

Racial Context and Political Support for California School Taxes¹

Jennifer M. Nations
Isaac W. Martin

ABSTRACT

Objective: To determine how racial context influences school districts' ability to raise taxes and whether it is mitigated by racial context.

Method: Panel regression models are fit to a data set of 287 parcel tax measures and 967 California school districts from 1997 to 2010, including data on the racial composition of enrolled students, the district population, and the school board, with controls for features of the policy and the social, political, and economic context.

Results: School boards were least likely to propose new parcel taxes where there was a high percentage of Latinx students, or a large gap between the percentage of White students and the percentage of White residents 65 and older. Once a tax was proposed, these and other measures of racial context had no measurable influence on the propensity of voters to approve it. Policy design influenced outcomes, but not by mitigating racial context.

Conclusion: Racial context affects whether school districts propose new taxes.

¹ The authors wish to thank Jane Lilly Lopez, Lauren Olsen, Germano Ribeiro Fernandes da Silva, Molly Micheltmore, Sang Kyung Lee, and the Public Finance Network of the Social Science History Association. This research was supported by the National Science Foundation (awards no. 1421993 and 1823821) and the Spencer Foundation (award no. 201800030).

In this paper, we attempt to identify how racial context may affect the resources available to public schools. Scholars find that revenue varies among districts (Kirst, Goertz, & Odden, 2007; Morgan & Amerikaner, 2018; Murphy & Paluch, 2019; Weston, 2010, 2012) and that racial and ethnic minority students disproportionately live in districts where resources available to public schools are fewer (Condrón & Roscigno, 2003; Owens, 2018; Walters, 2006). We rely on an original data set of tax measures proposed and adopted in California school districts in order to test hypotheses about how racial context affects public support for school spending. In this period, the state of California provided the majority of revenues to school districts and also tightly regulated local taxing authority. Local school boards had few options for increasing local revenues other than levying lump-sum parcel taxes, and state law required any such parcel tax increase to be submitted to the voters of the district for approval. Such supplemental parcel taxes provide as much as twelve percent of revenues in some districts.

A California school parcel tax becomes law only if it is first proposed by school board officials and then approved by a supermajority (66.7 percent) of voters in the school district. This two-stage procedure allows us to investigate how racial context may matter at different stages of the policy process. At the first, agenda setting stage, elected officials decide whether or not to petition voters for a tax increase. At the second, policy choice stage, aggregate voter decisions determine the success or failure of the proposal. Prior research has documented that voters may respond to racial context at the policy choice stage (Fox, 2004; Hopkins, 2009; O'Brien, 2017; Wetts & Willer, 2018). By decomposing the policy process, we can investigate whether racial context also matters at the agenda-setting stage.

We further distinguish between two influential hypotheses about *how* racial context matters for public revenues. The first hypothesis is that racial context matters because the policy

process is *generically biased* against racial others. In the context of California schools, this has been described as the hypothesis of the “racial generation gap” (Pastor, Scoggins and Treuhaft 2017): an older, majority-White population is expected to resist providing resources to serve mostly non-White young people. The second hypothesis is that the policy process is biased against *specific* groups that are structurally disadvantaged or stereotyped as unworthy. In the context of California, this is the hypothesis that voters may decline to support school taxes where school enrollment is highest among Latinx or Black children in particular (Alvord & Rauscher, 2019). Note that such biases may arise from explicit or implicit racial prejudices of the decision-makers, or from structural features of the decision situation (see Small & Pager, 2020). We use the term “bias” to refer to any systematic difference in outcomes across racial contexts. We control for district contextual factors at both stages of analysis and also consider mediating effects of policy characteristics at the stage of policy adoption.

Our analysis yields three main insights. First, the racial generation gap mattered at the agenda-setting stage. District leaders were less likely to place school tax referenda on the ballot when and where the racial generation gap was larger. This finding is consistent with the hypothesis of generic bias at the agenda-setting stage. Second, the racial composition of the student body also mattered at this stage. District officials were least likely to propose parcel taxes where Latinx children composed a substantial share of public-school students. These correlations persist even after controlling for variation in revenues from the state, which provide over half of the average district’s budget (Weston, 2012). Third, we find no evidence that racial context had any effect on aggregate voting behavior, conditional on the presence of a parcel tax measure on the ballot. The factors that made the greatest difference at the stage of policy choice were policy features and the median income of district residents.

In short: the school districts with the most Latinx students and the greatest racial generation gaps levied the fewest parcel taxes. This was not because White voters rejected such taxes, but because officials declined to propose such taxes in the first place. Instead of finding evidence of racial bias at the ballot box, we find evidence of bias at the agenda-setting stage.

THE INFLUENCE OF RACIAL CONTEXT ON PUBLIC PROVISION AND TAXATION

Scholars have found an association between increasing racial heterogeneity in the United States and declining support for taxation and public programs (Alvord & Rauscher, 2019; Gilens, 1999; Hero & Levy, 2018; Hopkins, 2009; O'Brien, 2017). Scholars differ on whether this association results from generic bias, such as might arise from in-group opportunity hoarding, or from a specific bias, such as might arise from anti-Black and anti-Latinx prejudice. In-group opportunity hoarding is understood as the tendency of racial or ethnic group members to vote in ways that direct public expenditures toward members of their group (O'Brien, 2017; Tilly, 1999). For example, some scholars have argued that White Americans resist policies where the benefits appear to accrue to primarily non-White "others" (Myers, 2007; Poterba, 1998). Other scholars emphasize that not all out-groups appear to be equally disfavored. Thus, for example, specific racist stereotypes of Black or Latinx residents that may be associated with a reluctance among groups of any race or ethnicity to increase Black or Latinx residents' access to public resources (Abrajano & Hajnal, 2015; Fox, 2004; Gilens, 1999; Hopkins, 2009). These hypotheses are not mutually exclusive: there is evidence that both generic and specific biases may be operative in many policy decisions.

The relationship between racial context and public spending has been confirmed at the school district level. Scholars have consistently found evidence of lower support for school

spending among White voters when Black, Latinx, and other non-White populations are larger (Alesina, Baqir, & Easterly, 1999; Alvord & Rauscher, 2019; An, Levy, & Hero, 2018; Bowers & Lee, 2013; Poterba, 1998; Tedin, Matland, & Weiher, 2001). The effects of racial context on voters' willingness to support public schools may be amplified by differences in the age structure of racial and ethnic groups. Younger voters and beneficiaries of public programs are more likely to be racial and ethnic minorities, while the elderly population is typically majority White and more politically active (Bowers & Lee, 2013; Ladd & Murray, 2001; Pastor, 2018). This so-called racial generation gap is a particular threat to school funding, because the beneficiaries of public schooling are easier to identify than the beneficiaries of other public spending, and are often more racially diverse than older populations, especially in states like California. Elderly district residents may see few direct benefits of paying more for local schools (Schlaffer, 2018), and they may be especially reluctant to contribute when they perceive young people to belong to racial out-groups (Pastor, Scoggins, & Treuhaft, 2017; Poterba, 1998).

In order to trace how racial context influences policy outcomes, we must distinguish between two stages of the policy process: agenda-setting and policy choice. First, before voters can approve expenditures or taxes, elected officials must *set the legislative agenda* by selecting which public policies to pursue. Voters' choices in a referendum election are constrained by what elected officials put on the agenda. Scholars show that elected officials are motivated and constrained by a diverse range of factors when deciding what policies to pursue. It is clear, however, that the presence of sizable and growing Latinx and Black populations may drive some of their decisions (Fording 2003). Elected officials may be motivated to appear responsive to voters' prejudices against Black and Latinx people (HoSang 2010), or they may share those

prejudices themselves (Abrajano and Hajnal 2015). Regardless of their motives, they may allow the racial composition of the polity to shape the policies that they propose.

