

One Run Leads to Another: Minority Incumbents and the Emergence of Lower Ticket Minority Candidates*

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Abstract

The primary determinant of minority office holding is the racial/ethnic composition of the legislative district. While an older literature focused on white resistance to minority representatives, more recent work focuses on the increased supply of minority candidates in heavily-minority districts. Using comprehensive data on the race/ethnicity of state legislative candidates nationwide in 2012 and 2014, we find that minority candidates still emerge at lower rates than whites after accounting for district composition. Leveraging detailed information about the overlap between congressional and state legislative districts, we then demonstrate that the victories of candidates of color for Congress reduce the co-ethnic/racial demographic thresholds for state legislative candidacy, and that the same pattern holds for white incumbents and state legislative candidacies. Indeed, once accounting for both the race of congressional incumbents and the racial/ethnic composition of state legislative districts, white, Latino, African-American, and Asian American state legislative candidates emerge at similar rates. These results narrow the set of mechanisms that contribute to the underrepresentation of racial/ethnic minority groups, suggesting that perceptions of minority candidate viability play a key role in structuring contemporary disparities in who runs for office.

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Political scientists and legal scholars have long focused on the relationship between electoral district demographics and the race/ethnicity of officeholders in seeking to understand racial/ethnic minority underrepresentation. Modeling the relationship between these factors as a representation “threshold,” or the percent that a racial/ethnic group must comprise to achieve at least a 50% chance of having a co-ethnic representative, researchers have focused on places with equal opportunity for minority voters. The general consensus is that districts with a majority or near-majority-minority population are necessary to ensure substantial non-white representation (Grofman, Handley and Lublin 2001; Lublin et al. 2009).

As most legislative districts nationwide do not have large minority populations, the paucity of minority representatives continues to be attributed to racial/ethnic voter compositions and white voter bias against minority candidates (Lublin et al. 2009). This “voter-demand” model suggests that without a substantial minority population to counter white opposition, minority candidates could not be elected. However, scholars have also identified instances where minority representation occurs outside of majority-minority districts, challenging the notion that white voter bias is sufficient to explain underrepresentation (Highton 2004; Juenke and Shah 2016). More recent work focuses on the supply of minority candidates, suggesting a better explanation for minority underrepresentation is the fact that minority candidates rarely emerge in white districts, but when they do, they win at similar rates to white co-partisans (Juenke and Shah 2016; Juenke 2014).

The shift in focus to racial/ethnic minority candidate emergence and supply produces new opportunities for research addressing minority representation. Chief among these is the possibility that minority candidates may be discouraged from seeking office due to perceived inability to win, an insight drawn from the literature on gender and politics. Parties exert substantial control over who seeks office in legislative elections, and scholars have determined that gender underrepresentation may be a function of partisan recruitment and gatekeeping (Lawless 2011; Crowder-Meyer 2013). Party elites may discourage

women from running due to a perception that they are less likely to win and less qualified as candidates (Sanbonmatsu 2006), a perception that may change with the success of women candidates (MacManus 1981; Broockman 2014). With the understanding that minority candidates are less likely to win in heavily-white districts, minority candidates may be discouraged. Could perceptions shift if there is evidence that minorities can win?

We build upon the emergence-focused literature on racial/ethnic minority representation, and add an important contextual factor not included in previous work — the presence of co-racial or co-ethnic higher-office political incumbents. We hypothesize that the presence of minority higher-level officeholders influences the perceived chance of minority down-ballot success. Leveraging detailed information about the overlap between congressional and state legislative districts, we demonstrate that the victories of candidates of color for Congress reduce the co-ethnic/racial demographic thresholds for state legislative candidacy, and that the same pattern holds for white incumbents and state legislative candidacies. Indeed, once accounting for both the race of congressional incumbents and the racial/ethnic composition of state legislative districts, nonparametric modeling indicates that white, Latino, black, and Asian American state legislative candidates emerge at similar rates. These results narrow the mechanisms that contribute to the underrepresentation of racial/ethnic minority groups, suggesting that perceptions of minority candidate viability are key in structuring disparities in who seeks office.

Data and Research Design

The data used in this project combines information about the race of politicians, district demographics, and geographic overlap between electoral jurisdictions. We began with a listing of 2012 and 2014 state legislative general election candidates drawn from the State Legislative Elections Returns database (Klarner 2018).¹ The race/ethnicity of state

¹Elections for 41 out of 46 states holding elections in 2012 or 2014 are included in our analysis. See Section A1 of the online appendix for details regarding our candidate data.

legislative candidates was generated through a combination of voter file-based modeling conducted by the Women Donors Network’s Reflective Democracy Campaign and expert coding conducted by the authors.² Then, the candidate-level data were merged with Census block-level voting age population (VAP) from the 2010 US Census, reconstructing from the block level each 2012 and 2014 state legislative district’s racial/ethnic composition and making sure to account for 2012 redistricting as appropriate.

Using the same block correspondence tables used to reconstruct the demographics of state legislative districts, we determined the proportion of overlap between state legislative districts and each congressional district within a state. To operationalize the presence of an incumbent U.S. House member of a given race for each state legislative district, we computed what proportion of the population had a member of congress of said racial/ethnic group. The primary unit of analysis is the state legislative district, with separate observations for 2012 and 2014 if the district held an election in each year. In total, we have data on 11,866 unique state legislative candidates contesting 9,716 general elections in 2012 and 2014; 11,344 of these candidates were identified as [non-Hispanic] white, African-American, Latino, or Asian American using the aforementioned sources.

If, as we hypothesize, factors separate from the demographic composition of districts are also predictive of candidate emergence, we should observe variation in the ethno-racial composition of the district. In other words, we should observe minority candidates running for office in areas where their ethnic group does not make up a majority of the population (Fraga 2016). As expected, a substantial number of black, Latino, and Asian American candidates emerge from majority-minority districts. However, we also observe hundreds of minority candidates seeking office in places where their ethnic group composes a far smaller share of the electorate. In fact, a majority of Latino candidates sought office in districts where the Latino VAP was less than 50% of the district, and nearly all Asian American candidates seek office where the Asian population is less than 20%.

²See Section A1 of the online appendix for full race/ethnicity coding details.

Results

The analysis we pursue provides separate results for non-Hispanic whites, African-Americans, Latinos, and Asian Americans. Using the state legislative candidate data, we determined whether each district had a general election candidate from the racial/ethnic group in question and had substantial overlap with congressional districts having an incumbent from the same group, and the likelihood of seeing a minority candidate on the ballot given different representational contexts.

