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ABSTRACT

Upward Income Mobility and Legislator Support for Education Policies*

This paper investigates how upward mobility affects legislator voting behavior towards education policies. We develop an electoral competition model where voters are altruistic parents and politicians are office seeking. In this setting the future economic status of the children is affected both by current public education spending and by the level of upward mobility. Using a newly compiled dataset of roll call voting on California education legislation matched with electoral district-level upward mobility we find that the likelihood of a legislator voting "no" on redistributive education bills decreases by 10 percentage points when upward mobility in his electoral district decreases by a standard deviation.

JEL Classification: I24, D72, H4

Keywords: upward income mobility, education policies, legislator voting behavior, roll call votes, California

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1 Introduction

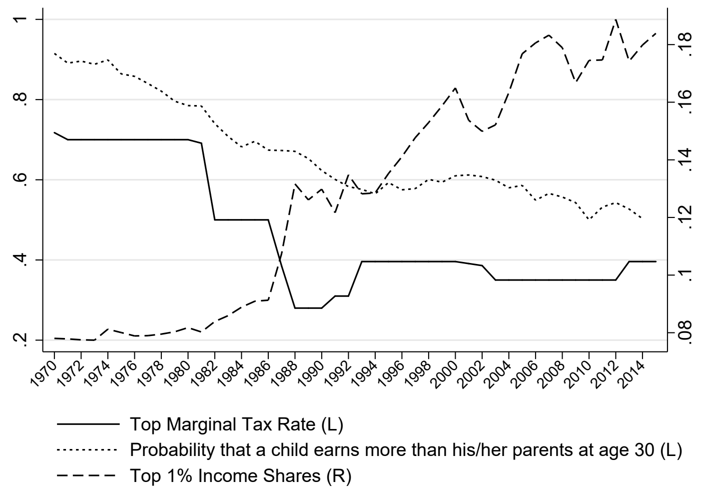
Social mobility is the ability of individuals to move from one social class to another. Upward mobility, in particular, refers to the ability of children of the poor to move up the income ladder. In the last 40 years, the United States have experienced a sustained increase in the degree of income inequality accompanied by a decrease in upward mobility (see Figure 1), a development perceived even by the average American. A poll conducted by *The Economist* in 2010 reveals that a third of the respondents felt they had less opportunities than their parents, while half of them believed the next generation would have a lower standard of living than the current generation. In an age where "the upwardly mobile American is becoming a statistical oddity" (Stiglitz, 2013), upward mobility begins to play an important role in the way the democratic process shapes public policies. Indeed, the political arena has seen an increase in the relevance of upward mobility in recent years, with the creation of the first bipartisan Economic Mobility Caucus in 2012 and Barrack Obama, throughout his two terms as president, calling the lack of upward mobility "the defining challenge of our time". With a relatively poorer and immobile majority, one would expect policies involving large scale redistribution, if not appropriation. This, however, is not commonly observed.[1] A number of theories have been proposed to explain this phenomenon (or the absence thereof) (Breyer and Ursprung, 1998; Roemer, 1998; Harms and Zink, 2003), among those being that the poor want for their children "some big prizes maintained in the game" (Okun, 1975). They do not expropriate the rich in the hope that their children will one day become rich; a conjecture known as the *prospect of upward mobility* (POUM) hypothesis (Benabou and Ok, 2001). The logic of such a hypothesis implies that expected upward mobility and the incidence of redistributive policies have a negative relationship. While there has been consistent evidence of this in voter preferences towards redistribution (Alesina et al., 2017; Guillaud, 2013; Lind, 2007; Alesina and La Ferrara, 2005; Ravallion and Lokshin, 2000), little has been done by way of linking upward mobility to actual policy outcomes. Figure 1 suggests that the constant fall in upward mobility in the last 25 years does not seem to translate into a change in redistributive tax policy.

In this paper we take a step in this direction by exploring the relationship between upward mobility and education policies. Education policy, itself a form of in-kind redistribution, has one peculiarity that makes it particularly suitable for this study: its benefits accrue to the next generation. In other words, the people substantially affected by education policies are not the same people who decide on it. We exploit this intergenerational characteristic of education policy to highlight a new mechanism through which the negative policy-mobility relationship can take place. We develop a probabilistic model of electoral competition where legislators care about re-election and voters care about their disposable income and their child's future income. Both education and upward mobility serve the same purpose, which is to improve children's future economic status. As a consequence, an increase in upward mobility could decrease the marginal benefit of education, thereby inducing reelection-seeking legislators to reduce their support for public education.

We test this prediction using a newly compiled dataset of *inclusive* (i.e. redistributive) education bills and legislative roll-call voting at the California State Legislature. This setting is an ideal testing ground for our model because, in the United States, education is primarily a State and local responsibility. To give an example, Federal contributions accounted only for about 8 percent of nationwide expenses on education at the elementary and

[1] Refer to Bellani and Ursprung (2016) for a review.

Figure 1: Top 1% share, income mobility and top marginal tax rate.



Note: Data sources for top 1% share is Piketty and Saez (2003) updated series (TabFig2015prel.xls), for income mobility is Chetty et al. (2017) and for top marginal tax rate is Tax Policy Center.

secondary level for school year 2012-2013. (U.S. Department of Education)

When combined with the upward mobility corresponding to each legislator's district, we find robust evidence that the likelihood of a legislator voting against a redistributive education reform is lower when upward mobility in his district decreases.

This study differs from the existing literature in a number of aspects. First, we explore the direct link between upward mobility and policy formation, while previous works in economics focus on individual preferences towards redistribution. We adopt here the perspective of representative democracies, where a politician represents his constituency in a legislature. In representative democracies, policies are enacted by gaining sufficient votes in the legislature. This paper is therefore among the first to investigate how upward mobility influences the process of policy formation. To study the relationship between policy outcomes and upward mobility, one must understand how upward mobility influences legislator voting behavior. Much of the research on legislator voting behavior originates from political science, where the main focus lies in finding a link between ideological variables and roll-call voting choices (Becher et al., 2016; Cox and Poole, 2002; Fleisher, 1993; Poole and Rosenthal, 2001; Snyder and Groseclose, 2000). More recently, economists have also begun exploring legislative voting behavior towards the purpose of understanding what drives policy reforms (Facchini and Steinhardt, 2011; Conconi et al., 2012; Bouton et al., 2014; Halcoussis and Lowenberg, 2015; Facchini et al., 2016). These studies, however, explore legislator behavior at the federal level, that is, roll-call voting in the US Congress. This study proposes an improvement on the discourse by focusing on state-level roll-call voting, a level at which the representatives are more localized in their respective states and are therefore more closely involved with their electoral districts.

Second, we investigate the relationship between upward mobility and education policies, exploiting its peculiar intergenerational attributes. Guillaud (2013) and Ravallion and Lokshin (2000) study preferences towards general redistribution, without specifying particular policy areas. Alesina and La Ferrara (2005) explore preferences towards tax policies, while to the best of our knowledge, only a very recent contribution by Alesina et al. (2017)

explores preferences towards public education and health care. In the model they develop however, education plays no intergenerational role.

The remainder of the paper proceeds as follows. Section 2 introduces our theoretical setting. Sections 3 and 4 elaborate on the data and empirical strategy, while Section 5 discusses the estimation results. Section 6 presents several robustness checks, and Section 7 concludes.

2 Theoretical Model

In this section we develop a simple political-economics model to help organize our empirical analysis and interpret our results on legislator voting behavior. Consider a society populated by a continuum of adult individuals normalized to one. The population is perfectly partitioned into 2 distinct groups $i = r, p$, representing the rich and the poor class, characterized by an income y_i, with $y_p < y_r$. [2] This society is formed by n districts. Furthermore, we assume that each adult person has a child. Every child is assigned an exogenous level of innate ability, which can either be high (a_H) or low (a_L). We assume that the probability of being high(low) ability, $Pr(a = a_{H(L)}) = q_{H(L)}$, is the same in both groups. Parents are assumed to know their income, and the distribution of income and ability in society.

In this society, the opportunities faced by children of the rich and the poor are not the same: children of rich parents have disproportionately better opportunities to find high paying jobs in adulthood than children from poor families due to, for example, better connections and neighborhood networks, the possibility of attending extracurricular activities, etc. Rich children are therefore more likely to become rich adult, regardless of their innate ability. These advantages of the rich children can be reduced by an increase in upward mobility. This can be due to an increase in the equality of opportunities in the district, like a decrease in the importance of families networks, etc., (m_n, exogenous in our static setting), and/or by an increase in public education spending, (e, endogenous in our setting), which can mitigate the disadvantage of the high able poor children, helping them to signal their true ability type.

More formally, let us denote by v_i the probability that a child grows up to become rich. We assume that with *perfect mobility*, belonging to the rich class depends entirely on ability, that is, $v_p = v_r = q_H$.

With *imperfect mobility* instead, the probability of belonging to the rich class differs across parental economic status according to:

$$
\begin{aligned}
v_p &= q_H g_p \left(\frac{e}{y}, m_n \right) \\
v_r &= 1 - q_L g_r(m_n)
\end{aligned}
\tag{1}
$$

where both $g_i(.)$ are well behaved functions, bounded between 0 and 1 and increasing in their arguments.[3] The expression $\frac{e}{y}$ denotes the public spending on education as share of income and m_n is the above-mentioned exogenous component of social mobility, which can also partly be the result of previous investments in public education.

Observe furthermore that the probability that a child with poor parents becomes rich, v_p, increases with both public education and mobility, but the marginal benefit of education could decrease with mobility. On the other hand, the

[2] By definition, the average income in the society $y = \gamma_p y_p + (1 - \gamma_p) y_r$ where γ_i is the share of individuals of group i in the society. For a population normalized to one, y is both the average and the total.

[3] $\frac{dg_p}{de} > 0$, $\frac{dg_p}{dm_n} > 0$, $\frac{d^2 g_p}{de^2} < 0$, $\frac{dg_r}{dm_n} > 0$, $\frac{d^2 g_r}{dm_n^2} < 0$

probability that a low-able child of rich parents becomes rich, v_r decreases with mobility and it is not affected by public education spending. In this society $0 \leq v_p \leq q_H \leq v_r \leq 1$. Therefore, high-ability poor children could end up poor, while low-ability rich children could become rich, therefore mismatching across ability and social status occurs.[4] However, upward mobility reduces the mismatching to some degree by counteracting the asymmetric advantage of the rich.

Regarding the political setting, we assume that each district elects one legislator, and elected legislators, during their mandate, vote by majority rule to implement proportional tax rate τ at the state level on the incomes of rich and poor adult individuals in order to finance public education. We assume that in order to maintain their credibility and being reelected, they are committed to vote according to the policy platforms proposed during their electoral campaign. We furthermore assume that the government education budget is balanced, $\tau y = e$.

The timing of the model is as follows. (1) Adult become parents (2) Candidates simultaneously propose an electoral platform τ_A and τ_B. (3) Elections take place and parents vote. (4) The winning candidates/legislators vote according to their proposed platform. (5) A level of public education spending is chosen. (6) Children grow up, their economic status is realized.

Individuals care about their private consumption and about the economic status of their children. The following function specifies the utility of a parent from income group i in district n, as a function of expected after-tax income and future child status.

$$U_{in} = (1-\tau)y_i + \beta v_{in}\theta, \quad i = p, r \tag{2}$$

where β is parental altruistic parameter and θ is the extra utility that they get if their child belongs to the rich group as adult. From Equation (2) the optimal tax rate desired by the two income groups in each district can be obtained.

