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Voting on Vouchers: A Socio-Political Analysis Of California Proposition 38, Fall 2000

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Abstract. This paper analyzes the results of the votes in the referendum in California regarding Proposition 38 in the November 2000 election. This Proposition offered voters the option of replacing the current education financing system with a system of vouchers, eligible at any school. The Proposition was easily defeated, but the pattern of votes across zip codes indicated varying support for the idea of vouchers. Using county voting data and an exit poll of voters, this paper estimates the main determinants of support for, and opposition to, the idea of education vouchers. Counties with higher representations of Republicans, with higher SES, and with lower densities of African American and Hispanic voters were more likely to favor of vouchers. In their reasons for voting for Proposition 38, voters emphasized their own family circumstances – whether or not their children were in private school, the importance of competition, and the notion of freedom of choice outside of government.

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I. Introduction

This study explores the fall 2000 public vote on a school voucher constitutional amendment in California. The policies embedded in this initiative augured substantial implications for state finance of public and private schools. At issue was Proposition 38, a ballot measure prescribing a $4000 tuition certificate for any school student wanting to attend a private school -- non-secular or religious. Students already in private schools could also use the proposed vouchers, at a potential direct cost to California in excess of $2 billion.[1] The certificates, or vouchers, would also be available to families wishing to newly enroll or transfer their children to private schools. Proposition 38 also spelled out eligibility rules for school participation and limited state regulation of participating schools. Private schools accepting tuition vouchers would be free of most regulations applied to public schools and be protected from future regulation. In short, Proposition 38 was an initiative with large stakes for the citizens of California and for the way its children are educated. It was a proposal also with great implications for existing private schools and for educators or others wanting to start up new schools.

Our interest was in "explaining" voter decisions in this election. The importance of this effort is underscored by the fact that most available information about public preferences on school vouchers or public aid to private schools comes from opinion polls. Polls ask citizens to respond to hypothetical situations. The California election, in contrast, supports analyses of presumably more genuine citizen views because voters weighed-in on the issue of school vouchers through a confidential ballot. The election also presented an opportunity to use multivariate analyses to gauge the independent effects of characteristics and circumstances faced by voters on their support or opposition to the initiative.

We used the County of Los Angeles as a laboratory for our inquiry. The county cannot be considered a representative sampling of the State of California, but it does account for just over 28 percent of the state's population with its nearly 10 million census count. The main rationales for this selection were two: one was that an examination of

[1] This estimate is based on 2000 California private school enrollment of 641,000 students. If all private school tuitions were to increase to at least $4000 as a result of Proposition 38, the total cost of supporting current private school enrollments would exceed $2.5 billion. (California Departent of Education, 2000)

voter preferences regarding school vouchers in a major urban area seemed worthwhile, since significant and seemingly intractable problems surround urban schooling in the United States. Second, we sought a setting where we could try out methods of data collection and aggregation for such a study. Using the county as a platform reduced some complexities that would have affected a statewide analysis. This will become clearer when we describe the data collection and matching issues for this study below.

The county vote in favor of Proposition 38 was 26.9 percent, marginally lower than the 29.4 percent vote favoring the initiative statewide. Additional county-state comparisons are shown in a table attached as Appendix 2. Certain demographic and education performance statistics differ significantly – Los Angeles County's population is nearly 47 percent Hispanic/Latino (about 32 percent statewide), the county has more children in poverty, and basic skills performance in its schools lags behind state averages. Each of these differences of course underestimates the gaps between Los Angeles County and the balance of the state (as opposed to the state averages) because Los Angeles accounts for a hefty share of average state statistics. If forced to hazzard guesses about the theoretical importance of key differences between the county and the state, we might surmise that lower average test scores would tend to increase support for education choice; we would also say that larger numbers of poor and minority families might predict less support for Proposition 38 than was found statewide. But a central purpose of this study is to investigate just what seems to matter.

We intended ultimately to build a predictive model, common to policy analyses, which could help identify what seemed to influence voter choices on this initiative. Most of this paper describes the construction and results of our principal predictive model.

We also conducted an exit poll in precincts spread across Los Angeles County to ask voters both how they voted on Proposition 38 and the reasons for their Yes or No votes. A subsequent section of the paper discusses this poll and its results.

II. Politics and School Vouchers

Scholarly analyses related to the politics of school vouchers are limited in scope and number. We do benefit from reports of results of public referenda on aid to private schools as well as public opinion polls, particularly the annual Gallup polls reported in the September issues of the *Phi Delta Kappan.* Recent years have also brought published discussions of the enactment and implementation of public voucher programs in Milwaukee, Cleveland, and Florida. These three voucher programs came about through legislative political processes and not through public referenda. In addition, Catterall (1982) reported an analysis of interest group activity surrounding a proposed California school voucher initiative in 1978-79 that received widespread public attention but which did not qualify for the ballot.

We should first note that the school voucher idea is a highly flexible policy tool, with proposed plans varying greatly in substance and plausible effects depending on their finance, regulation, and ancillary service provisions. For example, Proposition 38 offered a $4000 voucher to all takers across California. Milwaukee's school vouchers, in contrast, are restricted to families whose incomes are at or below 1.75 times the poverty level established by Federal guidelines. Voters or legislators facing one or the other of these school voucher models would probably behave differently and act for different reasons.

In addition, opinion polls about school vouchers are very sensitive to the specific wording of questions. For example, when asked if one supports the general voucher/school finance idea, one poll found that more than 60 percent of respondents indicated a favorable opinion; only about 40 percent of the same respondents indicated support for school vouchers when "at public expense" was added to the question (Rose & Gallup, 1999). We can presume that public voting on vouchers would be sensitive to the wording presented at the polls, to the more detailed provisions of initiatives for voters who were aware of these, and certainly to views propagated by sponsors and opponents through the media.

Table 1 about here

The *Kappan* polls have tracked public opinions about vouchers for at least three decades. There is evidence of increased support in the last few years for "alternative" education systems. As shown in Table 1, depending on the question, support for voucher-like concepts (sending children to private or parochial schools with government paying all or part of the costs) has risen to about 45%. When the word "voucher" enters a Gallup Poll question, positive sentiment decreases to about one third. The preferences of this one third of the nation's population, along with Milwaukee's widely examined experiences with school vouchers, seem to be sustaining if not increasing interest in the voucher idea.

There appears to be a cyclical nature of attention and support for school vouchers. In about 1980, school vouchers were brought to national attention by the Coons-Sugarman voucher proposal in California (Catterall, 1982). A decade later, the appearance of a popular book by John Chubb and Terry Moe (1990) seemed to have revived the idea.[2] And in the late 1990s, a popular, highly watched, and seemingly workable voucher plan in Milwaukee appears to have brought the voucher idea to the fore once again. Public interest in promoting school vouchers was probably enhanced by the United States Supreme Court's decision not to intervene in the lower court approval of the Milwaukee voucher program for students enrolling in religious schools – a perennial uncertainty concerning proposed policies in the past.[3] This decision alone might prompt religious schools to put more effort and resources, at least at the margin, into the passage of voucher plans that would include them. The 2000 voucher initiatives in California and Michigan as well as increased public support for the idea registered in the Kappan polls over the same period provide evidence of a current revival (see Table 1). The debates rising periodically throughout this period have served to clarify the espoused rationales offered by proponents of school vouchers and thus contribute to the theoretical model we used for our analysis. In turn, this theoretical model influenced our choice of potentially important factors guiding voter preferences for school vouchers.

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[2] Moe was a supporter of another failed California school voucher ballot measure in 1994.

[3] Jackson v. Benson, 578 N.W. 2d 602 (1998). And on September 25, 2001, the U.S. Supreme Court agreed to hear a case challenging a recent U.S. Court of Appeals opinion striking down Ohio's use of Vouchers. This challenge was brought by the Bush Administration and will be heard in January, 2002 (Zelman v. Simmons-Harris, 00-1751). (Los Angeles Times, 9/26/2001, A28-A29.)

Informed observation of support and opposition. Kennedy (2000) provides an inventory of major groups supporting and opposing school vouchers based on public stands witnessed in recent years. Supporters of school vouchers include: pro-market libertarians, business interests, the Christian right, the Catholic Church, and Republicans who tend to have an "ideological orientation toward the marketplace and competition." Opponents of school vouchers include: Civil libertarians, church-state separatists, African American organizations,[4] and groups allied to public schools such as teacher unions. We do not benefit from fine distinctions of sentiment or voter behavior within these groups because public agencies do not routinely archive data in these categories.

