When Social Capital Becomes Political Capital: Understanding the Social Contexts of Minority Candidates' Electoral Success in the American States

Supplemental Appendix

In this Statistical Appendix, we present additional empirical models as various robustness checks for results presented in our main manuscript. We also offer more detailed information about our data collection, coding decisions, and the operationalization of key variables.

1 Social Capital Measures

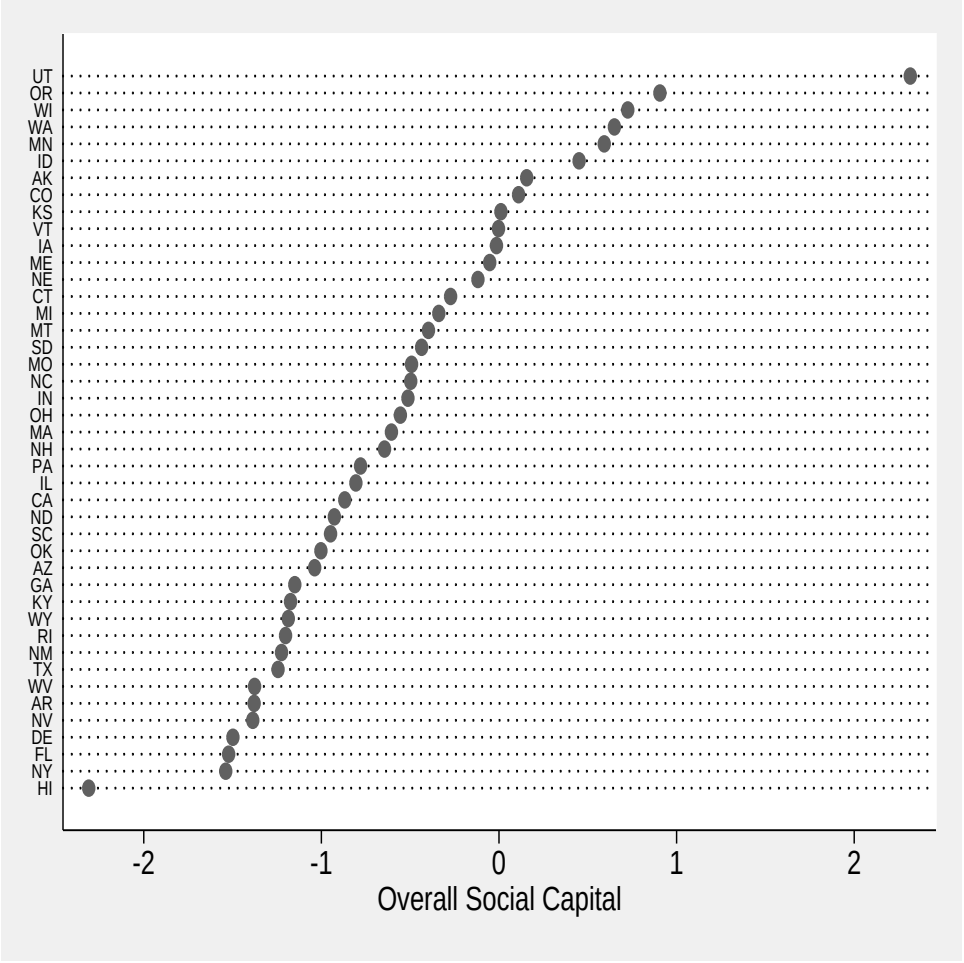
Levering data from the Census Current Populations Surveys (CPS),we validate state-level social capital measures and use them in our empirical models. Figure 1 presents the average levels of overall social capital across the 43 in-sample states. As noted in the main text, the overall social capital measure does not account for how social capital may vary among individuals from different racial/ethnic groups. The top portion of Figure 1 shows that states such as Utah, Oregon, Wisconsin, and Wyoming have higher mean levels of overall social capital. The bottom portion of the figure shows that Nevada, Delaware, Florida, New York, and Hawaii are among those with the lowest mean levels of overall social capital.

We then break down the CPS sample by respondents' race and ethnicity and estimated social capital measures by race and ethnicity. Table 1 reports the bivariate correlations between states' minority population (Black and Latino population) and the the three social capital indexes: Black Social Capital, Latino Social Capital, and White Social Capital. Across the board, we find that states with large minority population tend to have lower social capital across the three racial/ethnic groups. The correlation between the size of the Black population and each index is in the second row. All of the correlations are negative; the smallest correlation is between the Black population and the Black Social Capital (-0.3293) index and the largest correlation is between the Black population and White Social Capital (-0.5361). The correlation for Latino population and the Social Capital Indexes are in the third row of Table 1. Again, the most negative correlation is between Latino population and White Social Capital (-0.4137), while there is only a correlation of -0.1211 between Latino population and Latino Social Capital. The results in the correlation matrix contribute to our confidence that our social capital measures are not simply capturing the effects of the size of the minority population in each state.