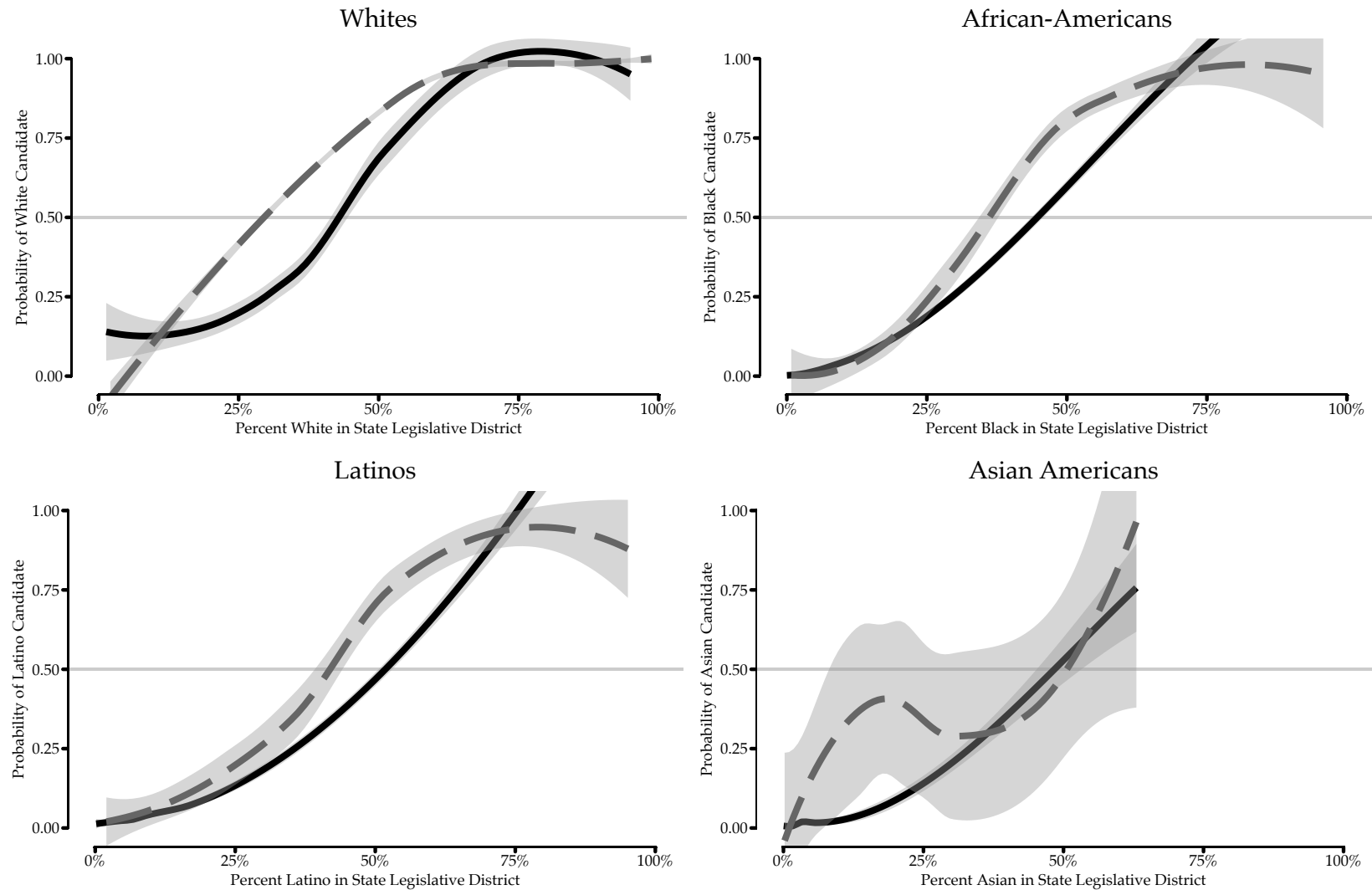
Previous research has found a robust relationship between the demographic composition of an electoral jurisdiction and the candidates who seek office in said jurisdiction (Canon, Schousen and Sellers 1996; Juenke 2014; Fraga 2016). However, no concurrent analysis of black, Latino, and Asian state legislative candidate emergence has ever been conducted. Following this previous research and ignoring the presence of a co-racial or co-ethnic Congressional incumbent, we find that all groups have at least a 0.5 probability of having a candidate when their group composes a majority of the district, but whites require a far lower proportion of a district to achieve 0.5 probability of having a co-racial candidate.³ On average, most state legislative districts are more than 80% white, as are most congressional districts. Thus, in practice, “ignoring” higher-level representational context is the same as assuming the member of Congress is white.

If we vary the higher-level representational context, does this change the percent minority necessary to get a minority state legislative candidate? Figure 1 illustrates the relationship between the racial/ethnic composition in a state legislative district and the probability that a general election candidate from that group seeks office. This relationship shifts under two conditions: substantial overlap with a congressional district having co-racial/ethnic incumbent currently in office, or no substantial overlap with such a district.⁴ Our analysis separates the relationship between incumbency context and can-

³See Section A2 in the online appendix for this analysis.

⁴Upper and lower house contests are combined in this analysis. Here “substantial overlap” is 25% or more of the district’s population. The results are robust to varying this threshold, as described in Section

Figure 1: Candidate Emergence by District Composition and Congressional Incumbent Race



Note: Each of the four panels in the figure displays the probability of at least one candidate from the indicated racial/ethnic group contesting the general election, given the specified state legislative district demographic composition. The solid black line is fit to state legislative elections where co-ethnic U.S. House incumbents represented less than 25% of each state legislative district. The dashed gray line is fit to state legislative elections where co-ethnic U.S. House incumbents represented more than 25% of each state legislative district. Each line depicts a tricubic weighted local linear regression fit to the binary outcome data, with a 95% confidence interval depicted in light gray.

didate emergence by group, composing each of the four panels of Figure 1.⁵

The upper left panel of Figure 1 indicates the probability of a white general election state legislative candidate emerging depending on the percent white in the district. The dashed gray line indicates the probability of a white candidate in districts that overlap with congressional districts that have a white incumbent; as most members of Congress are white, this constitutes most of the state legislative districts in our dataset. The solid black line shows the relationship between the demographic composition of state legislative districts and white candidate emergence in districts that are not overlapped by areas with white members of Congress. Comparing the lines to each other, we see that in the (rare) circumstance that there is no white member of the House of Representatives in the area covered by the state legislative district, the threshold at which the likelihood of a white candidate running is reached only at 43% white VAP, and drops to 30% white VAP for state legislative districts with white higher-level representatives.

Similar changes in the district composition-to-black candidacy relationship manifest when the Congressional representational context is modified (Panel 2 of Figure 1). Again, the solid line corresponds to the probability of seeing a black state legislative candidate in the subset of districts that do not overlap with African-Americans, which, unlike for white candidates, is relatively common. In this scenario, equal likelihood is reached at virtually the same point as for whites (45%).⁶ The dashed line, corresponding to the estimated probability of emergence in state legislative districts subsumed by districts with black congressional incumbents, even odds of having a black candidate occur when the state legislative district is only 36% black. Note that the deviation from contexts without

A2.3 of the online appendix.

⁵We model this relationship using a nonparametric local linear regression, or loess (Fox 2000). As we discuss in the online appendix, our analysis seeks to understand the conditional bivariate relationship between district composition and candidate emergence, not to account for the entire host of factors driving minority candidacy and success. For more details, see Section A2 of the online appendix. Table A3 in the online appendix also provides raw estimates of the point of equality and measures of uncertainty.

⁶Table A3 in the online appendix indicates that the 95% confidence interval for the point of equal likelihood for African-Americans overlaps the 95% CI for the equal likelihood estimate for whites, when both groups do not have a Congressional incumbent.

black incumbents is largest in the middle range of black district contexts, suggesting that having a higher-level co-racial may signal to latent candidates the potential to win office. It is in these “influence” districts where such signals should have the greatest effect.

Panel 3 in Figure 1 plots the relationship between Latino candidate emergence and percent Latino VAP⁷ in state legislative districts. As with African-Americans, the probability of having a Latino candidate emerge reaches 0.5 at a lower percent Latino (42%) when the state legislative district is subsumed by a congressional district with a Latino incumbent. In the more usual circumstance of not having a Latino congressional incumbent, the percent Latino required is 52%. This again points to mechanisms concordant with perceived viability as key in shaping underrepresentation; when whites have the most common higher-level context found by potential minority candidates (no co-ethnic congressional incumbent), rates of emergence are similar.

Finally, Panel 4 in Figure 1 examines Asian American candidate emergence. While there is too much uncertainty in the results for Asian Americans to allow us to make strong claims about the effect of higher-level co-ethnic incumbents on candidate emergence, we see two patterns worth exploring in future work. First, the percent Asian needed to reach 0.5 probability of having an Asian American candidate in the incumbent and no incumbent conditions is approximately equal, and similar to other groups. Second, there is a distinct “boost” provided by having a higher-level Asian incumbent at approximately 20% Asian VAP, which is notable as there are few Asian-majority state legislative districts in the country. Together, these findings suggest that non-Asian American voters may be more likely to elect Asian American representatives when they have already experienced Asian American representation at the congressional level.

⁷Citizenship data is not available for Census blocks. If CVAP was used instead of VAP, the percent Latino required would likely be similar to African-Americans.

Discussion

We offer a novel analysis of racial/ethnic minority candidacy. Examining the effects of higher-office incumbents on down-ballot candidate emergence, we show that victorious minority candidates in higher-level offices may encourage minority candidate emergence down the ballot, particularly in “whiter” districts where the conventional wisdom is that minority candidates are not viable. In analyzing white candidate emergence as well, our findings suggest that overrepresentation of whites in political office may, in part, be due to the fact that the vast majority of higher-level jurisdictions (in this case, congressional districts) have non-Hispanic white incumbents. These findings also complicate the consensus understanding of minority opportunity demographic “thresholds,” majority-minority districting, and court-ordered solutions to the lack of choices offered to minority voters across the country. In fact, higher-level incumbent effects appear strongest in exactly the types of districts where we would expect the largest substantive effect: minority “influence” districts that are the focus of ongoing litigation regarding strategies of increasing minority representation.