A recent national survey revealed some interesting aspects of the voucher debate (Public Agenda, 1999). First, the poll found that the modal American adult knows very little about school vouchers. Experts may play out their sophisticated economic, social, and economic debates, but voters tend to know little beyond a hobbled understanding of the basic notion of a voucher. Second, charter schools on balance seem positively received so far -- thus the idea of expanded choice has considerable support. And third, public school parents may be willing to shop around for schools, but they may make their decisions for reasons other than a quest for academic excellence – hence the fundamental economic model of school vouchers may represent an erroneous specification.

Table 2 about here

Table 2 shows collateral perspectives on where school vouchers are supported or opposed, in this case from our main data set. The percentages of yes votes on California's school voucher proposition in Los Angeles County are reported by relative concentrations of school children of differing race or ethnicity. Voters in zip codes with the highest concentrations of African American or Hispanic school enrollments were least supportive of the measure. Areas of high Caucasian and Asian school enrollments were somewhat more favorable on the ballot measure, although the differences were small. But overall even these districts remained largely non-supportive. Table 2 also shows relatively more

[4] African American organizations traditionally line up firmly behind integrated public schools. This community has also expressed fears of racist motivations on the part of school voucher advocates, who could want vouchers allowing some families to escape inner city schools.

support for Proposition 38 in areas represented by Republicans in the U.S. Congress, as opposed to areas represented by Democrats.

Table 3 about here

Table 3 shows additional information about support for Proposition 38 within various groupings of voters. These data derive from our Los Angeles County exit poll (discussed in detail below). Amassed at the individual level, the statistics in Table 3 show sharply higher opposition to California's school voucher initiative among African Americans, registered Democrats, and low socio-economic status (SES) voters.

Past votes. The history of statewide votes on two types of aid to private schools, vouchers and tuition tax credits, is not auspicious for the expansion of such policies in the United States through public referenda. Nearly all measures placed before voters have lost at the polls, typically by about 2-1. Such margins of opposition and support echo public opinions of school vouchers and aid to private schools evidenced in recent Kappan polls. In the mid 1980s, the idea suffered a large electoral defeat in a heavily African American community; a vote in Washington DC for a school tuition tax credit plan was defeated by a margin of 9 to 1.[5]

[5] We should point out that this study is focused on voting behavior and to some degree electoral politics. Political behavior surrounding school vouchers in the legislative arena, where a measure must find support of elected bodies and state governors (or the President), takes on many dimensions we do not address. Nonetheless, the patterns of group support and opposition we assess are foundational to any political contest over school vouchers

III. Our Study in More Detail

Our aim in this study was to enhance our understanding of support and opposition to school vouchers by means of an analysis of voting behavior regarding a California school voucher initiative, decided in the November, 2000 election. Our first incursion, reported here, was a detailed examination of the vote in Los Angeles County. Our main analysis plan was to build a predictive model of voter support for the initiative based on a theoretical model suggesting factors that might influence such support. Our work to achieve this relied on procuring data describing voting outcomes in the nearly 5000 precincts in the county, and the acquisition of information concerning demographics and school conditions relevant to voters in their respective precincts. We also used a trial exit poll in 40 selected precincts to gain further insights, especially about voters' expressed reasons for their support or opposition to the measure. In the following section, we describe the theoretical model that guided our search for potentially relevant data.

A Theoretical Model for Predicting "Yes on 38" Vote

Theory underlying school vouchers, and the claims of proponents, draws from common principles of economics, see Levin (2000). First, demand for any good, such as tuition-charging schools, relies on the resources of potential customers and their tastes at each price level. School vouchers reduce the cost of private schools by the amount of the voucher. Second, changes in demand for one good, other things being equal, cause changes in demand for competing goods. If demand for private education increases through vouchers, demand for public education will decrease as a simple substitution effect. Since it is in the interest of the suppliers (private and public schools) to have enrollments because enrollments drive their budgets, all schools will compete for students. And to wrap-up the basic theory, schools will compete by offering and promoting a 'higher quality' education, if we assume that this is what parents and students desire from their schools. ('Higher quality' may not mean higher test scores, but schools that map to parental preferences on religion, values, political orientation, educational philosophy, etc.). Theory suggests that all schools, public and private, could improve through competition.

Another link in the economics of school vouchers is that in the present arrangement of schools in American society, private schools are largely restricted to families who can afford tuition, scholarships aside. It is widely believed that families who cannot afford tuition are more concentrated in poor neighborhoods often served by "less effective" schools. Thus a school voucher might be especially useful to a poor family in search of better education.

And a final rationale (theory) advanced by voucher proponents is the potential for reduced overall public education costs through the implementation of school vouchers. Using Proposition 38 as an example, students might leave public schools to utilize vouchers claiming $4,000 from the public treasury. In comparison, the average state expenditure per pupil in California schools is between $5000 and $6000. In the long run, substantial use of vouchers might reduce public expenditures on education.[6]

Overall, this theoretical orientation is consistent with the sentiments of the main groups described by Kennedy (2000) in their support or opposition to vouchers as listed above. This theoretical orientation also supports a framework through which we can explore voter behavior concerning school vouchers as represented in Proposition 38. As such, theory took on two roles as we proceeded. One was its importance in guiding where we should look for factors influencing support or opposition to school voucher policies. Another was the practical fact that our study might capture whether and where the voting public "believed" the theory as it was articulated by the proponents of Proposition 38, or as it is advanced more generally by private choice advocates.

Data collection

We constructed two sets of data for the purposes of this study. For our principal analyses helping to explain voting patterns, we used voting precinct data on the Proposition 38 vote as the fundamental building block. The only data routinely collected and archived at the voting precinct level are the voting outcomes for each decision on the ballot. Thus we had to turn to other sources to estimate possibly critical measures for our

[6] Although another possibility is that 'higher cost' students may remain in public school because of a lack of openings for handicapped and disadvantaged students. Then, average costs for public schools of remaining students will rise.

model – including data representing school quality and voter demographics that could be associated with precinct voting results.

To attain a usable data set, we combined Los Angeles County voting results at the precinct level with measures of local school characteristics obtained from the California Department of Education. State archived school data became our main source of estimates for an array of important information -- particularly school performance data, race/ethnicity distributions, and family economic conditions that might be attached to voting precincts.

Since the lowest levels of sampling in our two main data sources (voting precinct versus local school) did not overlap, we aggregated data by zip code to provide a common unit of analysis. This meant averaging voter behavior, voter characteristics, and school conditions within zip codes containing multiple precincts on the one hand and multiple schools on the other hand. Demographic data for each zip code were estimated using demographic data for the schools within zip codes. We used the political party of the congressional representative attached to schools within each zip code to estimate voter political affiliation, albeit imprecisely.

Two important variables, voter choice on Proposition 38 and in the contest for the Presidency, were developed in the form of average vote distributions across the precincts in a zip code. Ultimately, data collected at the zip code level were weighted by the total numbers of votes cast across each zip code. The result was 266 cases (zip codes) containing voting, school, and demographic data. A schematic view of this phase of our data collection process is shown in Figure 1.

Figure 1 about here

The variables generated through these activities are listed and characterized here. The dependent variable was *Percentage voting "Yes on 38" in a zip code.* Across 278 zip codes, the mean percentage "Yes on 38" vote was 26.6 percent, with a standard deviation of 5.9. The distribution of the yes vote across the county zip codes is shown in Figure 2.

Figure 2 about here

Predictor Variables. Twenty-two potentially useful independent variables were constructed from the school data files; these data files are shown and described in Figure 1. School-level data variables used for estimating association with the Percent "Yes on 38" vote were obtained from four separate data sources, each of which were treated independently and aggregated by the zip code of each school. After each data source yielded a clean data set by zip code, these were merged into our zip code level file containing our averaged percent voting data. All school level files were downloaded from the California Department of Education world-wide-web site (www.cde.ca.gov).

Each data source along with variables obtained from that file are listed and explained in an Appendix display. An abbreviated list of our potentially predictive factors is shown here:

Potential indicators of school quality:

- API raw 1999 score (API99). (Student Stanford 9 achievement test scores.)
- Chemistry Enrollment (CHEM).
- Advanced Math Enrollment (ADVMATH).
- UC/CSU completing graduates. (UCGRAD).
- Computer Usage (COMPCLASS).
- Student Mobility (MOBILITY).
- Percent of teachers fully credentialed on a campus (PCTFULL).
- Percent of teachers emergency credentialed on a campus (PCTEMER).

Potential indicators of race/ethnicity of voters:

- Percent Hispanic students at a school (PCTHI).
- Percent American Indian students at a school (PCTAI).
- Percent Asian students at a school (PCTAS).
- Percent African American students at a school (PCTAA).
- Percent White students at a school (PCTWH).
- Percent Filipino students at a school (PCTFI).

Potential indicators of Voter SES:

- Percent of students with free/reduced price meals (PCTMEAL).
- Average education level of parents (AVE_ED 1).

