

Fulfilling Parents' Wishes: Property Taxes, School Choice, and Referendum Success

A. F. Shober

Assistant Professor of Government

Lawrence University

Appleton, Wisconsin 54912

arnold.shober@lawrence.edu

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ABSTRACT

Do charter schools improve the odds for school districts seeking increased funding at the polls? If school choice increases parental satisfaction, and those parents who choose schools are among the most attentive to school district policies, then increasing school choice should increase the likelihood that they turn out to support a district's request for more funds. (These voters would be more likely to turn out, too, given that few people vote in school referenda elections.) This paper uses a logit analysis of school finance ballot measures for Wisconsin from 1998 to 2005. The analysis suggests that the presence of charter schools in a district does improve a district's chances of gaining voter approval for finance issues.

The ability of parents to choose the school where their children attended—without moving—proved to be one of the innovations of the 1990s. The number of students using some form of school choice continues to grow (National Center for Education Statistics 2006, 187). The debates over whether allowing school choice improves student achievement, creams the best students, improves school morale, or simply competes with private schools continue (see Gill et al. 2007; Vergari 2007), but the focus of these studies has been on students and student interactions. Students are indeed a crucial part of the equation, but researchers have paid little attention to the educational environment they and their teachers operate in. What is the effect of school choice on school districts?

The influence of school choice on students and school demography is a central piece of the puzzle concerning the desirability of school choice as a public policy. Whether a school district participates in—or courts—school choice may help explain its financial success or failure. There is evidence that school districts have used school choice to increase in-district student enrollment, and that some districts have deliberately used school choice to draw in home- or private-school students and the state-aid payments they draw (Witte, Schlomer, & Shober 2007). This paper argues that entertaining school choice might also carry direct tax benefits. It is well known that students who participate in school choice are those whose parents are attentive. These very parents are also the most likely to pay attention to school district politics (see Cox & Witko 2008). Thus, permitting or encouraging school choice in a district may be a way to curry favor with these potential voters in a school district bond or mill rate referendum.

Below, I test the hypothesis that school choice increases the likelihood that election measures in favor of school bonds and increased mill rates for school purposes pass. I use the number of charter schools as an indicator of school choice (including zero schools). Briefly, charter schools are publicly-funded schools that are subject to the same accountability requirements as traditional public schools but are free from some of the curricular, building, and personnel regulations that apply to traditional public schools. Which regulations are waived is state-specific (see, e.g., Shober,

Manna & Witte 2006). Most notably, students' parents must choose to send their children to a charter school. I use data from Wisconsin for 1998 to 2005.

The paper first presents a theoretical overview of the connection between school choice and parent and voter satisfaction. Second, I present the paper's hypothesis, data and methods. A third section presents the results, and a fourth concludes.

THEORY AND BACKGROUND

The property tax is one of the United States' oldest forms of support and, as appropriate with an aged tax, each state has different uses and limitations on uses of property taxes (Fischer 1996). Some states require local approval to raise a property tax at all; others give local governments a set millage under which no election is necessary. Others do not require elections at all. Further adding to the complexity for school finance is the multitude of financial instruments schools may use to increase their revenues. Some states allow elections on property tax mill increases for school purposes. Others restrict schools to asking for bonds, sometimes limiting them to simply construction or other clearly-defined purposes.

In this paper, because I am not testing the interaction of choice availability with various means of raising revenue, I collapse the various means of raising funds into "school finance ballot measures." This loses detail and probably underestimates the effect of school choice on revenue—because in those states with relatively high barriers for passing any finance measure, a charter school might be hypothesized (say) to increase the likelihood of passage by 2 percent, but when a measure requires two-thirds support, the actual observations of passing measures may be very low regardless of the availability of choice or any other perceived positive feature of the school district.

Support for property tax increases, especially for schools, appears to have taken a hit beginning in the late 1970s as states enacted legal or constitution limits on raising taxes. Many scholars mark California's Proposition 13 as a convenient way-post for this decline. Some have argued that this decline has helped spark the many school finance lawsuits of the following three decades: as local financial support became difficult to acquire, districts tried to force state governments to revise decades-old school finance laws and formulae and thereby circumvent the local voter. Their suc-

cess has been mixed (Isaac 2006; Evans, Murray & Schwab 1997).