Future work should examine the specific mechanisms producing this effect. If upper-office incumbents influence candidate emergence, representation scholars should develop a more robust theoretical and empirical strategy examining the role of elites in creating a more diverse candidate pipeline. It is also possible that state legislators form the pool of congressional aspirants (Moncreif 1999), such that individuals who aspire to congressional office instead seek state legislative office when a co-ethnic holds the congressional seat. Alternatively, higher-office incumbents may inspire more minority candidates to run for office, a process that has some support from research on women (Ladam, Harden and Windett 2018; but Broockman 2014), or they may help recruit and professionalize latent minority candidates (Grose, Mangum and Martin 2007). Researchers should also examine how the presence of large populations of multiple minority groups may foster

coalition building and make minority candidate emergence more likely.⁸ Finally, the results could be due to a change in how party elites and latent candidates perceive voter demand for minority candidates in overlapping districts (Canon, Schousen and Sellers 1996; Doherty, Dowling and Miller N.d.).⁹ In short, our findings suggest that research on what produces underrepresentation must account for both the pipeline of candidates and the presence or absence of minority incumbents higher up the political ladder. The benefits of descriptive representation may pay dividends across the political landscape.

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⁸Section A2 of the online appendix indicates that the demographics of a group are the main driver of candidate emergence for that group.

⁹Section A3 of the online appendix examines differential impacts by candidate and congressional incumbent party, where we find a consistent pattern of higher-level incumbents expanding the range of possible districts where co-ethnics are likely to emerge.

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Online Appendix for “One Run Leads to Another: Minority Incumbents and the Emergence of Lower Ticket Minority Candidates.”

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A1 Candidate Data

A1.1 Coding the Race/Ethnicity of State Legislative Candidates

There is no comprehensive listing of the race/ethnicity of state legislative candidates on a national scale. Thus, we rely on a mix of voter file-based race/ethnicity modeling and expert coding of race. Voter file-based race/ethnicity was provided by the Women Donors Network (WDN) Reflective Democracy Campaign. Using self-reported race from state voter files, or an imputation of race based on last name and neighborhood demographics, WDN identified candidates as Black, Latino, Asian American, Native American, Multiracial, or “Other.” Documentation provided by WDN indicates that they are highly accurate in distinguishing between non-Hispanic white candidates and candidates of color, stating that under the most severe conditions of systematic bias their estimates of the percentage of candidates who are non-White could be off by as much as 1.5%.

Candidates from approximately a quarter of states were also expert coded by the authors and authors’ research assistants through analysis of candidate websites and press reports. To ensure accurate coding of candidates of color, we also verified WDN’s coding of all non-white state legislative candidates. Below is the set of coding definitions utilized by ourselves and our graduate students for the expert coding process:

- **White** (Non-Hispanic White)
 - European Ancestry (includes Spain), Armenian.
- **Black**
 - Includes Haitian, Jamaican, Trinidadian, African as well.
- **Latino** (Hispanic)
 - Includes any ancestry from Latin America not included in Black above. Does not include Spain unless accompanied by Latin American ancestry.
- **Asian**
 - Includes Indian, Pakistani.
- **Middle Eastern and North African** (MENA)
 - Includes North African, Turkish, Egyptian, and Iranian/Persian.
- **Native** (Native American)
 - Must indicate tribal membership. Includes Native Hawaiian, American Indian, and Alaska Native.

In this study, we present results for White, Black, Latino, and Asian state legislative candidate emergence. Candidates not falling into these categories are excluded from the analysis, except where descriptions or tabulations of the total number of candidates in the database (including Table [A1](#)) are used.

A1.2 Descriptive Statistics for Candidate Dataset

As noted in the main text, we used data for state legislative elections from 41 out of 46 states holding elections in 2012 or 2014. The following states were excluded: Hawaii, due to its large multiracial population which makes Census estimates of legislative district composition unreliable. New Hampshire, due to the floterial district system impeding matching to congressional districts. Vermont, due to the use of multi-member districts with strong third-party performance. Massachusetts, due to difficulties in matching state legislative district names to Census indicators. Nebraska, due to its nonpartisan state legislative elections.

Table A1: State Legislative Candidates by Race/Ethnicity

	Lower		Upper	
	<i>2012</i>	<i>2014</i>	<i>2012</i>	<i>2014</i>
<i>Total</i>	6187	6224	1800	1513
White	5254	5168	1542	1287
Black	356	445	97	106
Latino	301	329	86	63
Asian	53	72	12	21
Native	23	26	9	7
Other	19	13	3	3
<i>Unknown</i>	181	171	51	26

Note: “Lower” indicates candidates for the lower house of the state legislature. “Upper” indicates candidates for the upper house of the state legislature.

Table A2: Distribution of Candidates by State Legislative District Demographics

	White		Black		Latino		Asian	
	<i>Upper</i>	<i>Lower</i>	<i>Upper</i>	<i>Lower</i>	<i>Upper</i>	<i>Lower</i>	<i>Upper</i>	<i>Lower</i>
0-10%	3	10	11	58	19	122	19	74
10-20%	6	40	17	76	21	71	6	20
20-30%	25	102	12	69	15	52	5	19
30-40%	69	174	15	42	17	52	1	2
40-50%	79	297	20	93	10	31	1	5
50-60%	147	486	94	252	36	101	1	3
60-70%	286	861	28	145	19	123		2
70-80%	511	1613	3	36	7	29		
80-90%	765	2790	3	15	5	38		
90-100%	938	4049		15		11		
Total	2829	10422	203	801	149	630	33	125

Note: Cells indicate number of candidates from the indicated racial/ethnic group and in the indicated legislative chamber who competed in state legislative general elections. Rows indicate jurisdiction Voting-Age Population (VAP) for the indicated group. Cells are blank where jurisdiction demographics are beyond the range observed. For example, there are no upper house districts where the Latino VAP is 90% or more.

A2 Candidate Emergence Analysis

As noted in the main text, we use a nonparametric local linear regression (Cleveland 1979; Fox 2000), also called a *loess*, local polynomial regression, locally weighted regression, or “scatterplot smoother”¹ to estimate the probability of a state legislative candidate from a given racial/ethnic group emerging as a function of the racial/ethnic composition of the state legislative district. In essence, we estimate a moving average of the binary outcome variable’s value for each level of the independent variable of interest, allowing the resultant regression line to follow the data instead of holding it to an *e.g.* straight line. Nonparametric local linear regression “allows the data to speak for themselves” (Jacoby 2000) in that the relationship between the dependent variable and independent variable is not determined *a priori* by the researcher (Jacoby 2000; Andersen 2009).

Such an approach may be particularly appropriate for descriptive analyses like the one we undertake, where we are attempting to understand the pattern of candidate emergence as a function of one independent variable rather than explain the entirety of factors related to emergence as in a multivariate regression analysis. Other researchers use nonparametric local linear regressions as their primary technique of gaining an understanding of nonlinear relationships (Andersen 2009; Nezi 2012; Tausanovitch and Warshaw 2014), including in the study of elections (Dropp and Peskowitz 2012) and minority representation (Cameron, Epstein and O’Halloran 1996). For our analysis, we used the default settings for the *loess* function in R, which indicates a tricube kernel that provide greater weight to observations near the value of the independent variable x for which we seek to estimate a probability of y (Fox 2000, 18). Given the large number of observations, the span or bandwidth selected makes little difference, but here we also use the defaults in R and select a span or of 0.75, such that the 75% of the observations with the closest values of x are incorporated into the tricubic weighting scheme and used to smooth the line. For Figure 1 and the main results reported in the paper, we separated the data by the presence of a co-ethnic congressional incumbent that overlaps with the state legislative district, estimating separate nonparametric local linear regressions for each of these groups.