Researchers studying school funding and taxation have paid little attention to the agenda setting stage, despite requirements in many states that school district officials put tax and bond measures before the voters. In fact, it is this requirement that generates the data used by many scholars of voting behavior. Modeling the agenda-setting stage is especially important in California, where only about 15 percent of the state's districts have ever petitioned district residents for additional tax revenue. Much of the variation in parcel tax revenue available to California school districts may arise from differences in whether or not district officials ever proposed a parcel tax.

At the second stage, decision-makers must choose whether or not to approve a policy. In a referendum election, the decision-makers at this stage are voters, but even at this stage, policy design decisions of the agenda-setters can moderate or exacerbate the influence of voters' racial biases (see Glaser 2002; Rugh and Troustine 2011). For example, tax measures that allow for public oversight of expenditures, delineate categories of expenditures, or extend the duration of a tax with which voters are already familiar, typically garner greater support than tax measures without these features (Glaser 2002; Martin, Lopez, and Olsen 2018; Pearson 2014; identifying reference redacted). Policy features such as these are designed to increase voters' trust that funds will be raised and spent as advertised. If the presence of racial diversity reduces support for taxation by reducing voters' trust in how the funds will be spent (see Habyarimana et al. 2007), then policy design features such as these might be expected to moderate the effect of racial composition on support for taxation.

THE CASE OF CALIFORNIA SCHOOL DISTRICT PARCEL TAXES

California school districts provide an excellent site for investigating the association between racial context and support for public education. California districts are numerous and they vary widely in their racial composition. The California Department of Education collects detailed data on the racial and ethnic identities of students, making it possible to measure the racial composition of the student body independently of the racial composition of the general and elderly populations. Over the years from 1997 to 2010, parcel taxes were proposed in two percent of district-years in our sample, and at least once in approximately 15 percent of all California districts. Once proposed, they were passed nearly 60% of the time. The proposal and approval of parcel taxes varied by the racial and ethnic composition of districts. For example, districts where school officials proposed parcel taxes enrolled fewer Latinx students and more Black students, on average, than districts where officials did not propose parcel taxes (see Table 1).

[insert Table 1 about here]

Although the available statistics do not disaggregate revenue sources sufficiently to permit us to draw firm conclusions about the contribution of parcel taxes to every district that enacts them, case studies of some districts that publish parcel tax revenue separately show that parcel taxes can provide a significant source of revenue for the districts where voters adopt them. At the high end, for example, Alameda Unified School District's parcel tax provided over 12 percent of the district's revenue in 2014. At the low end among our case studies, the parcel tax in Las Virgenes provided just above 2 percent of revenue. Parcel taxes can contribute considerably to the budgets of urban districts with majority Black and Latinx student populations, such as

Oakland Unified, where one parcel tax generated nearly 600 dollars per student per year, and almost 5 percent of revenue. They also may contribute substantial revenues in some majority-White districts: in 2014, for example, over 8 percent of district revenues in Davis Unified and Santa Monica-Malibu came from parcel taxes. Depending on where parcel taxes are enacted, they may have the potential either to exacerbate or to ameliorate revenue imbalances between more and less racially diverse districts (see Table 2). School district leaders in the most populous counties of the state, such as Alameda, Los Angeles, and San Mateo, introduced parcel taxes more often than leaders elsewhere. Parcel taxes were introduced in every region of the state, however, and the districts in our sample represent 26 of California’s 58 counties.

[insert Table 2 about here]

California school district parcel tax elections allow us to determine whether racial context matters at the agenda-setting stage, or at the stage of policy choice, or both. By distinguishing between these stages, we can measure the independent effects of racial context on the agenda-setting decisions of policy-makers and the binding policy decisions of the voters. We can also distinguish analytically whether it is the specific racial composition of the student body, or merely the *mismatch* between the racial composition of the student body and the racial composition of the electorate, that affects district leaders’ and voters’ willingness to approve taxes. We follow Pastor, Scoggins, and Treuhaft (2017) in conceptualizing this mismatch as a “racial generation gap.” The referendum requirement also generates ample descriptive documentation on each parcel tax measure, which permits us to test whether specific policy design features may moderate the association between racial context and support for taxation, as other scholars have found (Glaser, 2002; Rugh & Trounstein, 2011).

We hypothesize that districts with more Black and Latinx students and districts with larger racial generation gaps (where White, non-Latinx elderly are more numerous than White, non-Latinx school children) will be less likely to propose tax measures for voter approval. In districts where measures have been proposed, we hypothesize further that voters will respond to racial context, with fewer affirmative votes and a lesser likelihood of enactment in districts with larger proportions of Black and Latinx students and larger racial generation gaps. However, we hypothesize that these associations will be attenuated in models that control for tax policy design features. Policy features, specifically features that are designed to enhance voters' trust such as tax expiration dates and oversight boards, will correlate positively with voter support for tax measures.

DATA

For the agenda setting stage of this analysis, we rely on detailed school district parcel tax election data from the Education Data Partnership, a public-private partnership between the California Department of Education, a non-profit organization called EdSource, and an independent state-funded entity called the Fiscal Crisis and Management Assistance Team (EdSource, 2018). The data representing racial context and other district features come from the Census Bureau, the California Department of Education, and the National Center for Education Statistics. For more information on the data and its provenance, see Table A-1 in the Research Notes.

Data for the agenda-setting stage include 12,063 district-year observations of 967 school districts (twelve school districts were dropped from the sample due to insufficient data related to the restructuring of districts). Our dependent variable for this analysis is whether or not the

school district proposed a parcel tax in a given year. During this period, almost 300 lump-sum parcel taxes were proposed in 150 districts, representing roughly 15 percent of California's 979 elementary, high school, and unified school districts.

For the policy choice stage, we limit our attention to proposed measures, and our dependent variable is whether or not voters approved a measure. For this analysis, we use an original dataset, the California School Finance Elections Data (for further description, see Research Notes). Data for this stage of the analysis include 287 parcel tax proposals, representing 142 districts. School districts in the data set proposed between one and seven measures.

For both stages of the policy process, we limit the years of analysis to 1997 through 2010, a period for which high-quality data are consistently available, and during which the laws governing school district parcel taxes and ballot measures remained consistent. In logistic regression models of policy choice with fixed intercepts for each year, the outcomes of six parcel tax measures that were proposed in 1998 were perfectly predicted, because all six passed; the models of policy choice here that we report here therefore omit observations from 1998. (In supplemental analyses, we replicated our main results in models without year dummy variables, and our qualitative results did not change.)

Our focal variables are measures of racial composition at the school district level. First, we measure the racial composition of the population receiving the benefit of the proposed tax: public schoolchildren. We focus on the percentage of enrolled students who are identified as non-Latinx Black and Latinx (all races). Prior research suggests that it is primarily the perception of a "threat" posed by Black and Latinx people that may trigger voters' reluctance to support social spending and taxation (Fox 2004). Second, we include a measure of the racial generation

gap to measure generic, out-group bias (O'Brien, 2017). Previous analyses define the racial generation gap as the percentage of the under-18 population identified as people of color, minus the percentage of the over-65 population identified as people of color (see e.g. Pastor, Scoggins, and Treuhaft 2017). Our measure differs in one respect: we focus on the share of people of color among students enrolled in grades K through 12 in the district's public schools, instead of the share among all district residents aged 18 years old or younger. For a study of school finance, we believe the conceptually relevant generation gap concerns youth in public schools rather than all young residents of the district (although we ran analyses that included all school-aged youth, see Research Notes). Our measure is otherwise arithmetically equivalent to the measure proposed by Pastor et al. (2017): we compute the racial generation gap as the White non-Latinx share of the elderly population minus the White non-Latinx share of enrolled students.² Greater values of this measure indicate greater representation of White non-Latinx people among elders than among public schoolchildren.