This paper argues that allowing school choice, particularly charter schools, may be one way to curry favor with local voters despite other difficulties in raising revenue. This section shows why school choice could improve parent satisfaction and how school finance can be used as measures of satisfaction.

Choice and satisfaction

As Hoxby (2003) notes, the decision to introduce charter schools (and later inter-district choice) was the results of good politics as much or more as a desire for educational improvement. But if the introduction of charter school laws were the result of politics, they were the result of politicians seeking to please their constituents—one of the hallmarks of representative government. Mintrom (1999) shows how political entrepreneurs successfully lobbied for school choice in their state legislatures. In other words, choice passed in order to improve the satisfaction of certain parents in certain school districts. (A history of charter schools in general may be found in Nathan 1996).

If school choice was enacted to increase parental satisfaction, it may have been part of an implicit political bargain to shore up tight school finances. In an officially unanticipated consequence of school finance reform in several states, states dramatically increased state-source school revenues, but local-source school revenues were virtually unchanged (Evans, Murray & Schwab 1997). The result has been that school financing is more equal across districts at the expense of tax cuts and perhaps even other state-funded programs. For example, increased state education revenue in Ohio's 2002-03 budget resulted in more than \$1.4 billion being cut from higher education, mental health, women's shelters, prisons, and other state programs. Even then, that state's supreme court held that the increase in state funding was not a sufficient remedy to Ohio's district funding disparities (O'Brien 2003, 412-414, nn. 127, 132). In Colorado, voters approved a constitutional amendment in 2000 to require a certain share of state K-12 education funding; in the ensuing years, this amendment combined with Colorado's tax expenditure limitation has crimped the state's ability to

fund discretionary programs (Bell Policy Center 2003).

Districts that have had difficulty raising funds in the past would gain little political support for additional local increases when state taxes are increasing and other state programs are being cut. Permitting school choice might appear to be one way to increase funding, especially if it can retain higher-income families to which some charter schools cater (e.g. those themed around ancient languages, engineering, or the natural sciences rather than those for at-risk students). Fernandez and Rogerson (1996) argue that adopting policies to keep higher-income families in lower-income neighborhoods is beneficial district wide because they tend to be supporters of high-quality education and provide positive tax revenues for the local taxing authority. Reback (2005), for example, found that Minnesota's open-enrollment program—where students may cross district lines to attend a public school of their choice and which has drawn significant numbers of students out of the Minneapolis public school district—has increased the value of housing in the district's limits. These higher-prices homes also generate more property tax revenue, yielding some benefit for the district at the expense of lost students. Detroit, Michigan, faces a similar situation with in-district charter schools drawing about 27 thousand students out of traditional public schools in 2005-06, but people may be staying in the city rather than moving out because they can send their children to charter public schools that they perceive as somehow better (Maxwell 2006). Others have found that, from a financial point of view, districts may authorize charter schools to draw students in from outside the district and at least keeping students from leaving the home district (Witte, Schlomer & Shober 2007). Using charter schools this way is a financial advantage to receiving districts because many open-enrollment programs tie state school funding to the number of students enrolled. Note, however, that property taxes are not tied to this. This apparent behavior indicates that these districts are seeking to increase (some) parents' satisfaction.

Taxes and Satisfaction

If choice is indeed an attempt to induce parent satisfaction, do successful school finance ballot measures indicate satisfaction with school district administration decisions? One of the property tax's enduring qualities is that many consider it the “worst” tax (Fisher 1996), so any voter self-im-

posed increases in the tax should be for extra-ordinary reasons. A link between a vote for a tax increase in the district and satisfaction with the district relies on the perception that increasing school funding improves school quality, not whether increases actually do (see Hanushek 2003). Further, it would not necessarily matter whether voters had children in school (with a possibility of direct benefit) or whether voters were simply concerned about the value of their property (an indirect benefit). Downes (1992) argues that some version of this occurred in California after the *Serrano* decision that required more equal spending in that state. Wealthier districts were able to raise funds for school projects even when they could not raise property taxes to do school projects. Spending inequality persists, but parents in wealthier districts were indicating satisfaction with the direction of local schooling.