The first order condition of a poor parent's optimization elucidates the trade-off he faces from an increase in public education.

$$\frac{dU_p}{d\tau} = -y_p + \beta\theta q_H g_\tau = 0. \tag{3}$$

The first term in (3) is the marginal cost of increased provision of public education and is represented by the forgone income due to an increase in the tax. The second term is the marginal benefit of increased public education represented by the increase in the child's chances of getting rich, where g_τ denotes the derivative of $g_p(.)$ with respect to τ.

Proposition 1. *The preferred tax rate of the poor parents is decreasing in their income, y_p, decreasing(increasing) in upward mobility, m_n, if the marginal increase in the probability of being rich due to education is decreasing(increasing) in upward mobility. The tax rate preferred by the rich parents is always zero.*[5]

In each district the voters elect by majority rule one candidate. Each candidate commits to the policy proposed during the electoral campaign in order to maintain credibility when facing reelection opportunities. Suppose that we have two candidates, each belonging to a party, e.g. one Republican and one Democrat, $L = R, D$. Each candidate proposes a platform τ_R and τ_D, which is assumed to maximize the expected value of some exogenous rent Q. If we denote by π_L the vote share for candidate L, then the probability of candidate L to be elected is given

[4] On this topic refer to the contribution of Bernasconi and Profeta (2012), who develop a politico-economic model where public education provides opportunities for the children of the poor to be recognized for their talent, reducing the probability of a mismatch, which takes place when individuals with low talent who come from rich families find jobs that should go to people with high talent (and vice versa).

[5] All the proofs can be found in Appendix A

by $p_L = \Pr(\pi_L \geq \frac{1}{2})$ and his expected utility is then $p_L Q$.

As in a simple probabilistic voting model[6], the voting strategy of voter j in group i is affected by (i) the education policy, τ, that is proposed[7]; (ii) his individual ideological bias ϕ_{ij} towards party D, which is uniformly distributed over $[-\frac{1}{2\sigma^i}, \frac{1}{2\sigma^i}]$ where σ^i is group specific; and (iii) some popularity shock δ, which is uniformly distributed over $[-\frac{1}{2\eta}, \frac{1}{2\eta}]$.

Therefore, voters in group i will vote to elect candidate R if $U_i^R > U_i^D + \phi_{ij} + \delta$. That is, all the individuals j in group i for which $\phi_{ij} \leq U_i^R - U_i^R - \delta$ will vote for R, thus his vote share will be:

$$\pi_R = \sum_i \gamma_{in} \sigma^i (U_i^R - U_i^D - \delta + \frac{1}{2\sigma^i}). \tag{4}$$

The winning probability of legislator R is given by:

$$p_R = \Pr\left(\pi_R \geq \frac{1}{2}\right) = \frac{1}{2} + \frac{\eta}{\sum_i \gamma_{in}\sigma^i} \left(\sum_i \gamma_{in}\sigma^i (U_i^R - U_i^D)\right). \tag{5}$$

where γ_{in} are the percentage of people belonging to group i in district n.

Proposition 2. *The likelihood of a legislator voting in favor of an expansion in education spending is:*

(i) decreasing in the incomes of both rich and poor parents;

(ii) decreasing in the ratio of the density of the ideological bias in the rich and poor group, i.e. the more responsive to policy are the rich with respect to the poor, the less likely the legislator will vote in favor; and

(iii) decreasing(increasing) in upward mobility if the marginal increase in the probability of being rich due to education is decreasing(increasing) in upward mobility

Proposition 2(iii) is the primary theoretical finding that we would like to test in this paper. It says that legislator support for education expansion weakens when upward mobility increases, if education and upward mobility are somehow substitute inputs in increasing the chances of the poor children to become rich adults. The remaining part of the paper explores this relationship empirically.

3 Data

An ideal setting that allows us to test our predictions is the behavior among U.S. state legislators. Of particular interest for this study is the enactment of education policies, which is the result of obtaining majority vote in the two chambers of the state legislature. Moreover, state legislators are elected by voters residing in their electoral districts, making them accountable to their constituency, and thereby responsive to their constituency's preferences. The model developed in the previous section predicts that legislators' support for redistributive education policy will be responsive to the upward mobility in the districts they represent. To test this empirically, we use information on roll-call voting outcomes on enacted education bills in the state of California. These voting outcomes are then

[6] Refer to Lindbeck and Weibull (1987) for a first example and Persson and Tabellini (2000) for an adaptation of the former, closer to the one we use here.

[7] The final tax level does not depend only on the one proposed by the elected legislator, but, as we have mentioned above, it will be decided through a majority voting among the elected districts' representatives. For simplicity we assume here that, when casting their vote, the voters in each district are naive and believe that the policy proposed by their district legislator will be the one implemented.

matched to the upward mobility in the respective electoral district, henceforth called legislative districts (LD). In this section, we describe in detail the data that we use for the analysis.

3.1 Education bills

Education bills are obtained from the website of the California State Legislature (CSL) that publishes information on bill texts and roll-call voting for legislation enacted in every legislative session. Different versions of the bill (henceforth called bill drafts) are published, including the introduced draft, the final enacted draft, and all the intermediate drafts. We collect all bill drafts and voting outcomes of education bills enacted between 2008 to 2013. To ensure that our analysis captures behavior of legislators towards redistributive education policy, we restrict attention to *inclusive* education bills by using the taxonomy of education reforms proposed by Braga et al. (2013). According to Braga et al. (2013), policies to improve human capital can be classified according to their impact on the distribution of students' educational attainment. Education policies that affect the bottom tail of the distribution provide school access to those who would otherwise be outside the system, and support low-achieving students, thereby increasing the mean and reducing the variance of the distribution. Braga et al. (2013) call these policies *inclusive* and identify a set of education policies satisfying this condition.[8] We use their classification as a guide to narrow down our sample of California bills to those that contain inclusive education policies. Selection of such bills involve identifying inclusive policies in the bill text using a list of inclusive reform-related terms presented in Table 1. [9] Of the 301 education bills enacted between 2008-2013, 54 of them (17.9%) contain inclusive policies. Figure 2 illustrates which type of policies were enacted in the two complete legislative sessions in our sample period.[10] Among the three types of inclusive policies we identify in our sample, expansion of university access is found in the most number bills, while pre-primary expansion and increase grant size occur in about a third of the bills.

Table 1. Inclusive reform terms

Reform[a]	Percent of all bills[b]	Terms used
Inclusive reforms	17.94	
Increase grant size	5.65	Student financial aid/grants, student scholarships, university/college scholarships, tuition equalization, equalization grants, tuition assistance
Pre-primary expansion	6.98	Early learning program, early child education, child learning centers, child care providers/facilities, kindergarten or preschool program/services, pre-K programs, age of pre-kindergarten enrollment, kindergarten enrollment age, admission age of kindergarten/preschool, pre-school fund/programs, preschools for all
Expansion of university access	12.62	College preparatory programs, college readiness, career and technical education, vocational schools/colleges, career coaching/counseling, early college programs, career pathway programs, work-study opportunity grant/program,apprenticeship/internship programs, dual/concurrent enrollment, advanced placement courses,

[a] This table reports only the policies that appear in at least one bill.
[b] Percentages sum up to more than the total because some bills contain more than one type of inclusive reform.

[8] Alternatively, policies that affect the upper tail of the distribution, such as encouraging high achievers and boosting the performance of good students through intensified competition, effectively increase both the mean *and* the variance of the educational attainment distribution. They call these policies *selective*. To obtain their classification they use information on various education policies across 24 European countries combined with individual information.

[9] A detailed description of the procedure used for identifying those bills is provided in Appendix B.

[10] Our sample period 2008-213 encompasses only two *complete* legislative sessions, 2009-10 and 2011-12.

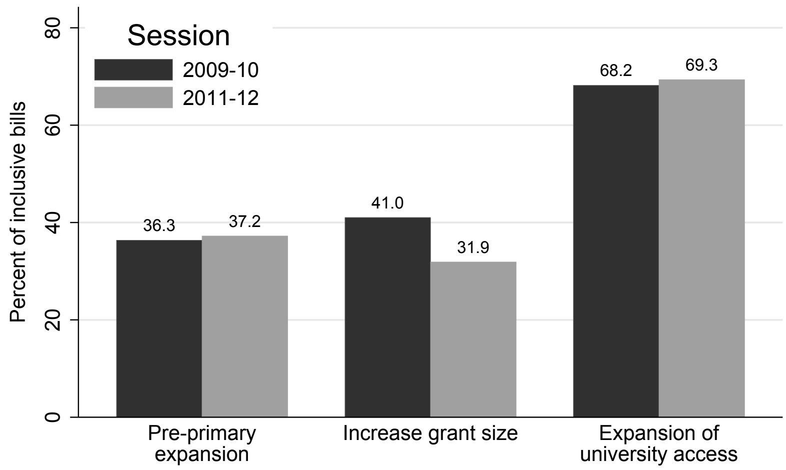


Figure 2: Education policies by legislative session

3.2 Legislator voting behavior

For each of the bills identified as having inclusive education policies, we collect roll-call voting information provided by the CSL. Each round of voting is recorded with the names of all the legislators who voted yes, no, or abstain on a particular draft of the bill. We exclude 16.8% of legislators who moved from the Assembly to the Senate between 2008 and 2013 to ensure that each legislator represents the same legislative district throughout the sample period. We consider only the votes taken on the floor of the upper chamber (called the Senate) or lower chamber (called the Assembly) and disregard voting in legislative committees. Only the floor votes that are associated with the third reading in each chamber were considered. At this point the bill draft is read with all amendments for a third and final time and taken to a vote for final approval. About 2.5% of the sample of all bills that had more than one recorded third reading vote in either chamber were dropped to ensure that each legislator in our data voted on every bill just once. The result is a sample of 4,496 individual legislator votes on inclusive bills across 97 roll-call voting rounds, 54 legislative bills and 196 legislators. Table 2 presents an overview of the proportion of yes votes for each of a bill's third reading votes. Most of the bills have their third readings on the second to fourth voting round, which means that the first few voting rounds are held in committees before a third reading on the chamber floor takes place. There are a couple of extreme bills whose third readings are held after the 8th voting round, which could potentially indicate that these bills contain many issues and have to be approved by various committees before being voted on by the whole chamber. Third reading votes that occur on the very first voting round have a much lower proportion of legislator support on average, about 62%, compared to those that occur on later rounds. This means that bills that go directly to a floor vote get less support than those that first get committee approval. Looking at the last two columns of the Table 2, one can observe that there are some vote rounds for which there were no opposition. Also, the minimum proportion of yes votes always exceeds 50%, which stems from the fact that our sample contains only enacted bills.[11] Nonetheless, there are some bills that have a vote outcome close to the margin, hovering around 52%.

[11] A bill must pass all voting rounds to be enacted into law.