Potential indicators of availability of school choices:

- Magnet Enrollment, grades K-8 (MAGK8).
- Magnet Enrollment, grades 9-12 (MAGK9_12).

Potential indicators of voter political affiliation:

- Voted Bush/voted Gore for President (v_Bush, v_Gore)
- Party of US Member of Congress representing the school (CONGPART).

Potential indicator of support for public schools:

- Percent Voted "Yes on Proposition 39" (bonds for public school facilities).

Potential indicator of voter interest in the election:

- Percent of registered voters voting (PCTVOTE).

Considered but not-explored variable: Residential property value per capita. This potentially interesting variable was not available by Zip Code and could have been approximated by hand aggregation using data map overlays. Since it would probably have strong correlations with variables included, we did not pursue this statistic. (We would assume significant correlations between property values and at least the following: parent education level, children in poverty, percent of registered voters voting, and political party.)

Proposition 38 in Theoretical Context

Listed here are descriptions of the main provisions of Proposition 38. Appended to each provision is a comment on links to the theoretical underpinnings of such policies.

1. All California elementary and secondary school students would be eligible to receive a voucher worth $4000 toward private school tuition. (Creation of demand for private schools and reducing demand for public schools. If significant numbers of

students transfer to private schools, probable reductions in public school budgets and negatively impacting public school characteristics.)

2. Release California from a voter-led constitutional requirement for minimum allocations of state funds to public schools. (Allowing state support for $4000 school vouchers and a transition to a system of both voucher and public schools of any proportion.)

3. All private schools would be exempt from California standards, including state academic requirements. (Free-up resources for other objectives of private schools, freedom to innovate which could add to the supply of private schools and perhaps attract additional demand for private schools. Alternatively, this provision would allow schools of unknown quality and practices to participate with no accountability (possibly reducing demand for private schools).

4. Require release of composite standardized test scores by private schools. (Assisting clients and potential clients to assess school quality, at least in the public's perception.)

5. Limit future health, safety, zoning, and building restrictions on private schools. (This would facilitate increases in the supply of private schools through reduced costs and increased locational and instructional facility opportunities.)

Our theoretical model. The model we constructed is consistent with both the theory and also the underlying details of Proposition 38. Our specification of this model includes five plausible factors influencing individual and community support for school vouchers:

1) Voter support for public schools.
2) The quality of public schools near the voter's residence.
3) Voter demographic characteristics.
4) The availability of public schools of choice.

   Note: the availability of private schools in the vicinity would be included in our model, but we lacked adequate data for this factor.
5) The political affiliation of the voter (Democrat vs. Republican).
6) The level of voter interest in the election.

(We explored this notion, asking if Proposition 38 may have contributed to interest in the election).

We used this model to select potentially indicative measures of these theoretical factors from our zip code data set. All candidate variables are included in the correlation matrix shown in Appendix 1. We reduced our candidate variable set by eliminating apparently redundant variables (such as individual levels of parent education -- for example average parent education in lieu of "some high school," "high school graduate," and so on. We also explored cases of multi-collinearity as we examined our data.

Our resulting models included the following variables. We note in this list variables which were found to be highly correlated to certain variables in our final model, and thus not included separately in our original estimated model.

Specified Model for Estimation

Here is a recap of our important constructs and the variables we used for regression estimation of each:

1) Voter support for public schools.

   Variable used: **Percentage yes vote on Proposition 39**, a measure calling for a bond issue for public schools.

2) The quality of public schools near the voter's residence.

   API99. (School performance index based on standardized test scores.)

   Note: The API measure is highly correlated with incidence of free meals and percent Hispanic (both negative), and UC/CU preparedness and percent white (both positive).

   Student mobility.

   Percentage of teachers with emergency credentials.

3) Voter demographic characteristics.

   Percent Hispanic.

   Percent Asian.

   Percent African American.

(Additional groups were less than 2 percent within all zip codes.) (Note: Percent white varies inversely with the percentages represented by the above three groups.)

Percent free/reduced price meals (SES)

4) Availability of public schools of choice.

Prevalence of magnet elementary/middle grade schools.

Prevalence of magnet high schools.

5) Political affiliation (Democrat vs. Republican) of the voter.

Congressional Party of the Congressperson representing zip code.[7]

Presidential preference. Percentage vote Bush vs. Gore.

6) Level of interest in the election.

Percent of registered voters voting in the election for each zip code.

Model estimation.

Our estimated model predicting percentage of Yes on 38 votes by zip code in Los Angeles County is shown in Table 4.1-4.3 below. We used the model described above with one exception: our indicator of support for public schools, percentage "Yes on 39" indicating support for public school bonds, was nearly a precise inverse of percentage "Yes on 38" votes. Any regression on "Yes on 38" including "No on 39" would find practically all of the variance accounted for by this public school support variable. What this tells us is that voters willing to actively support public dollars for public schools have practically no interest in school vouchers, at least the scheme called for in Proposition 38 and probably to the voucher idea more generally. We eliminated the percentage "Yes on 39" – if entered as an independent variable in our regression in place of "Yes on 38", a duplicate estimated model would emerge, with all of the coefficient signs reversed.

[7] Congressional party deserves added explanation. The Congressional party variable was estimated by assigning 1 to zip codes with schools represented entirely by a Democratic Congressperson. A 2 was assigned when a zip code contained schools entirely represented by a Republican. Estimates for zip codes crossing Congressional district boundaries were made by assigning a proportion between 1 and 2 to reflect the balance of schools in a zip code represented by Democratics versus Republicans in the U.S. Congress.

We used OLS linear regression for our model. We explored a curved fit using a logarithmic function, ln(percent yes_on_38). This produced no improvement in model fit – but explained nearly as much of the variance in the dependent variable as the linear regression. We also estimated a quadratic formulation – which resulted in a non-predictive model. OLS results are therefore shown in Tables 4.1-4.3.

Table 4.1 about here.

Explanatory power. Our Model 1 (in Table 4.1) can be evaluated in various terms. First, the adjusted R Square for the model is .224 – indicating that between one-fourth and one-fifth of the variance across zip codes in Percent "Yes on 38" is 'accounted for' by the model. This is a reasonable and non-trivial magnitude in its own right. It gains weight when we consider the imprecision necessary in our estimation of factors within zip codes. For example, political party was measured by indicating the party of the congressional representative attached to each zip code. This will show a tendency of voter party, but by no means indicates the political party of individual voters. As another example of "fuzziness" in our measures, the percentage distribution of race/ethnicity for each zip code was estimated by the percentage enrollment distribution in the schools in each zip code – again a measure that is only approximate. We assume throughout this part of the analysis that data focused on individual precincts would produce a much more accurate model, because of increased precision of measurment and increased number of cases.

What matters? The estimated regression assesses the importance of each independent variable in the equation. First, Table 4.1 shows all of the dependent variables we specified in our predictive model. A first pass at our estimated model shows that six of the nine predictor variables are significant. (That is, the probability that they have zero true effect is less than 0.95.) These six predictors are congressional party, percent African American, percent Hispanic, percent emergency credentialled teachers, student mobility, and percentage of registered voters voting.

Congressional party shows to be the dominant factor in predicting a yes vote on Proposition 38, even though, as we discuss above, our measure of congressional party is rather imprecise.

Race/ethnicity. Two relationships are negative: the higher the concentration of African American or Hispanic families within a zip code, the smaller the percentage of Yes on 38 votes are recorded. The negative effect of high concentrations of African Americans appears as the single largest predictor of the vote. This relationship shown for African American families is consistent with many past views of non-support for school vouchers in African American communities. We have little historical information on Hispanic voting patterns related to school vouchers. This group tends to concentrate in communities where school quality indicators are low and also has familial ties to the Catholic Church. Both of these factors might lead to support for school vouchers. But resolute Hispanic support for public schools is evident in our data, and higher concentrations of Hispanic enrollments within zip codes associates with less support for Proposition 38.

School quality. Two indicators of school quality in our model were significant but exerted less influence on the vote than race/ethnicity or Congressional party. Student mobility and presence of emergency teachers had significant positive effects on the vote in favor of Proposition 38. This is consistent with theory. A third, and thought to be direct, indicator of school quality is also included in the models shown in Table 4.1-4.3: the Academic Performance Index which is a measure derived from student standardized test scores. This variable does not show a significant effect in our model, but this variable behaves in a way that is worth pointing out. API associates positively with support for Proposition 38 when their bivariate correlation is considered ($r = 0.162$, $p < .01$). But when the partial influence of API is estimated, the valence of the association reverses to negative, although the relationship is by no means strong. Less support for school vouchers in areas with higher public school test scores conforms to theory.