From the perspective of the school board, however, asking for money also means ensuring that the district does not ask for too much. That is, for a successful ballot measure, the district must be careful to pay attention to its perceived “approval level.” Fort and Bunn (1998) found that requesting the funds that the median voter would approve increased the chances of passage. Using unique data from Florida where voters could write in mill rates if they did not like the school board’s proposal, Holcombe and Kenny (2007) found that districts that proposed the highest legal mill rate (10 mills) were more successful than when proposing other rates. They argue that in these cases, the school board believed that the median voter desired a greater mill rate but the law prevented any higher rate. Consistent with the findings of Dunne, Reed, and Wilbanks (1997), Holcombe and Kenny also find that larger turnout decreased the likelihood of passage because high-turnout school elections, they argue, were indicative of strongly negative feelings about the district. In sum, successful districts paid close attention to the desires of the potential voter population.

HYPOTHESIS, DATA AND METHODS

The primary hypothesis for the paper is that school choice provides a financial benefit for school districts. In its strongest form, one would expect that districts that directly support charter schools would benefit the most. If, as argued in the previous section, sponsoring a charter school is a symbol of responsiveness to parents (or the community) then charter schools should induce vot-

ers to render thanks to the district when it asks for additional funding:

As school districts sponsor more charter schools, voters in those districts will have a greater likelihood of approving school financing ballot measures.

The data for this project are drawn from the school finance election results in Wisconsin for 1998 to 2005. This state was chosen because it has had charter school legislation for well over a decade and one of the highest per-student number of charter schools in the country (one school for every 3,788 students). The schools are widely distributed around the state. Thus, charter schools are not the novelty they once might have been. Wisconsin has a “moralistic” political culture and strong local-school-control advocates, which means that the local property is seen as a key ingredient in school financing (Elazar 1994). The data for mill-levy overrides, school bond elections, or local-vote school measures were either requested from Wisconsin’s Department of Public Instruction or retrieved from its website (dpi.wisconsin.gov) depending on the year. Table 1 shows the 1,111 ballot measures that passed and failed in Wisconsin for the time period under consideration. It is important to recall that each observation in this analysis is a school finance ballot measure election in a school district; only school districts that held such measures are included.

*** TABLE 1 ABOUT HERE ***

The dependent variable for the analysis is a dichotomous variable for voter approval. Although an admittedly gross measure of district voter satisfaction, using a pass percentage would not yield much more information than this measure. The voting population is rarely representative of the true population of the school district because many school finance ballot measures are decided on non-standard election days (see Dunne, Reed, & Wilbanks 1997). Those who vote, however, are those who care most about the issue, and are therefore the ones the district must be especially careful to satisfy. With a dichotomous variable such as this, a logistic regression is an appropriate method of analysis.

If voters perceive to school choice as an attempt by the school district to be responsive to parent demands, then the number of charter schools available in the district is of interest as an inde-

pendent variable. This variable should be positively related to passage rates. If in great demand, simply having a charter school (that is, one charter school) may be unpalatable. Charter authorizers have approved schools that cater to special-needs children, English language learners, arts-and-theater production, engineering, a Greek and Latin classics emphasis, and other varieties (see Henig et al. 2005). If the school approved by the charter authorizer does not suit the parents, then choice may not have an effect on passage rates of finance measures. I assume that an increase in the number of school correlates with the variety of charter schools offered.

School finance ballot measures are subject to what Ehrenberg et al. (2004) call a “narcotic” effect. That is, those districts which hold, say, a referendum for an increase in the mill rate and lose are about 8 percent more likely to lose the next referendum than comparable districts that win a referendum. They also find that a state-wide defeat rate does not have an effect on individual measures; that is, districts do not need to fear state-wide anti-tax “moods.” These authors conclude that at least this politics is local. There may be an endogeneity problem with the variable (districts that lose referenda are probably more likely to try again; districts that win will not need to try one again, at least not for the same purpose), but for my purposes this is not a problem. Districts that lose and do not try again implicitly agree that parents are not satisfied enough with the district to increase funding. The variable is also potentially unobserved for districts in the initial year of the study because the data for elections prior to the start of the period are not available in most cases—so one cannot know whether some districts have held a ballot measure in the prior year. Nevertheless, I expect this dichotomous variable to be negatively related to the likelihood of passage. Additionally, Alexander and Bass (1974) show that higher potential tax increases lead to more “no” votes, though perhaps not failure of the ballot measure. Although it is difficult to know what “large” is, the analysis includes a dichotomous variable indicating whether the school district is requesting additional one-time funding or a permanent levy override under the assumption that voters would see permanent increases as larger than one-time requests.