Our models include additional covariates that differ by the stage of the policy process that we are analyzing. The decision to place a measure on the ballot is social, political, and financial. Boards of education, with district superintendents, consider the financial needs of their districts as well as the likelihood that voters will approve a tax. They often do so with the aid of political consultants (McCuan et al., 1998). In addition, members of California school boards are elected, and may consider their political futures when approving a parcel tax. In this stage of our analysis,

² Let E be the share of White non-Latinx people among elders, and Y be the share of White non-Latinx people among youth. The relevant population shares of people of color are then $1-E$ and $1-Y$. The racial generation gap may be computed equivalently as $(1-Y)-(1-E)$ or as $E - Y$.

we are most interested in the role of district racial composition on the outcome of school board decisions, but we control for other district-specific and resident-level covariates. These include the average income of residents, homeownership rate, and percent of district students whose households are in poverty, and the intergovernmental revenue of districts. In selected models, we also control for the racial composition of the school board. Because California school districts do not collect or report data on the race or ethnicity of board members, we impute a probable racial identity to each individual board member based on their first and last name, using the algorithmic approach of Sood and Laohaprapanon (2018). Additional details on this variable, and how we dealt with sources of measurement error, can be found in the Research Notes.

Our analysis of the policy choice stage includes only those districts where parcel taxes were considered. At this stage, voters must decide whether to approve the measures put forward by district officials. Our sample of districts where voters were asked to approve tax measures had fewer Black and Latinx students and larger racial generation gaps, lower rates of poverty, higher average incomes, and slightly lower intergovernmental revenue than the full sample of districts. In addition to these factors, we control for measures of several policy design features in this stage of the analysis. They include dummy variables for policies that sunset within five years, continue an already-existing tax, provide for a citizens' committee to oversee parcel tax revenues and expenditures, or exempt voters over a certain age (usually 64) from the tax (Plutzer & Berkman, 2005; Tedin et al., 2001). We also control for the amount of the tax, and we include a dummy variable equal to one if a parcel tax proposal is the first such proposal in that district.

To account for additional political factors that may drive voter support for district taxes, we introduce a measure of partisanship in select models at the policy choice stage (data from

Kogan, Lavertu, & Peskowitz, 2018). This data is only available for the years 2000 through 2010, which reduces the sample size to 205 districts for models that include this variable.

ANALYTICAL STRATEGY

For the agenda-setting stage of the policy process, we employ a random-effects logistic regression model. The dependent variable T is a dichotomy equal to one if a district proposed a tax measure in a given year and zero if it did not. The vector of independent variables X includes our three measures of racial context (racial generation gap, Latinx proportion of enrolled students, Black proportion of enrolled students) and other district characteristics that may be associated with the likelihood of proposing a parcel tax, including the homeownership rate, the average income of residents (logged), the percentage of students in poverty, total district enrollment (logged), and the shortfall of school district revenues relative to expenditures (transformed by the inverse hyperbolic sine function). Equation 1 describes our model of this stage of the policy process:

$$\text{Eq. 1 } \ln\left(\frac{P(T_{it})}{1-P(T_{it})}\right) = \alpha + \beta'X_{it} + \delta_t + v_i + \varepsilon_{it}$$

In this equation, subscript i represents unique districts and t denotes years. The vector β includes the coefficients of our focal variables, the three measures of racial context, along with the coefficients of control variables. The term δ represents a vector of dummy variables for year, v is a district-specific random intercept, and ε is a stochastic error term at the level of the district-year observation.

For the policy choice stage of our analysis, we fit a random-effects logistic regression model to data on the subset of tax measures that appeared on the agenda. In this model, Y is a dichotomous variable equal to one if a policy passed and zero if it failed, and Z is a vector of

independent variables, including variables measured at the level of the individual policy proposal and at the level of the district-year. Our model is represented by Equation 2.

$$\text{Eq. 2 } \ln\left(\frac{P(Y_{kit})}{1-P(Y_{kit})}\right) = \alpha + \gamma'Z_{kit} + \delta_t + v_i + \varepsilon_{kit}$$

In this equation, i indexes unique districts, t indexes years, and k indexes policy proposals. The vector γ includes the coefficients of our focal variables that describe the racial context, as well as the coefficients of other independent variables in the vector Z , including the policy features that are hypothesized to mediate the effects of racial context. As before, the term δ represents a vector of dummy variables for year, v is a district-level random intercept, and ε is a stochastic error term at the level of the individual observation (in this model, the individual policy proposal).

In supplemental analyses, we also fit correlated random effects models that decompose independent variables into longitudinal and cross-sectional components; such models yield within-district coefficients equivalent to the output of a conventional fixed-effects estimator (Bell, Fairbrother and Jones 2019; see Research Notes, Tables A-5 and A-6). The pattern of findings we report here is robust to this choice of estimator. In what follows we report the coefficients from our simpler, random-effects models.

FINDINGS

How does the racial composition of school districts influence the passage of new school district taxes? In Table 3, we report findings from our models of the agenda-setting stage. Model 1 is consistent with both the racial generation gap hypothesis and the specific bias hypothesis. Two of our three measures of racial context have a measurable impact on the decision to propose a parcel tax. The greater the racial generation gap, the lesser the probability that a measure would

be placed on the ballot, holding other factors constant. The coefficient suggests a non-trivial difference between districts with differing racial generation gaps. Comparing two district-years that are one standard deviation apart (one half standard deviation above and below the mean), one with a racial generation gap of 32.8 percent and another 18.8 percent, we find a 0.5 percent lesser probability of proposing a parcel tax in the district with the greater racial generation gap. This may appear small, but a coefficient this size is consistent with a larger cumulative effect over the fourteen-year period analyzed here: all else being equal, it implies that the likelihood of proposing a parcel tax *at least once* in the period from 1997 to 2010 decreases by five percentage points with one standard deviation increase in the racial generation gap. In supplemental models, we find that this correlation is driven by longitudinal variation *within* districts (see Research Notes, Table A-5). The coefficient of the Latinx enrollment variable is also consistent with an effect of a similar magnitude: a one standard deviation difference in Latinx enrollment correlates with a cumulative five percentage point difference in the probability that district leaders would ever propose a parcel tax measure over this fourteen-year period. In supplemental models, we find that this correlation is primarily driven by cross-sectional variation: districts with greater Latinx enrollment are less likely to propose parcel tax measures, but increases in Latinx enrollment *within* the same district do not contribute to any further decrease, over and above the decrease that is caused by growth of the racial generation gap (see Research Notes, Table A-5).

