yes	No
Trends	Yes	No	Yes	No	Yes	No
Districts	246	247	246	247	246	247

Note: The dependent variable is the log of the total number of voters in odd-year elections (columns 1-2), the logged count of voters who did not vote in the prior odd-year election (columns 3-4), or the logged count of voters who voted in the prior odd-year election (columns 5-6). All models include commuting-zone-by-year and district fixed effects. Standard errors clustered by district are in parentheses below the coefficient estimates.* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5 focuses on turnout in the years 2003-2011, as these are the years for which we can examine the behavior of voters who did not turn out in the prior odd-year election ("New") and those who did ("Repeat"). Columns 1-2 essentially replicate the analysis from Table 4 for the 2003-2011 period. Columns 3-4 present the results of models using logged counts of "new" voters, and columns 5-6 present the results using logged counts of "repeat" voters. The results quite clearly indicate that the decline in turnout we detect is due to a 3 percent reduction in new voters—which translates to around 120 fewer voters who did not vote in the prior odd-year election for every 1 percentage point increase in charter enrollments.[21] Once again, the lag of charter enrollment indicates a positive effect, but we seem to lack the power to determine whether district time trends can account for this estimated effect.

[21]That those who participated in prior elections are unaffected is consistent with evidence that voting is a habit (e.g., see Holbein and Hillygus, 2016).

5.3 DDD Estimates of Even- and Odd-year Turnout

The analysis above provides evidence that voters opt out of school district elections in response to charter expansion. However, we are unable to estimate the impact on turnout in even-year elections featuring state and federal contests because that analysis must be limited to the 2005-2011 period and we lack the statistical power to rule out some substantively significant effects.[22] Similarly, the DD design provides insufficient statistical power to disaggregate odd-year effects to determine whether they are driven entirely by the early years of our panel. To address these issues, we implement the triple difference (DDD) design we describe above. We implement this strategy by interacting the charter transfer variable with an indicator of whether the year is odd (1) or even (0), and adding that to our main specification ("$Odd * Charters$" in the tables below).[23]

Table 6 reports the results of this analysis for logged counts of total voters (column 1), "new" voters (column 2), and "repeat" voters (column 3). The results are consistent with those in Table 5, although the magnitudes of the coefficients are a somewhat smaller. The table also reveals that the effects of charter expansion on overall turnout are null in even years (see column 1). The results scaled by adult population estimates (columns 4 and 5) corroborate these findings. The one significant even-year result suggests that charter school expansion mobilizes voters who voted previously (see column 3). This result appears to be illusory, however. Models that include lags and leads of $Charters$ yield very small, negative coefficients that are comparable in magnitude to those from difference-in-differences models (see Appendix D). Overall, the results indicate that the turnout effects are limited to odd-year elections featuring school board contests.

It is also noteworthy that the results for the model that includes a lag and a lead of $Odd * Charters$ (column 5) indicate that the coefficient on the lag is very close to zero and

[22] Recall that we have reason to doubt the validity of our design for even years prior to 2005.

[23] We also estimated models using all available years with additional interactions that test whether odd and even-year estimates are different, depending on whether they capture periods before or after 2004. These models confirmed that the odd-year effects are identical in both periods, whereas the even-year effects are small but positive in the pre-2005 period. This result is consistent with the positive population trends the validity checks imply.

does not approach conventional levels of statistical significance.[24] Thus, it appears that the DDD design enables us to account for whatever led to the significant coefficients on lags of *Charters* in the DD analysis of turnout. This last set of results also yields a much larger coefficient of -0.024, which is in line with the effect sizes in models of votes cast per open school board seat.

Table 6. DDD Estimates of Turnout – 2005-2011

	(1)	(2)	(3)	(4)	(5)
	ln(Voters)	ln(New)	ln(Repeat)	ln(V/Pop)	ln(V/Pop)
$Odd * Charters$	-0.010***	-0.023***	-0.0059	-0.011***	-0.024*
	(0.0030)	(0.0044)	(0.0038)	(0.0031)	(0.014)
$Charters$	-0.000070	-0.022	0.023***	0.0027	0.0013
	(0.0074)	(0.020)	(0.0088)	(0.0094)	(0.0098)
$[Odd * Charters]_{t+1}$					-0.0095
					(0.0096)
$[Odd * Charters]_{t-1}$					0.00041
					(0.0079)
N	1727	1727	1727	1727	1476
Ratings	Yes	Yes	Yes	Yes	Yes
Trends	Yes	Yes	Yes	Yes	No
Districts	247	247	247	247	247

