Occasional Paper No. 56

National Center for the Study of Privatization in Education

Teachers College, Columbia University

Homeowners, Property Values, and the Political Economy of the School Voucher

Eric Brunner
San Diego State University

Jon Sonstelie
University of California, Santa Barbara

October 2002

Abstract A school voucher would decrease property values in neighborhoods with good public schools and increase property values in neighborhoods with inferior public schools. These potential gains and losses may influence voting on voucher initiatives, particularly for homeowners without school children. This paper examines that possibility, using a survey of potential voters on California's 2000 voucher initiative. We find evidence that homeowners voted to protect their property values. For homeowners without school children, the probability of voting for the voucher was 39 percent if they lived in neighborhoods with good public schools and 56 percent if they lived in neighborhoods with inferior schools.

We thank Mark Baldassare of the Public Policy Institute of California for providing us the results of the Institute's statewide polls for the 2000 general election.

The Occasional Paper Series produced by the National Center for the Study of Privatization in Education promotes dialogue about the many facets of privatization in education. The subject matter of the papers is diverse, including research reviews and original research on vouchers, charter schools, home schooling, and educational management organizations. The papers are grounded in a range of disciplinary and methodological approaches. The views presented in this paper are those of the authors and do not necessarily represent the official views of the NCSPE.

If you are interested in submitting a paper, please contact:

National Center for the Study of Privatization in Education
Box 181, Teachers College,
525 W. 120th Street,
New York NY 10027-6696
www.ncspe.org
email: ncspe@columbia.edu

1. Introduction

It has been forty years since Milton Friedman advocated the school voucher in *Capitalism and Freedom* (1962). While the voucher has subsequently become a mainstay of the conservative political agenda, it has not garnered the popular support necessary for widespread adoption. Milwaukee and Cleveland have experimented with limited voucher programs, and Florida has enacted legislation offering vouchers to parents if their local public schools fail to meet minimum standards; but the broad-scale voucher envisioned by Friedman has not been implemented. In 1992, both California and Colorado placed vouchers of this type on their statewide ballots. Both initiatives lost by a two to one margin. California and Michigan tried again in 2000, with the same result.

Why hasn't a broad-scale voucher been implemented? Though there has been excellent research analyzing how vouchers may affect schools, students, and families, there has been relatively little research on the political economy of vouchers—who would gain, who would lose, and how those gains and losses would affect the likelihood that a voucher would be enacted. Some aspects of that political economy are clear. The voucher would directly benefit families with children in private school. It would also change the educational opportunities available to families with children in public school, though whether these families would be better off is a more complicated issue. In any event, though families with school children have a direct interest in the voucher, they do not constitute a majority of voters. According to a 2000 survey by the Public Policy Institute of California (PPIC)[1], less than one-third of potential voters in California have

[1] Baldassare (2000).

children in either a public or private school. When it comes to political decisions about a voucher, voters without school children play the pivotal role.

The voucher may have fiscal consequences that affect all taxpayers, including those without school children. As Nechyba (2000) shows, a potentially more important effect concerns the property values of homeowners. Houses in neighborhoods with good public schools sell at a premium. Because the voucher would decrease the price of private alternatives to good public schools, it would also reduce the premium families would be willing to pay to live in such neighborhoods, causing their property values to fall. These capital losses would affect all homeowners, regardless of whether they have children in school, establishing a direct interest in the voucher for homeowners without school children.

Do these narrow economic interests affect political support for the voucher? Is the voucher another instance of the "homevoter hypothesis," articulated by Fischel (2001)? The link between the voucher and housing values seems indirect and thus unlikely to affect voting behavior. Would homeowners in neighborhoods with good public schools really vote against the voucher just to protect their property values? We addressed that question in Brunner, Sonstelie, and Thayer (2001). Using precinct returns from California's 1992 voucher initiative, we estimated the percentage voting for the initiative as a function of the housing price premium for the precinct's public schools. We found a negative relationship between these two variables, a result consistent with homeowners voting to protect their property values. Because our data were precinct returns, however, we did not directly observe how homeowners voted. We only observed the percentage of a precinct's households who owned their homes and whether that

percentage affected voting patterns. Using indirect methods, we attempted to infer how homeowners voted, but our inferences depended on a number of untested assumptions.

For California's 2000 voucher initiative, we are in a more fortunate position. For that initiative we have the PPIC survey, which asked 2,002 potential voters how they intended to vote. It also asked potential voters whether they had school children, whether they owned their home, and how they rated the quality of their local public schools. Using that information, we can directly examine how the voting pattern of homeowners depends on the quality of their local public schools.

We find evidence that homeowners voted to protect their property values. Homeowners without school children were less likely to vote for the voucher if they lived in neighborhoods with good public schools. For such homeowners, the probability of voting for the voucher was 39 percent. In contrast, for homeowners without school children living in a neighborhood with poor public schools, the probability rose to 56 percent. The desire to protect property values is the most plausible explanation of this voting pattern.