Interest in the election. The percent of registered voters voting in the election shows a strong and significant association with support for Proposition 38. This could have been the result of added voter motivation among those with favorable views about school vouchers. A strong negative correlation is found between percentage voting and

percent African American. Together, these relationships might indicate that supporters of school vouchers were more motivated to vote than opponents (African Americans being the strongest nay voters). The implications of estimates surrounding percent voting are far from clear -- percent voting may simply associate with other factors driving support for school vouchers, measured or not for our analyses. One implication for interpreting our models can be described if supporters in fact were more likely to vote. This is that factors influencing negative voting would tend to be underestimated in the model – because factors associated with non-voting opponents of Proposition 38 would have no opportunity to influence estimated model parameters.

No sizeable or significant effect was found for the presence of magnet schools or the percentage of Asian families in a zip code.

Since congressional party representation was so overriding as a predictor of the vote, we tried two alternative examinations of our data. These were identically specified models leaving out congressional party as a predictor. One we estimated within Democratic zip codes only, and the other within Republican zip codes only. We will not dwell on the results of this exercise at this time, except to make two points. First, explaining the "Yes on 38" vote among Democrats leads to a model similar to our full model, except that the explanatory model displays a smaller adjusted R squared – about 18 percent. Second, the regression within Republican districts explains none of the variance in "Yes on 38" and no predictive factors are statistically significant. Adjusted R square is zero in this regression. Two influences may be at work here: one is that the *N* of Republican represented zip codes is about half the *N* of Democratic districts. Another factor may be that Republican voters simply support school vouchers heavily and no factors within this group seem to matter much.

Weighting regressions for probable voter distribution by race / ethnicity

As shown in the descriptive statistics for our variables, the mean percentage of Hispanic representation in our zip codes (estimated by school enrollment patterns) is 49 percent. This may be explained by the larger family size amongst Hispanics, and their greater propensity to enroll at public school. We used published information about the

recent Los Angeles City mayoral election to try an adjustment of our model by weighting for probably vote distribution. As shown and discussed below, while Hispanic citizens may be about half of the school-going and overall populations of interest, only 21 percent of voters in the city election were Hispanic (see Table 6). Corresponding figures are 52 percent for whites, 14 percent for African Americans, and 4 percent for Asians. So we weighted voting patterns in our sample and ran our model again. The results are shown in Table 4.2.

Tables 4.2-4.3 about here

This model using votes weighted for likely race/ethnicity percentages of voters probably presents a more accurate characterization of overall voter sentiments for school vouchers in the county than the first estimation. The main effects are the same as in the first estimation. Differences worth noting: (1) API (school test scores) nears significance as a logical predictor of yes on 38, although the partial derivative is small, and (2) Congressional party remains important and significant, but the size of its influence is diminished.

SES. Our zip code data set offers potential assessments of the influence of family socioeconomic status on preferences for school vouchers, but only some illumination comes from this pursuit. One commonly used indicator of SES is the prevalence of students receiving free or reduced-priced meals – available to lower income families. In our data, concentrations of meal-benefit families correlate negatively with support for vouchers (more poverty associates with less support) – implying a positive relationship between SES and support for school vouchers. But the free meal designation is extremely correlated with our indicator of Hispanic concentration ($r = 0.835$; $p<.000$). This is a case of multi-collinearity that suggests not using both factors in a predictive model, and that the choice between factors is somewhat arbitrary. In a sense, our percent Hispanic factor is nearly as much an indicator of poverty as it is an indicator of ethnicity. In either case – Hispanic or poor -- the effect appears negative when it comes to supporting vouchers. Our model overall thus suggests a negative relationship between SES and support for school vouchers.

The positive association of support for school vouchers with SES is also apparent in a modified specification of our model. This regression, shown in Table 4.3, enlists the free and reduced price meals indicator in place of weighted percentage of Hispanics. This potential indicator of SES shows less support for school vouchers where there is increased prevalence of free-meal qualified families.

Polls vs. Multivariate Models. It is worth pausing here to consider what we gain from this sort of analysis that more simplistic opinion polls cannot deliver. One global advantage, as mentioned above, is the use of actual voting behavior as opposed to hypothetical choices. Another advantage lies in the ability of multivariate modeling to estimate the independent effects of individual factors – by statistically holding other predictors constant and testing for variance in voting linked to variance in individual predictors. This can have some revealing effects.

In our model, three relationships are quite robust – Democratic political party affiliation, African-American concentration, and Hispanic concentration are all highly correlated at the pairwise level with lower support for school vouchers; these three factors also show up as influential and significant predictors of non-support for Proposition 38 in our model.

In two other cases, a critical analytical advantage of multiple regression analysis shows up. One is in the case of the presence of emergency credentialled teachers. Emergency credentialled teachers are more concentrated in schools where many if not most regular district teachers prefer not to teach – namely the poorest areas of the inner city associated with difficult teaching situations and neighborhood violence. These constitute locales where vouchers might be supported. But when simply correlated with the vote on school vouchers, the presence of emergency teachers shows a negative relationship with support for vouchers significant at about the 90 percent confidence level. This appears counter-intuitive. But holding other factors constant, our model estimates the effect of concentration of emergency credentialled teachers to be positive in predicting yes votes on school vouchers at better than 98 percent confidence.

A second case where the valance of a factor's influence on the vote reverses in multivariate analysis from that implied by correlation is the effect of California's test-based school performance indicator, the API. As shown in the appended correlation matrix,

API scores associate positively and significantly with support for vouchers. This implies that the better schools are performing on standardized tests, the more their clients support vouchers. In contrast, our regression model shows a small, non-significant but negative independent influence of API scores on support for vouchers. If the API is assumed to have any validity in the minds of voters, a negative relationship with sentiments for vouchers would be expected.

Sensitivity of our main model. The standardized Beta coefficients in our model of Table 4.1 allow us to test the sensitivity of the percentage vote in favor of Yes on 38 to hypothetical changes in particular predictor variables of interest.

Table 5 illustrates the effects of one standard deviation changes in four predictor variables respectively on the estimated percentage Yes on 38 in a zip code. The estimates are achieved by using the Beta estimate (effect of one standard deviation change in a variable) on the outcome variable, measured in standard deviations. For example, if the African American percentage in a zip code should increase by one standard deviation (or 15.3 percent), the estimated percent Yes on 38 would decrease by 0.442*(standard deviation of Yes). Since the standard deviation of the Yes on 38 percentage is 5.9 percentage points, the effect of a standard deviation increase in the African American percentage in a zip code would yield a (.442 x 5.9) or 1.54 percentage decrease in the Yes on 38 percentage.

Analogous calculations were performed on other variables, yielding in the last column the change in percentage Yes on 38 associated with a one standard deviation (sigma) change in each predictor variable.

Congressional Party took an unusual and rather weak specification for our analysis (although see the definition of this variable above). Nevertheless, what is implied in the sensitivity analysis is that a one standard deviation increase in this variable, or 0.39 on the scale between 1 and 2 (or in the direction of Republican representation) is associated with an increase of 2.66 percentage points in the vote for Yes on 38. At our zip code level of aggregation, this is a substantial increase. (The maximum Yes on 38 percentage in a zip code is 41 percent; the minimum percentage yes is 12.9.) We should note that the sigma effect of Congressional party in our weighted models (Tables 4.2 and 4.3) is about one third of that shown in our first analysis. This estimate is probably more accurate.

Examining the Vote on Proposition 38 at the Individual Level

Why voters voted yes or no. We based the next phase of our work on a simple principle: if we want to know why individuals or groups behaved the way they did or made certain decisions, asking them directly is probably the most accurate method to achieve this. Note that our estimated model above serves to identify who or what groups or which groups in what contexts (e.g. areas varying in nearby school quality) supported California's Proposition 38. This strategy reveals broad explanatory tendencies. By this we mean, as examples, our discovery that a balance of negative opinions about Proposition 38 exists within regions high in African American or Hispanic populations; and that an apparent small favorable opinion of Proposition 38 surfaces in areas high in factors seeming to indicate lesser public school quality.

For asking voters how and why they voted on Proposition 38, we used a traditional exit polling strategy. In this poll, we asked willing voters if they had heard about the proposition, how they voted on the measure, their reasons for voting the way they did, and a few background questions: party registration, their vote for President, and family income level on a simple three-point scale. Pollsters identified and recorded clear race/ethnicity through observation. Pollsters also gauged the relative degree of information the respondent seemed to have about the school voucher initiative -- none, some, or a lot.

The main issues we faced were limited resources for such an activity, and somehow adequately representing the county's voters to make the results of a poll meaningful.

Our procedure was straightforward: we designed a polling protocol intended to obtain, in a minute or two, a good deal of information from willing voters. The heart of the document was a checklist of grounded plausible reasons for support or opposition to the measure. When a pollee indicated a yes or no vote on Proposition 38, the pollsters were instructed to ask for reasons and to check off any that were represented in the freely offered answers to the question. A space was provided for recording unanticipated reasons -- a feature used in fewer than 5 percent of interviews.