Note: The dependent variable is the logged count of voter counts from the Catalist voter file (column 1), the logged count of voters who did not vote two years prior (column 2), the logged count of voters who voted two years prior (column 3), and the logged count of voters scaled by Census population estimates (columns 4-5). All models include commuting-zone-by-year and district fixed effects. Standard errors clustered by district are in parentheses below the coefficient estimates.* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The DDD design also allows us to further explore the turnout mechanism. As we note above, for later years of the panel we have data on tax referenda school districts place on the ballot. If a tax referendum is on the ballot, then district residents (particularly homeowners) have an incentive to turn out to vote even if they are disinterested in school board politics. Thus, the negative turnout effects of charter school enrollments should be muted when tax levies are on the November ballot. To test for this possibility, we re-estimated the models

[24]The model in column 5 also includes a lead and a lag of *Charters*. The lag is not statistically significant, but the lead yields a positive and statistically significant coefficient. This coefficient becomes statistically insignificant with the inclusion of district time trends.

in Table 6 with three additional variables: an indicator of whether (1) or not (0) a tax levy was on the ballot, an interaction between this indicator and $Charters$, and an interaction between the levy indicator and $Odd * Charters$.[25]

Table 7. Mechanism Check: Whether a Tax Levy is on the Ballot – 2005-2011

	(1) ln(Voters)	(2) ln(New)	(3) ln(Repeat)	(4) ln(V/Pop)	(5) ln(V/Pop)
$Odd * Charters$	-0.016***	-0.035***	-0.0096**	-0.018***	-0.027**
	(0.0032)	(0.0057)	(0.0044)	(0.0032)	(0.013)
$Charters$	0.0033	-0.014	0.025***	0.0066	0.0047
	(0.0063)	(0.020)	(0.0086)	(0.0085)	(0.010)
$Levy$	0.079***	0.18***	0.040***	0.082***	0.091***
	(0.0087)	(0.022)	(0.0097)	(0.0092)	(0.0080)
$Odd * Charters * Levy$	0.013***	0.028***	0.0084*	0.015***	0.018***
	(0.0039)	(0.0076)	(0.0044)	(0.0041)	(0.0042)
$Charters * Levy$	-0.0055	-0.013*	-0.0036	-0.0069**	-0.0083***
	(0.0035)	(0.0069)	(0.0029)	(0.0033)	(0.0025)
$[Odd * Charters]_{t+1}$					-0.012
					(0.0092)
$[Odd * Charters]_{t-1}$					0.0069
					(0.0070)
N	1727	1727	1727	1727	1476
Ratings	Yes	Yes	Yes	Yes	Yes
Trends	Yes	Yes	Yes	Yes	No
Districts	247	247	247	247	247

Note: The dependent variable is the logged count of voter counts from the Catalist voter file (column 1), the logged count of voters who did not vote two years prior (column 2), the logged count of voters who voted two years prior (column 3), and the logged count of voters scaled by Census population estimates (columns 4-5). All models include commuting-zone-by-year and district fixed effects. Standard errors clustered by district are in parentheses below the coefficient estimates.* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 7 reveals that the results are just as one would expect. First, having a levy on the ballot ($Levy$) is associated with an increase in turnout of around 8 percent in even years in districts with no charter enrollments. Second, the presence of a levy on the ballot negates much of the odd-year negative turnout effects of charter enrollments. Specifically, as

[25]For the purposes of this analysis, we restrict our analysis to referenda put on the November ballot in odd or even years, but referenda can be on the ballot at multiple other times during the year.

the coefficients on the $Levy * Odd * Charters$ interaction reveals, having a levy on the ballot wipes out much of the negative odd-year impact of charter enrollments on turnout.[26] In other words, the results indicate that charter enrollments depress political participation on matters that primarily affect the governance of traditional public schools (i.e., school board elections) but not nearly as much when elections feature other school district matters that affect all district residents (i.e., tax levies). These results provide further evidence that the decline in political participation associated with charter school enrollments is reflective of disengagement from school district governance.

5.4 Additional Results

The school board data also enable us to examine turnover rates, the vote shares of members running for re-election, the probability that these incumbents win re-election, and the number of candidates running per open board seat. Charter enrollments have no significant effects on these outcomes, although some of our estimates are quite imprecise (see Table B1 in Appendix B).[27] Similarly, we find no significant impact of charter school expansion on the share of voters who are liberal, low-income, black, who have teaching licenses, who are parents, or who are under 40 years of age (see Table B2 in Appendix B).