2. The California Voucher Initiative

For the most part, California's voucher initiative was straightforward. Proposition 38 would have provided families a scholarship for each of their children enrolled in a private school. The scholarship would have been the greatest of three amounts: $4,000, half the national average of public school spending per pupil, or half California's public school spending per pupil. The initiative placed few conditions on scholarship-

redeeming schools and prohibited the state from placing additional conditions on these schools in the future.

The voucher would have affected families in many ways. One effect concerns property values in different neighborhoods. Neighborhoods differ along a number of dimensions, including the safety of their streets, the character of their housing, and the quality of their public schools. Families place different values on these attributes, depending on their own circumstances. A family with children may be particularly concerned with school quality. This may not be such a concern for a family without children, but the character of the housing stock may. The collection of these different interests determines the demand for a neighborhood's housing.

This demand also depends on alternatives to the neighborhood, and a voucher would affect how families with children view those alternatives. With or without the voucher, a family can live in a neighborhood with poor schools and still secure a quality education for its children by enrolling them in a good private school. A voucher would decrease the price of that option, and thus families with children would increase the value they place on neighborhoods with poor public schools and decrease the value they place on neighborhoods with good public schools. The voucher would not change the demands of families without children, but aggregate demand would rise for neighborhoods with poor public schools and fall for neighborhoods with good public schools. Property values in these neighborhoods would rise and fall accordingly.

For homeowners with school children, the effect of the voucher may be complicated. It will affect the value of their homes, and it will also affect the educational opportunities for their children. For homeowners without school children, educational

opportunities are not an issue, so the voucher's effect is less complicated. If they live in neighborhoods with good public schools, the voucher will reduce their wealth. If they live in neighborhoods with poor public schools, the voucher will increase their wealth.

In addition to these wealth effects, the voucher has several other effects that could influence voting patterns. With a voucher, the state would be making payments to families with children in private school, payments that it doesn't make now. On the other hand, the state would save money on each student transferring from public to private school, because the voucher was to be less than the average expenditure per pupil in public school. The net effect on the state budget depends on the number of students who would transfer. For this reason, in its official analysis of Proposition 38 for the November ballot,[2] the Legislative Analyst's Office forecasted a fiscal effect ranging from an annual cost to the state of $500 million to savings for the state of $2.5 billion.

A related concern involves how the voucher might affect public school spending. The voucher would cause some families to transfer their children from public to private school, which would decrease the cost to taxpayers of spending per pupil, but also decrease political support for school spending. We return to this issue in Section 5.

Finally, voting on the voucher will certainly be influenced by basic attitudes about the efficiency of the public sector. Conservatives argue that public education is a large, inefficient government monopoly and that private schools can educate students more thoroughly and at lower cost. Liberals question that premise and point to the essential role of public schools in building social capital. As Fischel (2002) argues in a related

[2] Secretary of State (2000).

point, because public schools bring parents together in a common venture, they promote the cooperation among neighbors that is essential in producing local public goods.

3. The PPIC Survey

In August 2000, PPIC surveyed 2,002 potential voters concerning issues related to the November 2000 ballot. The survey was conducted by telephone, using a random-dialing procedure, and was restricted to people age eighteen or older. Table A1 in the Appendix compares the distributions of various characteristics among survey respondents with the distributions of those characteristics among California householders from the 2000 Census. The survey distributions are quite similar to the Census distributions, indicating that the survey was successful in obtaining a representative sample of California residents.

There is an important dimension in which the survey is not representative, however. Forty-five percent of respondents replied that they intended to vote for the voucher initiative. Three months later, only 30 percent of the ballots cast in the November election were in favor of the initiative. We conduct our analysis under the working assumption that the survey responses are valid for testing whether certain factors affect the likelihood of supporting the voucher even though the responses in the aggregate predict more support for the voucher than was actually evidenced at the polls.

Table 1

Political Ideology and Support for the Voucher Initiative

Political Ideology* (n)	Intended Vote on Voucher Initiative		
	Yes	No	Don't Know
Liberal (340)	33.5%	53.8%	12.7%
Middle-of-the-road (392)	38.8	47.7	13.5
Conservative (411)	60.1	28.7	11.2

*Three of the 1,168 respondents did not answer the political ideology question. Twenty-two responded that they did not know their political ideology.

Our focus is the voting pattern of homeowners, particularly whether they voted to protect their property values. Of the 2,002 respondents in the PPIC survey, 1,178 were homeowners. All but 10 of these homeowners answered the question about how they intended to vote on the voucher initiative, yielding 1,168 observations for our analysis. Forty-five percent of those intended to vote yes on the voucher initiative, 43 percent no, and 12 percent were undecided.

Table 1 shows how these voting percentages varied with the respondent's political ideology. Political conservatives were much more likely to support the voucher than were liberals. Among the 340 homeowners who described themselves as either liberal or very liberal, only 34 percent intended to vote for the voucher. In contrast, among the 411 homeowners who described themselves as either conservative or very conservative, 60 percent intended to vote for the voucher.