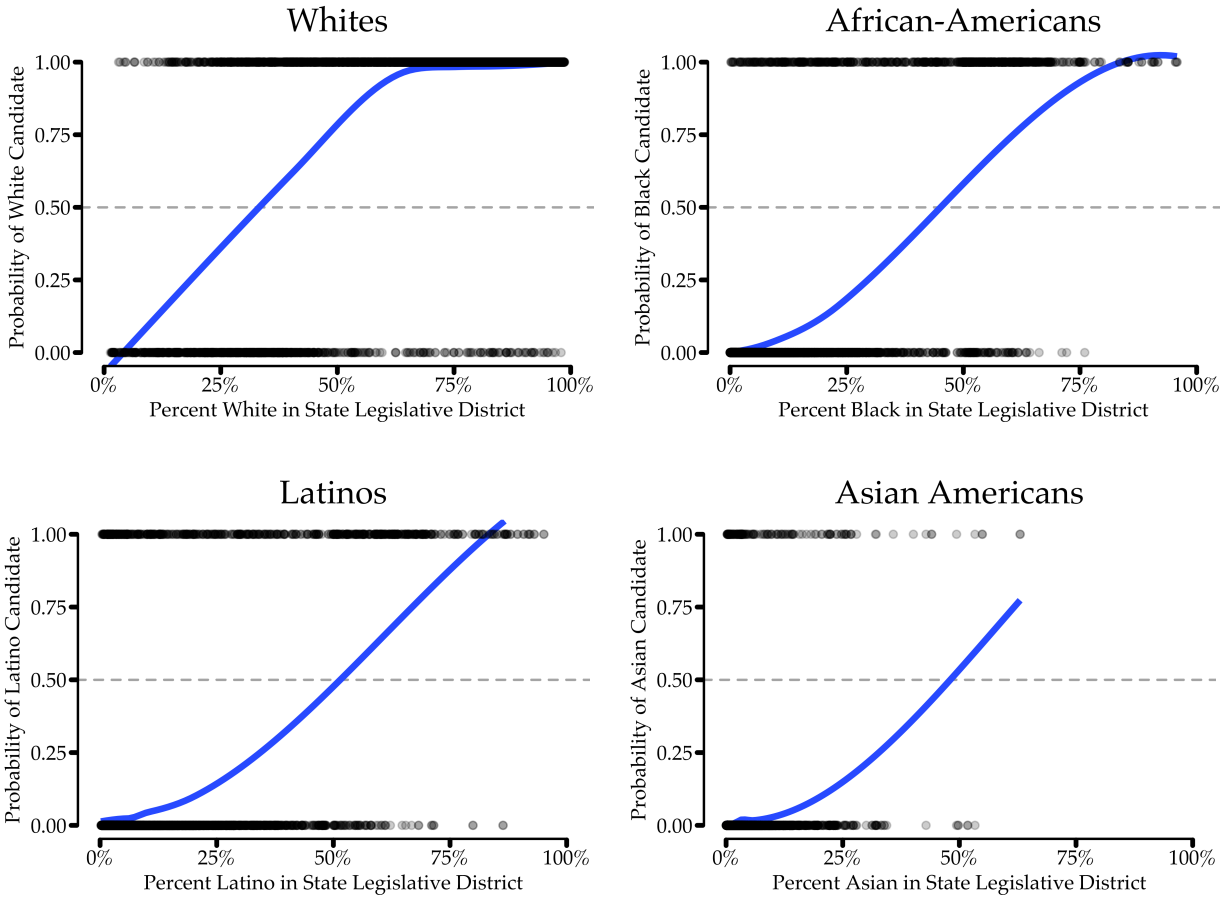
Future work may seek to model the determinants of state legislative candidate emergence in a multivariate framework, including variables for higher-level context such as the race of the congressional incumbent. We encourage such endeavors, but would encourage researchers to perform the appropriate loess-based statistical tests (Austin and Steyerberg 2014) before jumping to parametric linear modeling.

A2.1 Candidate Emergence by State Legislative District Composition

In Figure A1, we plot the relationship between the demographic composition of state legislative districts and the race/ethnicity of candidates seeking office using the loess

¹While often seen as interchangeable in common parlance, there are distinctions between these terms related to generality and weighting schemes (Jacoby 2000). We discuss the parameters used in our regression modeling below.

Figure A1: Candidate Emergence, by District Composition and Racial/Ethnic Group

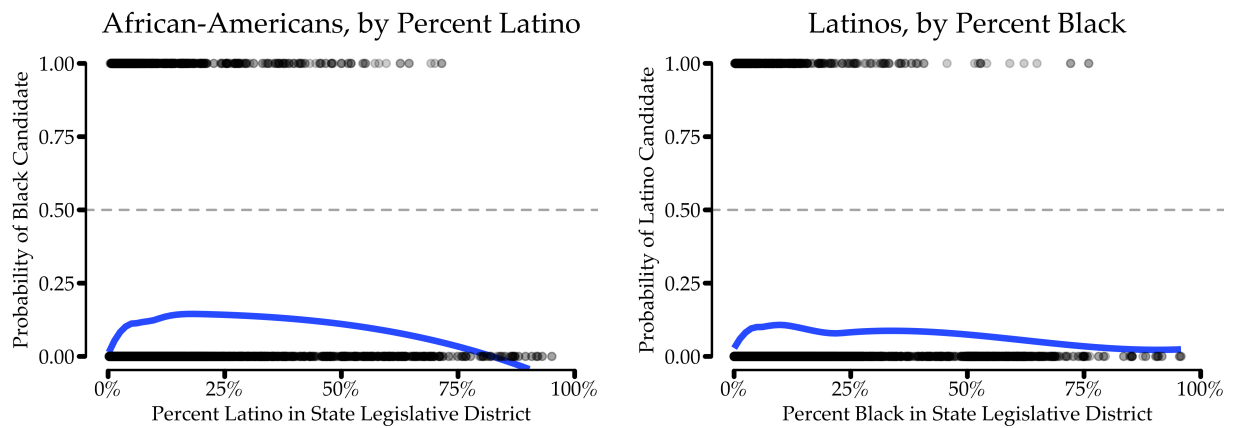


Note: Each of the four panels in the figure displays the probability of at least one candidate from the indicated racial or ethnic group contesting the general election, given the specified state legislative district demographic composition. The blue line depicts a tricubic weighted local linear regression fit to the binary outcome data. Points at the top and bottom of the plot indicate the actual distribution of the data, with a value of 1 indicating a candidate from the given racial/ethnic group was on the ballot.

function as described above. Three patterns are worth noting. First, all groups have a 0.5 probability of having a candidate when their racial/ethnic group composes a majority of the district's population. Even for Asian Americans, where majority-Asian districts are exceedingly rare, a bare majority Asian district has a 50-50 chance of having an Asian American candidate. Second, while 0.5 probability of having an Asian American or Latino candidate occurs at 50% Asian VAP or 50% Latino VAP respectively, African-Americans require a slightly lower VAP (roughly 43%) for even odds of black candidate emergence. The pattern for whites is even more striking. Non-Hispanic whites hit the 0.5 probability threshold at roughly 35% white VAP. Finally, across racial/ethnic groups, there are a number of instances in which candidates emerge even when the district has a relatively low proportion of the ethnic group in question.

Some research indicates that the relationship between a minority group’s percentage in an electoral district and the rate of candidate success in that district is influenced by the presence of minority voters that are *not* from the group in question, e.g. Black candidates do better in heavily-Latino districts (Lublin 1997). While we do not examine state legislative candidate *success* in our study (only emergence), it is worth examining whether a similar pattern manifests with our data. In Figure A2, we examine Black and Latino candidate emergence in a manner similar to Figure A1, except now the demographic composition variable of interest is the Latino or Black percentage of the district. In this nonparametric analysis, we see little evidence that the percent Latino or percent Black in a state legislative district predicts the emergence of Black or Latino candidates, respectively.

Figure A2: Black and Latino Candidate Emergence, by Latino and Black VAP

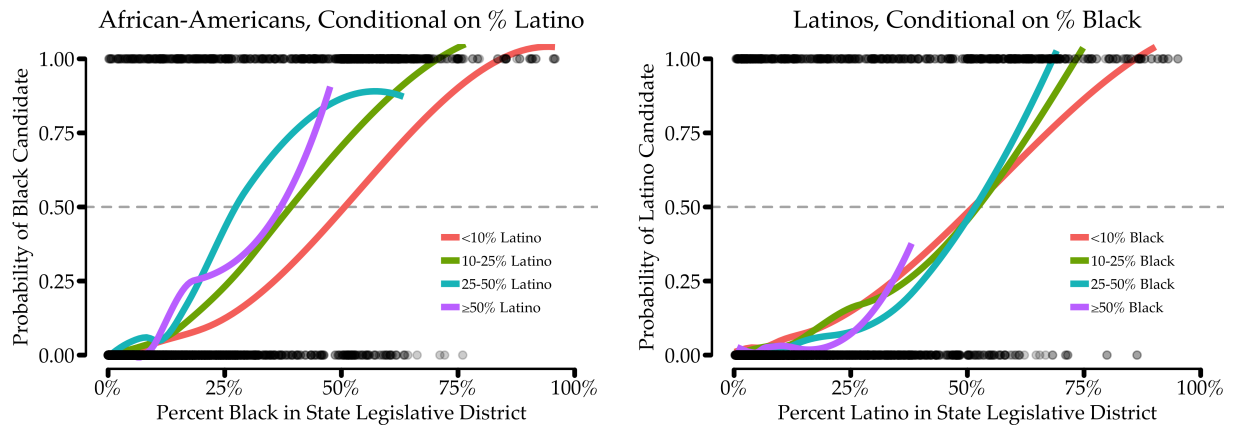


Note: Each of the panels in the figure displays the probability of at least one candidate from the indicated racial or ethnic group contesting the general election, given the specified state legislative district demographic composition. The blue line depicts a tricubic weighted local linear regression fit to the binary outcome data. Points at the top and bottom of the plot indicate the actual distribution of the data, with a value of 1 indicating a candidate from the given racial/ethnic group was on the ballot.