For our polling precinct sample, we divided Los Angeles County into 40 regions using a map and our generally grounded knowledge of the main demographics of various

regions of the county. Out final map dotted with 40 thumbtacks indicating our targets appeared as a good random and evenly spread out dusting of the county. We chose one precinct in each of the 40 locales, with no known bias.

For polling, we employed 20 upper-division UCLA students. We trained them in the laws, procedures, and ethics of the polling process. Each was assigned two nearby (typically 15 miles apart) voting precincts among our 40 communities; each pollster began work as the polls opened in the morning with instructions to balance targets for gender, and to remain at the voting place until they had 100 usable response forms. Pollsters then served at their second assigned voting site beginning at 2:30 P.M. and remained at this site until they obtained 100 usable polling forms. Our starting times were chosen to possibly capture a diversity of voters -- from the early morning rush to work, to a more leisurely trip to the polls during mid afternoon which might catch seniors, shift workers, housewives, and so on.

Our potential total of response forms under our plan was 4000. Several factors reduced our final total. Some pollsters were harassed at polling sites and told to move away. Even though California law permits polling within 25 feet of a voting site (and electioneering within 100 feet), some of our pollsters were made to feel unwelcome. Two specific incidents of this stand in mind. One was a pollster at a Christian school who was removed from the property entirely, and then tried to flag down voters in their cars as they left. The explanation transmitted to us was that the staff of this voting site were convinced that the pollster's mission was to advocate a “No on 38” vote. This was despite a large and clear badge identifying the pollster and the study as a UCLA School of Education research project; the badge also displayed the Principal Investigator's name. Students also had business cards identifying the Principal Investigator if anyone wished to learn more about the study.

We also had one pollster pushed away from a posh beach club in use as a voting site. In sum, several of our precinct samples fell short of 100. We also had two pollsters drop out of the project on the morning of Election Day -- this despite training and two personal phone follow-ups. We had reasons for concern over sampling because of the extreme diversity within Los Angeles County; for example in the entire county, 53.7 percent of registered voters are Democrats. And 27.9 percent are Republicans. One

community in our sample, Rolling Hills, is more than 60 percent Republican; in contrast, Lynnwood is 74 percent Democratic.

Our usable poll sample for most of our questions was just under 2000. We have some evidence to suggest there is validity to the sample we obtained. At least the racial and ethnic backgrounds of our sample fall respectably into line with another measure of voter distribution. Table 6 shows a key comparison.

Table 6 about here

The distribution in our exit poll of voters in November echoes the distribution of voters found in the Los Angeles City mayoral election on April 10, 2001. Table 6 shows six percent higher percentage points for Caucasian voters in our sample than in the City election; and five percentage points fewer in the share of African American voters. These disparities seem logical; we would expect the County to be more Caucasian and less African American than the City of Los Angeles. Hispanic representation is the same in the two voter polls.

Why did voters vote Yes on 38?

Our main interest in conducting an exit poll was hearing from voters why they voted yes or no on the school voucher initiative, and we obtained an exploratory look at this with our polling data set. We classified all responses to the "why" question and display the distribution of reasons offered in the following two tables, beginning with reasons for a Yes on 38 vote in Table 7.

Table 7 about here

Table 7 lists the reasons offered in our exit poll for Yes on 38 votes by respondents. Only six reasons were offered by more than 5 percent of Yes voters, and three reasons are clustered evenly at about 12 percent as the most frequently offered. A

composite reason, direct private school affiliation, heads the list. The four main reasons offered by voters for voting yes on Proposition 38 are:

Main reasons for Yes on 38:

1. Having a child or grandchild in a private school.
2. Competition would help the education system.
3. The public has a right to make choices and the government should facilitate choice making.
4. No confidence in public schools *generally*.

Secondary reasons for Yes on 38:

5. No confidence in *local* public schools.
6. Vouchers would promote new education ideas.
7. Personal negative experiences with public schools.

At this point, we remind readers that the reasons classified were offered spontaneously by respondents -- they were not shown a checklist to work from.

What do we see in these leading reasons? Fourteen percent of respondents cited their own affiliation with private schools as a reason for supporting the school voucher initiative. From the leading reasons, we also see support for the competitive market model among Los Angeles County voters. Kennedy (2000) cited this value as a central force propelling one constituency for school vouchers. In our poll, the "right to choice" was about as important as a competitive market for education-- both mentioned by about 1 in 8 voters. Since we did not have opportunities to explore the nuances of everything that came up in the polling interviews, it is difficult to interpret this general choice value precisely. It may be that choice is important in public service offerings so that there will be competition. This reason could also reflect sentiments that no one size (of just about anything) fits all, and that choice would lead to better matches between providers and clients. Choice also may undergird some more fundamental ideological orientation of these respondents.

The remaining four leading reasons can reasonably be seen as fairly direct criticisms or dissatisfaction with public schools -- lack of confidence, the need for new

ideas, and personal negative public school experiences driving an interest in school vouchers.

Why did voters vote No on 38?

As with our tallies of reasons for why some individuals voted Yes on 38, our pollsters also gathered volunteered reasons offered by "No on 38" voters. Even though there were about twice as many No voters as Yes voters in our polling sample, the spread of reasons for No votes offered by respondents was much more limited than that generated by Proposition 38 supporters. The distribution of reasons for a No vote is shown in Table 8.

Table 8 about here

Far and away the most popular reason for opposing California's school voucher initiative was the perception that the policy would reduce funding for the public schools. A full 61 percent of respondents expressed a version of this rationale. Running a distant second and third are two related reasons -- one that the public should not fund private schools, and two that the voucher plan would be too costly. Each of these two reasons was advance by about one in 6 to 7 voters. And just over one tenth of No voters mentioned a perception that voucher schools would not be held accountable (for their use of public money or for the education results of their students).

Social divisiveness? A critical issue among social scientists considering school voucher plans as well as evaluators of the limited number of operating voucher schemes in the United States did not resonate highly in our polling sample. This is the issue of whether or not school vouchers would lead to more or less segregated schools. Fewer than six percent in our sample expressed concern over increased segregation. Of course, an appraisal of this issue would depend on a rather thorough understanding of the provisions of the voucher plan to begin with, along with the interaction of the plan with

the communities or contexts in which it would operate.[8] Concerns about fraud and profiteering finish the list of reasons for No on 38 we heard, and these were from fewer than one in twenty voters.

A scan of the No on 38 constituency in our exit poll shows that concerns about the financial health of public schools, and probably the viability of the public school system, are without question robust reasons for opposing school vouchers. The public may not be satisfied and even vociferously critical of the state of schooling in America, but a large majority do not seem to see vouchers as a helpful solution and remain concerned about the health of the public schools.

Race/ethnicity, SES, and voting behavior. Finally, our exit poll allowed a glimpse of the interactions of race/ethnicity and SES in preferences for the California school voucher measure. Race/ethnicity in our poll was identified by the observations of pollsters; SES was measured by the question, "Would you consider your household income low, middle, or high?" Roughly 10 percent classified themselves into each of the low and high categories, leaving 80 percent in the middle. Table 9 shows voting outcomes related to income and race.

Table 9 about here

Several observations stand out in Table 9, all of which are consistent with general support patterns discussed at the start of this paper. One is that Caucasians average higher than average support for school vouchers in any income category. The largest divide within this group is the low SES Caucasian voters -- who showed considerably less support for Proposition 38 than middle or high income Caucasians. Another is that high-income voters across Hispanic, African American, and especially Asian voters are comparatively supportive of school vouchers; a majority of high income Asians in our sample voted yes. And a third observation is that low income African Americans were heavily negative on the ballot measure -- by nearly 13 to 1.

[8] Political scientist John Witte, an early evaluator and long term observer of the voucher system in Milwaukee, has concluded that vouchers in that scheme have in fact served to advance white flight from the inner city of Milwaukee, apart from any other things the system has accomplished (cited in Kennedy, 2000). Also, relative to present segregation – which many argue is high – vouchers might not appear much 'worse'.

Perhaps the most important observation implied by the voting patterns displayed in Table 9 is that poorer families -- long-described as potential primary beneficiaries of school vouchers by sponsors -- have yet to be convinced that school vouchers would lead to comparative advantages, or any advantages for that matter, for their children. If vouchers are intended to empower those who lack resources for private school choices, the targets of such an aspiration are not hearing or not subscribing to this message.