[TABLE 3 HERE]

Consistent with some prior research (e.g. Alvord and Rauscher 2019; O’Brien 2017), we find different outcomes for districts with many Black students and districts with many Latinx students. Our measure of Black student enrollment is positively correlated with the proposal of a parcel tax measure. The coefficient is imprecisely estimated, with a standard error almost as

large as the coefficient; although it is significantly different from the coefficient for Latinx enrollment at the $p < .05$ level, we cannot be sure that it is different from zero. The positive coefficient may appear surprising in light of prior scholarship documenting that voters and politicians may be less likely to support public provision when they believe African Americans will be the primary recipients. We think Black students in the schools may be most concentrated in a few metro areas where there are also many Black voters, who may tend to favor school spending on average. In supplemental models, we introduced a control for the number of adjacent districts that proposed parcel tax measures, in order to test whether our findings concerning racial composition were artifacts of geographic clustering; although the presence of parcel tax proposals in neighboring districts was positively and significantly associated with the proposal of a property tax ($p < .005$), the signs and significance of our measures of racial composition and the racial generation gap remained unchanged, and their magnitudes remained similar (see Research Notes, Table A-4).

We control for the racial composition of the school board in Model 2, by including the percent of board members who were non-Latinx White. Because the racial identity of school board members was imputed probabilistically, we re-sampled the imputed racial identity of each school board member 100 times. The coefficient estimates and standard errors in Model 2 are combined after multiple imputation to reflect the additional measurement error arising from the procedure. We find that districts where the proportion of White board members was greater were less likely to propose new taxes, all else being equal, but the coefficient of school board racial composition is not statistically significant at any conventional level. The findings are otherwise similar to those of Model 1. Although the decision to propose a parcel tax is in the hands of school board members, there is no evidence here that the racial composition of the school board

matters independently of the racial generation gap in the electorate. There is, however, evidence that racial context matters for the outcome, net of the racial composition of the school board.

In supplemental models, we tested whether these findings were robust to alternative measures of the racial generation gap. Specifically, we calculated the racial generation gap as the difference between the share of the over-20 population that was White and the proportion of students enrolled in public schools who were White. This alternative measure of the racial generation gap is not negatively correlated with the proposal of parcel taxes, all else equal; the coefficient is statistically indistinguishable from zero. At the policy setting, or passage, stage, our findings are largely unchanged by the use of this alternative measure, except that Black enrollment becomes positively associated with passage at the $p < .05$ level (see Table A-2). We also measured the racial generation gap as the difference between the White elderly population and the White school-age population (including students not enrolled in public schools), with regression results similar to those in the models reported in Tables 2 and 3 (see Research Notes, Tables A-2 and A-3).

In our second set of analyses we turn our attention to the policy choice stage. We model the correlates of tax policy passage conditional on the proposal of a parcel tax. We report the results in Table 4.

[Table 4 here]

Results from Model 3, which can be found in Table 4, are consistent with the null hypothesis. Parcel tax proposals in district-years with greater racial generation gaps have a lower likelihood of passage, adjusted for other features of social context, but the association is not statistically significant. Parcel tax proposals in district-years with greater proportions of Black

and Latinx students enrolled have a greater likelihood of passage, adjusted for other features of context, but these net associations, too, are statistically insignificant. Because the Democratic share of the electorate is only available for a subset of the years in our data set, we fit the model that includes this variable to a subset of the data, and we report the results here as Model 4. In a model that controls for the Democratic share of the electorate, the positive coefficients for Black and Latinx enrollments are attenuated, and the coefficient for Latinx enrollment reverses sign, suggesting that the positive coefficients for Black and Latinx enrollments in Model 3 may be attributable to the fact that such enrollments tend to be greater in school districts where more voters register as democrats. There is insufficient evidence to conclude that racial context influences the passage of a parcel tax, conditional on its having been placed on the ballot.

We also found no evidence that policy features mediate or moderate any effect of racial context. We did find evidence that some policy features matter: in particular, a measure to continue an existing parcel tax is more likely to pass than a measure to enact a new parcel tax. This finding is consistent with previous research (see Pearson 2014; Martin et al. 2019). A measure that provides for a citizen oversight board is also more likely to pass than a measure that does not, although this coefficient is not statistically significant when we restrict our sample to the period from 2000 to 2010 and control for the Democratic share of the electorate, as in Model 4. We anticipated that policy features such as these might moderate the effects of racial composition, but that is not the case. In supplemental analyses, we fit models excluding any ballot measure features, and the relationship between racial context and policy passage was indistinguishable from zero.

In the same small sample of district-years, we found clear evidence that other features of social context matter. In both Model 3 and Model 4, we found that districts with lower

homeownership rates are more likely to pass school parcel tax measures. We also found that personal income is positively associated with passage, all else being equal. Districts where personal income is higher are more likely to pass parcel taxes, all else being equal. The finding that these other features of context were correlated with the passage of parcel tax measures means that the absence of any measurable effect of racial context in our models of policy passage cannot be attributed only to the limited sample size. Although there were fewer than 300 district-years in which such measures were on the agenda, this sample was large enough to detect other important and meaningful contextual effects.

Our findings related to the racial context of school districts hold true regardless of which control variables we include in our model and they are robust to many reasonable alternative modeling strategies. In short, racial context matters for the passage of school district parcel taxes to the extent that it matters for their likelihood of being placed on the agenda. Once a parcel tax measure is on the ballot, we find no evidence that the size of the racial generation gap, or the enrollment of Black or Latinx minority children, has any further effect on its likelihood of passage.

DISCUSSION AND CONCLUSION

In this analysis we explore the political process by which racial context influences whether school districts are able to raise additional tax revenue. Our findings suggest that the outcomes of school district officials' agenda-setting decisions respond to the racial compositions of their districts. In a district with more Latinx students, the likelihood that district leaders will propose a parcel tax is lower. Our models are also consistent with the hypothesis of generic bias, as measured by the racial generation gap: district officials in places with larger differences

between the proportions of White senior elderly people and White school children are less likely to propose measures. Our data do not permit us to draw conclusions about whether these biases arise from explicit or implicit prejudices of the decision makers, from their beliefs about prejudices of voters, or from other, structural features of the choice situation. The data do, however, permit us to pinpoint the agenda-setting stage as the decision stage at which the bias arises.

The same associations are not evident at the second stage of policy formation, when voters are choosing policy; once a parcel tax measure is before voters, we find no evidence that the racial composition of the student body, or the racial generation gap between the elderly population and the student body, matters for the outcome. Most studies of how racial context affects the willingness to pay for public goods have sought to explain outcomes at the policy-choice stage. Our findings suggest that this focus on voters' decisions may be a mistake. In California school district tax elections, racial context is most influential at the agenda-setting stage. This means that voters in places with greater Latinx populations and greater racial generation gaps are less likely even to have the option of voting on new taxes to fund local schools.

This pattern of findings is consistent with at least some recent research on bond referenda, which suggests that elected officials influence the association between racial context and public spending by making strategic decisions about where and when to propose bond measures to voters (Rugh and Trounstein 2010). And it is consistent with a broader literature which shows that policy elites may intentionally structure policy choices in ways to maximize voter support for tax policy change (Hertel-Fernandez, 2013; Martin, 2010). On the one hand, these findings may be read as evidence that school district officials, by strategic use of their

agenda-setting power, can mitigate the putative effects of perceived racial “threat” on support for public spending at the ballot box. On the other hand, these findings may indicate that officials avoid parcel tax proposals altogether in districts where a large share of the students are Latinx or where there is a larger racial generation gap. Given that parcel taxes are one of few revenue policy tools available to California school districts, this pattern may make a small, but nevertheless real, contribution to racial inequalities in the resources available to public schools.

The present analysis cannot tell us precisely why or how school district leaders are reacting to racial context in their districts. One possibility is that officials in districts with more Latinx youth and larger elderly White populations are simply not considering parcel taxes in the first place. Another is that officials in such districts reject the idea of parcel taxes because they are less likely to favor raising additional tax revenues for non-White or specifically Latinx students. Still another is that district boards are acting strategically in anticipation of how voters may respond: they may have concluded that new taxes are so unlikely to pass as to not be worth proposing in districts where Latinx young people enroll at higher rates, especially if that enrollment makes the school population demographically distinct from the elderly population.