Table 2

Children in School and Support for the Voucher

Children in Public or Private School* (n)	Intended Vote on Voucher Initiative		
	Yes	No	Don't Know
No School Children (781)	40.5%	47.4%	12.1%
Public School (301)	50.8	35.2	14.0
Private School (83)	60.2	26.5	13.3

*Three of the 1,168 respondents did not answer the public school/private school question.

As Table 2 shows, having children in private school also affected support for the voucher. Homeowners with children in private school were more likely to support the voucher than other homeowners. It is interesting to note, however, that homeowners without school children were less likely to support the voucher than other homeowners. For this group, which is the most numerous, the issue is not the voucher's effect on their children's education or the net cost to them of a private school education. These homeowners are more likely to be influenced by less direct effects, such as the voucher's cost to taxpayers and its impact on property values.

We explore that latter issue in Table 3. The table separates homeowners into three groups: homeowners without school children, homeowners with children in public school, and homeowners with children in private school. For each group, the table lists the percentage intending to vote for the voucher initiative, grouped by how the respondent graded their local public school.

Table 3

Public School Quality and Support for the Voucher Initiative

Grade of Public School*	Percentage Voting Yes on Voucher Initiative		
	No School Children (704)	Children in Public School (258)	Children in Private School (71)
A or B	35.8%	50.0%	40.6%
C	42.9	48.2	73.1
D or F	51.4	55.1	83.3

*Two of the 1,168 respondents did not answer the question concerning the quality of their local public school and three did not answer the public/private school question. Of the remaining 1,163 respondents, 86 did not know the quality of their local public school.

The voting patterns in Table 3 are consistent with the hypothesis that homeowners without school children voted to protect their property values. In neighborhoods with good public schools (A or B), 35.8 percent of such homeowners intended to vote for the voucher. In neighborhoods with poor public schools (D or F), more than half of these voters favored the voucher. The same pattern holds for homeowners with children in private school. In neighborhoods with schools of average or poor quality, more than 70 percent of such homeowners intended to vote for the voucher; but in neighborhoods with good schools, less than half intended to vote for the voucher, despite the voucher's immediate benefit to them. This pattern does not hold for homeowners with children in public school, however, suggesting that these voters are motivated by factors other than the desire to protect their property values.

4. Multivariate Analysis

While these cross-tabulations are suggestive, they do not reveal the effect of school quality, holding other factors constant. Accordingly, we turn to probit analysis, including various demographic variables as well as ideology and school quality. We begin with a binary probit model using data from only those respondents who expressed a positive or negative opinion on the voucher and excluding those who did not know how they would vote on the initiative. We also exclude respondents who either declined to answer one of the questions used in the model or replied that they did not know the answer to such a question. In the second part of our analysis, we expand the sample to include some of these excluded observations by estimating an ordered probit model in which respondents that didn't know how they would vote on the voucher initiative are classified as indifferent to the outcome of the initiative. In the final part, we also include observations with missing data for one of the variables. In all parts, we follow the approach in Table 3 by partitioning the sample into three sub-samples (homeowners without school children, homeowners with children in public school, and homeowners with children in private school) and estimating models separately for each of the three sub-samples.

Table 4

Description of Explanatory Variable

Variable	Description
School Quality *(If you had to give your local public schools a grade, would it be…?)*	4 = A, 3 = B, 2 = C, 1 = D, 0 = F
Ideology *(Would you consider yourself to be…?)*	1 = very liberal, 2 = somewhat liberal, 3 = middle-of-the-road, 4 = somewhat conservative, 5 = very conservative
Race/Ethnicity *(How would you describe your race and ethnicity?)*	1 = Caucasian or White and not Hispanic, 0 = all other groups
Age *(What is your age?)*	1 = 18 to 24, 2 = 25 to 34, 3 = 35 to 44, 4 = 45 to 54, 5 = 55 to 64, 6 = 65 or older
Income (*What is your total household income before taxes, from all sources?)*	1 = under $20,000; 2 = $20,000 to $39,999; 3 = $40,000 to $59,999; 4 = $60,000 to $79,999; 5 = $80,000 to $99,999; 6 = $100,000 or more
Education *(What was the last grade of school you completed?)*	1 = some high school or less, 2 = high school graduate, 3 = some college, 4 = college graduate, 5 = post-graduate

Each model uses the same explanatory variables, which are defined in Table 4. We have described how we expect political ideology and school quality to affect the likelihood of voting for the voucher initiative. We also believe that ethnicity may have an influence. As Tafoya (2002) documents, students in California's public schools speak a wide variety of languages. In many schools, white students with English-speaking parents are a minority, suggesting that support for the voucher could be related to "white flight" from California's linguistically diverse schools. To capture that possibility, we

Table 5

Sample Means, Homeowners

Variable	No School Children	Children in Public School	Children in Private School
Voucher Vote (1=yes, 0=no)	0.46	0.59	0.69
School Quality	2.31	2.55	2.11
Ideology	3.02	3.09	3.43
Race/Ethnicity	0.77	0.66	0.59
Age	4.23	3.11	2.85
Income	3.51	3.89	4.30
Education	3.32	3.11	3.46
Number of Observations	502	210	61

have included a dummy variable for whether the respondent is white. We have no prior expectations about how age, education, or household income should affect the vote.