However, if we intersect the percent Black [Latino] in a district with the percent Latino [Black], we can see whether or not there is a *conditional* benefit of the percent Latino [Black] on the emergence of Black [Latino] candidates. The first panel of Figure A3 examines the effect of an increase in the percent Black on Black candidate emergence, but with four subsets of the data separated by the percent Latino in the district. The first panel indicates that, regardless of the percent Latino in a district, the percent Black is the driver of changes in the likelihood a district has a Black state legislative candidate. In the most heavily non-Latino districts, the relationship is similar to what we see in Figure A1. However, in districts with a sizeable number of Latinos, we see patterns suggestive of the phenomenon identified by (Lublin 1997). A lower Black share of the district’s VAP is necessary to see a 50% probability of a Black candidate emerging. The greatest gain is made in districts with between a 25% and 50% Latino population. Examining the way this con-

dition interacts with the percent Black, however, we see that when the Black population is *greater* than the Latino population, and especially as it approaches a plurality in the district, the chances of a Black candidate emerging go up drastically. In situations where Latinos either always dominate ($\geq 50\%$ of the district) or may serve as coalition partners (10-25% Latino), we see the thresholds are more similar to the district with no Latinos. Importantly, we see the largest shift for Black candidate emergence (and perhaps Latino candidate emergence) where the percent Latino [Black] still indicates that Black [Latino] voters are the plurality group in the district.

Figure A3: Conditional Black and Latino Candidate Emergence, by Black and Latino VAP



Note: Each of the panels in the figure displays the probability of at least one candidate from the indicated racial or ethnic group contesting the general election, given the specified state legislative district demographic composition. Lines depict tricubic weighted local linear regressions fit to the binary outcome data. Each color indicates a different subset of the data, depending on the Latino or Black percentage of the district. Points at the top and bottom of the plot indicate the actual distribution of the data, with a value of 1 indicating a candidate from the given racial/ethnic group was on the ballot.

The second panel of Figure A3 effect of an increase in the percent Latino on Latino candidate emergence, but with four subsets of the data separated by the percent Black in the district. Here we see no evidence of a conditional relationship at all, indicating that the conditional patterns for African-Americans are not shared by all minority groups. Thus, it is likely that factors such as rates of voter turnout, citizenship, coalition building by candidates, and party composition interact to generate the conditional relationships we see in the figure. A fuller analysis of the complex relationship between district composition and minority group relations is beyond the scope of this project. However, we encourage future researchers to consider how district composition *beyond* a simple bivariate relationship between a group's VAP and emergence for the group in a manner similar to what we do with higher-level context in the main text.

The above analyses largely confirm the patterns found in Figure A1, in that the relationship we probe in the main text between a single group's VAP and rates of candidate emergence for that group correctly identifies the dominant factor influencing candidate

emergence in general elections. While we do see the potential that an increase in the percent Latino in a district reduces the percent Black necessary to get even odds of a Black candidate emerging, these results appear to be isolated to districts where Black voters would still dominate outcomes as they are the plurality group in the district.

A2.2 Table of Results Reported in Main Text

In Table A3, we present a summary of the results featured in the main text. The table indicates the co-ethnic district voting-age population necessary to achieve 0.5 probability of a candidate from the specified group emerging, when the state legislative district is overlapped by a congressional district with a co-ethnic incumbent versus not overlapped with a co-ethnic incumbent, and the difference between the values. Standard errors are shown in parentheses, and a 95% confidence interval in brackets. Note, however, that because the analyses are conducted separately for each group, non-overlap in confidence intervals should not be taken as definitive evidence of a “statistically significant” difference attributable to race/ethnicity.

Table A3: Group VAP Needed for 0.5 Probability of Co-Ethnic Candidate Emergence

	No Incumbent		Incumbent		Difference	
	Mean (SE)	95% CI	Mean (SE)	95% CI	Mean (SE)	95% CI
White	0.429 (0.021)	[0.387,0.471]	0.295 (0.007)	[0.282,0.308]	-0.134 (0.022)	[-0.177,-0.090]
Black	0.447 (0.010)	[0.428,0.466]	0.361 (0.023)	[0.316,0.406]	-0.086 (0.025)	[-0.135,-0.037]
Latino	0.518 (0.011)	[0.496,0.540]	0.419 (0.033)	[0.355,0.483]	-0.099 (0.035)	[-0.166,-0.031]
Asian	0.484 (0.034)	[0.418,0.550]	0.506 (0.131)	[0.249,0.763]	0.022 (0.136)	[-0.244,0.288]

Note: *Mean* indicates the co-ethnic district voting-age population necessary to achieve 0.5 probability of a candidate from the specified group emerging, when the state legislative district is overlapped by a congressional district with a co-ethnic incumbent versus not overlapped with a co-ethnic incumbent, and the difference between the values. Standard error shown in parentheses, and 95% confidence interval in brackets. Values generated via a tricubic weighted local linear regression fit to the binary outcome data, as reflected in Figure 1 in the main text.

A2.3 Varying the Threshold for Congressional District Overlap

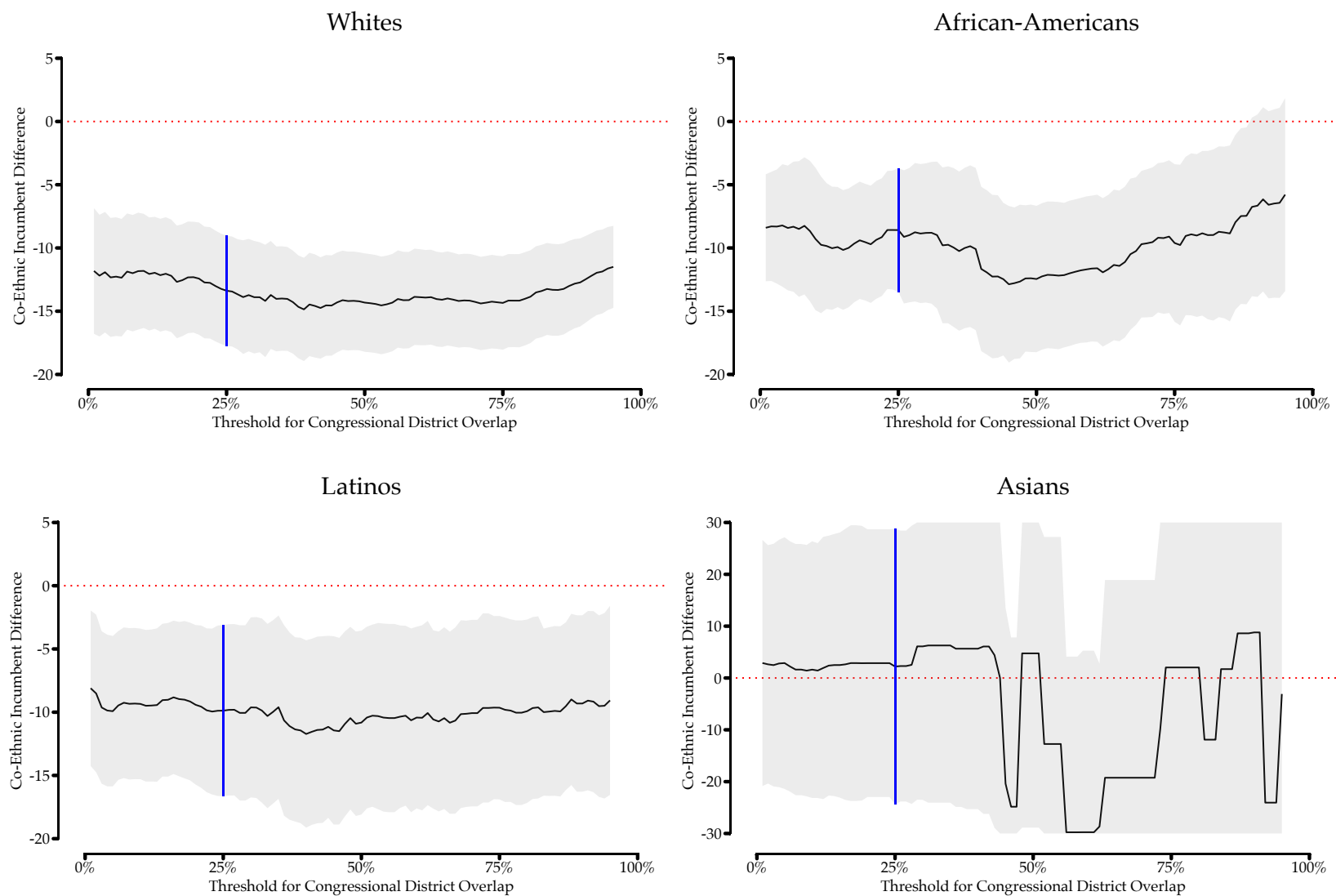
As indicated in the main text, Figure 1 and Table A3 display the difference in the co-ethnic district population necessary to achieve 0.5 probability of a candidate from the specified group emerging, when the state legislative district is overlapped by a congressional district with a co-ethnic incumbent versus not overlapped. We use a 25% threshold for “overlap,” understood as 25% or more of the state legislative district’s voting-age population also being represented by a co-ethnic congressional incumbent.² In Figure A4, we