In light of our finding that the racial context of enrolled school children matters at the agenda-setting stage, it is worth asking whether school district officials are judging the opinions of their districts’ voters correctly. Many districts that are considering parcel tax measures may hire political consulting firms to poll the district’s voters in order to determine whether those voters might support a parcel tax, and which features they most support. Perhaps the reason that officials in districts with more enrolled Latinx students are unlikely to propose parcel taxes is that they correctly judge that their electorate will look unfavorably on new taxes. On the other hand, school board members may have inaccurate or incomplete information about voter

preferences. Consider that the typical school board member is likely to have much less information about public opinion in his or her district than is available to the typical member of Congress, and even legislative staff to Members of Congress often systematically misjudge the opinions of their constituents (see Hertel-Fernandez, Mildemberger, and Stokes 2019). Regardless of whether the bias lies in the judgment of the school district officials or in the information to which they respond, our findings imply that the *outcome* is racially biased, in the sense that school districts with greater racial generation gaps and more Latinx students are systematically less likely to consider parcel tax increases. Future research should investigate how district officials make their agenda-setting decisions.

Future research should also investigate the role of intradistrict variation in support for parcel taxes. Our models observe political decisions at the district level, assuming school board members and voters make decisions based on district-level characteristics. However, given the racially segregated nature of many California cities, it is possible that the children at individual schools within a district represent significantly different racial, ethnic, and family income characteristics. Assessing the role of a racial or income gaps within districts could be a promising direction.

Our findings also may have important implications for understanding the association between racial composition and public spending more generally. Scholars have documented the ways that racial diversity is associated with less public spending in a variety of contexts, and they have debated whether this pattern results from voters' generalized mistrust of out-groups, or from group-specific racial prejudices (see, e.g., Fox 2010). We tested for two aggregate patterns associated with these hypotheses, respectively: whether opposition to spending on schools results from a demographic mismatch between elderly voters and students, or whether it results instead

from the specific identities of the students. We found that association between racial composition and the likelihood of proposing a parcel tax was at least partly attributable to a racial generation gap between voters and beneficiaries of public spending. In addition, the likelihood of proposing a tax was associated with the increasing proportion of enrolled students who were Latinx, regardless of the racial composition of the elderly population of the school district. This association persists in models that control for the availability of intergovernmental revenue, which would account for higher levels of state aid in districts with low socio-economic status and English language learner students, and district revenue shortfalls, which would account for fiscal crises that would lead district leaders to request more funds. We think it is reasonable to interpret this pattern as evidence that *both* generalized *and* specific biases may help to account for why public spending tends to be comparatively low in racially heterogeneous polities.

Readers in search of an optimistic interpretation of the data may take heart from our null findings with respect to racial composition at the decision stage. We cannot fully exclude the possibility that this null finding is an artifact of selection: had more parcel taxes been proposed in more racially diverse districts, perhaps more of those measures would have failed at the ballot box. But we also think it is possible that this unexpected null finding reflects a genuine turn in California politics. From the late 1960s to the late 1990s, California voters repeatedly petitioned and voted for racially conservative policies, including ballot initiatives to limit the services available to immigrants and their children, and to bar the use of race and ethnicity in admissions and hiring (HoSang, 2010). Since 2001, the tide of anti-minority propositions receded, and voters and elected officials have reversed many of these policy decisions at the state-level (Pastor 2018). Our data are from the period when this reversal occurred. Perhaps they are a sign that older findings about the association between racial homogeneity and voters' support for public

goods will not necessarily hold true in our multicultural future. At a minimum, our research challenges the assumption that voters always oppose raising taxes to support policies that benefit minority youth. Most often, the voters are not even asked.

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Table 1. Descriptive Statistics

	<u>N</u>	<u>Mean</u>	<u>Std.</u> <u>Dev.</u>	<u>Min</u>	<u>Max</u>
<i>All district years - agenda-setting stage</i>					
District tax proposed	13,738	0.021	0.142	0	1
Racial Generation Gap	12,324	0.258	0.147	-0.294	0.954
Percent Black students	13,622	0.035	0.059	0	0.769
Percent Latinx students	13,622	0.347	0.274	0.003	1
Personal income (Ln)	12,759	10.783	0.453	0	12.260
Percent students in poverty	13,632	0.176	0.105	0	0.911
Homeownership rate	12,736	0.650	0.133	0	1
District enrollment (Ln)	13,388	7.330	1.855	1.386	13.524
Intergovernmental revenue (Ln)	13,555	15.033	1.870	9.644	22.309
Percent White school board	3,691	0.849	0.236	0	1
<i>District elections with tax measure on ballot - policy choice stage</i>					
Passage (1=yes)	287	0.585	0.494	0	1
Racial Generation Gap	287	0.211	0.119	-0.048	0.757
Percent Black students	287	0.043	0.075	0	0.691
Percent Latinx students	287	0.195	0.186	0.006	0.886
Measure continues existing tax	287	0.345	0.476	0	1
Measure includes oversight provision	287	0.477	0.500	0	1
Measure exempts elderly	287	0.864	0.343	0	1
Tax rate (Ln)	287	4.748	0.761	2.996	7.569
Tax sunsets within five years	287	0.418	0.494	0	1
Homeownership rate	287	0.662	0.131	0.350	0.946
Personal income (Ln)	287	11.208	0.360	9.689	12.080
Percent students in poverty	287	0.089	0.064	0.008	0.444
Intergovernmental revenue (Ln)	287	15.521	1.669	11.424	22.266
District enrollment (Ln)	287	7.981	1.458	3.784	13.411
First parcel tax proposed in district	287	0.481	0.501	0	1
Democrats as percent of voters	205	0.653	0.129	0.025	0.95

Table 2. Parcel Tax Revenue and Racial/Ethnic Composition of Students in Select Districts, 2014

	<u>Parcel tax revenue</u>	<u>Annual parcel tax revenue/ enrolled student</u>	<u>Parcel tax revenue/ total revenue</u>	<u>Percent Black students</u>	<u>Percent Latinx students</u>
Alameda	\$11,983,873	\$1,321	12.3	9.7	17.0
Davis	\$6,460,346	\$843	8.4	2.6	19.3
Las Virgenes	\$2,254,294	\$208	2.3	2.3	9.9
Oakland	\$20,655,839	\$586	4.6	26.7	43.8
Santa Monica-Malibu	\$11,206,995	\$1,043	8.0	6.5	29.6

Table 3. Likelihood of parcel tax measure proposal on the ballot, logistic regression with random effects specification

	Model 1			Model 2		
	Coef.	(SE)		Coef.	(SE)	
Racial Generation Gap	-1.931	(0.926)	*	-1.834	(0.875)	*
Percent Black students	1.776	(1.542)		1.814	(1.473)	
Percent Latinx students	-1.820	(0.656)	*	-1.990	(0.739)	*
						*
Personal income (Ln)	2.546	(0.431)	**	2.494	(0.347)	*
Percent students in poverty	-5.820	(2.065)	**	5.987	(2.276)	*
						*
Homeownership rate	-4.781	(0.886)	**	-4.754	(0.752)	*
District enrollment (Ln)	0.197	(0.168)		0.186	(0.164)	
Intergovernmental revenue (Ln)	-0.051	(0.160)		-0.58	(0.159)	
Percent White school board				-0.888	(0.746)	
N districts	967			966		
N district-years	12,063			11,965		