For each variable in Table 4, Table 5 lists the means for each of the three sub-samples. On average, homeowners with children in public school report that their neighborhood schools are of higher quality than do either homeowners without school children or homeowners with children in private school. Homeowners without school children are older on average than homeowners in the other two sub-samples. Homeowners with children in private school tend to be more politically conservative, younger, wealthier, and more educated than homeowners in the other two sub-samples.

Table 6

Coefficient Estimates—Binary Probit, Homeowners
(1=yes on voucher initiative, 0=no)
Standard Errors in Parenthesis

Variable	No School Children	Children in Public School	Children in Private School
School Quality	-0.110**	0.153*	-0.399**
	(0.056)	*(0.090)*	*(0.180)*
Ideology	0.313**	0.390**	-0.176
	(0.055)	*(0.091)*	*(0.193)*
Race/Ethnicity	-0.180	-0.131	-0.225
	(0.142)	*(0.206)*	*(0.410)*
Age	-0.126**	-0.149	0.112
	(0.039)	*(0.100)*	*(0.219)*
Income	0.003	-0.198**	0.277*
	(0.039)	*(0.071)*	*(0.152)*
Education	-0.081	-0.031	-0.518**
	(0.056)	*(0.096)*	*(0.236)*
Constant	0.132	0.068	2.510
	(0.323)	*(0.550)*	*(1.227)*
Number of Observations	502	210	61

*Significant at 10 percent level.
**Significant at 5 percent level.

Table 6 presents the coefficient estimates for the binary probit model. The coefficient on school quality reveals whether respondents voted as if they were protecting their property values. For homeowners without school children, the coefficient is negative and significant, which is consistent with respondents voting to protect their property values.

While homeowners with children in private school are politically insignificant, their voting pattern is also consistent with this motivation. Private school parents would

have directly benefited from the voucher. For twelve years of private school education, they would have received nearly $50,000. Yet, they are significantly less likely to vote for the voucher if they own homes in neighborhoods with good, rather than inferior, public schools. This voting pattern is consistent with homeowners voting to protect their property values and difficult to rationalize in any other way.

For homeowners with children in public school, the estimated coefficient on school quality is positive and significantly different from zero at the 10 percent level. Not only is this voting pattern inconsistent with protecting property values, it also seems inconsistent with other motives, such as concerns about how the voucher will affect the quality of local public schools. As the analysis of Epple and Romano (1998) demonstrates, good public schools have the most to lose from a voucher-induced flight to the private sector. Parents with children in such schools are most likely to be influenced by this potentially adverse effect of the voucher, and thus parents' concerns about their children's public school ought to imply the same voting pattern as concerns about their property values.

One possible explanation for this voting pattern is related to parental demand for educational quality. For a family that demands quality schooling for its children, school choice may come down to a high quality public school versus a high quality private school. Given tuitions, housing prices, and its income, the family may choose the public school. With a voucher, however, it might opt instead for the private school. Thus, some families with children in high quality public schools might vote for the voucher with the intention of switching to the private sector if the voucher is implemented.

Another possible explanation lies in the well known tendency of parents to maintain confidence in their own children's school, while expressing reservations about other public schools. In a NPR/Kaiser/Kennedy School poll (1999), 71 percent of parents gave an A or B to their own children's public school, 60 percent rated their community's schools as A or B, but only 23 percent rated the nation's schools as A or B. Perhaps this discrepancy is due to the understandable desire of parents to believe that they are doing the best they can for their children, objective evidence notwithstanding. Regardless of the causes, however, the discrepancy itself suggests that a parent's answer to the PPIC question on school quality may be a poor measure of the quality of the parent's neighborhood school.

Our finding concerning homeowners without school children is open to an alternative explanation. Instead of protecting their property values, these voters may merely be registering their general opinion about the overall quality of public schools. If they hold all public schools in low esteem, they are likely to give their own local public schools a low grade and to vote for the voucher as a way of reforming public schools. If they hold the opposite view, they are likely to grade their neighborhood schools highly and vote against the voucher. We refer to this notion as the general opinion effect, because it concerns a respondent's opinion about the quality of all public schools, not just those in his or her neighborhood.

It is always difficult to determine what motivates individual behavior, much less to separate out two different explanations for the same observed behavior. In the present case, however, there may be an indirect way to distinguish between the two explanations. If the general opinion effect underlies the responses of homeowners without children, it

Table 7

Coefficient Estimates—Binary Probit, Renters
(1=yes on voucher initiative, 0=no)
Standard Errors in Parenthesis

Variable	Renters without School Children
School Quality	-0.008
	(0.067)
Ideology	0.115*
	(0.060)
Race/Ethnicity	-0.104
	(0.149)
Age	-0.098**
	(0.046)
Income	0.041
	(0.058)
Education	-0.155**
	(0.071)
Constant	0.585*
	(0.354)
Number of Observations	330

*Significant at 10 percent level.
**Significant at 5 percent level.

seems plausible that the same effect should also influence the responses of renters without children. To determine whether it does have that influence, we estimated the same probit model as in Table 6, but used only the responses of renters without children.