Table 2. Proportion voting yes for each vote round of a bill

Voting Round	Number of roll call votes	Voted Yes			
		Observations	Percent	Minimum Percent	Maximum Percent
1	12	629	63.12	58.82	76.92
2	16	645	83.41	52.63	100.00
3	22	1,179	79.90	57.97	100.00
4	15	598	84.28	56.67	97.37
5	11	461	84.16	59.42	97.10
6	3	156	76.28	62.71	93.22
7	11	450	80.44	61.02	100.00
8	4	219	84.47	63.64	97.10
9	2	128	98.44	96.61	100.00
12	1	31	64.52	64.52	64.52
Total	97	4,496	79.65	52.63	100.00

3.3 Upward mobility

We supplement our voting data with information on legislative-district upward mobility derived from Chetty et al. (2014b). Using federal income tax records of 40 million parents and children between 1996-2012, Chetty et al. (2014b) obtained measures for intergenerational mobility across counties and commuting zones in the United States. The scope of this data allowed for the calculation of social mobility across small geographic areas for birth cohorts between 1980-1993. Of particular interest is the measure of absolute upward mobility, defined as the mean percentile rank in the national child income distribution of children with parents at the 25th percentile of the national parent income distribution. The assignment of children to a county is based on where the child grew up.[12] Parent income is defined as the mean family income when the child was between the ages of 15-19. Two values of upward mobility were calculated: first, using child family income at the age of 24, and second at age 26. Since Chetty et al. (2014b) only has data until 2012, we use for each year the cohorts aged 25 and 27 respectively to have upward mobility for all years in our 2008-2013 sample. We take the average of these two mobility measures as a proxy for upward mobility in the county. Although these ages are fairly young, Chetty et al. (2014b) argue mobility at the mid-20s is a reliable summary of intergenerational mobility because estimates fully stabilize at the age of 30. Furthermore, the mid-20s cohort is ideal for our analysis for three reasons: (1) they have just gotten out of the public school system, (2) they are at that age where people start considering having children, and (3) they are young enough for their parents to still be part of the voting population. In fact, data from the Voting and Registration Supplement of the Current Population Survey show that the combined group of parents (aged 46-64) and children (aged 24-35) consist of more than half of the voting population in the period we are considering (see Appendix D). This is the group for whom the measure of upward mobility is particularly salient, because the children value their mobility, and the parents value their children's mobility. One can moreover observe from Figure D1 that the highest increase in voting population between the 2010 and 2012 elections comes from the 24- to 35-year old voters, making them an important voting group for legislators vying for reelection. [13]

We transform county-level upward mobility measures of Chetty et al. (2014a) into state legislative district (LD)-level measures using population-weighted averages.[14] Figure 3 gives an impression of the spatial variation in

[12]They use the ZIP code reported in the tax return of the parents on the first year the child was reported as a dependent and they report that only 38% of the children moved out of their county as adults (Chetty et al., 2014a).
[13]Refer to Appendix D for data on the percentage of voters by age groups in those elections.
[14]Population counts of the U.S. Census Bureau (2010) Census Redistricting Data were used.

our measure of upward mobility for California LDs, averaged across the years 2008-2012[15]. Districts along the coastline are relatively more mobile than inland districts and districts around major cities also show generally higher upward mobility. Figure 4 gives a sense of the variation over time in upward mobility within California LDs over the sample period. One can observe that from 2008 to 2012 upward mobility decreased on average in all but one district. The yearly change in upward mobility ranged from a decrease of one full rank in the district surrounding Sacramento (ASM 4) to an increase of a tenth of a rank in the district between Bakersfield and Fresno (ASM 32). Upward mobility decreased on average by half a rank per year and only 12% of all yearly changes were positive.

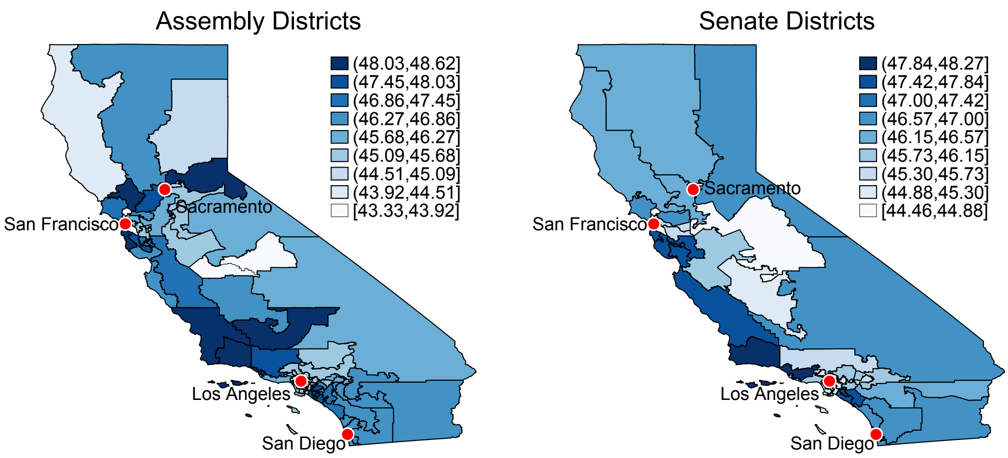


Figure 3: Upward mobility across legislative districts, 2008-2012

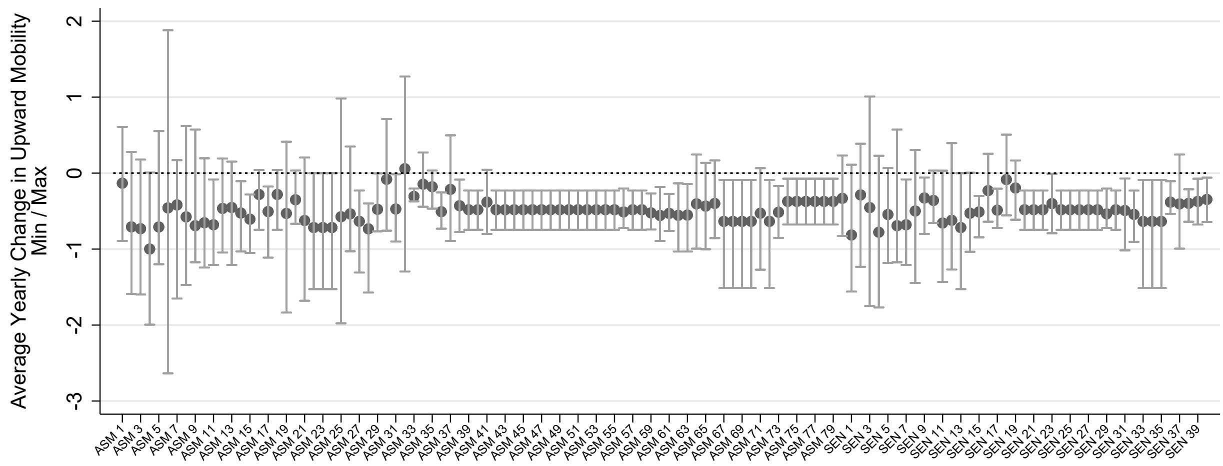


Figure 4: Upward mobility over time, 2008-2012

Finally, we complete our dataset by including time-varying information on legislators and districts. All district-level variables are lagged by one year. Table D1 of the Appendix presents the descriptive statistics on all the variables for the sample of inclusive bills, as well as subsamples for each type of inclusive bill. Table C1 enumerates the data sources.

[15]Redistricting in 2013 make districts spatially incomparable to prior years.

4 Empirical Strategy

The question we are exploring is whether upward mobility has an influence on the formation of education policy. Our basic empirical approach is to analyze legislator opposition to inclusive education bills through their roll-call vote. Each legislator in our sample voted either yes or no, or abstained on an education bill draft. We use this vote choice as our key dependent variable and in our preferred specification we estimate the following linear probability model (LPM):

$$No_{ijt} = \alpha_0 + \alpha_1 UpMob_{it} + \boldsymbol{X'_{ijt}\alpha_2} + \theta_t + \gamma_i + u_{ijt} \tag{6}$$

where No_{ijt} is a binary variable indicating a "no" vote by legislator i on inclusive education bill j in period t. The primary regressor of interest is the variable $UpMob_{it}$, which is our proxy for upward mobility in legislator i's district at time t. The vector $\boldsymbol{X}$ represents time-varying controls for characteristics of the bill (if introduced in the assembly), the legislator (term limited, seat is up for reelection, and the margin of victory in the last election), and the district (population, income, inequality, unemployment, student-teacher ratio, share of students eligible for free lunch, number of charter schools, academic performance index and school district expenditures per student).[16] The term θ_t measures year fixed effects, while γ_i measures legislator fixed effects, and u_{ijt} is an error term. Standard errors are clustered at the bill level. The parameter for year fixed effects controls for systemic trends affecting all districts in California. The parameter for legislator fixed effects, on the other hand, controls for certain unobserved, time-invariant legislator characteristics that may confound the relationship between mobility and voting behavior. One possible unobserved characteristic is the degree to which individual legislators respond to their constituencies. In addition, since every legislator represents only one district throughout the sample, the parameter γ_i also controls for district fixed effects.

The parameter of interest in equation (6) is α_1, the coefficient of upward mobility. Proposition 2(iii) of the model predicts variation in the support for education when upward mobility increases, that is, $\alpha_1 \neq 0$. The higher (lower) is the upward mobility in the district of the legislator, the more (less) likely he is to vote "no" on an education bill containing inclusive policies.

Although the LPM does not take account of the binary nature of our dependent variable, it has the advantage of being able to estimate a fixed effects model despite the potential quasi-complete separation of our data. Quasi-complete separation occurs when a binary outcome variable can be perfectly separated into its two groups by a regressor or a linear combination of regressors (Albert and Anderson, 1984). Given that our dataset consists of *enacted* bills, legislators vote "no" infrequently (see Table 2) causing the parameters for legislator fixed effects to perfectly separate the dependent variable into its two groups. In such cases, the maximum likelihood estimator of non-linear models such as logit or probit does not exist, and the estimate of the parameters causing the quasi-complete separation tend towards infinity (Albert and Anderson, 1984; Santner and Duffy, 1986).[17] For this reason, we use the LPM in order to incorporate legislator fixed effects into the specification, which we believe capture crucial time-invariant omitted variables that must be controlled for. In section 6, we nonetheless present probit estimations to test the robustness of our results.

[16]Time-invariant legislator characteristics such as gender, party or chamber are included in the legislator fixed effects. Age is captured by the year fixed effects.

[17]Non-linear models remedy this by excluding the observations associated with the legislators that cause the separation. For rare dependent variables such as our no-vote, this requires dropping more than half of the sample.

5 Results

Our main results are presented in Table 3. The dependent variable in all regressions is the dummy for voting "no" on an *inclusive* education bill draft. Columns (1) to (7) present estimates for regressions with different sets of controls without legislator fixed effects, while columns (8) and (9) include legislator fixed effects. In all columns, the estimate for upward mobility is always positive and highly significant. The last regression (column 9) which controls for all bill, district and legislator characteristics as well as year and legislator fixed effects reveals that, all things being equal, a standard deviation increase in upward mobility in a legislator's district increases his likelihood of voting "no" on an inclusive bill by 10.6 percentage points. Such an effect that could spell the difference between failure and passage for some bills on the margin (see Table 2). This is in line with our theoretical prediction that upward mobility reduces support for inclusive education policies when inclusive policies and upward mobility are substitutes.

Table 3 also reveals that the propensity to oppose an inclusive education reform is strongly affected by legislator and district characteristics. Considering first the cross-district variation, the first seven columns reveal that representatives of districts where the number of students per teacher, the expenditure per student and the number of charter schools are higher are more likely to oppose these bills. Legislators representing poorer, more unequal and racially heterogeneous districts are less likely to vote against those inclusive education policies. Unsurprisingly therefore, democrats who are also more likely to be elected in such districts are less likely than republicans to oppose inclusive policies. Given that the choice of elected representative in each district is clearly endogenous with respect to legislator and district characteristics, especially upward mobility, columns (8) and (9) focus on within-legislator (and therefore within-district) variation by adding legislator fixed effects.

The coefficients of upward mobility in the last two columns of Table 3 are generally larger than those in the previous columns. This may indicate a downward bias in the coefficients when legislator fixed effects are not controlled for. Districts with higher upward mobility may elect representatives who are less concerned by, and thereby less responsive to, income mobility, resulting in smaller estimates.