IV. Conclusions and Implications

There is much to consider as we survey the information generated in this study. At this point, we come to several conclusions and implications based on our work -- with an expectation that continued review and discussion will modify and add to our understanding. The following appear as important conclusions:

Basic model. Our basic predictive model and our strategy for constructing the analysis make sense. We explained a portion of the variance of support for school vouchers across a diverse set of 249 zip codes comprising Los Angeles County. And the analysis revealed significant predictors of voter support and opposition regarding school vouchers.

- **Implication**. Refinements and extensions of this analytic strategy are worth exploring.

Imprecise demographic measures. At the same time, our predicting factors suffer from imprecision because of limitations we faced in aligning available data. The critical source of this limitation was the use of school demographic data within a zip code to estimate most of our voter characteristics. While distributions of population factors within schools provide indications of the characteristics of the larger population in the vicinity, these data are only approximate and probably differ in accuracy from zip code to zip code. Our measure of the family income of voters was limited to the proportion of school children in a zip code qualifying for free and reduced priced lunches; this measure is subject to considerable error and captures little variance in the income distributions within our zip codes.

- **Implication.** Family income was a potentially important variable in our regression model and a decidedly important variable in our exit poll data analysis. Future work toward the purposes of this analysis should use more accurate income estimates for voter groups, estimates probably obtained through use of micro-tract or other appropriate aggregations of census data.

Imprecise school quality measures. In a similar vein, our measures of school quality seem imprecise -- standardized test scores have limitations as indicators of school quality, even though scores show all signs of being important to many parents. Presence of emergency credentialled teachers and student mobility are known to associate with test scores, but these may or may not serve as indicators of school quality to voters.

- **Implication**. More precise targeting of data would sharpen the model's ability to predict support for vouchers of the Proposition 38 sort. So would better measures of school quality. (Remember it is the public's perceptions of school quality that matter in a voting contest. Representative variables would need validating as influences on public perceptions.) The use of micro-tract Census data would allow aligning population demographics with our 5000 precincts directly, increasing precision of measures and the number of cases considered for statistical analyses.

Role of race/ethnicity. Our analysis revealed strong negative appraisals of school vouchers in the African American and Hispanic communities of Los Angeles County. While scholars have widely noted opposition to school vouchers among African Americans, little or no systematic information seemed previously available about the Hispanic community. Our study contributes understanding of this opposition.

Role of SES. Both the predictive model and our exit poll support the conclusion that there is a positive overall relationship between SES and support for school vouchers. This stands out in multiple regression where an SES measure predicts support for Proposition 38 independent of race/ethnicity. The role of SES is apparent also in our exit poll. Here we see that in simple correlations, low-income voters in all race/ethnic groups reported higher incidence of No votes on Proposition 38. And high-income populations within all

racial/ethnic groups show dramatically higher support for vouchers. These differences are quite large and warrant credence. We are aware of no systematic analyses of support for school vouchers addressing SES as comprehensively as we do in this paper, even if our indications are only suggestive.

Role of political party. Republican affiliation is a very strong predictor of support for vouchers in our predictive model, even though our measure of party affiliation was imprecise. Because a zip code lies in the congressional district of a Republican does not imply that all voters or anything like all voters in that district are Republican. Nevertheless the relationship is robust. And for Republicans alone, our attempt to build a predictive model for support of vouchers fell absolutely flat. Being Republican alone seems a strong predictor of support for school vouchers.

- **Implication.** An important implication stands out when we consider our analyses of SES, race/ethnicity, and political affiliation together. First, the major beneficiaries touted by school voucher sponsors are not subscribing to the promise of voucher policies. The poor generally along with poor African Americans and poor Hispanics specifically are the most likely groups to vote no on the voucher scheme represented by Proposition 38.

Of course, whether or not poor or disadvantaged minority families would in fact benefit from an implemented voucher plan remains an empirical question. Because one does not favor an electoral proposition does not necessarily mean that one would not take advantage of a program that was passed despite electoral objections. But there is evidence of very strong support for public schools among voucher detracators generally. Support for public bonds for public schools is practically the inverse of support for vouchers in our zip code data set. And dislike of draining funds from public schools was far and away the leading reason for opposition to Proposition 38 uncovered in our exit poll. Affiliation with public schools and lack of knowledge or distrust of private schools could mean that few school transfers would come from the ranks of public school families, and especially from poor families. This threatens a good part of espoused rationales for school vouchers.

Ideology and money. According to Kennedy (2000: p. 45), early Milwaukee voucher system evaluator and University of Wisconsin political scientist John Witte claimed that school vouchers have more to do with money and the allocation of power than with education. Kennedy herself claimed that school vouchers have more to do with political ideology than with education.

In some ways, our data support these notions: Voting on Proposition 38 was consistent by political party in both data sets. And voters revealed limited information about the initiative in the exit poll. This implies that an ideological orientation favorable to school vouchers may be a strong operating factor when it comes to voting.

We also saw in our exit poll that support by parents of children already in private schools is the leading reason for support of school vouchers. This implies that the allocation of public schooling resources (i.e. money) is an important factor driving support for school vouchers. And the prospect of lost funds to public schools important to voucher opponents in our sample reinforces a focus on resources when it comes to school vouchers.

Extensions of this Work. Finally, we note that our work could be refined or extended based on presently archived data we did not explore. We have already suggested possible refinements of this work. One was using more accurate data to estimate our models -- such as Census demographic data applied to large numbers of individual voting precincts (5000) rather than school-based estimates applied to comparatively small numbers of zip codes (249). Even census-based estimates applied to zip codes would be an improvement over school system demographic data applied to zip codes. We could also extend this work to analyze the vote on Proposition 38 throughout the State of California. Lastly, a broader scope analysis might, if the opportunity presents itself, explore differences in voter sentiment when an inclusive and free-market voucher scheme such as that outlined in Proposition 38 is compared to a voucher scheme more compensatory in its intentions. The Milwaukee model comes to mind, where voucher eligibility is concentrated on poor families. On the one hand, if supports for vouchers follow perceived self-interest, voter views of such contrasting plans should differ. On the other hand, if school vouchers as an

idea is so pejorative that voters care little about the details, a comparative analysis such as that just suggested might show few differences in the distributions of preferences.

Table 1
Reported Support for School Vouchers, Various Years

Percent Supporting:	**National Totals**			
	2000	**1999**	**1997**	**1996**
Reforming Existing System	59	71	71	
Finding Altenative System	34	27	24	
Improving Existing Public Schools	75	70		
Providing Vouchers	22	28		
Do you favor or oppose allowing choice of public and private schools at public expense?	39	41	44	
Allow parents to send children to any public, private, or church-related school, with government paying all or part?	45	51	51	43

Source: Annual Kappan Poll (1999)

Table 2
Percent Supporting Proposition 38, in Top Decile of Districts in Prevalence of Various Groups

	Percent "Yes on 38"
White	26.9
African American	22.4
Hispanic	23.9
Asian	28.1
Republican represented	28.0
Democrat represented	24.1

Source: Zip Code Dataset

Table 3
Actual Individual Percentage "Yes on 38" from Exit Poll

	Percent "Yes on 38"	***N***	**% Sample**
White	34	1274	55.4
African American	14	183	8.0
Hispanic	23	444	19.3
Asian	26	150	6.5
Registered Republican	51	670	29.1
Registered Democrat	16	1004	43.7
High SES	39	246	10.7
Low SES	21	273	11.9
Highly informed	31	363	15.8
Relatively non-informed	27	272	11.8

Source: Exit Poll Dataset

Table 4.1
Model 1: Predicting Percent "Yes on 38,"

Dependent Variable: % "Yes on 38"	**Unstandardized Coefficients**		**Standardized Coefficients**		
	B	Std. Error	Beta	t	Sig.
MODEL 1:					
(Constant)	14.9	7.520		1.981	**
Congress Party (1=Dem, 2=Rep)	3.009	0.765	0.249	3.931	***
API99_1	-0.004	0.008	-0.092	-0.578	
PCT_AA_1	-0.164	0.035	-0.442	-4.633	***
PCT_AS_1	0.025	0.038	0.043	0.661	
PCT_HI_1	0.070	0.035	-0.314	-1.977	**
EMER_1	0.137	0.057	0.205	2.384	**
MAGNK8_1	0.006	0.005	0.064	1.087	
MAGN91_1	0.001	0.007	0.012	0.199	
MOBILI_1	0.090	0.047	0.120	1.930	*
PCNTVOTE	0.19	0.066	0.168	2.866	***
	R	R Squared	Adjusted R Squared	S. E. of the Estimate	
	0.506	0.256	0.224	5.1241	

Source: Zip Code LA County Data
*** Significance level p<0.01; ** Significance level p<0.05; * Significance level p<0.10.
Variables: API99_1: Student Stanford 9 achievement score; PCT_AA_1: Percent African American at school; PCT_AS_1: Percent Asian at school; PCT_HI_1: Percent Hispanic at school; EMER_1: Emergency-credentialled teachers; MAGNK8_1: Magnet enrollment, grades K-8; MAGN91_1: Magnet enrollment, grades 9-12; MOBILI_1: Student mobility; PCNTVOTE: Percent of registered voters voting.