The results are presented in Table 7. The estimated coefficient on school quality is not significantly different from zero, which is inconsistent with the generalized opinion effect. We believe that inconsistency casts doubts on whether that effect can be a plausible explanation of the voting pattern of homeowners without school children.

Table 8

Predicted Probability of Voting Yes on Voucher Initiative
(using coefficient estimates in Table 6)

Individual Characteristics	No School Children	Children in Public School	Children in Private School
Median*	47%	47%	83%
Median except:			
Grade A School	39	59	56
Grade F School	56	35	96
Very Liberal	24	20	73
Very Conservative	71	76	90

*Neighborhood school of grade C, middle-of-the-road political ideology, white, age between 45 and 54, income between $60,000 and $79,999, and some college education.

Table 8 presents the predicted probabilities of a yes vote calculated using the coefficient estimates reported in Table 6. The first row gives the probability of voting yes for a homeowner with median characteristics. The second and third rows give that probability for a homeowner with median characteristics except the quality of his or her local public schools. The probabilities in the second row are for a median homeowner who lives in a neighborhood with grade A public schools; the probabilities in the third row are for a median homeowner who lives in a neighborhood with grade F schools. The fourth and fifth rows report predicted probabilities for a homeowner with median characteristics except for political ideology.

The three factors we have focused on all have large effects on voting behavior. The first factor is a family's choice between public and private school. Holding everything else constant, a homeowner with children in private school has an 83 percent

probability of voting for the voucher, as compared to a 47 percent probability for either a homeowner with children in public school or a homeowner without school children.

School quality has a sizeable effect on the probability of voting for the voucher initiative. A homeowner without school children has a 39 percent probability of voting for the voucher if he or she reports grade A public schools, but a probability of 56 percent if the schools are grade F. For homeowners with children in private school, the probabilities are 56 percent with a grade A school and 96 percent with a grade F school. For homeowners with children in public school, the probabilities are 59 percent and 39 percent.

Political ideology also has a large effect. Among homeowners without school children, the probability of a yes vote is 71 percent for those who are very conservative, but only 24 percent for those who are very liberal. Among homeowners with children in public school, political ideology has a similar effect: 76 percent for very conservative and 20 percent for very liberal. The effect is also large for homeowners with children in private school, though for this sub-sample the coefficient for political ideology is not significantly different from zero.

The sample underlying the estimates in Table 6 includes 39 homeowners who did not reside in a metropolitan area, as defined by the Census. Because households in non-metropolitan areas are unlikely to have the range of school choice implicit in our model of how the voucher would affect property values, we have re-estimated the model without those 39 observations. The results are reported in Table A2 in the Appendix. The coefficient estimates and standard errors are nearly the same as those in Table 6.

The estimates in Table 6 are derived from a sample that excluded homeowners who responded that they did not know how they would vote on the voucher initiative. One interpretation of that response is that the respondent was indifferent about the outcome of the voucher initiative, an interpretation that suggests an ordered probit model. In such a model, an individual votes yes if his or her utility from a voucher exceeds some upper cutoff, votes no if that utility is less than some lower cutoff, and does not know how he or she will vote if utility falls between the upper and lower cutoffs.

Table 9

Coefficient Estimates—Ordered Probit
(3=yes on voucher initiative, 2=do not know, 1=no)
Standard Errors in Parenthesis

Variable	No School Children	Children in Public School	Children in Private School
School Quality	-0.095*	0.110	-0.395**
	(0.050)	*(0.078)*	*(0.153)*
Ideology	0.284**	0.316**	-0.011
	(0.049)	*(0.077)*	*(0.130)*
Race/Ethnicity	-0.169	0.012	-0.251
	(0.127)	*(0.173)*	*(0.327)*
Age	-0.111**	-0.133	0.046
	(0.035)	*(0.086)*	*(0.138)*
Income	0.003	-0.161**	0.192
	(0.036)	*(0.061)*	*(0.120)*
Education	-0.079	-0.035	-0.349**
	(0.049)	*(0.083)*	*(0.174)*
Lower Cutoff	-0.283	-0.253	-1.985**
	(0.288)	*(0.486)*	*(0.893)*
Upper Cutoff	0.010	0.107	-1.608*
	(0.287)	*(0.486)*	*(0.885)*
Number of Observations	563	240	69

*Significant at 10 percent level.
**Significant at 5 percent level.

Table 9 reports the estimates from an ordered probit model. The results are similar to those in Table 6. School quality has a negative and significant effect for homeowners without school children and for homeowners with children in private school. It has a positive effect for homeowners with children in public school, but that coefficient is no longer statistically significant.