All significant regressors in column (9) except unemployment rate retain their sign after the addition of legislator fixed effects. Although representatives of districts with higher unemployment rate are less likely to vote "no" (column (4)), an increase in unemployment in the district induces more opposition to inclusive policies, particularly in university access. When economic circumstances worsen, legislators might prefer to divert funds to policies that address the problem directly instead of appropriating to education.

Table 4 presents regressions of our preferred specification (column (9) of Table 3) for different subsamples of inclusive bills. In the first column, the relevant sample is all the bills containing inclusive policies, while succeeding columns use samples of bills containing pre-primary expansion, increase grant size and expansion of university access, the three subcategories of inclusive policies as presented in Table 1. We find positive and significant coefficients of upward mobility for all three subsamples. The point estimate in column (3), however, is more than double that of the estimate in the full sample, suggesting that the effect is strongest for policies that provide scholarships and financial aid to students. Indeed, the impact of upward mobility is statistically significantly greater

Table 3. Baseline results

	Dependent variable: Voted No								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Upward mobility[a]	0.03257**	0.06832***	0.05352***	0.1059***	0.04755***	0.01837***	0.04567**	0.1055***	0.1057***
	[0.011,0.055]	[0.046,0.091]	[0.033,0.074]	[0.071,0.14]	[0.028,0.067]	[0.0095,0.027]	[0.018,0.073]	[0.046,0.16]	[0.046,0.17]
Academic performance index (API)[a,b]			-0.01188				0.006428		0.009670
			[-0.025,0.00086]				[-0.0016,0.014]		[-0.015,0.034]
District student-teacher ratio[a,b]			0.08093***				0.01067		0.07366**
			[0.049,0.11]				[-0.0081,0.029]		[0.028,0.12]
Share of students eligible for free lunch[a,b]			-0.04195**				0.01534		0.01295
			[-0.067,-0.017]				[-0.0032,0.034]		[-0.019,0.045]
Number of charter schools in district[a,b]			0.03644***				-0.01043		-0.01524
			[0.022,0.051]				[-0.021,0.00047]		[-0.061,0.031]
School district expenditure per student[a,b]			0.01847***				0.003618		0.02576*
			[0.0099,0.027]				[-0.0026,0.0098]		[0.0018,0.050]
District income per capita (log)[b]				-0.4732***			-0.1663*		0.004436
				[-0.66,-0.29]			[-0.29,-0.038]		[-1.33,1.34]
District unemployment rate[a,b]				-0.03455**			0.01863		0.05586*
				[-0.059,-0.0099]			[-0.00018,0.037]		[0.0098,0.10]
District Gini coefficient[a,b]				-0.01661*			0.02624		0.01141
				[-0.031,-0.0019]			[-0.0032,0.056]		[-0.043,0.066]
District black share[a,b]					-0.02943***		0.006819		0.03582
					[-0.045,-0.014]		[-0.0046,0.018]		[-0.043,0.11]
District hispanic share[a,b]					-0.02136***		-0.04187*		-0.2271*
					[-0.031,-0.012]		[-0.077,-0.0072]		[-0.43,-0.029]
District share over 65 years old[a,b]					0.04651***		0.01694*		0.006974
					[0.024,0.069]		[0.0020,0.032]		[-0.047,0.061]
District share below 18 years old[a,b]					0.09658***		0.01914		0.1638**
					[0.063,0.13]		[-0.0046,0.043]		[0.068,0.26]
District preprimary share[a,b]					-0.04014***		-0.005055		0.01333
					[-0.056,-0.024]		[-0.016,0.0060]		[-0.012,0.038]
Male						-0.01661	-0.01695		
						[-0.035,0.0013]	[-0.038,0.0039]		
Democrat						-0.3136***	-0.3003***		
						[-0.42,-0.20]	[-0.40,-0.20]		
Senator						0.01972	0.03024		
						[-0.022,0.062]	[-0.017,0.077]		
Term limited						-0.01490	-0.009155		-0.02131
						[-0.037,0.0071]	[-0.030,0.012]		[-0.048,0.0054]
Margin of victory in last election[a]						0.01138**	0.01511**		0.01281
						[0.0033,0.019]	[0.0045,0.026]		[-0.0074,0.033]
Seat is up for election						0.01159	0.01615		0.01886
						[-0.081,0.10]	[-0.081,0.11]		[-0.073,0.11]
Assembly bill						0.008223	0.007558		0.006160
						[-0.065,0.081]	[-0.069,0.084]		[-0.072,0.085]
Constant	0.1143***	0.07683	0.1100*	4.8396***	0.07244	0.3048***	1.9977**	0.1927*	0.1076
	[0.076,0.15]	[-0.0099,0.16]	[0.016,0.20]	[3.01,6.67]	[-0.014,0.16]	[0.15,0.46]	[0.65,3.34]	[0.00083,0.38]	[-13.0,13.2]
Year FE	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Legislator FE	No	No	No	No	No	No	No	Yes	Yes
Observations	4,496	4,496	4,272	4,496	4,496	4,496	4,272	4,496	4,272
R-squared	0.0102	0.0590	0.0801	0.1142	0.1275	0.2476	0.2501	0.2993	0.3014

The sample consists of all types of inclusive bills. Robust standard errors clustered by bill, 95% confidence intervals in brackets. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

[a] Expressed in standard deviations.

[b] Lagged by one year.

Table 4. Baseline Results by Type of Inclusive Policies

	Dependent variable: Voted No			
	(1) Any inclusive reform	(2) Pre-primary expansion	(3) Increase grant size	(4) Expansion of university access
Upward mobility[a]	0.106*** [0.0464,0.165]	0.168** [0.0537,0.282]	0.213** [0.0835,0.343]	0.0796* [0.0138,0.145]
Year FE	Yes	Yes	Yes	Yes
Legislator FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Observations	4,272	1,566	1,294	2,869
R-squared	0.3014	0.4676	0.5531	0.2430

Robust standard errors clustered by bill, 95% confidence intervals in brackets. *** p <0.001, ** p <0.01, * p <0.05.
[a] Expressed in standard deviations.

for grant size policies than for university access policies ($\chi^2 = 5.65$, $p = 0.017$).[18] The positive and significant coefficients of upward mobility in all columns nevertheless indicate that upward mobility has a positive influence on opposing any type of inclusive education policy.[19]

Thus far we have found that an increase in upward mobility in a legislator's district increases his likelihood of opposing an inclusive education bill by about 10 percentage points. We now consider the possibility that this effect varies depending on other legislator and district characteristics. To see this, we interact upward mobility with individual controls from the baseline specification, presented in Table D4 of the Appendix. Adding interaction terms to the regression yields a marginal effect of upward mobility of 11.5 percentage points, which differs little from the estimate in our baseline regressions (10.6 percentage points). It also reveals that the influence of upward mobility increases significantly with income inequality and student-teacher ratio. Figure 5 show these results graphically.

A low student-teacher ratio can signal better school quality in the district. The positive interaction effect could therefore imply that when the quality of schooling decreases, the more responsive legislators become to upward mobility, that is, the stronger is the substitution between upward mobility and education. In our model, upward mobility and education essentially serve the same purpose: to augment the economic status of the children. If education quality falls, upward mobility becomes comparatively more effective at achieving this purpose, thereby intensifying its effect. This is indeed what we find in the data. With respect to income inequality, our results suggest that an increase of one standard deviation in inequality in the district increases the average impact of a standard deviation increase in upward mobility from 11.5 to 13.4 percentage points. Consistent with previous theoretical contributions, we would expect that the higher the inequality, the higher is the support for redistribution.[20] This support for redistribution could be in terms of inter-generational or intra-generational redistribution. In our analysis we are focus on inter-generational redistribution, disregarding intra-generational redistribution, which could indeed become more relevant the higher the inequality. If inequality positively influences intra-generational redistribution, this could be perceived as an increase in the importance poor parents give to their current consumption relative to the importance they give to the future status of their children, i.e. a reduction in the altruistic parameter β of our theoretical model. In this scenario, reelection seeking legislators would be even more likely to oppose inclusive

[18]Similarly, the coefficients of upward mobility in the university access subsample and the pre-primary subsample are statistically different at the 10% level ($\chi^2 = 2.87$, $p = 0.0904$). For the rest of the pairwise comparisons the null cannot be rejected.
[19]Refer to Table D3 in Appendix D for the full table including controls.
[20]See among others Borck (2007); Alesina and Giuliano (2010); Bellani and Ursprung (2016) for surveys of this literature.

education reform for the same marginal increase in upward mobility, as the results suggest.

In exploring further possible heterogeneity in the effects of upward mobility, it is also instructive to estimate the baseline specification for subsamples of the data divided according to legislator and district characteristics. Table 5 presents the results of this exercise. The upper panel divides the sample according to district characteristics, while the lower panel divides the sample according to legislator characteristics. The main result is robust to splitting the sample by income, inequality and gender. When it comes to comparing the effect for high- and low-mobility samples (column (3)), we see that upward mobility is only statistically different from zero in high-mobility districts. Such a result is consistent with column (4) where we divide the sample by coastal and inland districts, since districts along the coast tend to be more upward mobile (as seen in Figure 3). These results, however, do not control for the possibility that districts with different characteristics may choose to elect different legislators that respond to upward mobility in a dissimilar manner. Table D2 of the Appendix presents test of means of legislator characteristics across different subsamples. It suggests that low-mobility, low-income and high-inequality districts tend to elect more black or hispanic legislators. Conversely, if high-mobility districts elect more non-black and non-hispanic legislators, this could explain why the coefficient of upward mobility in columns (3) and (5) of Table 5 are very close in magnitude and significance. We also get an unexpected result that hispanic legislators respond to upward mobility in the opposite direction as the rest. An increase in upward mobility increases their support for inclusive education policies. It is however possible that this is a result of the fact that hispanic legislators are on average more likely to represent very different districts in terms of inequality, mobility, unemployment rate and also school quality, as shown in Table D2. Regarding partisanship, the coefficient of upward mobility seem to lose its significance when the sample is divided according to the legislator's party. Indeed, in column (6) of Table 3, the coefficient of upward mobility falls to its lowest magnitude when partisanship is controlled for. In the full sample regression of Table 3, however, upward mobility remains strongly significant, which suggests that the loss of significance in the divided samples of Table 5 could be caused by lack of variation in the no-vote. True enough, democrats are more likely to be authors of inclusive bills (84.2% of the authors in our sample are democrats), and are therefore less likely to oppose the bills they proposed, at any level of upward mobility.

