

Can Ending At-Large Elections Encourage Racial Minorities To Run For Office?

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Abstract

Why do racial minorities remain underrepresented among office-holders, particularly at the local level? Previous research on descriptive representation often focuses on voter choices at the ballot box and attributes the paucity of minority candidates to voter bias. At the same time, given findings that at-large elections can diminish racial minorities' political power and candidates selectively run in favorable political landscapes, institutional electoral rules might contribute to the persistent disparity in racial representation among candidates. Despite these expectations, the dynamics under which electoral institutions shape candidate emergence among racial minorities remains understudied. I utilize the switch from at-large to by-district city council elections under the California Voting Rights Act of 2001 to causally identify how and under what conditions switching to by-district elections encourages racial minorities to run for local office.

1 Background

The election of Karen Bass as mayor of Los Angeles in November 2022 was a multifaceted historical event. Not only did Bass become the second Black mayor and first woman to lead the nation’s second-largest city, but moreover her swearing-in began a period in which, for the first time, Black mayors simultaneously held office in the four largest cities in America: New York, Los Angeles, Chicago, and Houston.

While these victories mark an important milestone in descriptive representation for Black Americans within the nation’s largest cities, racial and ethnic minorities have remained underrepresented in elected office throughout American history and at all levels of government (Kinder and Dale-Riddle, 2012). This troubling trend has persisted even while racial minorities approach a majority of the population. And while diversity among elected officials has improved, understanding the persistent under-representation of racial minorities in office continues to be an important area of study in politics. Scholars, seeking to explain this phenomenon, have largely characterized this problem as one of voter demand, and produced a glut of research documenting the extent to which discriminatory attitudes among white voters persist and influence their evaluations of candidates of color. These scholars come to the conclusion that in the face of opposition from white voters, candidates of color win when they can draw support from a sizable racial minority population. This conclusion has been complicated, however, by recent findings that candidates of color are increasingly elected outside of majority-minority districts and some select white voters might actually favor candidates of color, and these studies raise questions about the adequacy of racial animus among white voters as the sole explanation for under-representation (Juenke and Shah, 2015; Mikkelsen, 2023).

Yet by focusing on voter demand, these proposed explanations for the continued gap in racial minorities’ descriptive representation largely fail to address the question of candidate supply (Shah, 2014). Intuitively, descriptive representation among elected officials can only increase insofar as there are racial minorities running for office. Furthermore, it is

generally understood that — like all candidates — candidates of color strategically approach the decision whether or not to run for office (Black, 1972; Stone, 1980). If candidates of color disproportionately view the electoral environment as unfavorable for their potential candidacies, they will run at lower rates and racial minorities may remain underrepresented among officeholders. Thus, studies that seek to understand determinants of descriptive representation should grant considerable attention to the contextual factors that shape electoral conditions. And while reasonable scrutiny has focused on how the electorate’s racial composition and racial animus among white voters might affect strategic candidate emergence among candidates of color, the role of electoral institutions remains understudied.

By determining how votes are translated into legislative seats, electoral rules have historically been used to both promote and restrict political representation. One of the most notable ways in which electoral rules have shaped political representation is through the move from at-large to by-district legislative elections. In at-large legislative elections, all of the legislative seats are simultaneously decided by all of the voters. In contrast, in by-district legislative elections, the jurisdiction is divided into geographic districts that each elect a single seat on the legislative body. Reformers note that under at-large electoral systems, if preferences are sufficiently polarized and a majority group consistently votes as a faction, the majority group’s interests will dominate and given minority groups will effectively be shut out of the legislative body. If racial minorities are spatially distributed such that they are geographically compact enough to draw a district where the racial minority group constitutes a local majority, however, by-district elections should manage to produce minority representation on the legislative body even under the same conditions of racially-polarized voting.

While the theoretical expectations through which by-district elections should improve minority representation seem simple, their practical impact on minority office-holding appear more complex. Certainly, many scholars provide evidence to suggest that by-district elections are associated with stronger racial representation (Berry and Dye, 1979; Bledsoe,

1986; Collingwood and Long, 2019; Davidson and Grofman, 1994; Davidson and Korb, 1981; Engstrom and McDonald, 1981; Grofman, Handley and Lublin, 2001; Grofman, 1992; Karnig and Welch, 1982; Leal, Martinez-Ebers and Meier, 2004; Lublin, 1997*b*, 1999; Lublin and Voss, 2000; Marschall, Ruhil and Shah, 2010; Meier et al., 2005; Molina and Meier, 2016; Moncrief and Thompson, 1992; Polinard, 1994; Robinson and England, 1981; Stewart, England and Meier, 1989). At the same time, a number of studies find a null, mixed, or even negative association between the use of by-district elections and minority representation on legislative bodies (Bullock and MacManus, 1993; Cole, 1974; Fraga and Elis, 2009; Fraga, 2015; MacManus, 1978; Meier and Rutherford, 2016; Trounstein and Valdin, 2008; Welch, 1990; Welch and Karnig, 1978).