Table 1: Correlation Matrix: Minority Population Size and Social Capital Indexes by Race and Ethnicity

Correlation	Black Social Capital	Latino Social Capital	White Social Capital
Black population	-0.3293	-0.4731	-0.5361
Latino population	-0.0840	-0.1211	-0.4137

Figure 1: Mean Levels of Overall Social Capital across the 43 In-Sample States



2 Alternative Specification: Multilevel Models

In our main manuscript, we present empirical results based on probit models. In this section, we present an alternative specification, using multi-level probit models with standard errors clustered at the district level. Table 2 shows the impact of overall social capital on the emergence and electoral success of minority candidates in state legislative elections. The multilevel models produce results that are consistent with models presented in our manuscript. We observe that the overall social capital is negatively associated with minority candidates emergence and their electoral prospects.

We also estimated multilevel models to examine the impact of the social capital indexes. Table 3 presents the results of black social capital and Latino social capital. These results highlight that black social capital negatively impacts the probability of a minority winning a state legislative election in 2012. This finding does not align with our expectations, but as explained in the manuscript, this may reflect competition between individuals who belong to different minority groups. Although the additional effects social capital indexes are not statistically significant, the direction is in the same direction as the results in the manuscript. Table 4 presents the results for multi-level models examining the effect of white social capital.

Table 2: The Impact of Overall Social Capital on Minority Candidates' Electoral Outcomes

Variables	Probit Equation I Minority Running Coeff.	(SE)	Probit Equation II Minority Winning Coeff.	(SE)
Overall Social Capital	-0.1233**	(0.0291)	-0.1137**	(0.0393)
% Minority legislators	-0.0151**	(0.0042)	-0.0051	(0.0056)
Liberal citizen ideology	0.0033**	(0.0070)	0.0012	(0.0021)
Black population	0.0158**	(0.0043)	0.0126	(0.0058)
Latino population	0.0296**	(0.0035)	-0.0118**	(0.0048)
County-level poverty rate	0.0021	(0.0042)	0.015	(0.0057)
Single-member districts	0.0485	(0.0892)	-0.2397**	(0.1198)
Term limit	-0.0686	(0.0421)	-0.0510	(0.0566)
Total seats	-0.0011**	(0.0003)	-0.0004	(0.0004)
Average legislator salary	0.0003**	(0.0007)	0.0008	(0.0010)
Number of candidates	0.0433**	(0.0136)	-0.0436**	(0.0216)
Open-seat election	0.2812**	(0.0386)	0.7820**	(0.0537)
Majority minority district	1.1376	(0.0664)	0.9660	(0.0747)
Minority incumbent	2.8135**	(0.0843)	3.275**	(0.0820)
Age	-0.0152**	(0.0015)	-0.0168	(0.0019)
Campaign contribution	-0.0032**	(0.0009)	0.0020**	(0.0009)
Experience	-0.2090**	(0.0399)	0.2342**	(0.0585)
Party affiliation	0.14092**	(0.0866)	0.2773**	(0.0259)
N	9,685		2,050	

Significance levels: ** p<0.05, * p<0.1.

These results also align with the results in manuscript - white social capital is negatively associated with the probability of a minority running for office, but does not have a statistically significant effect on the electoral success of these candidates.

Table 3: Impact of Black and Latino Social Capital on Minority Candidates' Electoral Outcomes

Variables	Probit Equation I Minority Running Coeff.	(SE)	Probit Equation II Minority Winning Coeff.	(SE)
Black Social Capital	0.0120	(0.0226)	-0.0630*	(0.0322)
Latino Social Capital	-0.0078	(0.0221)	0.0468	(0.0303)
% Minority legislator	-0.0134**	(0.0042)	-0.0040	(0.0056)
Liberal citizen ideology	0.0048**	(0.0014)	0.0031	(0.0020)
Black population	0.0210**	(0.0043)	0.0169**	(0.0059)
Latino population	0.0313**	(0.0036)	0.0128**	(0.0049)
County-level poverty rate	0.0040	(0.0043)	0.0027	(0.0058)
Single-member districts	-0.0373	(0.0890)	-0.2691**	(0.1197)
Term limit	-0.0638	(0.0436)	-0.0123	(0.0582)
Total seats	-0.0011**	(0.0003)	-0.0003	(0.0004)
Average legislator salary	0.0037**	(0.0008)	0.0024	(0.0001)
Number of candidates	0.0429**	(0.0137)	-0.0445**	(0.0216)
Open-seat election	0.3053**	(0.0390)	0.8158**	(0.0544)
Majority minority sistrict	1.129**	(0.0670)	0.9693**	(0.0763)
Minority incumbent	2.835**	(0.0852)	3.3133**	(0.0833)
Age	-0.0151**	(0.0014)	-0.0172**	(0.0020)
Campaign contribution	-0.0003**	(0.0009)	-0.0017*	(0.0009)
Experience	-0.2093**	(0.0403)	0.2498**	(0.0593)
Party affiliation	0.1408**	(0.1885)	0.2696**	(0.0261)
N	9,451		2,022	

Significance levels: ** p<0.05, * p<0.1.