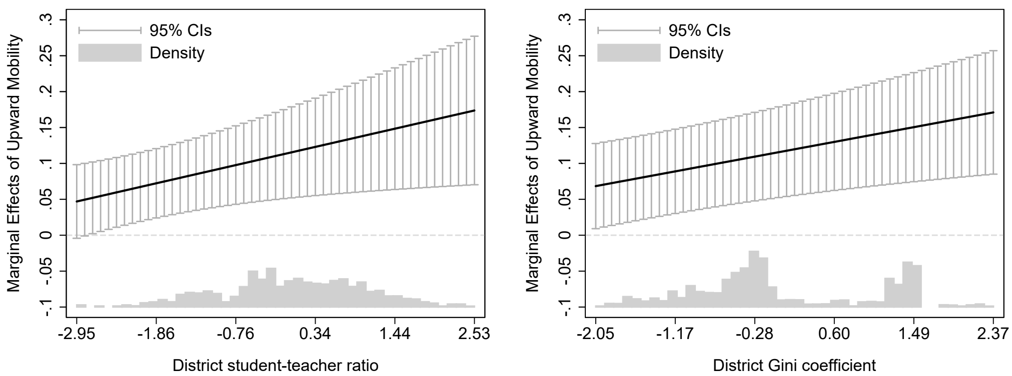


Figure 5: Marginal effect of upward mobility

Table 5. Subsample regressions

	(1) Income		(2) Inequality		(3) Mobility		(4) Geography	
	Low	High	Low	High	Low	High	Coast	Inland
Upward mobility[a]	0.152*	0.0907*	0.0993**	0.169**	0.0757	0.108**	0.117**	0.128
	[0.0231,0.281]	[0.0224,0.159]	[0.0412,0.157]	[0.0440,0.294]	[-0.0282,0.180]	[0.0345,0.182]	[0.0494,0.185]	[-0.0551,0.312]
Observations	1,960	2,312	2,210	2,062	2,151	2,121	3,296	976
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Legislator FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

	(4) Gender of legislator		(5) Partisanship		(6) Race of legislator		
	Female	Male	Republican	Democrat	Non-black, non-hispanic	Black	Hispanic
Upward mobility[a]	0.109**	0.0887*	0.0223	-0.00358	0.122***	0.502	-0.0570*
	[0.0395,0.179]	[0.0206,0.157]	[-0.0414,0.0859]	[-0.0163,0.00916]	[0.0547,0.190]	[-0.511,1.514]	[-0.109,-0.00545]
Observations	1,224	3,048	1,570	2,702	3,421	242	609
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Legislator FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Dependent variable is the probability of voting “no” on a bill. The sample consists of all types of inclusive bills. Robust standard errors clustered by bill, 95% confidence intervals in brackets. *** p <0.001, ** p <0.01, * p <0.05.

[a] Expressed in standard deviations.

6 Robustness Checks

In this section we conduct robustness checks of the baseline results. The first set of checks involves alternative definitions of inclusive bills and upward mobility presented in the top panel of Table 6. Given the fact that we are extracting information from legal text, and given the complexity of legal parlance, we might be concerned that our algorithm identifies both false positive and false negative inclusive bills. False positives occur when inclusive terms are mentioned in bills that have nothing to do with inclusive policies. On the other hand, false negatives occur when bills that propose inclusive policies do not use the exact terms included in the list given in Table 1. For this reason we also looked deeper into the education bills and subjectively identified those containing inclusive policies. We then estimate the specification using the sample of subjectively identified bills and present the results in column (1) of Table 6. We also estimate the same specification using a strict sample of bills that were identified as inclusive by both subjective *and* objective methods (column (2)). In both cases the coefficients of upward mobility are positive and statistically significant, suggesting that our results are robust errors in the coding of inclusive bills.

Recall that the proxy for upward mobility we have been using is the average upward mobility of the 25- and 27-year old in the district. Column (3) tests whether our results hold when using only the mobility of the 25-year old cohort. One would expect this to be a weaker proxy of upward mobility as it was measured at a younger age. Nevertheless, the coefficient of this variable remains positive and statistically significant.

Table 6. Robustness checks

	(1) Subjective inclusive bills	(2) Strict inclusive bills	(3) Mobility of 25-year olds	(4) Year 2013 excluded	(5) Year 2013 × Legislator FE	(6) District specific time trend
Upward mobility[a]	0.0819**	0.109**	0.0829***	0.137**	0.102**	0.106**
	[0.0262,0.138]	[0.0319,0.185]	[0.0468,0.119]	[0.0556,0.218]	[0.0349,0.169]	[0.0290,0.184]
Observations	4,046	2,440	4,272	3,687	4,272	4,272
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Legislator FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
	(7) Abstain votes removed	(8) Bills with only one third reading removed	(9) First voting round only	(10) Exclude author	(11) S.E. clustered at district level	(12) Horrace-Oaxaca trimmed sample
Upward mobility[a]	0.0960**	0.1000**	0.219***	0.106***	0.106***	0.126***
	[0.0305,0.162]	[0.0356,0.164]	[0.160,0.278]	[0.0464,0.166]	[0.0690,0.142]	[0.0551,0.196]
Observations	3,883	4,047	589	4,245	4,272	3,128
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Legislator FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes

Dependent variable is the probability of voting "no" on a bill. The sample consists of all types of inclusive bills. Robust standard errors clustered by bill, 95% confidence intervals in brackets. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.
[a] Expressed in standard deviations.

The following robustness checks are related to the redistricting that was conducted in 2011. It was done using population counts from the 2010 Census, and the new districts were introduced during 2012 legislative elections. In the assembly, representatives have two-year terms and all the 80 seats are up for election every two years, therefore, during the 2012 elections, the new districts were easily implemented. Senators, on the other hand, serve four-year terms, and only half of the 40 senate seats are up for election every two years, alternating between odd and even districts. In 2012, the odd districts were up for election. This means that for the 2013-14 legislative session, half of the senators represent newly-redrawn districts, and the other half represent old districts. Given the changes made to district boundaries, some 2 million voters (about 0.05% of California's population) are left without a senate representative for two years. "Caretaker" senators were selected then by senate leaders at the beginning of the 2013-14 legislative session to represent these voters (Joseph and Miller, 2011; McGreevy, 2013). Since our analysis includes legislative activities during 2013, both senate and assembly representatives no longer represent the same districts in 2013 as they did in the previous years of the sample. Therefore time-invariant *district* characteristics that may confound the effect of upward mobility are not controlled for in the baseline specification. We remedy this in two ways, (1) we run the baseline regression excluding the year 2013 in our sample, and (2) we interact the 2013 year dummy with the legislator dummy variables. Columns (4) and (5) of Table 6 present the results, with hardly a change in the magnitude of the estimate of upward mobility.

Up to this point we control for many observable time varying, and unobservable time-invariant, district and legislator characteristics. However, there is still a possibility that a time trend has an influence on our results. That is, upward mobility decreased in districts whose representatives' propensity to vote in favor of inclusive education bills was anyway increasing over time. In column (6) we deal with this concern by including linear district-specific time trend to the specification. The coefficient on upward mobility remains unchanged although slightly less precisely estimated. This result suggests that changes in upward mobility do not seem to correlate with other underlying trends at the district level, which we are not already controlling for.

The next set of robustness checks test different variations of a reduced sample of observations. In our baseline specification, the regressions include both yes votes and abstain as the base category of the dependent variable. However, choosing to abstain from the vote could potentially signal a different kind of behavior from choosing to vote yes. It would therefore be instructive to test whether the results still hold after excluding the abstain votes, which make up 8.9% of the sample. Column (7) shows that this reduction in sample size has only a marginal impact on the size and significance of the upward mobility estimate. [21]

The legislative process in California requires that proposed bills go through both chambers of the legislature before it is enacted into law. This means that each of the enacted bills in our sample must have had at least two third-reading voting rounds, one for the Senate, and one for the Assembly. There are, however, enacted bills in our sample that have only one reported voting outcome. There are two possible reasons for this. Either the bill was reported as enacted when in fact it was not (a false positive), or the missing voting round was not published on the CSL website. For these reasons, we re-run the baseline regressions with a reduced sample that excludes these cases (making up 1.6% of all bills.) Column (8) of Table 6 presents the results of this exercise. The coefficient of upward mobility is not affected by the removal of these bills from the sample.

Given that our sample is composed only of enacted policies, one could argue that our results are mainly driven by legislators who "expressively" vote against a bill, knowing that their vote is not pivotal, while they would not do so if the margins were closer[22]. In column (9) we show the results over a sample of votes cast in the very first voting round for that bill. This is where the margins are usually lower and where probability of a decisive vote is higher. Despite the drop in sample size, both the coefficient and significance of upward mobility in this regression

[21] Regarding this point we have also checked if an increase in upward mobility is decreasing the likelihood of voting yes (and abstain) and we find that following our main specification, an increase in one standard deviation decrease the probability of voting yes and abstain of roughly the same amount, 5 p.p. (See Table D5 in Appendix D).

[22] Refer, for example, to the contribution of Brennan and Hamlin (1998) on this type of voting behavior.

Table 7. Comparing LPM and Probit estimates

	(1) No FE	(2) Year FE	(3) Year & Legislator FE
Upward mobility[a]			
Probit (marginal effects)	0.0652***	0.0540***	0.132**
	[0.0409,0.0895]	[0.0348,0.0731]	[0.0337,0.231]
Linear probability model	0.0880***	0.0925***	0.147**
	[0.0552,0.121]	[0.0575,0.128]	[0.0563,0.237]
Corr($\hat{y}_{Pr}, \hat{y}_{LPM}$)	0.8845	0.8744	0.7635
Observations	4,272	4,272	1,951
Controls	Yes	Yes	Yes
Year FE		Yes	Yes
Legislator FE			Yes

Dependent variable is the probability of voting "no" on a bill. The sample consists of all types of inclusive bills. Robust standard errors clustered by bill, 95% confidence intervals in brackets. *** p <0.001, ** p <0.01, * p <0.05.
[a] Expressed in standard deviations.

increased substantially.

The last two robustness checks in the bottom panel of Table 6, concerns the estimation strategy. The first robustness check relates to the level of clustering of our standard errors (column (11)), while the second addresses concerns about the use of the LPM in estimating a binary "no"-vote outcome variable. The LPM has the disadvantage of yielding predicted probabilities outside of the unit interval, and–more importantly–yielding biased and inconsistent estimators under certain conditions. These conditions were formalized by Horrace and Oaxaca (2006) who show that the LPM estimates will be unbiased and consistent when all predicted probabilities fall within the unit interval. The more observations with predicted probabilities outside of the unit interval, the larger is the bias. Horrace and Oaxaca (2006) thus recommend trimming the sample of observations that fall outside of the unit interval to reduce the extent of the bias. In the baseline specification in Table 4, column (1), about 28% of the predicted values fall outside the unit interval. In column (12) of Table 6 we exclude these observations, which considerably reduces the sample size, but the upward mobility estimate remains remarkably stable.

Given the nature of our dataset of enacted education bills, there are relatively fewer instances in which a legislator votes "no". As already mentioned in Section 4, adding controls for legislator fixed effects in the specification therefore causes quasi-complete separation of the data, which non-linear probit or logit models remedy by excluding observations. We investigate the difference between linear and non-linear estimation models in more detail in Table 7, where we compare the LPM estimate to the probit marginal effects across different specifications. At the bottom of each column are the correlation coefficients of the predicted probabilities obtained from the probit and LPM estimations. There is a high positive correlation between the two predicted probability vectors, indicating that the predicted values generated by the LPM and the probit regressions do not differ considerably. One can also observe that the coefficient of upward mobility in the probit models are slightly smaller compared to the LPM, suggesting that the LPM estimates might be upward biased. Note however that the number of observations in column (3) has fallen substantially due to quasi-complete separation.[23] The resulting probit estimates are positive and significant across all specifications. The effect we find of upward mobility remains regardless of whether a linear or non-linear estimation procedure is used.

[23]For purposes of comparison, the LPM coefficient in column (3) is estimated using the same sample of 1,951 observations.

Table 8. Falsification Tests.

	(1) Bills without inclusive reforms	(2) Rank-rank slope	(3) Random mobility
Upward mobility[a]	0.0206 [-0.00222,0.0435]		
Rank-rank slope[a]		-0.0929 [-0.194,0.00849]	
Random mobility[a,b]			-0.000121 [-0.00866,0.00842]
Observations	21,488	3,687	4,272
Year FE	Yes	Yes	Yes
Legislator FE	Yes	Yes	Yes
Controls	Yes	Yes	Yes

Dependent variable is the probability of voting "no" on a bill. The sample consists of all types of inclusive bills. Robust standard errors clustered by bill, 95% confidence intervals in brackets. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.
[a] Expressed in standard deviations.