When trying to make sense of these seemingly contradictory findings, some traction is provided by Trounstein and Valdin (2008) and Abbott and Magazinnik (2020), whose findings demonstrate that by-district elections are more likely to lead to an increase in descriptive representation only when a minority group is highly concentrated and constitutes a substantial proportion of the population. Empirical tests providing explanations as to how these conditions lead district elections to promote minority representation, however, are largely absent. This hole in the literature can be explained in part by the fact that electoral reform tends to have effects that are largely context dependent, which makes robust causal estimation difficult.

Despite these quantitative challenges, some studies have begun to more carefully consider the exact mechanisms through which creating districts with compact and sizable minority populations leads to more racial minorities elected to office. One mechanical explanation is proffered by Hertz (2023), who finds that adopting by-district elections tends to reduce the gap in turnout between racial minorities and white voters. And while researchers provide robust support for the theoretical expectation that candidate emergence may explain some of the association between adopting district elections and an increase in minority representation, no previous studies have investigated whether electoral rules improve descriptive

representation through encouraging racial minorities to run for office.

The California Voting Rights Act of 2001 (CVRA) provides ample variation to provide leverage to overcome some of the previously stated empirical challenges facing research linking electoral institutions and descriptive representation. Under the CVRA, dozens of cities across California have been encouraged to switch from at-large to by-district city council elections in the last few years. As a result, the number of municipal by-district elections in California have nearly tripled since the CVRA was passed, and the conditionally random variation in the timing of this policy adoption allows us to more precisely estimate the effects of adopting by-district elections on minority candidate emergence. But as cities have been increasingly adopting by-district elections under the CVRA, it becomes increasingly important to improve our understanding about the reform and its effects on minority representation.

In this vein, this study builds on the previous literature studying electoral rules and racial representation while shifting focus to an important but under-explored mediating factor: minority candidate emergence. I leverage the exogenous variation in policy adoption under the CVRA and city-level panel data to estimate the effect that adopting by-district elections has on minority candidate emergence. By doing so, this study provides the first such causal estimates, and expands on our policy understanding of the mechanisms through which electoral systems shape minority officeholding. I hypothesize that under by-district elections, racial minorities should perceive more favorable electoral contexts and be encouraged to run for office.

2 Theoretical Expectations

2.1 Are Demographics Destiny? The Complicated Role of Voter Preferences

Political scientists and legal practitioners have long sought to understand why racial minorities lag white Americans among political officeholders. The need for studies on descriptive

representation, which broadly aim to clarify and fully understand what constrains and what empowers racial minority groups to elect co-ethnic candidates, is grounded in normative, structural, and policy justifications.

From a normative perspective, individuals in a multiracial democracy should have equal access to voting rights, representation, and basic civil liberties regardless of their race or ethnicity. In a case where racial minorities prefer coethnic candidates, we would expect that legislative bodies should generally reflect the racial composition of their constituencies, and as racial diversity among the electorate increases we would generally expect an equivalent pattern to emerge within the legislature. If both voter and legislator preferences are racially polarized, however, and racial minorities are underrepresented in the legislature, we would expect racial minorities to be increasingly at risk of having their policy interests dominated by the racial majority, raising clear normative concerns that democratically elected bodies should be racially representative of their voters.

The legal structure through which racial representation is evaluated also encourages a focus on descriptive representation. The passage of the Voting Rights Act of 1965 was constructed in the aftermath of historical segregation and Jim Crow voting rights restrictions, and in its review in *Thornburg v. Gingles* (1986) the Supreme Court expanded Section 2 to cover cases in which a “certain electoral law, practice, or structure interacts with social and historical conditions to cause an inequality in the opportunities enjoyed by black and white voters **to elect their preferred representatives**” (emphasis mine, *Civil Rights Division / Section 2 Of The Voting Rights Act*, 2015). In practice, this has meant that potential Voting Rights Act lawsuits often test racial minorities’ ability to elect their preferred candidates using partisan evaluations and — when elections are nonpartisan — candidate ethnicity.

Descriptive representation remains a compelling metric through which to evaluate racial representation in part because it is easily quantifiable and fairly straightforward to measure, while also remaining static across electoral contexts. It is also an outcome that has been shown to yield a plethora of well-documented beneficial effects for racial minority groups;

representation by a coethnic officeholder has been found to improve trust in government, increase political participation, lead to greater control over the allocation of public resources, and improve legislative support and responsiveness for racial minorities (Brown and Banks, 2013; Brown, 2014; Broockman, 2014; Butler and Nickerson, 2011; Dovi, 2002; Gay, 2002; Hero and Preuhs, 2013; Hertz, 2023; Mansbridge, 1999; Meier et al., 2005; Phillips, 1995; Rocha et al., 2010).

The American electorate has diversified significantly in the past few decades. In the 1980s, as the Supreme Court was deciding *Thornburg v. Gingles* (1986), the national population was overwhelmingly comprised of white Americans, who accounted for almost 80 percent of Americans. Black Americans, meanwhile, stood at 11.5 percent of the national population while Latino Americans were 6.5 percent and Asian Americans were 1.8 percent of the population respectively. By the beginning of the 2020s, however, the size of racial minority groups had grown considerably. In 2019, White Americans made up 60 percent and Black Americans were 12.5 percent of the national population. The Latino or Hispanic share of the population nearly tripled, comprising 18.5 percent, and Asian Americans accounted for nearly 6 percent of the national population (Frey, 2020). These trends are not expected to subside; indeed, a 2015 Census report estimated demographic and immigration trends will continue to diversify the American population and by 2044 the white majority will become a white plurality (Colby and Ortman, 2014).