Some voters are likely to support school finance ballot measures regardless the quality of school and availability of school choice (and indeed, might support measures in spite of them). This is a manifestation of the educational climate. Ehrenberg et al. (2004) show that higher educa-

tional attainment correlates with greater support for school ballot referenda generally. Part of the study of Weimer and Wolkoff (2001) also finds strong correlation between college-educated residents and higher home values (leading to higher property taxes). Schools are also used as a real-estate proxy for “good” neighborhoods (Bogart & Cromwell 1997). If Fischel’s (2001) “home-voter” argument is correct, that property owners vote to support property values, then college educated residents should support school finance ballot measures to support their property values. They may also support measures because they believe they benefited from education, public or otherwise, and so may have an interest in maintaining a quality school system for others. Thus, the percentage of residents in a school district with a college degree should be positively related with passage.

School districts may also need to be mindful of two other factors that are directly related to schooling: the age and the parental status of potential voters. For both variables, the argument is that those with direct experience with the schools are most likely to vote and most likely to have a favorable impression of the services the public school provides. That is, those who are younger and those who have children (who are probably enrolled in the school district) should be more supportive of the system. Here, a proxy is used to indicate this; greater numbers of children in the district should lead to more support for the school system. On the flip side, those who are older are often predicted to be less supportive of public school financing because they likely have little direct contact with the school system and are more likely to live on a fixed income and be price-sensitive to property taxes (Ladd & Murray 2001). Ladd and Murray (2001) found that the older voters do not necessarily oppose school finance measures, although they find a small effect if the dominant school population is not of the same race. Although Chew (1990, 1992) argues that parental status is a significant influence, the data in these papers only support the contention that parental status has an indirect effect of increasing the level of support. Therefore, I include the percentage of the school district population that is over 65 and one for the school-aged population.

The success of school finance ballot measures may also be influenced by the relative affluence of a school district. One might argue that parents in low-income communities have greater motivation to move from a poor school to a good one, while in an higher-income community, parents

may see little long-term advantage from moving their children from a better school to the best school. This might increase the advantage of passing school finance measures: motivated parents seeking a better school would be more likely to turn out for a referendum while motivated parents in low-income communities have a greater imperative to seek to move their children among schools. Indeed, Aaronson (1999) finds that Tiebout-style sorting appears primarily in low-income communities. It appears, then, that it is easier for low-income parents to exit the school district than to stay and hope for improvement. If voters seek to maintain their property values (for property owners who pay the taxes directly), then higher-income districts might be more inclined to support school finance ballot measures (see also Alexander & Bass 1974). Therefore, I expect that more affluent districts would be more likely to support measures. I include three measures to tap the effects of the wealth of the school district. First is the percentage of households under the federal poverty line; it should be negatively related to passage. Second I use an estimated property tax burden on the “median” household in the district (Plummer 2003). This variable should be negatively related to passage to the extent that home owners are price sensitive to property taxes; but it may interact with a third variable, the mean single-family home value in the district (Weimer & Wolkoff 2001). Because most ballot measures ask for funding that would be payable through property taxes or other property-based assessments, using home values are more productive than the relative affluence of individuals.

I include variables for the percentage of the population who identify themselves as non-white. A table of summary statistics appears in the appendix.

Other variables could, of course, be potentially relevant. Graves (1998) argues that the district must diligently mobilize its supporters and convince fence-sitters that increasing funding is important to them. These include door-to-door efforts, advertising campaigns, and media appearances. Given the large number of school districts under review here, I was unable to collect this data in a systematic fashion. Chew (1992) also persuasively argues that political liberals are more likely to support school referenda than either political moderates or conservatives, an ideology that trumps even parental status. Unfortunately, there is no good measure of voter ideology by school district.