²In the 2012 elections, members of Congress and state legislatures were elected from new districts. However, at the time the 2012 election was held, the congressional incumbents were still representing

indicate how our results would change if thresholds from 1% to 95% overlap were used instead. Figure A4 indicates that the difference in the point of 50-50 probability of having a candidate from the indicated racial group does not change a great deal depending on the threshold chosen, and that the 25% threshold is a robust approximation of the average effect. For Asian Americans, where the difference was not statistically or substantively significant at the 50% probability of candidate emergence point, there is greater variation, but at no threshold do we see a clear indication that even odds of Asian state legislative candidate emergence can be achieved at a lower percent Asian when overlapped with an Asian-held congressional seat.

geographic areas corresponding to the pre-redistricting district configurations. Therefore, we use overlap between pre-redistricting (i.e., 2010) congressional districts and post-redistricting (i.e., 2012) state legislative districts when examining 2012 state legislative candidate emergence. For 2014, post-redistricting congressional and state legislative districts are used.

Figure A4: Results when Varying Threshold for Congressional District Overlap



Note: Each of the four panels in the figure indicates the difference in the co-ethnic district population necessary to achieve 0.5 probability of a candidate from the specified group emerging, when the state legislative district is overlapped by a congressional district with a co-ethnic incumbent versus not overlapped. The x-axis varies the threshold used to determine whether there is sufficient overlap or not, spanning from 1% to 95%. The blue line indicates the 25% threshold, which is what is reported in the main text and in Table A3. 95% confidence interval for the difference indicated in gray, with the confidence interval for Asian Americans truncated at -30 and +30.

A3 Variation in Effects by Party

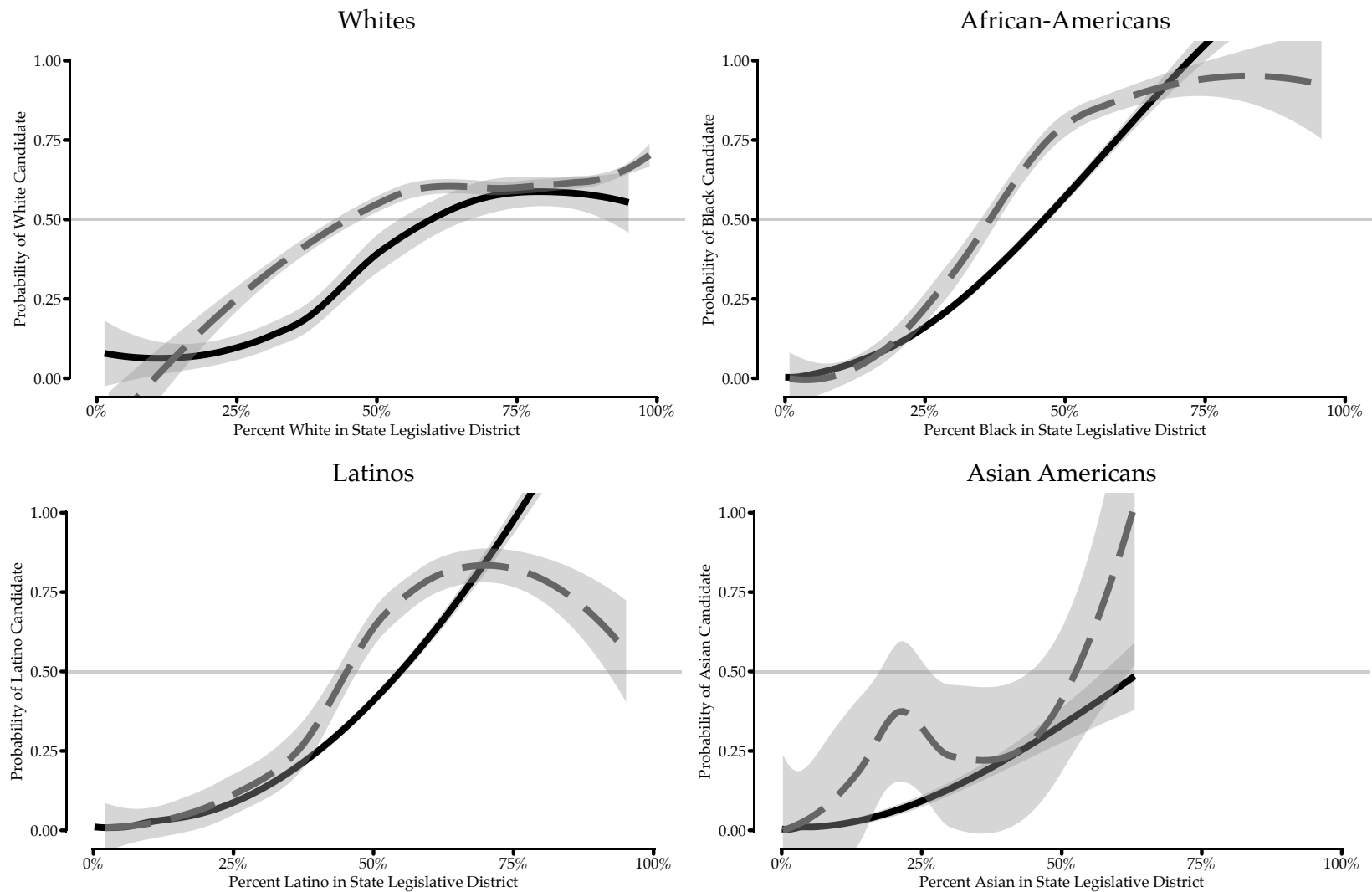
A3.1 Results for Democratic versus Republican Candidate Emergence

The results presented in the main text and so far in this appendix have combined Democratic and Republican candidate emergence into a single binary variable. However, it is possible that distinct results manifest for Democrats versus Republicans. In Figures A5 and A6, we separate emergence for Democratic and Republican general election candidates, conducting the same analysis as found in Figure 1 of the main text.

Examining Figure A5 first, we see that White, Black, Latino, and (though with high uncertainty) Asian Democratic general election candidate emergence occurs at a lower group percent voting-age population when the state legislative district is overlapped by a congressional district represented by a co-ethnic. For Whites, we see severely diminishing returns in candidate emergence as a function of the percent White in a state legislative district, likely resulting from the fact that many heavily-White districts are uncontested Republican-held areas. For African-Americans, Latinos, and Asian Americans, the pattern of emergence probabilities looks similar to Figure 1 in the main text around the 50% Black, Latino, or Asian point. For Latino Democrats, the diminishing returns experienced beyond 75% Latino are primarily due to heavily Latino districts in South Florida where Cuban American Republicans dominate in uncontested elections. These districts are nested within majority-Latino congressional districts also represented by Cuban American Republicans, hence the appearance of diminishing returns for Democratic candidate emergence.