Given the myriad ways in which descriptive representation has been shown to benefit racial minorities and the remarkable pace at which racial minority groups have increased in their share of the electorate, a natural question is whether minority representation among political officeholders has kept pace with the rapid strides in diversity among the adult population. It is an undeniable fact that the number of racial minorities in Congress has greatly increased since the 1980s. But while racial minorities are nearly 40 percent of the American population, they comprise just 23 percent of the 117th Congress. This persistent underrepresentation is amplified at the local level (in 2016, Feeney and Camarena (2021)

found that just 17 percent of mayors were racial minorities) and for particular racial minority groups (a report by the National Association of Latino Elected and Appointed Officials found that Latino Americans were less than 2 percent of all national and local elected officials).

One frequently promoted explanation for racial minorities' lagging representation among officeholders is that voters' racial preferences are responsible. A wide body of work suggests that it is not just racial polarization, but specifically racial animus among white voters who refuse to back minority candidates that widely drives the enduring gap between racial minority groups' share of the population and their rates of holding political office. This theory has garnered significant attention and prominence, and has been identified as both the "leading hypothesis" (Highton, 2004) and even the "conventional wisdom" (Swain, 1995).

Certainly, this conclusion is founded on a considerable amount of empirical evidence. Studies of individual-level voter behavior have consistently found evidence across racial groups that voters prefer candidates that share their ethnicity (Ansolabehere and Fraga, 2016; Barreto, 2007; Philpot and Walton Jr, 2007; Sigelman and Sigelman, 1982; Terkildsen, 1993). Experimental studies have also found that white voters tend to evaluate Black candidates less favorably than white candidates (Berinsky et al., 2011; McDermott, 1998; Moskowitz and Stroh, 1994). This theory is bolstered, its proponents claim, by observational evidence in congressional voting patterns that show Black candidates are frequently elected by congressional districts that have substantially Black voting populations and are rarely elected by congressional districts that have especially large white populations (see, for example Canon, 1999; Lublin, 1997*a*), in addition to studies that racial divisions play a major role in local voting patterns (Hajnal and Trounstone, 2014).

Taken together, the implication is that if these theoretical explanations hold and racial attitudes dominate candidate evaluations, racial minorities running for office will draw support from their coethnic voters and face opposition from white voters. If this dynamic persists, then racial minorities running for office would have limited viability in electoral jurisdictions that are largely white, and would only face support when running for office in electoral juris-

dictions that have a sizable coethnic population. This premise, in which racial polarization constrains minority officeholding to majority-minority districts, has been largely accepted by most previous studies on the Voting Rights Act (Lublin, 1997*b*, p.40).

More recent empirical work, however, has provided a good deal of evidence to complicate this conclusion and raise concerns about its generalizability. Several studies have shown that coethnic support among racial minorities is not unconditional but rather is subject to moderation by partisan and other ideological considerations as well as the strength of their racial identity (Ansolabehere and Fraga, 2016; Cho, Costa and Horiuchi, 2023; Schildkraut, 2013; Visalvanich, 2017). In spite of the theoretical expectation that racial animus among white voters largely impacts minority officeholding, scholars have also found that the expected discriminatory attitudes are largely overstated (Highton, 2004; Abrajano and Alvarez, 2005). There is also strong evidence to suggest that ideological and partisan beliefs can lead white voters to actually prefer candidates of color (Agadjanian et al., 2021; Mikkelsen, 2023), and notably this can occur even in spite of strongly-held racial animus (Karpowitz et al., 2021). The observational evidence, too, is mixed; an increasing number of racial minorities in Congress have been winning election in majority-white districts (Mikkelsen, 2023) and White et al. (2023) examine state legislative election data and find no evidence to suggest that racial minorities running for office face an electoral penalty relative to copartisan white candidates in close elections. These findings suggest that white voter bias may be an inadequate explanation to understand why racial minorities' rates of officeholding lag their share of the population, and prove that more investigation into potential mechanisms driving this phenomenon are needed.

2.2 Institutional Arrangements and Descriptive Representation

The electoral systems that determine how votes are apportioned into legislative seats are one such area of attention in the search to understand racial representation. These studies generally compare the use of the two most common electoral institutions in local elections:

at-large and by-district elections. Under at-large elections, all seats in a given legislative body are concurrently elected by the entire voting jurisdiction. This remains the most prominent electoral institution in American local elections (Clark and Krebs, 2012). In an at-large system, if preferences are racially polarized it becomes likely that a racial majority group can vote as a faction and effectively decide every seat on the legislative body even if they make up a relatively slim majority of the voting population.

Under by-district elections, however, the seats on the legislative body are apportioned across a set of geographically distinct districts whose residents each elect one seat. In a by-district electoral system, if preferences are racially polarized and racial minorities are sufficiently compact, it becomes possible to draw districts where racial minority groups comprise local majorities. Under these conditions, it can become possible to more closely apportion legislative seats that reflect the racial makeup of the overall jurisdiction. Recalling that whatever the individual-level underlying mechanisms driving lagging descriptive representation among racial minorities might be, it is a strong and consistent finding that racial minorities win political office at higher rates when running in electoral jurisdictions with significant coethnic populations, this is the basis behind the use of by-district elections under the Voting Rights Act to improve minority representation.