Note: Table omits year-specific intercepts

*p<.05 **p<.005

Table 4. Likelihood of passage as a function of school district characteristics and ballot measure features with additional controls, logistic regression with random effects specification

	Model 3			Model 4		
	Coef.	(SE)		Coef.	(SE)	
Racial Generation Gap	-1.053	(2.159)		-0.081	(2.235)	
Percent Black students	8.437	(4.345)		3.445	(3.834)	
Percent Latinx students	0.246	(1.563)		-1.074	(1.580)	
Measure continues existing tax	2.054	(0.504)	**	2.059	(0.496)	**
Measure includes oversight provision	1.227	(0.514)	*	0.892	(0.515)	
Measure exempts elderly	0.707	(0.657)		0.431	(0.681)	
Tax rate (Ln)	-0.163	(0.367)		-0.375	(0.377)	
Tax sunsets within five years	0.919	(0.446)	*	0.825	(0.448)	
Homeownership rate	-5.343	(2.416)	*	-4.795	(2.734)	
Personal income (Ln)	4.356	(1.567)	**	3.508	(1.533)	*
Percent students in poverty	3.520	(5.602)		3.398	(6.604)	
Intergovernmental revenue (Ln)	-0.263	(0.382)		0.193	(0.413)	
District enrollment (Ln)	-0.376	(0.407)		-0.608	(0.455)	
Measure is first tax proposed in district	-0.823	(0.482)				
Democrats as percent of voters				2.575	(2.132)	
N districts		142			119	
N district-years		287			205	

Note: Table omits year-specific intercepts

*p<.05 **p<.005

SUPPLEMENTAL RESEARCH NOTES

Table A-1. Variable descriptions: All variables measured at school district level

Variable	Description
Dependent variables	
District tax proposed (agenda-setting stage)	Binary variable equal to 1 if district leaders proposed tax measure in given year. Source: EdSource
Passage (policy-choice stage)	Binary variable equal to 1 if votes were above supermajority threshold (66.7%) required for passage. Source: [redacted to preserve author anonymity]
Contextual features of districts	
Racial Generation Gap	Difference between percent of elderly population (65+) identified as White and percent of enrolled students identified as White, decennial census observations interpolated to fill in missing values. Source: Census Bureau and California Department of Education
Percent Enrolled Students Black	Percent of enrolled students identified as Black; mostly annual observations, interpolated to fill in missing values. Source: Census Bureau and California Department of Education
Percent Enrolled Students Latinx	Percent of enrolled students identified as Latinx; mostly annual observations, interpolated to fill in missing values. Source: Census Bureau and California Department of Education
Percent Enrolled Students in Poverty	Percent of enrolled students residing in a household with income below the federal poverty line. Source: California Department of Education
Personal (Avg) Income of Residents, Ln	Income of district residents, decennial census observations interpolated to fill in missing values and logged. Source: Census Bureau

Homeownership Rate in District	Percent of district residents who own their residence. Source: Census Bureau
Intergovernmental Revenue, Ln	Sources of district revenue from federal, state, and local governments, logged. Source: California Department of Education SACS data.
Percent White School Board (predicted probability estimates)	Predicted probability of the percentage of non-Hispanic White school board members elected in previous four years. Source: Sood and Laohaprapanon (2018)
District Enrollment, Ln	Number of enrolled students, logged. Source: California Department of Education
Ballot measure features	[the following sources redacted to preserve author anonymity]
Measure sunsets within 1-5 years	Ballot includes sunset provision by which voters will be asked to reapprove tax within one to five years.
Measure continues existing tax	Ballot asks voters to reapprove an existing tax
Measure Includes Oversight Provision	Ballot includes provision for establishment of a citizen oversight board which oversees revenues and expenditures from new tax.
Size of Tax, Ln	Dollar amount of proposed tax, logged.
Elder Exemption	Measure provides an exemption for district residents over a certain age considered 'elderly'
Political factors	
First Parcel Tax Proposed in District	Measure is first proposed for district in sample.
Democrats as Percent of Voters	District-level estimates of percent of voters registered as Democrats Source: Kogan et al. 2018

Research Note 1: California School Finance Election Data

This data set consists of descriptive information about school district parcel taxes, coded from sample ballots, voter information guides, and proposed policy text. A team of research assistants collected original documents describing every school district parcel tax for which these records survive the archives of California's local governments. Researchers scanned and coded each document, yielding a detailed dataset of the policy features of district parcel taxes.

Research Note 2: Percent White School Board Variable and Analysis

In order to control for the racial composition of the school board, we applied a classification algorithm of Sood and Laohaprapanon (2018) to a list of California school board members' names. The authors trained a neural network on Florida voter registration data from 2017 to predict the probability of a voter's membership in one of four self-reported racial categories (non-Hispanic white, non-Hispanic black, Asian, and Hispanic), conditional on the sequence of characters in that voter's first and last name. We applied their trained model to the names of all regularly elected California school board members as recorded in election returns by the California Election Data Archive. Because the available data come from election returns, and California school board members serve four-year terms, our measure of a school board's racial composition is the percentage of putatively non-Hispanic white people among all of the members of the school board who were elected at a regularly scheduled election in the previous four years.

The imputation of a categorical racial identity based on a probability distribution introduces a known source of measurement error into our regression models. We adjust for this source of error in two ways. First, we reduce the likelihood of error in any individual instance by imputing membership only in the most frequently observed and accurately predicted category,

non-Hispanic white (see Sood and Laohaprapanon 2018: 6). Second, we adjust the standard errors for imputation error by repeating the imputation 100 times, each time sampling the imputed racial identity of each school board member in California at random from the probability distribution predicted by Sood and Laohaprapanon's (2018) algorithm for a person of the same name. The regression models that control for the racial composition of the school board were run 100 times, once for each imputation; the coefficients and standard errors that we report for any model containing this variable are the coefficients and standard errors that result from 100 models (one for each repetition of the imputation procedure), combined according to Rubin's (1987) rules for multiple imputation.

Research Note 3: Robustness Checks

In supplemental analyses, we tested a measure of the racial generation gap between public schoolchildren and *all* district residents age 20 and over, not just those who are elderly. Our findings are only slightly altered: the alternate racial generation gap is no longer negatively correlated with proposal, although the outcome is statistically indistinguishable from zero. At the policy setting, or passage, stage, our findings are largely unchanged except that Black enrollment becomes positively associated with passage at the $p < .05$ level (see Table A-2). We do not report these findings in the main body of the paper because our 65 and over variable better corresponds to the conception of the racial generation gap proposed by Pastor, Scoggins, and Treuhaft (2017), and to previous literature on age-related voting patterns in school finance referenda (e.g., Plutzer and Berkman 2005; Tedin, Matland and Weiher 2001).