However, it is clear that the turnout effects are driven by districts serving low-achieving, poor, and minority students (see Appendix C). The negative impact of charter school enrollment on voting and turnout in school board elections is present only among districts that are below the median on Ohio's performance index (based on student proficiency rates), above the median in the share of students who receive free lunches, and above the median in the share of students who are black (see tables C1-C3). Such districts experienced almost twice as much charter school expansion as higher achieving, more affluent, and whiter

[26] Similarly, in difference-in-differences models examining turnout for November tax referenda (as measured by total votes cast in those referenda), the impact of charter enrollments is statistically indistinguishable from zero.

[27] Although table C4 in Appendix C indicates that charter enrollments increase the vote share of incumbent school board members, other analyses indicate that those running for office are actually less likely to be re-elected. Moreover, as the table indicates, these results are highly sensitive to model specification.

districts (around 4 percent of total public school enrollment, as opposed to around 2 percent). Consequently, some of the difference in impact may reflect insufficient variation in charter enrollment among more affluent districts, or perhaps a non-linearity in the impact of charter enrollment. Nevertheless, the results indicate that the extent to which charter expansion negatively affects political participation depends on district demographics.

Because the effects we detect are concentrated in low-achieving districts, we re-examined the impact of charter enrollment on voter demographics based on this sub-sample of districts. As the results in Table 8 reveal, among districts with low-achieving students, an increase in charter enrollment is associated with statistically significant declines in the share of voters who are parents and the share who are black. Specifically, for elections held in November of odd years, a 1 percentage point increase in charter enrollments is associated with a 0.19 percentage point decline in the share of voters who are black and a 0.12 percentage point decline in the share of voters who have children. These results likely understate turnout declines among parents, as parental status is as of 2016—when we downloaded the Catalist data. For example, it is likely that many of these voters were not yet parents when charter expansion began in 1999. On the other hand, we still find no statistically significant effects of charters on the share of voters who are liberal, low-income, teachers, or under 40 years of age (as of 2016).

Table 8. Share of Voters by Demographic Characteristics (Low-Achieving Districts Only)

	(1) Liberal	(2) LowIncome	(3) Black	(4) Teacher	(5) Parent	(6) Under40
Charters	-0.00021	0.000062	-0.0019*	-0.000072	-0.0012*	-0.00055
	(0.00023)	(0.00082)	(0.0010)	(0.00011)	(0.00071)	(0.00043)
N	737	737	737	737	737	737
Ratings	Yes	Yes	Yes	Yes	Yes	Yes
Trends	Yes	Yes	Yes	Yes	Yes	Yes
Districts	123	123	123	123	123	123

Note: The dependent variable is the share of voters who are liberal (column 1), low income (column 2), black (column 3), teachers (column 4), parents (column 5), and under the age of 40 (column 6). All models include commuting-zone-by-year and district fixed effects. Standard errors clustered by district are in parentheses below the coefficient estimates.* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Thus, charter enrollments primarily affected turnout in low-achieving districts that disproportionately serve poor and minority students. That parents experienced a disproportionate decline in turnout is consistent with the notion that charter schools decreased their stake in school board politics—perhaps because some of their children did not attend schools that the school board governed. Importantly, it also appears that the political representation of black families declined in these districts. In nearly all Ohio districts with low-achieving student populations, the percentage of the electorate that is black is far lower than the percentage of students who are black. Thus, our results indicate that the privatization of public education via charter schools exacerbated this "democratic deficit" in Ohio districts serving low-achieving students.

6 Conclusion

The analysis indicates that charter school enrollments lead to a decline in political participation. A 1 percentage point increase in charter school transfers corresponds to a 2.5-4 percent decline in votes cast in school board elections—approximately 100-160 fewer voters per open school board seat. The primary reason for this decline is a reduction in turnout in odd-year elections, as opposed to ballot roll-off. Further analysis of the 2005-2011 period—for which we can account for voting histories—indicates that the decline in turnout is attributable to there being fewer new voters, as opposed to a demobilization of existing voters. Overall, these results are consistent with the notion that charter school expansion inhibits political participation (and that voting is a habit, as we find little evidence of differential turnout declines among those who voted previously). That this effect is largely muted when a tax levy is on the ballot is consistent with the notion that district residents have a lower stake in the governance of traditional district schools when charter schools provide alternative educational options.