In arriving at the estimates in Table 9, 296 observations were excluded because the respondent did not answer a question used in the analysis or replied that he or she did not know the answer. Nearly half of these observations had missing data for the income variable: 103 homeowners without school children, 38 homeowners with children in public school, and two homeowners with children in private school. For the third sub-sample, few observations had missing income data, and thus their exclusion is unlikely to affect results. For the first two sub-samples, however, a relatively high percentage of observations had missing income data, raising the question of whether we may learn something from these observations, despite their missing data. To incorporate these missing observations, we created a dummy variable indicating whether income is missing. The variable takes the value of unity if income is missing and zero if income is present. We then include in the regression the dummy variable and an interaction term between the dummy variable and the income variable. Specifically, let d_i be a dummy variable taking the value of unity if observation i has a missing value for income, x_i. The regression equation then includes the terms $a d_i + b(1 - d_i)x_i$, which takes the value of *? ?* if the observation has a missing value for x_i and the value bx_i otherwise.

Table 10

Coefficient Estimates—Ordered Probit with Dummy Variables for Missing Data
(3=yes on voucher initiative, 2=do not know, 1=no)
Standard Errors in Parenthesis

Variable	No School Children	Children in Public School
School Quality	-0.086*	0.026
	(0.045)	*(0.070)*
Ideology	0.284**	0.333**
	(0.045)	*(0.073)*
Race/Ethnicity	-0.201	0.009
	(0.118)	*(0.162)*
Age	-0.116**	-0.141*
	(0.033)	*(0.076)*
Income	-0.004	-0.143**
	(0.035)	*(0.060)*
Education	-0.077	0.055
	(0.045)	*(0.077)*
Lower Cutoff	-0.309	-0.450
	(0.275)	*(0.453)*
Upper Cutoff	-0.012	-0.058
	(0.275)	*(0.453)*
Number of Observations	666	278

*Significant at 10 percent level.
**Significant at 5 percent level.

Table 10 reports coefficient estimates for the ordered probit model using this approach for missing income data for both homeowners without school children and homeowners with children in public school. The most significant change concerns the school quality coefficient for the sub-sample of homeowners with children in public school. The coefficient falls from 0.110 to 0.026.

5. The Voucher Initiative and Public School Spending

In addition to the voucher, Proposition 38 also provided a mechanism for the state legislature to increase public school spending. Because California public schools are state financed, this provision was merely window dressing. The state legislature already had the authority to raise school spending and had chosen not to do so. Window dressing notwithstanding, public school spending is a salient political issue in California and is thus important in interpreting political support for the voucher initiative. In this section, we investigate how the public school spending provision may have influenced voting on Proposition 38.

As pointed out by Rangazas (1995) and Hoyt and Lee (1998), a voucher could indirectly affect public school spending. Because the voucher would decrease the number of students in public school, it would also decrease the tax-price of public school spending per pupil, which would tend to increase spending per pupil. On the other hand, because the voucher would cause fewer families to enroll their children in public school, it could erode political support for school spending. The net effect on public school spending per pupil depends on the relative strength of these two forces. Regardless of this theoretical argument, voters often express the concern that a voucher could siphon resources from the public schools. In an exit poll from the November 2000 election, Catterall and Chapleau (2001) report that those who voted against the voucher most frequently cited concerns about public school spending as the reason for their vote.

Moreover, the adequacy of public school spending is an important political issue in California. From 1970 to 1998, public school spending per pupil fell about 15 percent in California relative to the average of other states. In 1970, spending per pupil in

California was a little above the average in other states. By 1998, it was 15 percent below that average. Because teacher salaries are relatively high in California, this difference in spending per pupil translates into an even larger difference in resources per pupil. In 1998, pupils per teacher were 38 percent higher in California than the rest of the country. These trends are documented in Sonstelie, Brunner, and Ardon (2000).

In view of these trends, Californians are understandably concerned about the adequacy of public school resources. In 1988, they manifested that concern by passing Proposition 98, which placed a floor on public school spending in the state. The floor did little to increase spending, however, largely because it was set at a low level.

Because Proposition 98 failed to achieve its objective, there is still strong political support in the state for other measures to increase school spending. The authors of California's school voucher initiative may have sought to enlist some of that support to their cause by including a provision about school spending in the initiative. The provision allowed the state legislature to replace the Proposition 98 floor with a higher floor, the national average in public school spending per pupil. Because the state legislature had not increased spending to this level in any one year, it is highly unlikely that it ever would have committed itself to this level in perpetuity. In that sense, the provision was meaningless. Nevertheless, it may have swayed some voters.

The PPIC survey included a question about the adequacy of public school spending, responses to which may shed further light on this issue. The survey asked whether respondents thought the level of state funding for public schools was more than enough, just enough, or not enough. Only 8 percent of respondents thought that level was more than enough, while 62 percent thought it was not enough.

Table 11

Adequacy of School Spending and Support for the Voucher Initiative

Opinion About the Current Level of Public School Spending* (n)	Intended Vote on Voucher Initiative		
	Yes	No	Do Not Know
More Than Enough (166)	62.5%	29.5%	7.8%
Just Enough (465)	48.4	41.5	10.1
Not Enough (1237)	45.6	40.8	13.6
Do Not Know (124)	39.7	33.9	26.4

*Thirteen respondents did not answer the voucher question, and an additional five did not answer the public school spending question.