While there is a wealth of evidence that links by-district elections and improved racial representation (Berry and Dye, 1979; Bledsoe, 1986; Collingwood and Long, 2019; Davidson and Grofman, 1994; Davidson and Korbel, 1981; Engstrom and McDonald, 1981; Grofman, Handley and Lublin, 2001; Grofman, 1992; Karnig and Welch, 1982; Leal, Martinez-Ebers and Meier, 2004; Lublin, 1997*b*, 1999; Lublin and Voss, 2000; Marschall, Ruhil and Shah, 2010; Meier et al., 2005; Molina and Meier, 2016; Moncrief and Thompson, 1992; Polinard, 1994; Robinson and England, 1981; Stewart, England and Meier, 1989), by-district elections are, of course, by no means a panacea. Trounstein and Valdini (2008) and Abbott and Magazinnik (2020) note important limitations on district elections' ability to improve descriptive representation. First, a given racial minority group must comprise a share of the voting

population that is sufficiently large in order to impact election results. If, for example, there are five seats on a city council and a racial minority group comprises significantly less than 10 percent of the voting population, it is mathematically impossible to draw a seat where at least 50 percent of the seat's electorate belongs to the racial minority group while also ensuring that all five seats contain approximately 20 percent of the city's voting population. Second, the racial minority group must be sufficiently geographically compact to allow for drawing a district in which they comprise a local majority of the voting population.

As a result, at-large elections have frequently been the target of voting rights lawsuits under the federal Voting Rights Act. Convincing empirical studies estimating the ability of adopting by-district elections to promote racial minority representation, however, remain somewhat sparse. One challenge lies in the previously-noted contextual limits that both constrain the ability of electoral reform to impact representation and also present challenges to conducting robust causal estimation. Another challenge arose from the decision in *Thornburg v. Gingles* (1986), which raised the burden of proof on plaintiffs hoping to prove the existence of vote dilution in at-large electoral systems. This decision had the effect of largely limiting the scope under which federal Voting Rights Act lawsuits could induce a switch from at-large to by-district elections.

Some headway was provided in the form of the California Voting Rights Act of 2001 (CVRA). The CVRA reaches further than its federal counterpart to promote by-district elections in two crucial ways. First, the CVRA lowers the threshold for success facing plaintiffs, by eliminating the geographic concentration and other requirements amended in *Gingles* and merely requiring that plaintiffs provide evidence that voting patterns in the jurisdiction have become racially polarized. Second, the CVRA also increases the potential costs for cities facing CVRA lawsuits by compelling city governments to cover the cost of attorney fees, expert expenses, and all other court and legal costs both in lawsuits decided in favor of the plaintiff and in lawsuits where the city government decides to reach a settlement out of court prior to a verdict. These both create incentives for city governments to preemptively

adopt by-district elections in order to avoid the possibility of taking on considerable legal costs and also keep control over the process through which districts are drawn, rather than cede these powers to the court. Indeed, while some cities initially facing CVRA lawsuits attempted to engage in legal defenses of their at-large electoral systems, several visible legal losses ensued and subsequently most California cities opted to adopt by-district elections voluntarily when facing a CVRA lawsuit rather than risk a loss. This policy adoption has become widespread in recent years, and more than 80 California cities have since adopted by-district elections under the CVRA since it was first enacted.

The ubiquity of conversions to by-district elections under the CVRA widely increased the potential cases and induced semi-random variation through which to estimate any potential effects of changing electoral systems on minority representation. Several scholars have utilized the CVRA and generally found that the law has promoted racial representation. Collingwood and Long (2019) estimate that adopting by-district elections under the CVRA increased descriptive representation on city councils by 10 percent on average and by greater than 20 percent in cities that had high Latino populations. When looking at school district elections, Abbott and Magazinnik (2020) find that while there did not appear to be a general effect of adopting by-district elections under the CVRA, doing so led to dramatic increases in descriptive representation in segregated school districts with high Latino populations.

But while the causal effect of adopting district elections on a subsequent increase in descriptive representation is relatively established and it has been consistently identified that minority group size and geographic compactness moderate this effect, the actual underlying mechanisms driving these relationships are less clear and remain underexplored in the literature. Hertz (2023) suggests that one possibility lies in voter turnout, and estimates that the switch to by-district elections under the CVRA also decreased turnout gaps with white voters for Latino and Asian voters in California. Still, given findings in the behavioral literature on the context-dependent nature of racial polarization and pointing to potentially overstated effects of racial animus among white voters, individual-level theories seem an

inadequate explanation for these relationships.