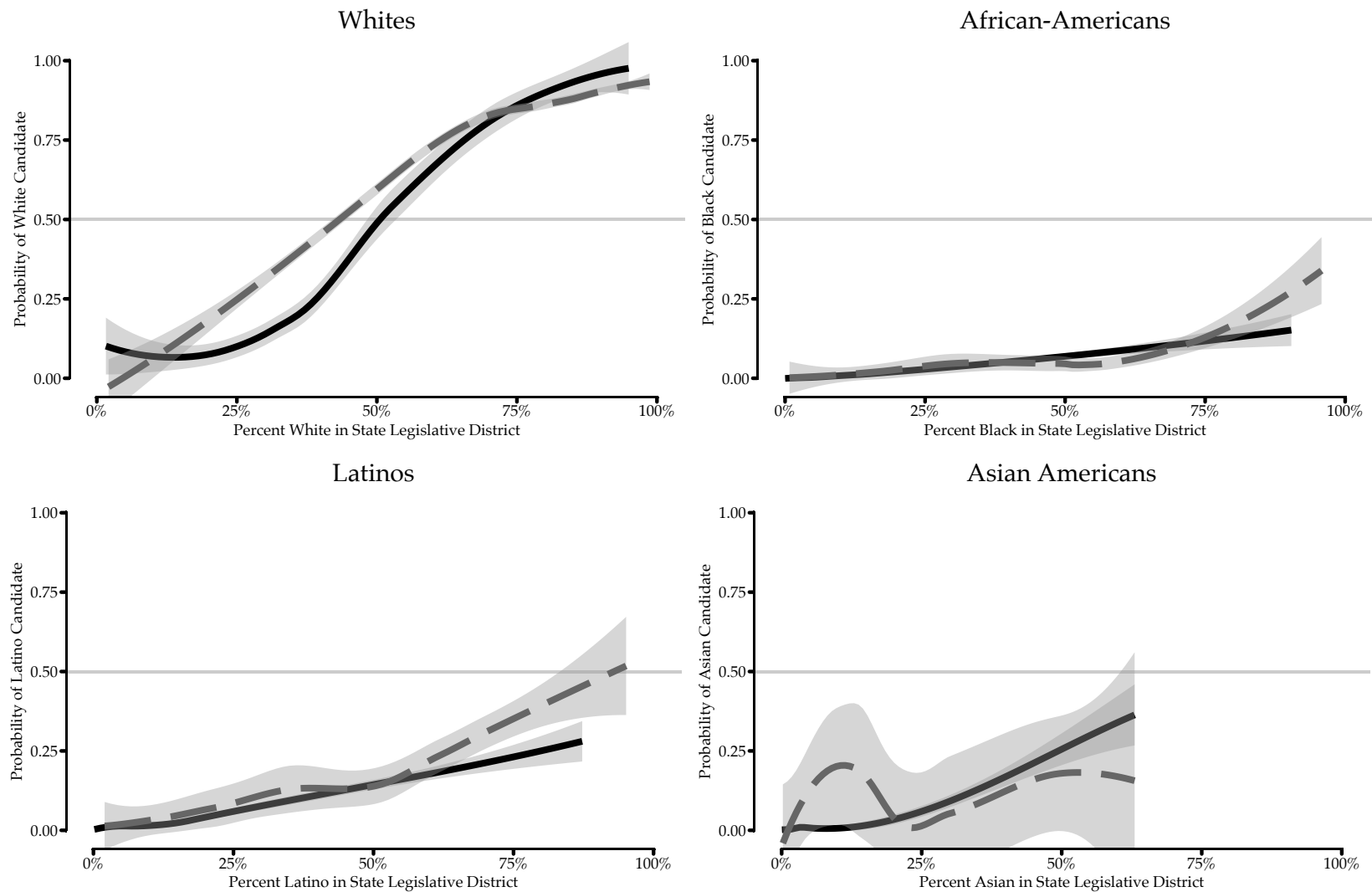
In Figure A6, results are shown for Republican candidate emergence. For White Republicans, again, the 50% probability of having a White state legislative candidate is reached at a lower White VAP % in the presence of a higher-level co-ethnic incumbent. We also see that Black and Latino Republican candidate emergence is generally rare, even in the most heavily-minority areas. However, when the district is subsumed within a Black or Latino-held congressional district, emergence does become more likely in heavily-Black or heavily-Latino districts. For Latinos, some of this effect is explained by the prevalence of heavily-Latino Republican districts in South Florida. More broadly, however, one possibility is that elites are reluctant to push forward candidates “mismatched” with the racial composition of the state legislative district when the incumbent member of congress is Black or Latino, despite the relative rarity of Black or Latino Republican candidates in most of the country. Future work should examine whether Republican elites encourage minority candidates to run for symbolic reasons in these areas.

Figure A5: Democratic Candidate Emergence by District Composition and Higher-Level Context



Note: Each of the four panels in the figure displays the probability of at least one candidate from the indicated racial/ethnic group contesting the general election, given the specified state legislative district demographic composition. The solid black line is fit to state legislative elections where co-ethnic U.S. House incumbents represented less than 25% of each state legislative district. The dashed gray line is fit to state legislative elections where co-ethnic U.S. House incumbents represented more than 25% of each state legislative district. Each line depicts a tricubic weighted local linear regression fit to the binary outcome data, with a 95% confidence interval depicted in light gray.

Figure A6: Republican Candidate Emergence by District Composition and Higher-Level Context



Note: Each of the four panels in the figure displays the probability of at least one candidate from the indicated racial/ethnic group contesting the general election, given the specified state legislative district demographic composition. The solid black line is fit to state legislative elections where co-ethnic U.S. House incumbents represented less than 25% of each state legislative district. The dashed gray line is fit to state legislative elections where co-ethnic U.S. House incumbents represented more than 25% of each state legislative district. Each line depicts a tricubic weighted local linear regression fit to the binary outcome data, with a 95% confidence interval depicted in light gray.

A3.2 Difference in Group VAP Needed for Congressional Co-Ethnic Incumbent Democrats and Republicans

Extending the partisan analysis, it is possible that the presence of a co-ethnic Democratic congressional incumbent has a distinct impact from a co-ethnic Republican congressional incumbent on candidate emergence. Tables A4 and A5 are of the same form as Table A3, but here data are divided on the basis of having a co-ethnic Democrat [Republican] or not, ignoring the presence of a co-ethnic incumbent from the other party.

Table A4: VAP Needed for 0.5 Probability of Candidate Emergence, Co-Ethnic Democratic Congressional Incumbents

	No D Incumbent		D Incumbent		Difference	
	Mean (SE)	95% CI	Mean (SE)	95% CI	Mean (SE)	95% CI
White	0.356 (0.007)	[0.343,0.369]	0.293 (0.009)	[0.275,0.311]	-0.063 (0.011)	[-0.085,-0.04]
Black	0.449 (0.010)	[0.430,0.468]	0.354 (0.028)	[0.299,0.409]	-0.094 (0.030)	[-0.153,-0.036]
Latino	0.528 (0.011)	[0.506,0.549]	0.414 (0.045)	[0.325,0.502]	-0.114 (0.046)	[-0.205,-0.023]
Asian	0.484 (0.034)	[0.418,0.550]	0.513 (0.163)	[0.193,0.834]	0.030 (0.167)	[-0.297,0.356]

Note: *Mean* indicates the co-ethnic district voting-age population necessary to achieve 0.5 probability of a candidate from the specified group emerging, when the state legislative district is overlapped by a congressional district with a Democratic co-ethnic incumbent versus not overlapped with a Democratic co-ethnic incumbent, and the difference between the values. Standard error shown in parentheses, and 95% confidence interval in brackets. Values generated via a tricubic weighted local linear regression fit to the binary outcome data, as reflected in Figure 1 in the main text.

Table A5: VAP Needed for 0.5 Probability of Candidate Emergence, Co-Ethnic Republican Congressional Incumbents

	No R Incumbent		R Incumbent		Difference	
	Mean (SE)	95% CI	Mean (SE)	95% CI	Mean (SE)	95% CI
White	0.353 (0.009)	[0.336,0.370]	0.312 (0.010)	[0.293,0.331]	-0.041 (0.013)	[-0.067,-0.016]
Black	0.452 (0.010)	[0.433,0.471]	0.375 (0.156)	[0.070,0.679]	-0.077 (0.156)	[-0.382,0.228]
Latino	0.512 (0.010)	[0.493,0.532]	0.485 (0.046)	[0.395,0.575]	-0.027 (0.047)	[-0.119,0.065]

Note: *Mean* indicates the co-ethnic district voting-age population necessary to achieve 0.5 probability of a candidate from the specified group emerging, when the state legislative district is overlapped by a congressional district with a Republican co-ethnic incumbent versus not overlapped with a Republican co-ethnic incumbent, and the difference between the values. Standard error shown in parentheses, and 95% confidence interval in brackets. Values generated via a tricubic weighted local linear regression fit to the binary outcome data, as reflected in Figure 1 in the main text.