These responses demonstrate the potential of the school spending issue to influence voter sentiment. Table 11 shows how support for the voucher varied with opinions about the adequacy of school spending. Among respondents who thought that California spent more than enough on its schools, 62.5 percent intended to vote for the voucher initiative. In contrast, among residents who thought California spent too little, only 45.6 percent intended to vote for the voucher initiative.

To determine whether these attitudes affected the vote on the voucher, we expanded the binary probit model in Table 6 to include responses to PPIC's question about the adequacy of school spending. Those responses are represented by two dummy variables. The first takes the value of unity if a respondent thought California spent more than enough and zero otherwise. The second variable takes the value of unity if the respondent replied that the state did not spend enough. We excluded the 24 observations

Table 12

Coefficient Estimates—Binary Probit, Adding School Spending Question
(1=yes on voucher initiative, 0=no)
Standard Errors in Parenthesis

Variable	No School Children	Children in Public School	Children in Private School
School Quality	-0.101*	0.147	-0.578**
	(0.059)	*(0.092)*	*(0.220)*
Ideology	0.292**	0.377**	-0.081
	(0.057)	*(0.092)*	*(0.208)*
Race/Ethnicity	-0.181	-0.157	-0.325
	(0.145)	*(0.207)*	*(0.455)*
Age	-0.136**	-0.174*	0.191
	(0.041)	*(0.103)*	*(0.236)*
Income	0.003	-0.211**	0.340*
	(0.041)	*(0.073)*	*(0.177)*
Education	-0.083	-0.001	-0.583**
	(0.057)	*(0.098)*	*(0.251)*
More Than Enough	0.220	0.561	-1.318
	(0.222)	*(0.460)*	*(0.828)*
Not Enough	-0.232	0.072	-0.571
	(0.141)	*(0.214)*	*(0.479)*
Constant	0.342	0.089	2.930**
	(0.371)	*(0.574)*	*(1.315)*
Number of Observations	482	208	59

*Significant at 10 percent level.
**Significant at 5 percent level.

in which respondents replied that they did not know whether public school spending was too much or too little or who didn't respond to the question about public school spending.

Table 12 presents coefficient estimates for the binary probit model with the school spending dummy variables added to the basic specification in Table 6. Neither of the

coefficients for these two variables is significantly different from zero for any of the sub-samples. More importantly, including the school spending question does not change the basic results in Table 6. Homeowners without school children are less likely to favor the voucher initiative if they live in neighborhoods with good public schools. For these respondents, the coefficient on the school quality variable is negative and significant at the 10 percent level. For homeowners with children in private school, the coefficient on school quality is negative and significant at the 5 percent level. For homeowners with children in public school, the coefficient is not significantly different from zero.

6. Conclusion

The goal of this paper is to shed light on the political economy of the school voucher. Because vouchers would directly affect families with school children, it is natural to analyze the pros and cons through their eyes. However, families with school children constitute a minority of voters, and thus the political economy of the voucher must necessarily incorporate the interests of voters without school children. While all voters will naturally be concerned about the fiscal effect of vouchers, it is not clear whether California's voucher would have increased or decreased the fiscal cost of public education. There is less ambiguity, however, about how the voucher would have affected property values. It would have decreased values in neighborhoods with good public schools and increased values in neighborhoods with low quality schools. These capital gains and losses were potentially quite large, giving all homeowners a stake in the outcome of the voucher initiative, regardless of whether they had school children.

Our empirical results are consistent with the hypothesis that homeowners without school children voted to protect their property values. If they owned homes in neighborhoods with good public schools, they were less likely to vote for the voucher than if they lived in neighborhoods with low quality public schools. Another explanation of this pattern is that voters with a generally low opinion of public schools would have been more likely than other voters to give their own local public schools a low grade and to vote for the voucher. However, if this is the explanation of the voting pattern we observe, it also ought to apply to renters without children. We found that it does not, lending further support to the notion that the voting pattern of homeowners was motivated by their desire to protect property values.

Our conclusion may explain why the voucher has not been widely adopted. The voucher is perfectly aligned with the pro-market philosophy of political conservatives. In principle, they should form its core political constituency. Yet, many conservatives live in the suburbs where public schools tend to be relatively good. While the voucher may align with their philosophy, it also threatens their property values. This conflict between philosophy and self-interest suggests that the voucher may have more support in principle than in practice.

Bibliography

M. Baldassare, 2000. *PPIC Statewide Survey: Californians and their Government, August 2000*. San Francisco, Cal.: Public Policy Institute of California.

E. Brunner, J. Sonstelie, and M. Thayer, 2001. "Capitalization and the Voucher: An Analysis of Precinct Returns from California's Proposition 174." *Journal of Urban Economics,* 50, pp. 517-536.

J. S. Catterall and R. Chapleau, 2001 "Voting on Vouchers: A Socio-Political Analysis of California Proposition 38," National Center for the Study of Privatization in Education, Teachers College, Columbia University.

D. Epple and R.E. Romano, 1998. "Competition between Private and Public Schools, Vouchers, and Peer-group Effects," *American Economic Review,* 88, 33-62.