These results are not consistent with the notion that turnout declines occurred only

among parents who chose to enroll their children in charter schools. For example, for a district of average size, the results imply that the enrollment of 40 students in charter schools is associated with a reduction in odd-year turnout of about 100 voters. Even if these 40 students have two parents who would have voted in school board elections had they not enrolled in charter schools, that leaves about 20 voters unaccounted for. It may be that other family members with an investment in a child's performance (e.g., siblings, aunts and uncles, and grandparents) are opting out, but there are social dynamics involved in turnout that could lead to spillovers into the broader community. For example, perhaps the unusually engaged parents who opt out of traditional public schools were more likely to be dissatisfied and perhaps would have mobilized dissent in the absence of a charter school option. Conversely, perhaps the loss of teachers associated with these enrollment declines (e.g., see Cook, 2018) also had downstream turnout effects by limiting the ability of teachers and their unions to mobilize voters. Or perhaps the presence of charter schools drew attention to the low quality of a district's schools (as indicated by district and school report cards), discouraging participation among other stakeholders. Unfortunately, we are unable to explore such mechanisms, as we cannot identify the students who transferred to charters—much less identify how their family members voted.

The results also indicate that the impact of charter schools on political participation is not localized to school board contests. Increases in charter enrollments lead to lower turnout in odd-year elections that feature other contests, thereby lessening political participation on non-school matters. On the other hand, the spillovers appear to be limited primarily to local elections, as we detected no overall turnout effects in even-year elections featuring state and federal contests.[28] And, overall, we found little evidence that lower participation affected the electoral fortunes of school board members running for re-election or turnover among board members.

Besides the overall negative effects on turnout, perhaps our most striking finding is

[28]Some statewide ballot measures appear in odd years, but the vast majority of elections are local.

that the declines in political participation are concentrated in districts characterized by low student achievement, a high percentage of students receiving free lunches, and a high share of black students. This had to be the case in general, as these are the districts in which charter schools were permitted to open. But the analysis reveals that among districts that lost students to charter schools, the negative impact of charter schools on political participation occurs exclusively in districts that serve low-achieving, impoverished, and minority students, leading to a lower share of voters in those districts who are black and who have children. Thus, insofar as the privatization of public schools primarily takes place in districts where students have low test scores, such policies may be more likely to disproportionately affect poor and minority populations.

It is important to emphasize that our research design permits us to capture only the short-run effects of charter entry. That is, we estimate the effects of charter school enrollment changes in August (during a current odd year as compared to other odd years) on elections that occur months later. This feature is highly beneficial in that it allows us to plausibly link charter school enrollments to district-wide political participation. But it does not allow us to speak to long-term dynamics whereby the impact of charter schools might accumulate over time. Along those lines, although the effects we detect may seem small, they may accumulate to substantively significant effects in some districts. For example, our results imply that districts in which 20 percent of students enroll in charter schools experience a 40 percent decline in turnout.

Overall, this study provides convincing evidence that the privatization of public education can produce declines in political participation. This result is consistent with other work in the policy feedback literature suggesting that voter self-interest is an important source of political engagement and mobilization (e.g., Campbell, 2002; Lerman and McCabe, 2017).[29] Although the negative effects we document are largely limited to odd-year elections featuring school board contests, they raise broader questions about the impact of privatizing public ser-

[29]Fischel (2005) suggests that self-interest—specifically, concern about the capitalization of service quality into home values—also explains why home owners vote at higher rates than renters.

vice delivery on the vitality of democratic governance. The same mechanism through which privatization is thought to produce efficiency gains—limiting elected officials' influence over service delivery—appears to also reduce political engagement by reducing individual citizens' stake in politics. This logic is consistent with Hajnal and Lewis's (2003) cross-sectional analysis of turnout in California mayoral elections, which indicates that turnout is higher in municipalities that directly provide services such as fire, police, library, sewerage, and garbage, rather than outsourcing to other government agencies or private companies. As in our analysis, Hajnal and Lewis find that the demobilizing effects of outsourcing are limited to cities that use off-cycle elections, when there are no salient state or federal contests to help mobilize voters. Our study, although limited to one service area, demonstrates that the relationship between outsourcing and turnout may indeed be causal and suggests that the effect is driven, at least in part, by the reduced stake in politics citizens perceive as a result of privatization.

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