Table A4 indicates that the presence of a co-ethnic Democratic congressional incumbent has a larger effect on Black and Latino candidate emergence than on White candidate

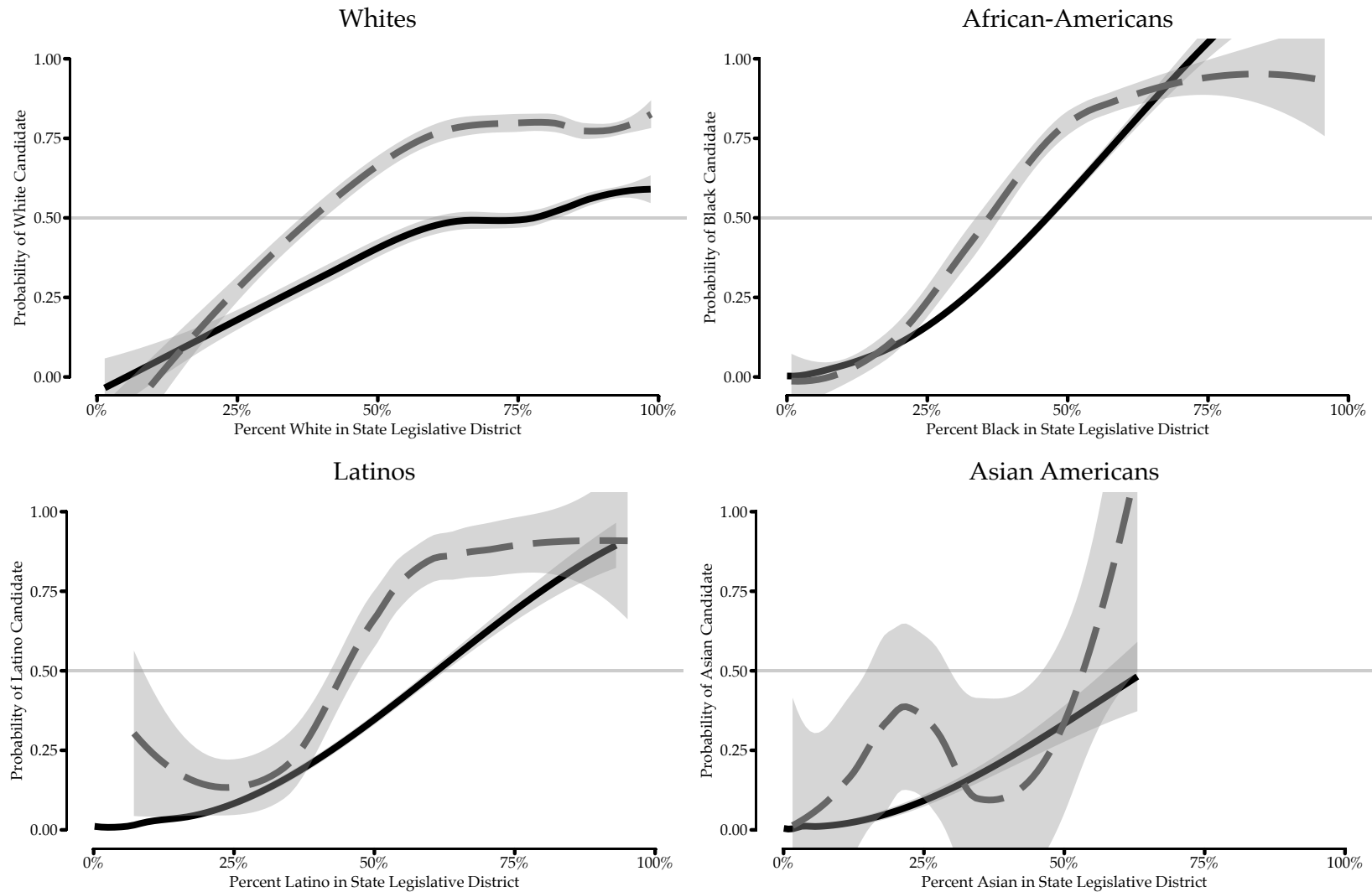
emergence, but for all three groups a lower group VAP is necessary in order to reach a 50-50 chance of having a candidate emerge with a Democratic co-ethnic present. For Asian Americans, we again do not see a statistically significant difference. The fact that White candidate emergence is less influenced by having a higher-level co-ethnic Democrat is likely a function of the fact that many White potential candidates are Republican.

Table A5 displays a different pattern. First, note that we do not have an Asian American Republican incumbent on both sides of the 25% overlap threshold, meaning that it is not possible to estimate effects for Asian Americans in this context. For Whites, we again see a significant difference in the percent White necessary to reach the point of equal likelihood for White candidate emergence. However, the difference attributable to higher-level co-ethnic incumbents is *smaller* with co-ethnic Republicans than Democrats, which is logical given the fact that nearly all Republican state legislative candidates are White and, outside of uncontested races, there will always be a Republican no matter the higher-level context. For Black and Latino candidate emergence, we have slight evidence that a co-ethnic Republican leads to a lower group VAP necessary to get to 50% chance of a state legislative candidate, though uncertainty is quite high as there are very few minority Republicans in Congress.

As a final check, we may combine the analyses shown in Figure A5 with Table A4, and Figure A6 with Table A5, to examine the impact of co-ethnic *and* co-partisan incumbents on candidate emergence. There are several caveats to this analysis, of course: percent non-White in a district is correlated with partisanship, and there are so few Black and Asian congressional Republican incumbents that it makes little sense to examine Republican candidate emergence in this framework. However, Figures A7 and A8 help us to understand the role of partisanship in structuring the results described in the main text.

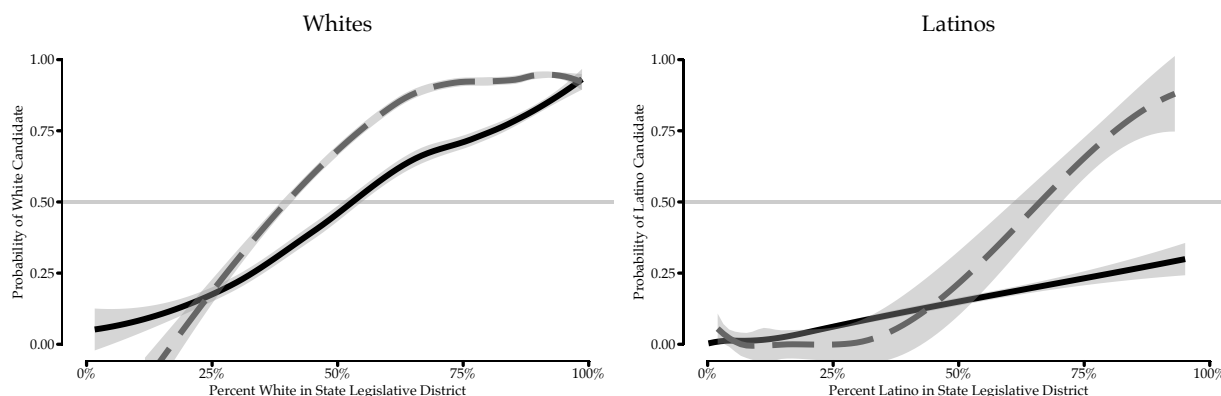
The results for African-American, Latino, and Asian Democratic emergence in Figure A7 are, not surprisingly, similar to the results reported above and in the main text. Again, the same pattern of lower group VAP necessary to see a state legislative candidate emerge (though uncertainty is still greater for Asians). For Whites, however, we now see the combined effect of partisanship more clearly. White Democratic state legislative candidates are, even in the most White districts, barely more than 50% likely to emerge when no White incumbent member of Congress is present. For districts with any meaningful White population, having a co-partisan, co-ethnic makes it more likely that a White candidate will emerge.

Figure A7: Democratic Candidate Emergence by District Composition and Presence of a Democratic Incumbent



Note: Each of the four panels in the figure displays the probability of at least one candidate from the indicated racial/ethnic group contesting the general election, given the specified state legislative district demographic composition. The solid black line is fit to state legislative elections where co-ethnic Democratic U.S. House incumbents represented less than 25% of each state legislative district. The dashed gray line is fit to state legislative elections where co-ethnic Democratic U.S. House incumbents represented more than 25% of each state legislative district. Each line depicts a tricubic weighted local linear regression fit to the binary outcome data, with a 95% confidence interval depicted in light gray.

Figure A8: Republican Candidate Emergence by District Composition and Presence of a Republican Incumbent



Note: Each panel in the figure displays the probability of at least one candidate from the indicated racial/ethnic group contesting the general election, given the specified state legislative district demographic composition. The solid black line is fit to state legislative elections where co-ethnic Republican U.S. House incumbents represented less than 25% of each state legislative district. The dashed gray line is fit to state legislative elections where co-ethnic Republican U.S. House incumbents represented more than 25% of each state legislative district. Each line depicts a tricubic weighted local linear regression fit to the binary outcome data, with a 95% confidence interval depicted in light gray.

For White and Latino Republican candidate emergence, shown in Figure A8, we see different patterns than for Democrats. For Whites, co-partisan co-ethnic incumbents again have a substantial effect, though heavily-White districts are always quite likely to have a White state legislative candidate perhaps owing to the partisanship of such state legislative districts. For Latinos, we see a stronger form of the results shown in Figure A6, as isolating *Republican* emergence in the presence of *Republican* Latino incumbents demonstrates that, in heavily-Latino districts such as those found in South Florida, co-ethnic Republicans have a large effect. Again, it is difficult to separate this result from the power of district partisanship in shaping which state legislative races are contested at all. Future work should examine distinct partisan effects, but the information presented here does not indicate that party explains all of the results indicated in the main text. At the very least we can say that, across parties and for the three largest racial/ethnic groups, co-ethnic incumbents seem to impact lower-ticket candidate emergence.

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