W. A. Fischel, 2001. *The Homevoter Hypothesis*. Cambridge, Mass.: Harvard University Press.

W. A. Fischel, 2002. "An Economic Case Against Vouchers: Why Local Public Schools Are a Local Public Good," Dartmouth Economics Department Working Paper 01-02.

M. Friedman, 1962. *Capitalism and Freedom*. Chicago, Ill.: University of Chicago Press.

W. H. Hoyt and K. Lee, 1998. "Educational Vouchers, Welfare Effects, and Voting," *Journal of Urban Economics,* 69, 211-228.

T. J. Nechyba, 2000. "Mobility, Targeting, and Private School Vouchers," *American Economic Review,* 90,130-146.

National Public Radio, Americans willing to pay for improved schools, NPR Online (1999), available at *www.npr.org/programs/specials/poll/education*.

Secretary of State, "Official Voter Information Guide, General Election 2000," Sacramento (2000), available at www.ss.ca.gov.

P. Rangazas, 1995. "Vouchers and Voting: An Initial Estimate Based on the Median Voter Model," *Public Choice*, 82, 261-279.

J. Sonstelie, E. Brunner, and K. Ardon, 2000. *For Better or For Worse: School Finance Reform in California*. San Francisco, Cal.: Public Policy Institute of California.

S.M. Tafoya, 2002. "The Linguistic Landscape of California Schools," *California Counts*, 3, 1-15.

Table A1

PPIC Survey Respondents versus California Householders in 2000 Census

	Percentages	
	PPIC Survey	2000 Census
County of Residence		
Alameda	4.30%	4.42%
Alpine	0.00	0.01
Amador	0.10	0.12
Butte	0.75	0.70
Calavaras	0.10	0.19
Colusa	0.05	0.06
Contra Costa	3.35	2.90
Del Norte	0.15	0.09
El Dorado	0.55	0.58
Fresno	2.80	2.22
Glenn	0.15	0.08
Humboldt	0.50	0.46
Imperial	0.65	0.36
Inyo	0.00	0.07
Kern	1.95	1.90
Kings	0.60	0.30
Lake	0.20	0.27
Lassen	0.20	0.10
Los Angeles	24.98	26.78
Madera	0.25	0.33
Marin	0.60	0.86
Mariposa	0.05	0.07
Mendocino	0.20	0.30
Merced	0.55	0.56
Modoc	0.05	0.04
Mono	0.10	0.10
Monterey	1.10	1.08
Napa	0.40	0.40
Nevada	0.40	0.36
Orange	6.09	7.94
Placer	0.50	0.88
Plumas	0.05	0.11
Riverside	5.29	4.79
Sacramento	4.20	3.89
San Benito	0.20	0.14
San Bernardino	6.29	4.92
San Diego	8.69	8.52
San Francisco	1.80	2.84
San Joaquin	1.80	1.55

San Luis Obispo	1.20	0.84
San Mateo	1.40	2.13
Santa Barbara	1.40	1.17
Santa Clara	4.40	4.74
Santa Cruz	1.05	0.81
Shasta	0.80	0.56
Sierra	0.00	0.02
Siskiyou	0.20	0.18
Solano	1.35	1.10
Sonoma	1.60	1.50
Stanislaus	1.50	1.23
Sutter	0.30	0.23
Tehama	0.25	0.19
Trinity	0.10	0.07
Tulare	1.10	0.98
Tuolomne	0.25	0.23
Ventura	1.90	2.06
Yolo	0.95	0.50
Yuba	0.30	0.19
Housing Tenure		
Homeowner	60.72	56.91
Renter	39.28	43.09
Age		
18 to 24	13.3	
15 to 24		4.7
25 to 34	18.1	18.5
35 to 44	21.2	24.3
45 to 54	18.4	20.8
55 to 64	12.1	12.9
65 or older	16.9	18.8
Race/Ethnicity		
Hispanic or Latino	20.9	22.3
White and Not Hispanic	66.3	58.2
All Other	12.8	19.5

Table A2

Coefficient Estimates—Binary Probit, Metropolitan Sample
(1=yes on voucher initiative, 0=no)
Standard Errors in Parenthesis

Variable	No School Children	Children in Public School	Children in Private School
School Quality	-0.115**	0.138	-0.362**
	(0.058)	*(0.095)*	*(0.184)*
Ideology	0.317**	0.408**	-0.145
	(0.056)	*(0.095)*	*(0.195)*
Race/Ethnicity	-0.189	-0.207	-0.293
	(0.145)	*(0.213)*	*(0.419)*
Age	-0.126**	-0.176*	0.130
	(0.040)	*(0.107)*	*(0.220)*
Income	0.013	-0.184**	0.275*
	(0.040)	*(0.075)*	*(0.152)*
Education	-0.078	-0.065	-0.515**
	(0.057)	*(0.102)*	*(0.237)*
Constant	0.091	0.218	2.331*
	(0.328)	*(0.570)*	*(1.239)*
Number of Observations	480	194	60

*Significant at 10 percent level.
**Significant at 5 percent level.