Finally, we conduct a number of falsification tests to strengthen our baseline result. Table 8 presents the estimates of three falsification tests, the first of which is a regression using the sample of bills not containing any inclusive policies. A positive coefficient in this regression would cast doubt on the primary logic of our theoretical framework. In column (1) we see that as expected, upward mobility has no statistically significant effect on legislator opposition to bills that do not contain inclusive policies.

The second falsification test investigates whether a more general measure of social mobility has an impact on the voting behavior of legislators. Recall that the mobility measure we have used thus far involves the income rank of only those children whose parents come from the bottom quartile of the income distribution. It is however possible that our findings are driven by social mobility across the full parent income distribution. To see whether it is indeed *upward* mobility that is driving the results and not mobility across the whole distribution, we run the baseline specification using another measure of social mobility generated by Chetty et al. (2014a), called the *rank-rank slope* (RRS). The RRS is the correlation between child and parent percentile rank in the national family income distribution[24] and essentially captures social *immobility* of the population. The higher the RRS, the more correlated is a child's income to his parents', regardless of his parents' position in the distribution. The results of the regression with the RRS are presented in column (2) of Table 8. The estimate of the RRS is not significant, confirming that our findings are indeed specific to mobility from the bottom quartile of the income distribution,[25] i.e. *upward* mobility.

Column (3) presents results of a falsification test that randomly assigns to the legislative districts mobility levels drawn from the same distribution as our upward mobility variable. It shows the summary results of 1000 randomization. If this random mobility variable yields the same results as our baseline estimates, it would call into question the relationship we find between upward mobility and legislator opposition towards inclusive policies. We therefore do not expect to find an association between this mobility variable and legislator voting behavior. Indeed, this is what we observe in the last column of Table 8.

[24] According to Chetty et al. (2014a,b), the RRS is a more robust measure of intergenerational mobility than the traditional intergenerational income elasticity (IGE).

[25] One interesting question that arises at this point is to find the threshold level of the distribution for which the effect of upward mobility becomes insignificant. This question however cannot be answered with the data we have available. Such an investigation requires the confidential federal income tax records obtained by Chetty et al. (2014b).

7 Conclusion

This paper is among the first to investigate the link between upward mobility and legislator voting behavior. We develop a probabilistic voting model where voters care about the social-economic status of their children, whose opportunities are augmented both by (endogenous) education policies and by (exogenous) upward mobility. We find that if a decrease in upward mobility increases the marginal benefit of public education for the poor, this translate in an increase in the support for education reform of re-election seeking legislators. We test this hypothesis empirically using a new dataset that compiles California education legislation matched with legislative voting outcomes and electoral district-level upward mobility. We focus primarily on education bills that are redistributive in nature, and we find that indeed, less upward mobility in a legislator's district reduces his opposition for inclusive education policies. The data also suggest that this effect is stronger for policies increasing pre-primary access and student grants, which are mainly related to secondary education, compared to university access policies. We furthermore find that the influence of upward mobility increases significantly with according to inequality and student-teacher ratio in the district. Our results are robust to different definitions of inclusive bills, changes in the sample and the choice of estimation procedure.

We provide evidence that upward mobility is relevant for the *enactment* of redistributive education policies. Exploring whether it influences the formation of other types of policy, such as social welfare, would be a natural avenue for further research.

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Appendices

Appendix A Mathematical Appendix

A.1 Proof of Proposition 1

τ^*_{pn} is implicitly defined by the F.O.C. in eq.3 and from the Implicit Function theorem we know that: $\frac{d\tau^*_{pn}}{dy_p} = \frac{-1}{-SOC} < 0$ and $\frac{d\tau^*_{pn}}{dm_n} = \frac{q\beta\theta g_{\tau,m_n}}{-SOC} \lesseqgtr 0 \Leftrightarrow g_{\tau,m_n} \lesseqgtr 0$ where $g_{\tau,m_n} = \frac{d^2 g_p}{d\tau dm_n}$ denotes the cross derivative. Meanwhile, maximizing the utility function of the rich parents yields $\tau^*_r = 0$.

A.2 Proof of Proposition 2

Each legislator will propose the platform which maximize his probability of being elected and vote accordingly once elected.

$$\underset{\tau_R}{\text{Max}} \quad p_R = \frac{1}{2} + \frac{\eta}{\sum_i \gamma_{in}\sigma^i}\left[\gamma_{pn}\sigma^p(U_p^R - U_p^D) + \gamma_{rn}\sigma^r(U_r^R - U_r^D)\right]$$

where

$$\begin{aligned} U_p^R &= (1-\tau_R)y_p + \beta\theta q_H g(\tau, m_n) \\ U_r^R &= (1-\tau_R)\,y_r + \beta\theta\,(1-(1-q_H)g_r(m_n))\,. \end{aligned}$$

The first order condition reads

$$\frac{\eta}{\Sigma_i\gamma_{in}\sigma^i}\left[-\gamma_{pn}\sigma^p y_p - (1-\gamma_{pn})\,\sigma^r y_r + \gamma_{pn}\sigma^p\theta\beta q_H g_{\tau_R}\right] = 0.$$

Again we we can see that τ^*_R is implicitly defined by the F.O.C. and we can apply again the Implicit Function Theorem and see that:
(i) $\frac{d\tau^*_R}{dy_p} = \frac{-\gamma_{pn}\sigma^p}{-SOC} < 0$
(ii) $\frac{d\tau^*_R}{dy_r} = \frac{-\gamma_{rn}\sigma^r}{-SOC} < 0$
(iii) Denoting $\frac{\gamma_{rn}\sigma^r}{\gamma_{pn}\sigma^p} = \sigma$, $\frac{d\tau^*_R}{d\sigma} = \frac{-y_r}{-SOC} < 0$
(iv) $\frac{d\tau^*_R}{dm_n} = \frac{\gamma_{pn}\sigma^p q_H\beta\theta g_{\tau_R,m_n}}{-SOC} \lesseqgtr 0 \Leftrightarrow g_{\tau_R,m_n} \lesseqgtr 0$

The unique equilibrium of this game has both legislators converging on the same strategy.

Appendix B Identification of inclusive bills

In this appendix we describe the algorithm we use to identify inclusive bills. Our interest is in determining for each bill whether its text contains inclusive policies. The simplest way to do this would be to do a count of inclusive-related words in the bill text. The problem with this simple word count is that it ignores the direction of the reform. For example, a reform that says "abolish the kindergarten program" will be identified as an inclusive reform by a simple word count of "kindergarten program", but would not be an inclusive reform. To remedy this, we augment our simple word count by using nearby qualifying words that indicate the correct direction of an inclusive reform. Table B1 presents the list of qualifiers we use for each of the inclusive-related policy terms we locate in the bill text. Only the bills with reform terms accompanied by these qualifiers will be tagged as inclusive policies.

To accomplish this task, we borrow a concept from computational linguistics called the N-gram, which is a sequence of n adjacent terms taken from a longer sequence of text. An N-gram is essentially an n-word slice of a sentence. Every sentence is typically sliced into a set of overlapping N-grams. For example, the sentence “The bill is long” will have the following N-grams of length 2 (bi-grams): “the bill”, “bill is”, and “is long.” For our purposes, we set the length of the N-grams to 5 words (5-grams), so that we can capture a maximum of 4 words to the left and to the right of each reform term. We therefore take 5-grams of every sentence in the bill text and keep only those 5-grams that contain both the reform term *and* its associated qualifiers. The bills which contain such 5-grams are our inclusive bills.

Table B1. List of qualifiers associated with reform terms

Reform terms	Qualifiers
Panel A: Pre-primary expansion	
Kindergarten enrollment age, admission age of kindergarten/preschool, age of pre-kindergarten enrollment	Decrease, lower, reduce
Kindergarten or preschool program/services, early learning program, early child education, pre-school fund/programs, preschools for all, pre-K programs, child learning centers, child care providers/facilities	Establish, develop, create, support, offer, expand, provide, appropriate, fund, administer, implement
Panel B: Increase grant size	
Student scholarships, university/college scholarships, tuition equalization, student financial aid/grants, equalization grants, tuition assistance	Offer, increase, fund, establish, provide, appropriate, create, add
Panel C: Expansion of university access	
Dual/concurrent enrollment, advanced placement courses, work-study opportunity grant/program,apprenticeship/internship programs, career pathway programs, early college programs	Allow, broaden, strengthen, authorize, support, establish, grant, develop, create, offer, expand, provide, appropriate, fund, administer, implement
College preparatory programs, college readiness, career coaching/counseling, career and technical education, vocational schools/colleges	Strengthen, broaden, authorize, establish, develop, create, offer, expand, provide, appropriate, fund, administer, implement

Appendix C Data sources

Table C1. Data sources

Variables	Sources
Inclusive and selective reforms	Authors' calculations from bills texts provided by the California State Legislature (2016).
Upward mobility, rank-rank slope	Chetty et al. (2014a,b)
Legislator votes	California State Legislature (2016)
Margin of victory in last election	Klarner et al. (2013)
Unemployment rate	Bureau of Labor Statistics (2017) Local Area Unemployment Statistics
Demographic variables	American Community Survey (2016) Tables B01001, B03002, B19083 and U.S. Census Bureau (2010) Redistricting Data
Income and Gini coefficient	American Community Survey (2016) Tables B19301 and B19083
Academic Performance Index (API)	California Department of Education (2017) API Data Files
Student-teacher ratio in district	National Center for Education Statistics (2016) Common Core Data supplemented by the California Department of Education (2016) Staff Demographics Data for 2011.
Total students in district and pre-primary share	National Center for Education Statistics (2016) Common Core Data
Share of students eligible for free lunch	National Center for Education Statistics (2016) Common Core Data
No. of charter schools in district	National Center for Education Statistics (2016) Common Core Data