Furthermore, as Shah (2014) notes, analyses that focus on racial minorities' ability to win political office cannot adequately disentangle between factors that both improve racial minorities' chances of electoral victory and also improve racial minorities' propensity to enter races for office. Estimating the effect of switching to by-district elections on racial minorities' rates of officeholding without controlling for the rates at which racial minorities initially ran for office erroneously conflates cases in which racial minority candidates ran, but did not win, and cases in which no racial minority candidates won because there were no racial minority candidates who ran. By doing so, if adopting by-district elections increases the likelihood that racial minorities run for office, researchers run the risk of overestimating the impact of switching to by-district elections on descriptive representation by failing to control for the changes in descriptive representation that are caused by electoral institutions increasing the supply of candidates.

2.3 Shifting Analyses to Consider Candidate Supply

Can strategic candidate emergence explain some of the complicated findings on the link between electoral system and minority representation? Because racial diversity among candidates who win office is conditional on the racial diversity of the candidates who seek office in the first place, analyses of the former must consider the latter. Yet much of the previously-cited literature on descriptive representation almost uniformly assumes that voters are facing electoral choices in which qualified minority candidates are running for office. This assumption seems especially strange given that much of the same literature acknowledges that racial minorities are underrepresented in the population as well as among officeholders.

There are clear theoretical reasons to expect adopting district elections to encourage racial minorities to run for office. It has been frequently found that potential candidates take a strategic approach in evaluating their chances of victory when making their decisions about when and where to run, and that identity can play a role in these decisions (Black,

1972; Fox and Lawless, 2004, 2005; Juenke and Shah, 2015). Candidates also make these decisions to enter or abstain from races by evaluating whether the resource environment (in terms of their fundraising ability, staffing resources, and political connections) is favorable to their potential candidacy (Lawless, 2012).

Among potential candidates, racial minorities tend to be less experienced, smaller political networks, lower rates of incumbency, and more constrained fundraising abilities than white potential candidates (Moncrief, Squire and Jewell, 2001). A switch to by-district elections from at-large elections has the potential to reduce these disparities and encourage racial minorities to enter electoral contests at similar rates to white candidates in a few ways. Relative to at-large elections, by-district elections decrease the size of the electoral battlefield and decrease the cost of campaigning, potentially lowering barriers to racial minority candidacies.

While the racial composition of an electoral jurisdiction may not be strongly linked to voter bias at the ballot box, evidence from a conjoint experiment by Doherty, Dowling and Miller (2019) suggests that the perception that it might has been shown to shape behavior among local political party recruiters. They also find evidence that while party chairs view minority candidates as less likely to draw the same electoral support as white candidates, these perceptions are lessened in heavily-minority electoral contexts. Thus, by creating smaller electorates that are more diverse than the city’s at-large population, district elections might stand to further reduce the perceptions that racial minorities suffer an electoral penalty relative to white candidates and increase the rates of racial minorities seeking office.

In summary, I hope to build on the previous literature in a number of important ways. By estimating the impact of adopting by-district elections on racial minority candidate emergence, I illuminate the role of electoral institutions in shaping a key determinant of descriptive representation. By doing so, I add to our understanding of previous studies and clarify the path through which a key reform improves racial representation.

3 Data and Measurement

This study focuses on cities (any incorporated municipality) in the state of California. To measure the number and racial breakdown of candidates running for office in each city over time, I draw city-wide and district-level election data from the American Local Government Elections Database (de Benedictis-Kessner et al., 2023). This dataset provides me with a broad set of election data — including candidate name, vote totals, and vote share — and is one of the broadest publicly-available sources of local election returns. From this source, I draw on 10629 candidates in 169 cities across California, between 1989 and 2021.

I also rely on the data to identify candidate race/ethnicity, which is primarily estimated via two methods. In the first approach, candidate race/ethnicity is drawn when possible from definitive sources that include data labeled by workers through Amazon Mechanical Turk and information provided by non-profit organizations. In the second, de Benedictis-Kessner et al. (2023) train a Random Forest for multi-class classification with 10-fold cross-validation scheme using voter file data, surname-based Bayesian Improved Surname Geocoding (BISG) (Imai and Khanna, 2016), the fully Bayesian Improved Surname Geocoding (fBISG) developed by Imai, Olivella and Rosenman (2022), and a pre-trained convolutional neural network model that uses photos of a candidate’s face to predict their race/ethnicity. These methods of estimating individual-level race have been used in previous work on minority voting rights (e.g. Barreto et al., 2022/2023) and have been found to provide reliable racial estimates for use in political analysis (Clark, Curiel and Steelman, 2022). Through this data cleaning, I construct the names and estimated ethnicity for every candidate across every city council election in California since the CVRA was passed in 2001, and in fact back to 1989.

3.1 Outcomes

I use my cleaned candidate data, aggregated at the city-year level, to estimate a primary outcome as the proportion of candidates seeking election in a city-year who belong to a given

racial minority group. I use proportions, rather than the raw number, because the number of seats on a city council varies across cities, though I also consider the raw number as a secondary check. Additionally, I estimate the number of candidates belonging to a given minority group who successfully won office as a proportion of the total number of candidates from that minority group who ran for office in a particular city-year as an additional outcome. This measure estimates whether minority groups won office at higher or lower rates following the switch to by-district elections under the CVRA.