Table A-2. Likelihood of parcel tax measure proposal and passage with alternate racial generation gap variable, logistic regression with random effects specification

	Model 1 (agenda setting)		Model 2 (policy choice)		
			Coef.	(SE)	
Alternate Racial Generation Gap	0.138	1.064	-0.803	2.585	
Percent Black students	1.123	1.554	8.085	4.073	*
Percent Latinx students	-2.451	0.624	**	-0.499	1.380
Measure continues existing tax	-	-	2.229	0.477	**
Measure includes oversight provision	-	-	1.107	0.479	*
Measure exempts elderly	-	-	0.671	0.616	
Tax rate (Ln)	-	-	-0.063	0.339	
Tax sunsets within five years	-	-	0.767	0.403	
Homeownership rate	-4.405	0.881	**	-5.020	2.212
Personal income (Ln)	2.505	0.429	**	3.727	1.389
Percent students in poverty	-5.627	2.046	*	2.375	5.214
Intergovernmental revenue (Ln)	-0.041	0.159		-0.248	0.360
District enrollment (Ln)	0.183	0.166		-0.375	0.384
N districts	967		142		
N district-years	12,088		287		

Note: Table omits year-specific intercepts

*p<.05 **p<.005

We also modeled our data with a racial generation gap calculated as the difference between the White elderly population and the White school-age population (including students not enrolled in public schools). This alternate enrollment data is decennial census observations that we have interpolated by district-year. We model these variables to address the possibility that alternative schooling options, like private schools or home school (which White families are more likely to pursue for their children), account for our findings related to racial context. agenda and policy setting. We found no significant difference in the regression results from models with this modified variable (see Table A-3).

Table A-3. Likelihood of parcel tax measure proposal and passage with substitute enrollment data, logistic regression with random effects specification

	Model 1 (agenda setting)			Model 2 (policy choice)		
				Coef.	(SE)	
Racial Generation Gap	-4.403	1.323	**	-0.423	3.139	
Percent Black students	2.651	2.040		9.621	5.278	
Percent Latinx students	-2.448	0.806	**	-1.036	1.950	
Measure continues existing tax	-	-		2.248	0.499	**
Measure includes oversight provision	-	-		1.105	0.494	*
Measure exempts elderly	-	-		0.738	0.644	
Tax rate (Ln)	-	-		-0.144	0.361	
Tax sunsets within five years	-	-		0.910	0.423	*
Homeownership rate	-4.883	0.841	**	-5.321	2.254	*
Personal income (Ln)	2.508	0.424	**	4.047	1.456	**
Percent students in poverty	-5.074	2.144	*	3.878	5.795	
Intergovernmental revenue (Ln)	-0.082	0.154		-0.356	0.390	
District enrollment (Ln)	0.278	0.160		-0.256	0.407	
N districts	968			140		
N district-years	11,504			276		

Note: Table omits year-specific intercepts

*p<.05 **p<.005

We also tested whether our findings concerning racial composition are artifacts of geographic clustering of parcel tax proposals. If a school board's decision to place a parcel tax measure on the ballot is influenced by the behavior of neighboring districts, and if neighboring districts have student bodies of similar racial composition, then we might mistakenly attribute the influence of neighboring districts to the influence of racial composition. We tested this hypothesis by fitting a random-effects logistic regression model of parcel tax policy proposals with an additional control variable for the number of neighboring districts that proposed parcel tax measures in the same year. We relied on 2012 Census TIGER shapefiles to identify a neighboring district as any district that either overlapped geographically, or shared a boundary or

a vertex with the reference district. Table A-4 reports the coefficients and standard errors from this model, which is otherwise comparable to Model 1 in Table 3. We find substantial geographic clustering in the proposal of parcel tax measures; the more neighboring districts that had such proposals on the ballot in a given year, the more likely that a district itself would place such a measure on the ballot. Controlling for the number of neighboring districts proposing parcel taxes did *not*, however, measurably attenuate the coefficients of the racial generation gap or the percentage of students who are Latinx.

Table A-4. Likelihood of parcel tax measure proposal on the ballot, logistic regression with random effects specification

	Model 1		
	Coef.	(SE)	
Racial Generation Gap	-1.874	(0.865)	*
Percent Black students	1.445	(1.360)	
Percent Latinx students	-1.698	(0.712)	*
Personal income (Ln)	2.084	(0.341)	**
Percent students in poverty	-4.920	(2.192)	**
Homeownership rate	-3.960	(0.780)	**
District enrollment (Ln)	0.146	(0.154)	
Intergovernmental revenue (Ln)	-0.0248	(0.149)	
Number of neighboring districts proposing taxes	0.548	(0.0843)	**
N districts	937		
N district-years	11,930		

Note: Table omits year-specific intercepts

*p<.05 **p<.005

Research Note 4: Correlated random effects models

The correlated random effects (CRE) approach, sometimes also called the “Random Effects Within-Between” estimator (see Bell, Fairbrother and Jones 2019), decomposes X into uncorrelated cross-sectional (“district mean” or “between-district”) and longitudinal (“de-measured” or “within-district”) components, along with a district-specific random intercept to control for unmeasured, time-constant characteristics of school districts. Like the conventional fixed effects (FE) estimator, this approach permits estimation of within-district coefficients that are, by construction, orthogonal to the time-invariant characteristics of districts. It has the added advantage of permitting explicit measurement of the coefficients of the time-invariant characteristics of school districts (for more on the comparison between CRE and FE estimators, see Bell, Fairbrother and Jones 2019). We use this estimation strategy to further test the robustness of our findings.

Specifically, for the agenda setting policy stage we fit logistic regression models in which the dependent variable is the log odds that a district proposed a tax measure. The vector of independent variables X includes our two measures of racial context, and other district characteristics that may be associated with the likelihood of proposing a parcel tax, including the homeownership rate, the average income of residents (logged), the percentage of students in poverty, the total district enrollment (logged), and the shortfall of school district revenues relative to expenditures (transformed by the inverse hyperbolic sine function). The model is as follows:

$$\text{Eq. A-1. } \ln\left(\frac{P(T_{it})}{1-P(T_{it})}\right) = \alpha + \beta'(X_{it} - \bar{X}_i) + \xi'\bar{X}_i + \delta_t + \nu_i + \varepsilon_{it}$$

Subscript i represents unique districts and t denotes years. The term δ represents a vector of year-specific intercepts, v is a district-level random intercept, and ε is an error term.

For the policy choice stage of our analysis, our modeling strategy is slightly more complex, because the decision to propose a tax measure may be endogenous to voters' willingness to approve it. An analysis of policy passage with data only on observed policy proposals therefore may be subject to various sample selection biases. We fit a logistic regression of the dependent variable (a dichotomous variable equal to one if a measure passes) on characteristics of the policy and characteristics of the district context, and we adjust for unequal sample selection probabilities by incorporating an estimate of the non-selection hazard. Our model is akin to Heckman's (1979) well-known two-step estimator for sample selection (see Semykina and Wooldridge 2010), and it has the following form:

$$\text{Eq. A-2. } \ln\left(\frac{P(T_{it})}{1-P(T_{it})}\right) = \alpha + \beta'(W_{it} - \bar{W}_i) + \gamma'(Z_{kit} - \bar{Z}_i) + \xi'W_i + \zeta'\bar{Z}_i + \eta\chi_{it} + \delta_t + v_i + \varepsilon_{kit}$$

The vector W includes a subset of the district contextual features in the vector X , including the racial generation gap and the enrollment of Black and Latinx students, along with measures of residents' average income, the homeownership rate, the school district's intergovernmental revenue per capita, and the percentage of enrolled students in poverty. The vector Z includes policy design features. As above, the vector β represents the coefficients of the within-district components of district contextual features. The vector γ includes within-district coefficients of policy characteristics (e.g., whether a measure continues an existing tax). These vectors of coefficients may be interpreted as comparisons over time within the same district. The coefficients of between-district components are represented by the vectors ξ and ζ ; these may be interpreted as time-averaged comparisons among districts. Year dummy variables are represented by δ ; v is a district-level random intercept; and ε is a robust clustered error term, as

above. The subscript i represents unique districts, t represents years, and k indexes unique policy proposals, of which there may be more than one per year in a given district. The model also includes a predicted nonselection hazard, λ_{it} . This is a predicted probability computed from a probit model over all districts, where the dependent variable is a dichotomy equal to one if *no* tax measure was proposed in a given district-year. The form of the probit model is as follows:

$$\text{Eq. A-3. } P(Y_{kit} \text{ observed} | X_{it}) = 1 - \lambda_{it} = \Phi(\kappa_t + v_t'(X_{it} - \bar{X}_i) + v_t'\bar{X}_i)$$

Where X is the vector of district characteristics from equation A-1, above. Following an estimation strategy described by Wooldridge (1995), we compute $\bar{X}_i$ over all the years in our data, but incorporate this mean as a covariate into probit models that we fit separately to annual cross sections of the data.