Appendix D Other regressions and statistics

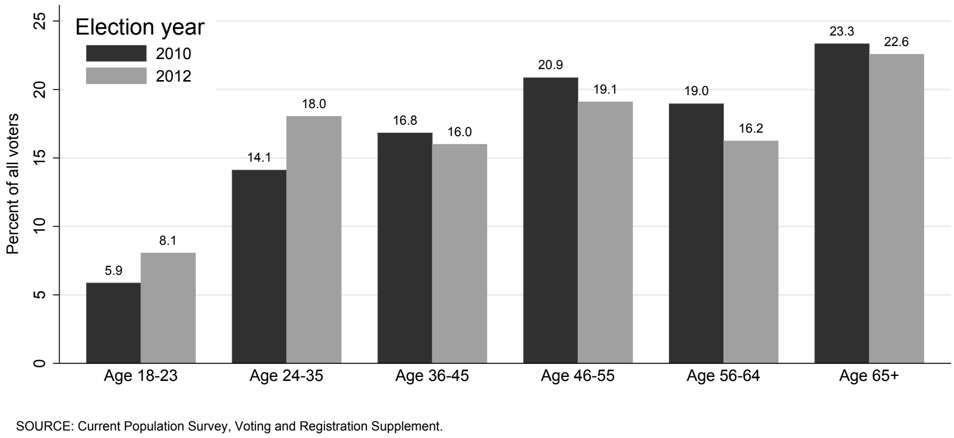

Figure D1: California voters by age group in the 2010 and 2012 elections

Table D1. Descriptive statistics

	Any inclusive reform $N = 4,496$ Bills = 54				Sub-sample: Pre-primary expansion $N = 1,645$ Bills = 21				Sub-sample: Increase grant size $N = 1,357$ Bills = 17				Sub-sample: Expansion of university access $N = 3,020$ Bills = 38			
	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max
Mobility																
Upward mobility	45.9287	1.4575	42.3959	49.3727	46.0085	1.4540	42.3959	49.3727	45.9859	1.4214	42.3959	49.3727	45.8848	1.4517	42.3959	49.3727
Rank-rank slope	0.1721	0.0193	0.1466	0.2234	0.1720	0.0192	0.1466	0.2234	0.1720	0.0194	0.1466	0.2234	0.1722	0.0193	0.1466	0.2234
Legislator characteristics																
Voted yes	0.7965	0.4027	0	1	0.7198	0.4493	0	1	0.7104	0.4537	0	1	0.8152	0.3882	0	1
Voted no	0.1145	0.3185	0	1	0.1653	0.3716	0	1	0.1651	0.3714	0	1	0.0993	0.2992	0	1
Did not vote	0.0890	0.2847	0	1	0.1149	0.3190	0	1	0.1245	0.3303	0	1	0.0854	0.2796	0	1
Term limited	0.3287	0.4698	0	1	0.3313	0.4708	0	1	0.3419	0.4745	0	1	0.3305	0.4705	0	1
Seat is up for election	0.3136	0.4640	0	1	0.3009	0.4588	0	1	0.2778	0.4481	0	1	0.3099	0.4625	0	1
Margin of victory in last election	34.4209	22.9377	0.2000	100	34.9361	23.0771	0.2000	100	35.4082	23.3870	0.2000	100	34.2925	22.8978	0.2000	100
Bill characteristics																
Assembly bill	0.5632	0.4960	0	1	0.5015	0.5001	0	1	0.5851	0.4929	0	1	0.5964	0.4907	0	1
District characteristics																
Income per capita (log)	10.2649	0.1981	9.8085	10.7643	10.2641	0.1985	9.8085	10.7643	10.2686	0.1983	9.8085	10.7643	10.2659	0.1981	9.8085	10.7643
Unemployment rate	9.5205	3.1861	3.8000	18.5871	9.2234	3.2464	3.8000	18.5871	9.4226	3.0844	3.8000	18.5871	9.7070	3.1317	3.8000	18.5871
District Gini coefficient	0.4614	0.0221	0.4160	0.5135	0.4612	0.0222	0.4160	0.5135	0.4613	0.0223	0.4160	0.5135	0.4614	0.0221	0.4160	0.5135
Black share	0.0618	0.0301	0.0120	0.1324	0.0620	0.0302	0.0120	0.1324	0.0619	0.0301	0.0120	0.1324	0.0618	0.0301	0.0120	0.1324
Hispanic share	0.3691	0.1134	0.1259	0.5601	0.3685	0.1136	0.1259	0.5601	0.3688	0.1137	0.1259	0.5601	0.3694	0.1133	0.1259	0.5601
Share below 18 years old	0.2536	0.0275	0.1335	0.3214	0.2539	0.0275	0.1335	0.3214	0.2539	0.0275	0.1335	0.3214	0.2534	0.0275	0.1335	0.3214
Share over 65 years old	0.1113	0.0129	0.0817	0.1718	0.1110	0.0129	0.0817	0.1718	0.1110	0.0126	0.0817	0.1718	0.1114	0.0130	0.0817	0.1718
Academic performance index	773.9484	56.6306	574.2639	927.8750	771.9563	56.5941	574.2639	927.8750	771.9604	56.1970	574.2639	927.8750	774.8644	56.4900	574.2639	927.8750
Student-teacher ratio	20.7194	2.4447	13.5614	26.9996	20.5900	2.4785	13.5614	26.9996	20.3294	2.6232	13.5614	26.9996	20.7805	2.4470	13.5614	26.9996
District preprimary share	0.0748	0.0080	0.0512	0.1093	0.0745	0.0080	0.0512	0.1093	0.0743	0.0079	0.0512	0.1093	0.0750	0.0080	0.0512	0.1093
Share of students eligible for free lunch	0.3828	0.1980	0.0050	0.8497	0.3946	0.1904	0.0050	0.8497	0.4042	0.1835	0.0050	0.8497	0.3809	0.1994	0.0050	0.8497
Number of charter schools in district	12.6919	10.9969	0	65	12.6942	11.1146	0	65	12.9602	11.2035	0	65	12.8457	11.0442	0	65
Expenditure per student (/1000)	8.8940	1.2926	6.8492	14.8934	8.8736	1.2804	6.8492	14.8934	8.9138	1.2651	6.8492	14.8934	8.9042	1.2952	6.8492	14.8934
Other statistics																
Total bills voted on by legislator	31.5525	12.3441	2	47	11.7161	4.4958	1	17	10.7391	4.0705	1	17	21.4093	8.4364	2	33

Note: all district controls are lagged by one year.

Table D2. Test of means of legislator characteristics across different subsamples

	High mobility			High income			High inequality			Coastal district		
	0	1	Diff	0	1	Diff	0	1	Diff	0	1	Diff
Male	0.736	0.733	0.003	0.774	0.695	0.079*	0.687	0.785	-0.099*	0.725	0.768	-0.042
Black	0.112	0.008	0.103***	0.096	0.024	0.072***	0.028	0.094	-0.067**	0.060	0.061	-0.001
Hispanic	0.227	0.078	0.149***	0.226	0.081	0.145***	0.091	0.219	-0.128***	0.176	0.061	0.116**
Age	52.778	54.749	-1.971*	52.810	54.695	-1.886*	54.584	52.913	1.671	53.393	55.267	-1.874
Senator	0.314	0.354	-0.040	0.339	0.329	0.010	0.349	0.318	0.032	0.313	0.414	-0.101
Democrat	0.777	0.506	0.271***	0.665	0.618	0.047	0.575	0.712	-0.137**	0.642	0.636	0.006
Term limited	0.285	0.276	0.009	0.289	0.272	0.016	0.294	0.266	0.028	0.280	0.283	-0.003
Margin of victory	37.503	31.626	5.877**	36.397	32.772	3.625	32.264	37.040	-4.776*	35.757	29.885	5.871*
Observations	242	243		239	246		252	233		386	99	

	Male			Democrat			Black			Hispanic		
	0	1	Diff	0	1	Diff	0	1	Diff	0	1	Diff
Upward mobility	45.964	45.886	0.078	46.478	45.587	0.890***	45.967	44.953	1.014***	46.031	45.219	0.812***
Gini coefficient	0.502	0.525	-0.023**	0.480	0.540	-0.061***	0.515	0.582	-0.067***	0.511	0.560	-0.048***
Income per capita (log)	10.265	10.259	0.005	10.188	10.302	-0.114***	10.265	10.202	0.062	10.271	10.202	0.069**
Unemployment rate	9.309	9.266	0.043	9.577	9.110	0.467	9.271	9.388	-0.117	9.116	10.176	-1.059**
Black share	0.066	0.060	0.006	0.046	0.070	-0.024***	0.059	0.091	-0.031***	0.060	0.067	-0.007
Hispanic share	0.351	0.371	-0.020	0.367	0.365	0.002	0.361	0.442	-0.081***	0.351	0.447	-0.096***
Share below 18 years old	0.255	0.253	0.001	0.263	0.248	0.015***	0.253	0.258	-0.004	0.252	0.262	-0.009**
District preprimary share	0.076	0.075	0.001	0.072	0.077	-0.005***	0.075	0.081	-0.006***	0.075	0.079	-0.004***
Share over 65 years old	0.111	0.112	-0.002	0.113	0.111	0.001	0.112	0.104	0.009**	0.113	0.106	0.007***
API	772.396	776.862	-4.466	779.740	773.184	6.555	776.272	764.666	11.606	778.667	756.201	22.466**
Student-teacher ratio	20.779	21.019	-0.240	21.269	20.780	0.490*	20.964	20.825	0.139	20.789	21.882	-1.093***
Free lunch share	0.325	0.346	-0.021	0.288	0.370	-0.082***	0.331	0.498	-0.167***	0.322	0.446	-0.125***
Charter schools in district	14.115	14.335	-0.221	13.801	14.543	-0.741	13.588	25.107	-11.520***	14.749	11.654	3.095
Expenditure per student (/1000)	8.879	8.865	0.014	8.979	8.804	0.176	8.893	8.475	0.418	8.923	8.521	0.402*
Observations	128	333		172	289		435	26		399	62	

Notes: The universe used is the sample of legislators per legislative session.

Table D3. Baseline Results by Type of Inclusive Policies

	Dependent variable: Voted No			
	(1) Any inclusive reform	(2) Pre-primary expansion	(3) Increase grant size	(4) Expansion of university access
Upward mobility[a]	0.106***	0.168**	0.213**	0.0796*
	[0.0464,0.165]	[0.0537,0.282]	[0.0835,0.343]	[0.0138,0.145]
Academic performance index (API)[a,b]	0.00967	0.0153	0.00842	0.00765
	[-0.0147,0.0341]	[-0.0270,0.0575]	[-0.0392,0.0561]	[-0.0249,0.0402]
District student-teacher ratio[a,b]	0.0737**	0.0988*	0.131*	0.0486*
	[0.0284,0.119]	[0.000718,0.197]	[0.0159,0.246]	[0.000825,0.0963]
Share of students eligible for free lunch[a,b]	0.0130	0.0433*	0.0413	0.00570
	[-0.0195,0.0454]	[0.00572,0.0808]	[-0.0104,0.0931]	[-0.0318,0.0432]
Number of charter schools in district[a,b]	-0.0152	-0.0544	-0.0606	-0.00573
	[-0.0610,0.0306]	[-0.137,0.0280]	[-0.144,0.0231]	[-0.0656,0.0541]
School district expenditure per student[a,b]	0.0258*	0.0483**	0.0829*	0.0173
	[0.00184,0.0497]	[0.0155,0.0811]	[0.0183,0.147]	[-0.00928,0.0440]
District income per capita (log)[b]	0.00444	-0.152	-1.398	-0.184
	[-1.330,1.339]	[-2.893,2.588]	[-6.122,3.326]	[-1.915,1.546]
District unemployment rate[a,b]	0.0559*	0.0444	0.101	0.0718*
	[0.00979,0.102]	[-0.0741,0.163]	[-0.0578,0.259]	[0.0128,0.131]
District Gini coefficient[a,b]	0.0114	0.0502	-0.0296	-0.0164
	[-0.0429,0.0657]	[-0.0415,0.142]	[-0.128,0.0683]	[-0.0771,0.0443]
District black share[a,b]	0.0358	0.0790*	0.155***	0.00698
	[-0.0432,0.115]	[0.00404,0.154]	[0.0796,0.230]	[-0.0792,0.0932]
District hispanic share[a,b]	-0.227*	-0.418*	-0.358	-0.273*
	[-0.425,-0.0291]	[-0.835,-0.000908]	[-1.001,0.285]	[-0.538,-0.00762]
District share over 65 years old[a,b]	0.00697	-0.0362	0.0242	0.00361
	[-0.0469,0.0608]	[-0.137,0.0645]	[-0.0913,0.140]	[-0.0631,0.0703]
District share below 18 years old[a,b]	0.164**	0.238*	0.287*	0.130*
	[0.0678,0.260]	[0.0386,0.438]	[0.0134,0.561]	[0.00473,0.255]
District preprimary share[a,b]	0.0133	0.0543	0.0339	0.0203
	[-0.0118,0.0385]	[-0.00223,0.111]	[-0.0285,0.0963]	[-0.00802,0.0486]
Term limited	-0.0213	-0.00545	-0.0224	-0.0264
	[-0.0480,0.00536]	[-0.0498,0.0389]	[-0.0881,0.0434]	[-0.0609,0.00801]
Margin of victory in last election[a]	0.0128	0.0218	0.00275	0.00327
	[-0.00741,0.0330]	[-0.0232,0.0668]	[-0.0259,0.0315]	[-0.0180,0.0246]
Seat is up for election	0.0189	0.107	0.0848	-0.00835
	[-0.0726,0.110]	[-0.0713,0.285]	[-0.0969,0.267]	[-0.135,0.119]
Assembly bill	0.00616	-0.0277	0.0792	0.0157
	[-0.0723,0.0847]	[-0.179,0.123]	[-0.0606,0.219]	[-0.0856,0.117]
Constant	0.108	1.821	14.45	1.815
	[-13.02,13.24]	[-25.32,28.96]	[-32.20,61.10]	[-15.22,18.85]
Year FE	Yes	Yes	Yes	Yes
Legislator FE	Yes	Yes	Yes	Yes
Observations	4,272	1,566	1,294	2,869
R-squared	0.3014	0.4676	0.5531	0.2430

Robust standard errors clustered by bill, 95% confidence intervals in brackets. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

[a] Expressed in standard deviations.