3.2 Treatment

To track and measure the cities that adopted by-district city council elections under the CVRA, I use the universe of cities analyzed in Collingwood and Long (2019) and Hertz (2023) as a starting point. Because some cities have undergone CVRA-induced redistricting in the few years following those studies, I expanded this list following a search of local media reports, other public records, and conversations with policy experts. Among the treated cities — those that switched from at-large city council elections to by-district city council elections in the years following the CVRA’s passage — I then recorded the year in which the switch was completed, defined as the election year after which every seat on a city council had been elected via by-district elections.

3.3 Additional Controls

I also collect data on key potential controls by theorizing about city-level demographics that vary over time and correlate with minority participation, vote choice, and candidacy. Because we have strong theoretical reasons to believe that city-level diversity moderates the effects of electoral institution on candidate emergence, I draw city-level demographic data from the American Community Survey (ACS). The ACS is a large-scale, high-quality dataset that produces demographic estimates periodically from continuous monthly survey data. I draw estimates of a city’s citizen voting age population (CVAP) and its racial demographic

breakdown from the ACS and merge this data with the CEDA election data. I also draw relevant socioeconomic data, including city-level median income at the aggregate and racial group levels, and educational attainment. I also record the total number of seats on the city council, as this is a key determinant of both the electoral context and its consequences. I merge these characteristics to construct my panel dataset, with observations at the city-year level.

4 Empirical Strategy

I employ a two-way fixed effects (TWFE) approach to estimate the effect of switching to by-district elections on minority candidate emergence using the following equation:

$$Y_{it} = \beta_0 + \beta_1 \times \text{Adopted By-District Elections}_{it} \\ + X_{it}\gamma + \eta_i + \rho_t + \epsilon_{it}$$

where the outcome Y_{it} is the proportion of candidates seeking election in city i and election year t who belong to a given racial minority group. I estimate this model among the Latino population, and then re-estimate the model for the Asian American population. Under the two-way fixed effects estimation assumptions, the estimand β_1 should estimate the causal effects of switching to by-district elections under the CVRA on minority candidate emergence.

Because we would expect to see the proportion of racial minorities running for city council rise conditional on the size of the coethnic population if the CVRA is indeed successful in promoting minority candidacies, I also estimate the following interaction model:

$$\begin{aligned}
Y_{it} = & \beta_0 + \beta_1 \times \text{City Proportion Minority}_{it} + \beta_2 \times \text{Adopted By-District Elections}_{it} \\
& + \beta_3 \times (\text{City Proportion Minority} * \text{Adopted By-District Elections}_{it}) \\
& + X_{it}\gamma + \eta_i + \rho_t + \epsilon_{it}
\end{aligned}$$

Here, my theoretical estimand is the marginal effect of adopting by-district elections conditional on a city’s racial diversity, equivalent to $\beta_2 + \beta_3 \times \text{City Proportion Minority}_{it}$. This approach borrows from a number of previous studies, first Engstrom and McDonald (1981) and later Meier and Rutherford (2016); Trounstine and Valdini (2008) and Abott and Magazinnik (2020).

While some concerns have been raised that TWFE estimators may be invalid in the face of treatment heterogeneity over time or by treatment “cohort” (Athey and Imbens, 2022; Borusyak, Jaravel and Spiess, 2022), Wooldridge (2021) notes that these concerns can be addressed by estimating the “extended” TWFE estimator instead. I re-estimate my results using the “extended” TWFE estimator to show that my results are robust and include these in an appendix. TWFE estimation also relies on an assumption that there are no potentially unobserved confounders driving treatment selection that vary with time and are correlated with the outcomes. I test this assumption by comparing the pretreatment outcome trends, and any remaining variation should be accounted for in the city-level controls included in the analysis.

Under the TWFE assumptions, the estimand $\beta_2 + \beta_3 \times \text{City Proportion Minority}_{it}$ should estimate the marginal causal effects of switching to by-district elections under the CVRA on minority candidate emergence, conditional on the minority population in a given city. Recall that because this is an interaction model, therefore β_2 should recover the causal effects of switching to by-district elections under the CVRA on candidate emergence for a minority group in cities where that minority group is 0 percent of the population.

Table 1: Effect of Adopting By-District Elections on Latino Candidate Emergence

	Number of candidates	Percent of candidates	Win rate
Adopting Districts Under CVRA	0.374** (0.126)	0.047** (0.016)	0.070* (0.035)
Num.Obs.	2148	2148	2148
R2	0.005	0.004	0.002
RMSE	1.07	0.14	0.30

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

5 Results

Table 1 presents the results from my two-way fixed effects regression test of the effect adopting by-district elections has on Latino candidate emergence. I find that ending at-large elections and implementing by-district elections encouraged Latino candidates to run for office and increased their probability of winning. I estimate that city council elections in cities that switch to by-district elections under the CVRA have, on average, 0.37 more Latino candidates running for office ($p=0.003$). I also estimate that Hispanic candidates for city council are, on average, a 5 percent greater share of the total candidates in cities that adopt by-district elections ($p=0.004$). I estimate that Hispanic candidates for city council also win office at rates 5 percentage points higher following CVRA-based redistricting ($p=0.04$).