*** TABLE 2 ABOUT HERE ***

RESULTS

Table 2 offers some support for the hypothesis that having more charter schools in a district increases the likelihood that voters will pass finance ballot measures ($\beta=0.165$, $p < 0.04$). Adding one charter school to the district that has none increases the likelihood of passage 4.1 percent; increasing the number of charter schools from 0 to 8 (the maximum for these data) increases the likelihood of passage 30.2 percent — second only to the effect of a college-educated electorate (below). This suggests that charter schools do have some bearing on how voters perceive a school district's responsiveness to active-parent demands. Indeed, authorizing charter schools is the only variable in this analysis that a school district's administration could directly manipulate (save the actual ballot request).

The control variables in the analysis generally perform as expected. A high proportion of college educated residents significantly increases the likelihood of passage ($\beta=0.033$, $p < 0.02$). Approval rates increase by 32.4 percent from the minimum to the maximum in the data (6.5 percent to 48.1 percent). A curious facet of the particulars here that remains to be explored is that the highest percentages of college-educated residents who approve ballot measures appear to live in well-to-do parts of Wisconsin which are anecdotally Republican (and the median owner-occupied home values are correlated with percentage college degrees at 0.75). This appears to run counter to the untested expectation that more politically liberal school districts would approve more ballot measures. Thus, those supportive of their own education appear to support that of children.

As found by Ladd and Murray (2001), higher percentages of senior citizens does not affect passage rates. Instead, it appears older Americans have a positive effect (8.2 percent increase for a one standard deviation change), although the variable is of borderline traditional significance ($\beta=0.039$, $p < 0.06$). Changes in the percentages of school age population does not have a significant effect on passage rates.

The findings also confirm previous research regarding the characteristics of the ballot measures themselves. Wisconsin school districts were much more likely to receive the blessing of voters when they asked for non-recurring funds than not ($\beta=0.41$, $p < 0.01$). The prospect of a “permanent” increase in taxation (e.g. for new teachers or administration expenses; or a levy-limit override) appears less appealing to voters than a short-term request (e.g. funds to repair a school building or other capital project). Asking for increased indebtedness had no detectable effect.

Results of ballot measures in Wisconsin also appear to support a version of the “narcotic effect” of Ehrenberg et al. (2004): failures led to more ballot measures, but successes generally did not. Some 215 failed finance measures (and only 30 successes) led to another ballot issue in the immediately subsequent year. Incidentally, a ballot success in a previous year’s election ($N=245$, analysis not shown) also greatly increased the chance of failing in a subsequent finance measure ($\beta= -0.76$, $p < 0.02$).

There were some surprises in the data as well. Each school district’s median owner-occupied home value had no discernible effect on the success of school finance measures. Neither did the proportion of school funding derived from the property tax. This variable was meant to measure how much a school district could claim it needed new funds. The logic was that, if a district’s budget is primarily state- or federally-funded, voters might assume that those sources should be able to supplement a district’s needs. This figure generally mirrors the financial well-being of the district; higher percentages appear in more well-to-do districts (it is positively correlated with the median owner-occupied home value at 0.61 in these data). Districts with fewer special-needs or children in poverty, for example, receive fewer Title I funds and so the proportion of revenues from the property tax would be higher. As the results stand, the wealth of district residents had little to do with the willingness of voters to approve new school funds; the effect of wealth appears to be contained in the value of a college degree.

CONCLUSIONS

In conclusion, paying attention to parent desires by permitting school choice in the form of charter schools appears to be a boon to school districts seeking additional funding. At least partly

for this reason, some researchers have raised concerns about the tax equity of charter schools that are by nature limited enrollment (Moore 1998). Yet an underlying principle of democratic education is responsiveness to public desires, and school districts appear to be responsive with charter schools.

There are several extensions to this work that need to be done. Most notably, the positive effect in Wisconsin should be tested in other states with similar school budget elections such as Arizona, California, and Colorado. These particular state are important test beds because they have large numbers of charter schools and rely on voter approval of major school finance issues. Arizona and Colorado have multiple charter authorizers (including school boards) in order to circumvent local school board opposition, so these state could provide a comparison of district ballot success with non-district authorized charter schools. California and Colorado have stringent finance requirements (Proposition 13 and the Taxpayer's Bill of Rights, or TABOR, respectively) that might magnify the effect of charter schools, if any.