Table 4.2
Model 2: Predicting Percentage "Yes on 38"
Weighted for Probable Voting Patterns by Race / Ethnicity

Dependent Variable: % Yes on 38	**Unstandardized Coefficients**		**Standardized Coefficients**		
	B	Std. Error	Beta	t	Sig.
MODEL 2:					
(Constant)	24.4	7.673		3.180	***
PCNTVOTE	0.163	0.066	0.152	2.470	**
Congress Party (1=Dem, 2=Rep)	1.933	0.921	0.132	2.098	**
API99_1	-1.17E-02	0.008	-0.246	-1.483	
PCT_AA_1	-0.176	0.038	-0.464	-4.659	***
PCT_AS_1	3.52E-02	0.039	0.062	0.902	
PCT_HI_1	-0.107	0.038	-0.480	-2.824	***
MOBILI_1	0.111	0.048	0.148	2.302	**
EMER_1	0.117	0.058	0.177	2.006	**
MAGNK8_1	4.25E-03	0.005	0.053	0.868	
MAGN91_1	4.54E-03	0.008	0.035	0.57	
	R	R Squared	Adjusted R Squared	S. E. of the Estimate	
	0.438	0.192	0.156	5.3582	

Source: Zip Code LA County Data
*** Significance level p<0.01; ** Significance level p<0.05; * Significance level p<0.10.
For variable definitions, see foot of Table 4.1.

Table 4.3
Model 3: Predicting Percentage "Yes on 38"
Regression Substituting Prevalence of Free/RP meals for Percent Hispanic

Dependent Variable: % Yes on 38	**Unstandardized Coefficients**		**Standardized Coefficients**		
	B	Std. Error	Beta	t	Sig.
MODEL 3:					
(Constant)	20.605	9.042		2.279	**
PCNTVOTE	0.140	0.067	0.131	2.102	**
Congress Party (1=Dem, 2=Rep)	1.998	0.94	0.136	2.126	**
API99_1	-0.007	0.009	-0.147	-0.751	
MOBILI_1	0.110	0.049	0.146	2.247	**
EMER_1	0.086	0.057	0.13	1.497	
MAGNK8_1	0.006	0.005	0.063	1.027	
MAGN91_1	0.004	0.008	0.033	0.524	
RECODEAA	-0.681	0.19	-0.251	-3.585	***
RECODEAS	1.639	1.034	0.116	1.586	
MEALS_1	-0.007	0.038	-0.319	-1.704	*
	R Squared	Adj. R Squared	S.E of Estimate		
	0.174	0.138	5.417		

Source: Zip Code LA County Data
*** Significance level p<0.01; ** Significance level p<0.05; * Significance level p<0.10.
For variable definitions, see foot of Table 4.1. Also: RECODEAA: Percent African-American students; RECODEAS: Percent Asian students; MEALS_1: Free school meals indicator.

Table 5
Sensitivity Analyses

	Estimated Changes in Percent "Yes on 38" Vote with One-Sigma Changes in Selected Predictor Variables				
Factor	Mean	Std. Dev.	Beta	Sigma effect Yes on 38	Percentage Yes Effect
Yes on 38	26.6	5.9			
African American	12.0	15.3	-0.442	-2.61	-1.54
Hispanic	49.8	26.3	-0.314	-1.85	-1.09
Emergency Credentialled Teachers	19.5	9.4	0.205	1.21	0.71
Congr. Party (1=Dem, 2=Rep.)	1.44	0.389	0.765	4.51	2.66

Table 6
Comparison of Race/Ethnic Mix of Actual Voters in Two Los Angeles Exit Polls

	Distributions of Voters (%)	
	Los Angeles County Pres. Election	**Los Angeles City Mayoral Election**
	11/6/00	**4/10/01**
Caucasian	58	52
Latino	21	21
African- American	9	14
Asian	5	4
	2079	*2930*

Source: Column 1 – Exit Poll Dataset. Column 2 – *Los Angeles Times* Exit Poll. (p.1).

Table 7
Reasons for Voting Yes
Among all 653 "Yes on 38" Voters

	Fraction "Yes on 38"
Current private school affiliation (*)	0.14
Competition is good	0.13
Public has right to choice	0.12
No confidence in public schools	0.11
No confidence local public schools	0.08
Would promote new educational ideas	0.08
Personal negative experience with public schools	0.06
Have children enrolled in other private schools*	0.06
Would promote entrepreneurism	<0.05
Proposition 38 will save money	in descending
Have children enrolled in Catholic Sch.*	order
Would like to choose local private school	
Would oust bad teachers	
Have children enrolled in independent schools*	
Attended private school myself*	
Newspapers were influential	
Have grandchild enrolled in private schools*	
Public school reforms don't work	
The media influenced my opinion	
TV was influential	
Have children enrolled in Fundamentalist Christian school*	
Radio was influential	
Dislike bussing pupils	
N	*653*

Source: Exit Poll Dataset.

Table 8
Reasons for Voting No
Among all 1402 "No on 38" voters

	Fraction "No on 38"
Prop. 38 would reduce funding for public schools	61.0
Public should not support private schools	17.0
Too costly	16.0
Voucher schools would not be accountable	11.0
Would segregate schools	5.6
Would promote fraud	4.6
Proposition 38 would encourage profiteering	3.5
N	*1402*

Source: Exit Poll Dataset.

Table 9
Percentage Yes Vote on Proposition 38
by Race / Ethnicity and SES

Group	SES	% Yes on 38
Overall "Yes on 38", LA County		26.0
Caucasian	Low	27.5
	Medium	36.7
	High	37.9
Latino	Low	23.6
	Medium	28.6
	High	40.0
African American	Low	7.8
	Medium	16.3
	High	37.5
Asian	Low	22.2
	Medium	27.6
	High	53.8

(SES as predictor of Yes 38, pos. sig. P<.001)

Source: Exit Poll Dataset.

Figure 1: Flow Chart of Data Treatment

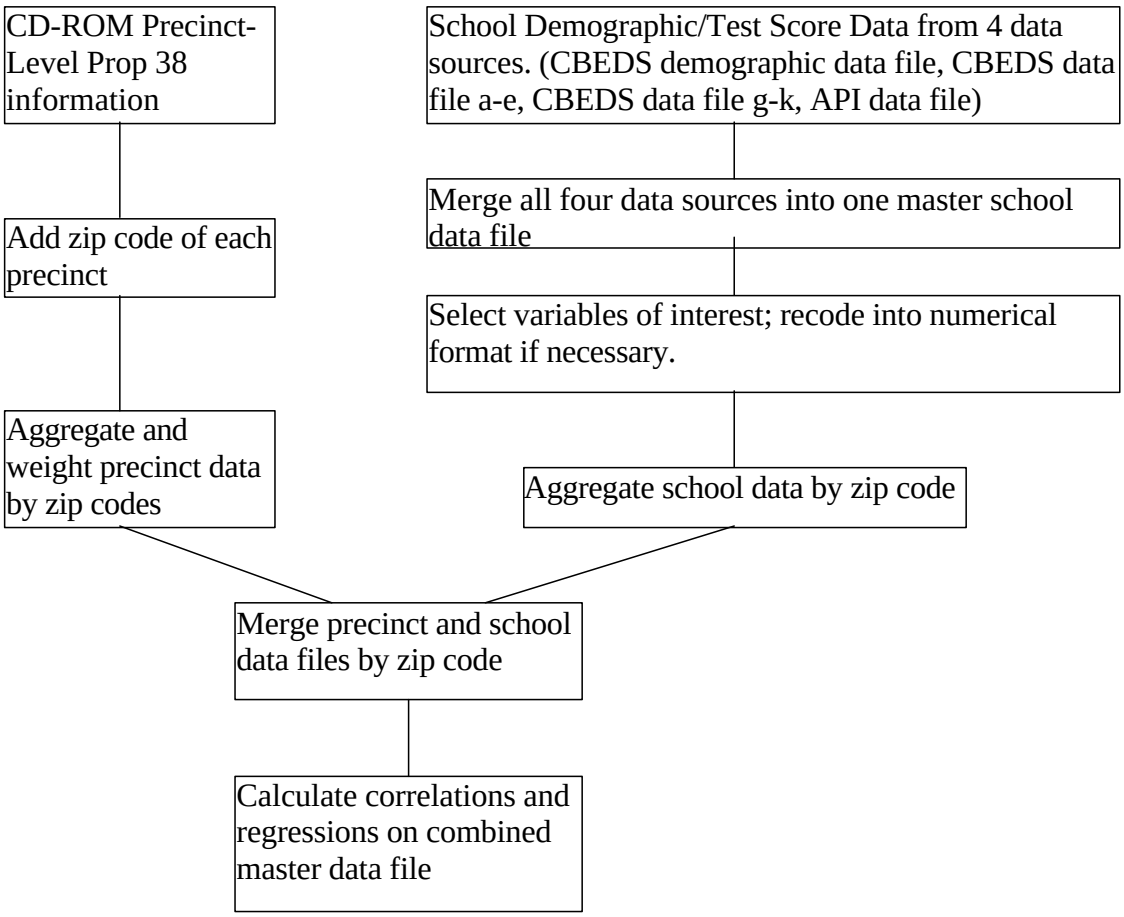
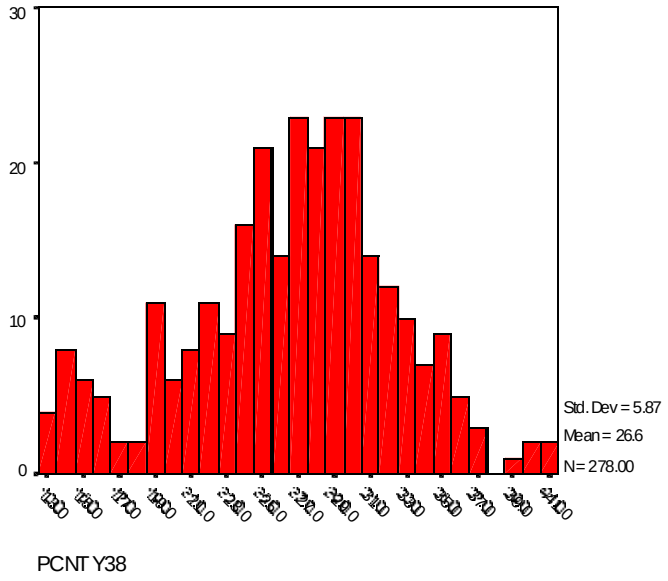