Table 2 presents the results from my two-way fixed effects regression test of the effect adopting by-district elections has on Asian American candidate emergence. I do not find any effects of adopting by-district elections on increasing the number of Asian Americans running for city council, the percent of Asian American candidates among total candidates running for city council, or the win rate of Asian American city council candidates. I suspect that one factor driving these null findings is that despite the fact that Asian Americans are a sizeable racial minority group in California, there are very few cities where Asian Americans comprise a meaningfully large size of the population. The median city is just 13 percent Asian American, and Asian Americans are less than 25 percent of the population in more

than 77 percent of cities in my sample. Since we theoretically would expect the CVRA to have its most noticeable effects when Asian Americans are a large part of the population, this potentially presents problems for statistically estimating an effect.

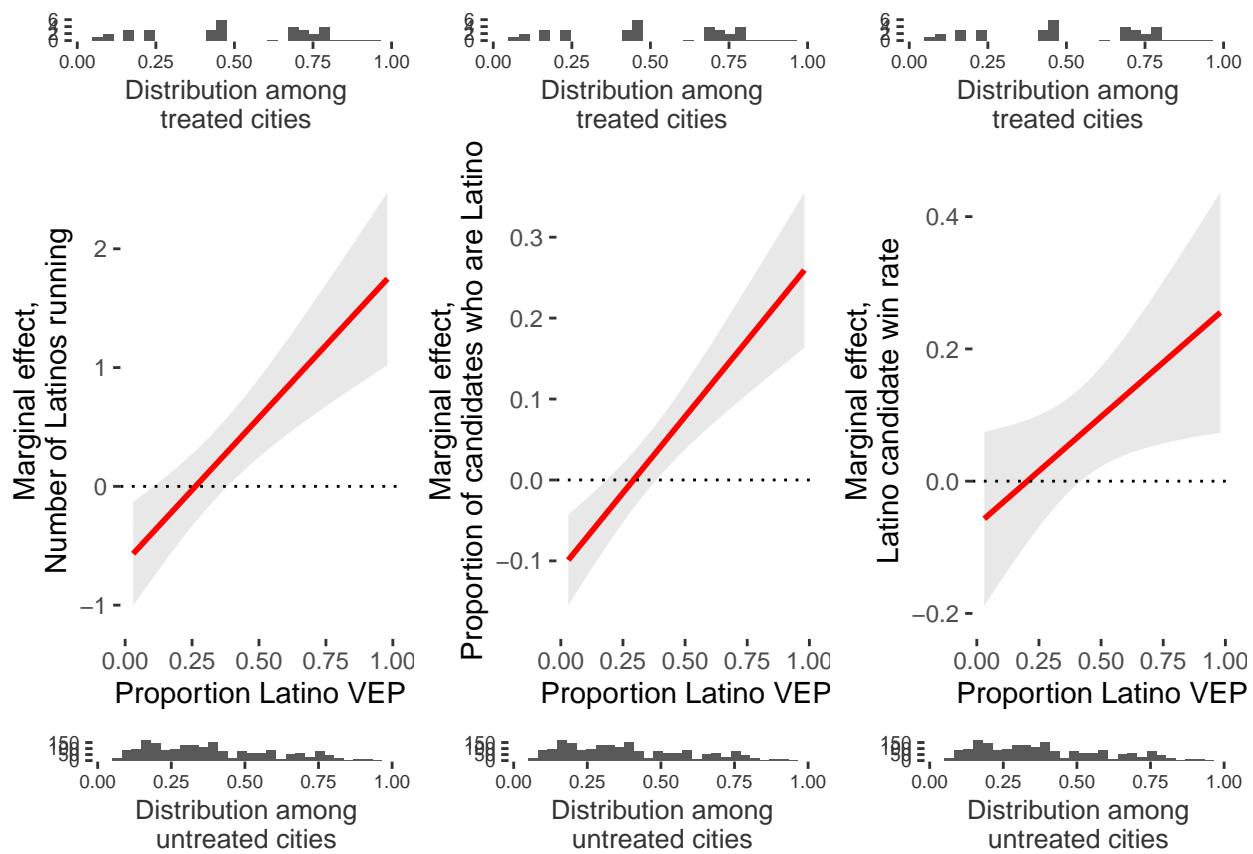
In addition to these findings, however, there is important heterogeneity in the effects that by-district elections have on candidate emergence. We have strong theoretical reason to expect effects to be strongest in cities where there is a sufficiently large minority population to create winnable districts for minority candidates. Accordingly, I interact treatment with the percent of the city that is Latino or Asian American, and plot the marginal effects of adopting by-district elections over all observed values of Latino or Asian American populations in the sample. For Latinos, this means the x-axis is bounded between 3 percent and 97 percent, and for Asian Americans the x-axis is bounded between 0.4 percent and 70 percent. The histograms at the top of the plot represent the distribution of observed Latino or Asian American populations in the treatment group, and the histograms at the bottom of the plot represent the distribution of observed Latino or Asian American populations in the control group.