The partisan composition of school districts is an untapped variable largely because it is difficult to construct (no state of which the author is aware has data readily available by school district; though matching ward-level returns to school district is possible in this age of geographic information systems). Yet, the partisanship appears to play a distinct role in legislative support or opposition to charter schools (Mintrom 1999), so it is conceivable that finance measure success, conditioned on the presence of charter schools, might be mediated through partisanship as well.

Finally, there should be some distinction between *types* of charter schools. Charter schools may be at-risk, virtual, "traditional," themed, or some combination of these. An at-risk charter school might attract a different level of parent involvement than a Greek-and-Latin charter school. Certainly on-line, virtual schools provide this paper's main hypothesis with a problem: these schools serve children primarily out of the district! Those parents have no say in district elections; and one might imagine that such schools would have a negative effect (because the district is using district resources for non-district children).

Whatever their educational quality, charter schools appear to have real financial implications

for school districts. This paper suggests those effects are positive, but further work needs to be done to understand exactly when that effect is most prevalent — and whether charter schools have undermined the base level of school district revenues as some critics have argued.

APPENDIX

*** TABLE A ABOUT HERE ***

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TABLE 1

Success and Failure of
School Finance Ballot Measures in Wisconsin,
1998–2005

Year	Approved	Failed	Total
1998	98 (42.4)	133 (57.6)	231
1999	87 (56.1)	68 (43.9)	155
2000	102 (51.5)	96 (48.5)	198
2001	44 (37.0)	75 (63.0)	119
2002	33 (29.5)	79 (70.5)	112
2003	44 (51.8)	41 (48.2)	85
2004	53 (50.0)	53 (50.0)	106
2005	58 (55.2)	47 (44.8)	105
Total	519 (46.7)	592 (53.3)	1,111

Source: Wisconsin Department of Public Instruction, School Management Services, School Finance Referenda, various years. Numbers in parentheses are percentages.

TABLE 2

Probability of Voter Approval of a School Finance Ballot Measure, by School District

Variable	Coefficient	Standard Error	p value, one-tailed
Number of charter schools	0.165	0.097	0.05
% non-white students	0.004	0.009	0.31
% school-aged population	0.042	0.036	0.13
% population over 64	0.039	0.024	0.06
% population with college degree	0.033	0.016	0.02
Median value of an owner-occupied home	1.24×10^{-6}	3.72×10^{-6}	0.37
% of district revenues from property taxes	-0.003	0.007	0.31
Does the measure request indebtedness? (1=yes)	0.052	0.138	0.36
Does the measure request one-time funds (1=yes)	0.406	0.173	0.01
Was there a measure that passed last year? (1=yes)	-0.246	0.313	0.22
Constant	-2.564	1.117	0.01
<i>N</i>			1,111
Log likelihood			-756.589
Prob. > χ^2			0.014

TABLE A

Summary Statistics

Variable	Annual or Year	Minimum	Maximum	Mean	Standard Deviation
<i>Dependent variable</i>					
Approved ballot measure	Annual	0	1	0.48	0.50
<i>Explanatory variables</i>					
Number of charter schools	Annual	0	8	0.25	0.75
% non-white students	Annual	0.00	67.35	6.33	7.83
% school-aged population	2000	12.98	28.87	21.18	2.38
% population over 64	2000	3.79	28.82	13.64	4.27
% population with college degree	2000	6.51	48.13	18.31	6.50
Median value of an owner-occupied home, in dollars	2000	46,700	315,600	114,960	34,836
% of district revenues from property taxes	Annual	15.24	88.25	36.60	15.90
Does the measure request indebtedness? (1=yes)	Annual	0	1	0.42	0.49
Does the measure request one-time funds (1=yes)	Annual	0	1	0.80	0.40
Was there a measure that passed last year? (1=yes)	Annual	0	1	0.04	0.20

Sources: Those indicated “2000” are from the 2000 U.S. Census. Ballot measures, ballot characteristics and number of charter schools are from the Wisconsin Department of Public Instruction. All others are from the National Center for Education Statistics, Common Core of Data. All variables are aggregated to the school district level.