In Tables A-5 and A-6 we report the coefficients from these two stages of analysis, beginning with the agenda-setting stage—an analysis of the characteristics of districts where school officials proposed parcel tax measures at least once between 1997 and 2010—and proceeding to the policy choice stage—an analysis of the district and policy characteristics associated with the log odds of passage.

The longitudinal components in the models provide insight into the relationship between racial context and policy adoption over time, *within* districts. For the agenda-setting stage, Table A-5 suggests that the correlation between the racial generation gap and decision to propose a parcel tax is largely attributable to changes in the racial composition of district resident populations over time. As the racial generation gap increases (or the difference between the proportion of the elderly who are White and the proportion of students who are White grows so that the elderly are proportionately more White), the likelihood that district political leadership will propose a parcel tax decreases. This is true even after controlling for the percent of school

board members that are White. The cross-sectional component coefficients reflect the relationship of the independent variables and the outcome variable *between* districts, or comparatively. The results are consistent with those reported in the paper, but permit us to distinguish between cross-sectional components of the association. In districts where rates of Latinx enrollment are consistently higher, district leaders are less likely to propose parcel taxes, all else being equal; and an increase in a district's racial generation gap is associated with a decrease in the probability of proposing a parcel tax, all else being equal.

Table A-5. Likelihood of parcel tax measure proposal on the ballot, CRE logistic regression, 1997-2010

	Model 1			Model 2		
<i>Longitudinal components</i>	Coef.	(SE)		Coeff	(SE)	
Racial Generation Gap	-3.720	(1.814)	*	-3.722	(1.289)	**
Percent Black students	-8.123	(5.210)		-7.901	(4.435)	
Percent Latinx students	1.819	(2.269)		1.916	(1.764)	
Personal income (Ln)	-2.106	(1.854)		-2.084	(1.770)	
Percent students in poverty	0.440	(2.850)		0.379	(2.488)	
Homeownership rate	19.088	(13.799)		18.830	(12.549)	
District enrollment (Ln)	-0.010	(0.478)		-0.016	(.383)	
Intergovernmental revenue (Ln)	-0.235	(0.215)		-0.236	(0.181)	
Percent White school board				-0.590	(0.927)	
<i>Cross-sectional components</i>						
Racial Generation Gap	-1.645	(1.131)		-1.497	(1.129)	

Percent Black students	2.380	(1.667)		2.436	(1.709)	
Percent Latinx students	-2.041	(0.768)	*	-2.372	(0.832)	**
Personal income (Ln)	2.266	(0.501)	**	2.164	(0.443)	**
				-		
Percent students in poverty	-9.639	(2.829)	**	10.007	(3.197)	**
Homeownership rate	-4.809	(0.935)	**	-4.786	(0.779)	**
District enrollment (Ln)	-0.030	(0.302)		-0.032	(0.378)	
Intergovernmental revenue (Ln)	0.176	(0.302)		0.144	(0.385)	
Percent White school board				-1.786	(1.396)	
N districts	967			966		
N district-years	12,063			11,965		

Note: Table omits year-specific intercepts

*p<.05 **p<.005

At the policy choice stage, the CRE modeling strategy confirms our finding that racial context makes no discernible impact on the aggregate voter decision to approve a parcel tax. Once proposed, neither change in the racial context over time within districts nor differences between districts in racial context are impactful enough to change outcomes.

Table A-6. Likelihood of passage as a function of school district characteristics and ballot measure features, CRE logistic regression									
	Model 1		Model 2				Model 3		
	Coef.	(SE)		Coef.	(SE)		Coef.	(SE)	
<i>Longitudinal components</i>									
Racial Generation Gap	5.153	(6.076)		4.996	(6.221)		11.369	(9.865)	

Percent Black students	50.873	(26.230)		51.896	(26.428)	*	52.256	(35.553)	
Percent Latinx students	10.856	(9.566)		11.342	(9.630)		14.473	(13.580)	
Measure continues existing tax	0.449	(0.795)		0.510	(0.809)		0.045	(1.019)	
Measure includes oversight provision	3.355	(1.199)	**	3.378	(1.217)	*	3.956	(1.685)	*
Measure exempts elderly	4.899	(2.146)	*	5.006	(2.167)	*	5.930	(3.260)	
Tax rate (Ln)	-2.874	(0.999)	**	-2.923	(1.007)	**	-2.715	(1.311)	*
Tax sunsets within five years	1.496	(1.010)		1.395	(1.012)		3.830	(1.748)	*
Homeownership rate	64.970	(59.490)		64.372	(58.879)		618.550	(303.129)	*
Personal income (Ln)	-6.457	(7.050)		-6.706	(7.111)		-15.242	(13.082)	
Percent students in poverty	7.037	(12.632)		6.720	(12.716)		13.500	(21.950)	
Intergovernmental revenue (Ln)	-0.461	(0.867)		-0.502	(0.871)		-0.504	(1.253)	
District enrollment (Ln)	-1.988	(2.480)		-2.012	(2.484)		0.417	(4.516)	
Measure first proposed				0.299	(0.653)				
Democrats as percent of voters							8.443	(10.246)	
<i>Cross-sectional components</i>									
Racial Generation Gap	-2.026	(3.579)		-2.277	(3.585)		-2.924	(4.947)	
Percent Black students	9.054	(6.017)		8.852	(5.992)		9.552	(8.537)	
Percent Latinx students	-0.584	(2.430)		-0.730	(2.452)		-2.094	(3.571)	
Measure continues existing tax	5.917	(1.407)	**	6.022	(1.450)	**	7.234	(2.237)	**
Measure includes oversight provision	0.539	(0.750)		0.587	(0.770)		0.633	(1.061)	
Measure exempts elderly	0.400	(1.029)		0.385	(1.029)		0.281	(1.494)	
Tax rate (Ln)	0.034	(0.567)		-0.002	(0.567)		-1.310	(0.954)	
Tax sunsets within five years	1.193	(0.776)		1.108	(0.776)		1.248	(0.982)	
Homeownership rate	-7.265	(3.542)	*	-7.146	(3.522)	*	-12.154	(5.500)	*

Personal income (Ln)	5.540	(2.326)	*	5.376	(2.316)	*	9.417	(3.977)	*
Percent students in poverty	10.924	(9.624)		10.539	(9.590)		17.330	(14.427)	
Intergovernmental revenue (Ln)	0.775	(0.734)		0.791	(0.728)		1.753	(1.066)	
District enrollment (Ln)	-1.590	(0.818)		-1.599	(0.812)	*	-2.728	(1.268)	*
Measure first proposed				-70.966	(125.603)				
Democrats as percent of voters							4.844	(4.548)	
InverseMills	-4.354	(2.815)		-4.360	(2.836)		-0.657	(4.090)	
N districts	142			142			119		
N district-years	287			287			205		
Note: Table omits year-specific intercepts									
*p<.05 **p<.005									