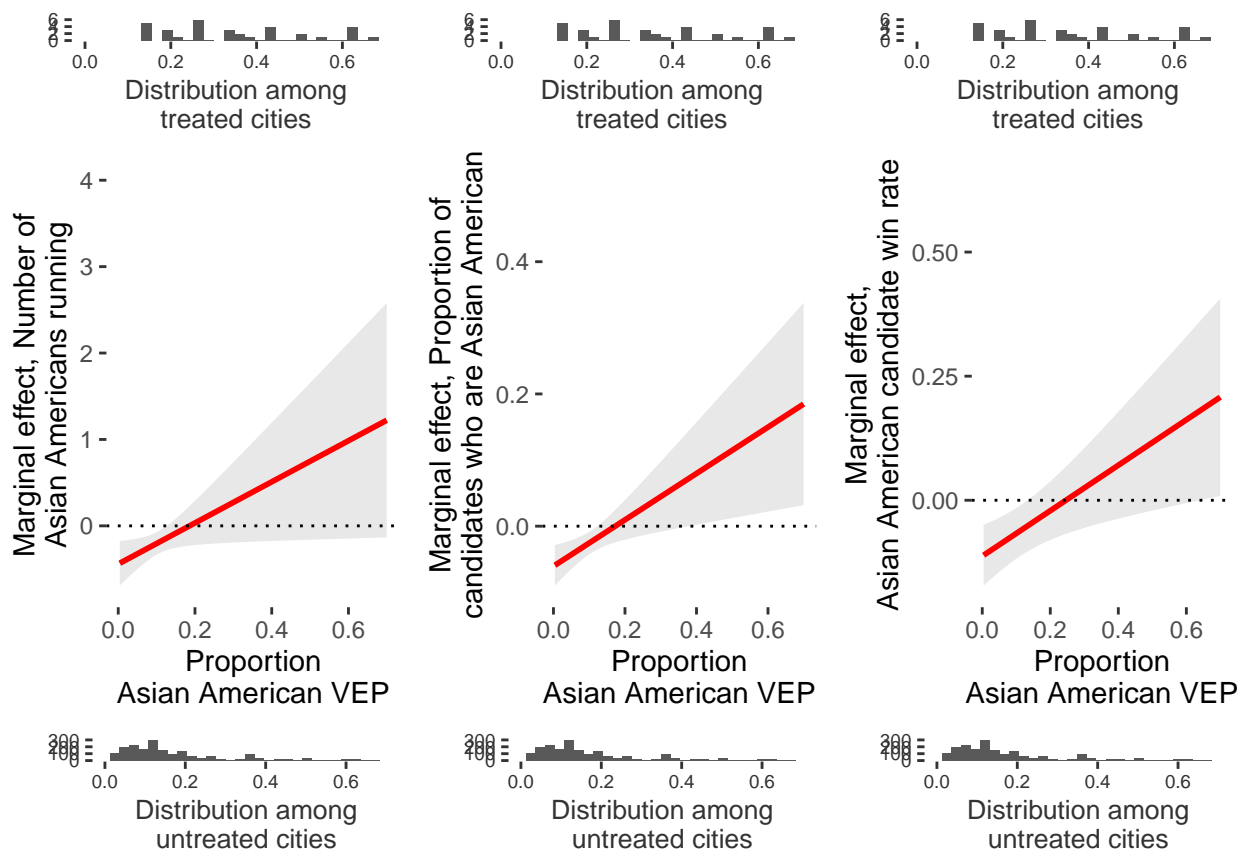
From these plots, we can note that treatment is conditional on racial minorities being a sufficiently large proportion of the population. For cities with a Latino population at the first quartile (20 percent), the CVRA has a statistically null effect on the share of candidates running for city council who are themselves Latino. For cities with a median Latino population (36 percent), however, districting under the CVRA is estimated to increase the share of Latino candidates running for city council by 3 percentage points. In cities with a Latino population at the third quartile (54 percent), I estimate that the CVRA increases the percent of Latino city council candidates by 9 percentage points.

Table 2: Effect of Adopting By-District Elections on Asian American Candidate Emergence

	Number of candidates	Percent of candidates	Win rate
Adopting Districts Under CVRA	−0.099 (0.067)	−0.010 (0.010)	−0.046 (0.027)
Num.Obs.	2148	2148	2148
R2	0.001	0.001	0.002
RMSE	0.57	0.09	0.23

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$





6 Conclusion

Does ending at-large city council elections and implementing by-district elections encourage racial minorities to run for office? The preliminary evidence suggests that the CVRA increased the number of Latinos running for office, their percent share of total city council candidates, and their probabilities of successfully winning office. These effects are strongest in cities where Latinos are more than 20 percent of the population. I do not find evidence to suggest the CVRA increases candidate emergence for Asian Americans, except for in cities where Asian Americans are more than 50 percent of the population. I note, however, that this may be due to the relative lack of cities in my sample where Asian Americans compose more than 25 percent of the population.

As I move forward with this project, I hope to incorporate balance tables for pre-treatment covariates as well as the test for pre-treatment trends in a time-variant treatment setting described by Autor (2003). I also plan to estimate the number of city council seats in a city-year where at least one candidate from a given racial minority group ran for office, as a proportion of the total number of city council seats facing elections in that city-year as an alternative outcome. This should measure whether minority candidacies competed for more or fewer seats following the switch to by-district elections under the CVRA.

Finally, I hope to tie these results to the descriptive representation outcomes at play. Is the increase in descriptive representation under the CVRA a result of its positive effects on candidate supply found here, or does this mostly result from voter demand effects (e.g. increased turnout as found by Hertz (2023))?

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