Figure 2: Histogram of Frequency Distribution for PCNTY38. By inspection, data approach a normal distribution (skewness –0.334, kurtosis -.064).



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Appendix 1

Bivariate Correlations of candidate variables

PCNTVOTE	Pearson Correlation	PCNTVOTE	PCNTY38	PCNTY39	CHARTR_1	Congress Party 1=dem 2=rep	API99_1	PCT_AS_1	PCT_HI_1	PCT_WH_1	MEALS_1	MOBILI_1	AVG_ED_1	EMER_1	MAGNK8_1	GRAD_S_1	FULL_1	MAGN91_1	UC_GRA_2
	Sig. (2-tailed)	1	0.214	-0.445	0.012	0.027	0.085	0.025	0.011	0.1	-0.099	-0.008	0.02	-0.105	-0.133	-0.01	0.154	-0.032	0.077
	N	.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PCNTY38	Pearson Correlation		2205390	2205390	2151070	2151070	2015057	2015057	2015057	2015057	2015057	2015057	1992067	2015057	2061613	2015057	2015057	2061613	2061613
	Sig. (2-tailed)		1	-0.85	0.122	0.298	0.192	0.156	-0.098	0.209	-0.204	0.04	0.113	-0.09	-0.019	0.055	0.171	-0.055	-0.058
	N		.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PCNTY39	Pearson Correlation			2205390	2151070	2151070	2015057	2015057	2015057	2015057	2015057	2015057	1992067	2015057	2061613	2015057	2015057	2061613	2061613
	Sig. (2-tailed)			1	-0.095	-0.341	-0.2	-0.042	0.091	-0.254	0.24	-0.026	-0.079	0.136	0.036	0.037	-0.228	0.067	0.005
	N			.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CHARTR_1	Pearson Correlation				2151070	2151070	2015057	2015057	2015057	2015057	2015057	2015057	1992067	2015057	2061613	2015057	2015057	2061613	2061613
	Sig. (2-tailed)				1	0.198	-0.06	0.112	0.184	-0.081	0.072	0.049	-0.203	0.029	0.031	-0.211	0.024	0.026	0.068
	N				.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Congress Party	Pearson Correlation					2151070	2015057	2015057	2015057	2015057	2015057	2015057	1992067	2015057	2061613	2015057	2015057	2061613	2061613
(higher is repub)	Sig. (2-tailed)					1	0.396	0.185	-0.383	0.362	-0.452	0.09	0.28	-0.259	-0.111	0.124	0.396	-0.085	0.001
	N					.	0	0	0	0	0	0	0	0	0	0	0	0	0.095
API99_1	Pearson Correlation						2015057	2015057	2015057	2015057	2015057	2015057	1992067	2015057	2061613	2015057	2015057	2061613	2061613
	Sig. (2-tailed)						1	0.456	-0.835	0.835	-0.934	-0.186	0.879	-0.712	-0.217	0.748	0.804	-0.112	-0.146
	N						.	0	0	0	0	0	0	0	0	0	0	0	0
PCT_AS_1	Pearson Correlation							2015057	2015057	2015057	2015057	2015057	1992067	2015057	1927261	2015057	2015057	1927261	1927261
	Sig. (2-tailed)							1	-0.343	0.076	-0.319	-0.154	0.328	-0.307	-0.126	0.325	0.357	0.019	0.17
	N							.	0	0	0	0	0	0	0	0	0	0	0
PCT_HI_1	Pearson Correlation								2015057	2015057	2015057	2015057	1992067	2015057	1927261	2015057	2015057	1927261	1927261
	Sig. (2-tailed)								1	-0.785	0.829	0.048	-0.858	0.561	0.172	-0.661	-0.614	0.121	0.126
	N								.	0	0	0	0	0	0	0	0	0	0
PCT_WH_1	Pearson Correlation									2015057	2015057	2015057	1992067	2015057	1927261	2015057	2015057	1927261	1927261
	Sig. (2-tailed)									1	-0.891	-0.183	0.784	-0.679	-0.152	0.671	0.744	-0.103	-0.2
	N									.	0	0	0	0	0	0	0	0	0
MEALS_1	Pearson Correlation										2015057	2015057	1992067	2015057	1927261	2015057	2015057	1927261	1927261
	Sig. (2-tailed)										1	0.166	-0.859	0.697	0.212	-0.712	-0.797	0.123	0.166
	N										.	0	0	0	0	0	0	0	0
MOBILI_1	Pearson Correlation											2015057	1992067	2015057	1927261	2015057	2015057	1927261	1927261
	Sig. (2-tailed)											1	-0.155	0.165	-0.059	-0.211	-0.153	-0.11	0.059
	N											.	0	0	0	0	0	0	0
AVG_ED_1	Pearson Correlation												1992067	2015057	1927261	2015057	2015057	1927261	1927261
	Sig. (2-tailed)												1	-0.643	-0.19	0.857	0.671	-0.081	-0.191
	N												.	0	0	0	0	0	0
EMER_1	Pearson Correlation													1992067	1904271	1992067	1992067	1904271	1904271
	Sig. (2-tailed)													1	0.139	-0.587	-0.927	0.002	0.067
	N													.	0	0	0	0.016	0
MAGNK8_1	Pearson Correlation														1927261	2015057	2015057	1927261	1927261
	Sig. (2-tailed)														1	-0.145	-0.181	-0.003	-0.105
	N														.	0	0	0	0
GRAD_S_1	Pearson Correlation															1927261	1927261	2061613	2061613
	Sig. (2-tailed)															1	0.592	0.098	-0.117
	N															.	0	0	0
FULL_1	Pearson Correlation																2015057	1927261	1927261
	Sig. (2-tailed)																1	-0.058	-0.057
	N																.	0	0
MAGN91_1	Pearson Correlation																	1927261	1927261
	Sig. (2-tailed)																	1	0.629
	N																	.	0
UC_GRA_2	Pearson Correlation																		2061613
	Sig. (2-tailed)																		1
	N																		.
																			2061613

Appendix 2

Los Angeles County and State of California
Selected Demographic Comparisons, 2000 Census

	LA County	California
Percent White, Non-Hispanic	31.1	46.7
Percent Hispanic	44.6	32.4
Percent Asian	11.9	10.9
Percent African-American	9.8	6.7
Median household income	$36,400	$39,600
Percent children below poverty	30.5	24.6

Source: http://quickfacts.census.gov/qfd/states/06000.html

Educational Achievement Data, State of California
STAR9 Assessment, 2000

	LA County	California
SAT9 Reading: % of students above national norm		
Grade 6	36	46
Grade 11	31	36
SAT9 Mathematics: % of students above national norm		
Grade 6	45	55
Grade 11	42	47

Source http://star.cde.ca.gov/star99/index_index.html