Table D4. Upward mobility interacted with control variables

	(1) Regression with interactions	(2) Marginal effects
Upward mobility[a]	0.488	0.115***
	[-3.612,4.587]	[0.0517,0.177]
Margin of victory in last election[a]	0.0168	0.0165
	[-0.00238,0.0359]	[-0.00280,0.0357]
Upward mobility[a]× Margin of victory in last election[a]	-0.00605	
	[-0.0204,0.00831]	
District income per capita (log)[b]	0.429	0.428
	[-0.813,1.672]	[-0.805,1.660]
Upward mobility[a]× District income per capita (log)[b]	-0.0352	
	[-0.435,0.364]	
District unemployment rate[a,b]	0.106*	0.106*
	[0.0133,0.198]	[0.0126,0.199]
Upward mobility[a]× District unemployment rate[a,b]	0.000733	
	[-0.0345,0.0360]	
District Gini coefficient[a,b]	0.0263	0.0275
	[-0.0336,0.0862]	[-0.0325,0.0874]
Upward mobility[a]× District Gini coefficient[a,b]	0.0232**	
	[0.00678,0.0396]	
District black share[a,b]	0.0392	0.0405
	[-0.0780,0.156]	[-0.0770,0.158]
Upward mobility[a]× District black share[a,b]	0.0253	
	[-0.0186,0.0691]	
District hispanic share[a,b]	-0.262	-0.263
	[-0.538,0.0145]	[-0.538,0.0115]
Upward mobility[a]× District hispanic share[a,b]	-0.0319	
	[-0.0823,0.0185]	
District share over 65 years old[a,b]	-0.0445	-0.0458
	[-0.119,0.0299]	[-0.122,0.0299]
Upward mobility[a]× District share over 65 years old[a,b]	-0.0254	
	[-0.0715,0.0208]	
District share below 18 years old[a,b]	0.154**	0.153**
	[0.0483,0.259]	[0.0464,0.260]
Upward mobility[a]× District share below 18 years old[a,b]	-0.0137	
	[-0.0699,0.0425]	
District preprimary share[a,b]	0.0212	0.0212
	[-0.00899,0.0513]	[-0.00996,0.0523]
Upward mobility[a]× District preprimary share[a,b]	0.000264	
	[-0.0296,0.0301]	
Academic performance index (API)[a,b]	0.0152	0.0154
	[-0.0171,0.0475]	[-0.0175,0.0482]
Upward mobility[a]× Academic performance index (API)[a,b]	0.00304	
	[-0.0139,0.0200]	
District student-teacher ratio[a,b]	0.0858*	0.0869**
	[0.0210,0.151]	[0.0218,0.152]
Upward mobility[a]× District student-teacher ratio[a,b]	0.0231*	
	[0.00317,0.0430]	
Share of students eligible for free lunch[a,b]	0.0253	0.0262
	[-0.000813,0.0513]	[-0.000554,0.0530]
Upward mobility[a]× Share of students eligible for free lunch[a,b]	0.0190	
	[-0.0283,0.0663]	
Number of charter schools in district[a,b]	-0.00256	-0.00181
	[-0.0442,0.0391]	[-0.0440,0.0404]
Upward mobility[a]× Number of charter schools in district[a,b]	0.0146	
	[-0.0192,0.0484]	
School district expenditure per student[a,b]	0.0289	0.0298
	[-0.00543,0.0632]	[-0.00543,0.0649]
Upward mobility[a]× School district expenditure per student[a,b]	0.0169	
	[-0.00494,0.0387]	
Term limited	-0.0152	-0.0159
	[-0.0472,0.0168]	[-0.0485,0.0166]
Term limited × Upward mobility[a]	-0.0135	
	[-0.0381,0.0111]	
Seat is up for election	0.0236	0.0224
	[-0.0584,0.106]	[-0.0610,0.106]
Seat is up for election × Upward mobility[a]	-0.0226	
	[-0.0651,0.0200]	
Assembly bill	0.00461	0.00494
	[-0.0715,0.0807]	[-0.0721,0.0820]
Assembly bill × Upward mobility[a]	0.00659	
	[-0.0380,0.0512]	
Observations	4,272	4,272
Year FE	Yes	
Legislator FE	Yes	
Controls	Yes	

Dependent variable is the probability of voting "no" on a bill. The sample consists of all types of inclusive bills. Robust standard errors clustered by bill, 95% confidence intervals in brackets. *** p <0.001, ** p <0.01, * p <0.05.
[a] Expressed in standard deviations.
[b] Lagged by one year.

Table D5. Baseline results- No, Yes & Abstain

	Dependent Variable:		
	(1) Vote No	(2) Vote yes	(3) Abstain
Upward mobility[a]	0.106***	-0.0530	-0.0527
	[0.046,0.17]	[-0.15,0.045]	[-0.12,0.017]
Academic performance index (API)[a,b]	0.00967	-0.0222	0.0125
	[-0.015,0.034]	[-0.046,0.0012]	[-0.014,0.039]
District student-teacher ratio[a,b]	0.0737**	-0.0812**	0.00749
	[0.028,0.12]	[-0.14,-0.025]	[-0.046,0.061]
Share of students eligible for free lunch[a,b]	0.0130	-0.0183	0.00532
	[-0.019,0.045]	[-0.083,0.046]	[-0.038,0.049]
Number of charter schools in district[a,b]	-0.0152	0.0185	-0.00322
	[-0.061,0.031]	[-0.051,0.087]	[-0.054,0.048]
School district expenditure per student[a,b]	0.0258*	-0.0291*	0.00330
	[0.0018,0.050]	[-0.056,-0.0017]	[-0.020,0.026]
District income per capita (log)[b]	0.00444	-0.842	0.837
	[-1.33,1.34]	[-2.37,0.69]	[-0.12,1.80]
District unemployment rate[a,b]	0.0559*	0.00838	-0.0642
	[0.0098,0.10]	[-0.075,0.092]	[-0.14,0.011]
District Gini coefficient[a,b]	0.0114	0.0452	-0.0566
	[-0.043,0.066]	[-0.0086,0.099]	[-0.12,0.0037]
District black share[a,b]	0.0358	-0.0569	0.0211
	[-0.043,0.11]	[-0.15,0.032]	[-0.028,0.070]
District hispanic share[a,b]	-0.227*	0.0445	0.183
	[-0.43,-0.029]	[-0.21,0.29]	[-0.10,0.47]
District share over 65 years old[a,b]	0.00697	-0.0145	0.00748
	[-0.047,0.061]	[-0.088,0.059]	[-0.055,0.070]
District share below 18 years old[a,b]	0.164**	-0.0953	-0.0685
	[0.068,0.26]	[-0.23,0.044]	[-0.19,0.054]
District preprimary share[a,b]	0.0133	-0.0115	-0.00182
	[-0.012,0.038]	[-0.047,0.024]	[-0.028,0.025]
Term limited	-0.0213	0.0289	-0.00763
	[-0.048,0.0054]	[-0.0046,0.062]	[-0.041,0.026]
Margin of victory in last election[a]	0.0128	0.00530	-0.0181*
	[-0.0074,0.033]	[-0.021,0.032]	[-0.035,-0.00079]
Seat is up for election	0.0189	0.0101	-0.0290
	[-0.073,0.11]	[-0.072,0.092]	[-0.10,0.047]
Assembly bill	0.00616	-0.0714	0.0652***
	[-0.072,0.085]	[-0.16,0.017]	[0.028,0.10]
Year FE	Yes	Yes	Yes
Legislator FE	Yes	Yes	Yes
Observations	4,272	4,272	4,272
R-squared	0.3014	0.3055	0.1706

The sample consists of all types of inclusive bills. Robust standard errors clustered by bill, 95% confidence intervals in brackets. *** p <0.001, ** p <0.01, * p <0.05.

[a] Expressed in standard deviations.

[b] Lagged by one year.

Table D6. Regression using sample of bills without inclusive policies

	Dependent Variable: Vote no	
	(1) Bills with inclusive reforms	(2) Bills without inclusive reforms
Upward mobility[a]	0.106***	0.0206
	[0.046,0.17]	[-0.0022,0.043]
Academic performance index (API)[a,b]	0.00967	-0.00137
	[-0.015,0.034]	[-0.011,0.0087]
District student-teacher ratio[a,b]	0.0737**	0.0295**
	[0.028,0.12]	[0.011,0.048]
Share of students eligible for free lunch[a,b]	0.0130	-0.00344
	[-0.019,0.045]	[-0.015,0.0080]
Number of charter schools in district[a,b]	-0.0152	-0.00970
	[-0.061,0.031]	[-0.029,0.0099]
School district expenditure per student[a,b]	0.0258*	0.00815*
	[0.0018,0.050]	[0.0011,0.015]
District income per capita (log)[b]	0.00444	-0.191
	[-1.33,1.34]	[-0.70,0.31]
District unemployment rate[a,b]	0.0559*	0.00637
	[0.0098,0.10]	[-0.015,0.028]
District Gini coefficient[a,b]	0.0114	-0.0127
	[-0.043,0.066]	[-0.028,0.0030]
District black share[a,b]	0.0358	0.00976
	[-0.043,0.11]	[-0.013,0.033]
District hispanic share[a,b]	-0.227*	-0.0129
	[-0.43,-0.029]	[-0.081,0.055]
District share over 65 years old[a,b]	0.00697	0.0245*
	[-0.047,0.061]	[0.0032,0.046]
District share below 18 years old[a,b]	0.164**	0.0318
	[0.068,0.26]	[-0.011,0.074]
District preprimary share[a,b]	0.0133	-0.000603
	[-0.012,0.038]	[-0.010,0.0092]
Term limited	-0.0213	-0.00593
	[-0.048,0.0054]	[-0.017,0.0048]
Margin of victory in last election[a]	0.0128	-0.00212
	[-0.0074,0.033]	[-0.0087,0.0045]
Seat is up for election	0.0189	0.00599
	[-0.073,0.11]	[-0.013,0.025]
Assembly bill	0.00616	-0.0459***
	[-0.072,0.085]	[-0.072,-0.019]
Year FE	Yes	Yes
Legislator FE	Yes	Yes
Observations	4,272	21,488
R-squared	0.3014	0.1592

Dependent variable is the probability of voting "no" on a bill. Robust standard errors clustered by bill, 95% confidence intervals in brackets. All continuous regressors are expressed in standard deviations. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

[a] Expressed in standard deviations.

[b] Lagged by one year.