Table 4: The Impact of White Social Capital on Minority Candidates' Electoral Outcomes

Variables	Probit Equation I Minority Running Coeff.	(SE)	Probit Equation II Minority Winning Coeff.	(SE)
White social capital	-0.0838**	(0.0310)	0.0598	(0.0436)
% Minority legislator	-0.0149**	(0.0042)	-0.0050	(0.0056)
Liberal citizen ideology	0.0047**	(0.0014)	0.0026	(0.0020)
Black population	0.0165**	(0.0044)	0.0142**	(0.0060)
Latino population	0.0291**	(0.0036)	-0.01197**	(0.0049)
County-level poverty rate	0.0021	(0.0042)	0.0016	(0.0057)
Single-member districts	0.0150	(0.0888)	-0.2743**	(0.1192)
Term limit	-0.0692	(0.0426)	-0.0498	(0.0576)
Total seats	-0.0012**	(0.0003)	-0.0004	(0.0004)
Average legislator Salary	0.0032**	(0.0008)	-0.0079	(0.0011)
Number of candidates	0.0429**	(0.0136)	-0.0444**	(0.0216)
Open-seat election	0.2894**	(0.0385)	0.7918**	(0.0536)
Majority minority district	1.1519**	(0.0663)	0.9797	(0.0746)
Minority incumbent	2.8148**	(0.0843)	3.2762**	(0.0820)
Age	-0.0150**	(0.0014)	-0.0167**	(0.0019)
Campaign contribution	-0.0030**	(0.0009)	0.0016*	(0.0009)
Experience	-0.2075**	(0.0399)	0.2353**	(0.0585)
Party affiliation	0.1390**	(0.0186)	0.2755**	(0.0258)
N	9,526		2,050	

Significance levels: ** p<0.05, * p<0.1.

3 Additional Models with Interaction Terms

We also generate models to examine expectations regarding the conditional nature of social capital interacting white social capital with our minority population size variables. We focus on two interaction terms (1) white social capital and the black population in each state and (2) white social capital and the Latinx population in states. Table 5 presents the results from the first interaction term and Table 6 contains the results from the second interaction term. While the interaction between white social capital and Black population is statistically insignificant, the results for models with the interaction of Latino population align with the existing literature on the conditional nature of social capital. While white social capital along does not have a significant effect on minority candidates running, the interaction of white social capital and the Latino population has a positive, statistically significant effect on this variable; this suggests that the benefits of a large Latino population may "counteract" the negative effects of white social capital on minority candidates winning. This provides support for the expectations put forth by (Fraga 2016).

Table 5: The Interactive Effects of White Social Capital and Black Population on Minority Candidates' Electoral Outcomes

Variables	Probit Equation I Minority Running Coeff.	(SE)	Probit Equation II Minority Winning Coeff.	(SE)
White Social Capital	-0.057	(0.040)	-0.051	(0.053)
Black population	0.014***	(0.005)	0.013**	(0.006)
White social capital × Black Pop.	-0.006	(0.005)	-0.002	(0.006)
% Minority legislator	-0.015***	(0.004)	-0.005	(0.005)
Liberal citizen ideology	0.005***	(0.001)	0.003	(0.002)
Latino population	0.029***	(0.004)	0.012***	(0.004)
County-level poverty rate	0.002	(0.004)	0.002	(0.005)
Single-member districts	0.023	(0.085)	-0.273**	(0.120)
Term limit	-0.075*	(0.042)	-0.052	(0.050)
Total seats	-0.0011***	(0.0003)	-0.0004	(0.0004)
Average legislator Salary	0.033***	(0.007)	0.0008	(0.0008)
Number of candidates	0.043***	(0.012)	-0.044	(0.030)
Open-seat election	0.284***	(0.040)	0.790***	(0.053)
Majority minority district	1.155***	(0.068)	0.980***	(0.064)
Minority incumbent	2.816***	(0.088)	3.276***	(0.093)
Age	-0.015***	(0.001)	-0.017***	(0.002)
Campaign contribution	-0.034***	(0.010)	0.0002**	(0.0008)
Experience	-0.209***	(0.041)	0.235***	(0.063)
Party affiliation	0.139***	(0.019)	0.276***	(0.028)
N	9,685		9,685	

Significance levels: *** p<0.01, ** p<0.05, * p<0.1.

Table 6: The Interactive Effects of White Social Capital and Latino Population on Minority Candidates' Electoral Outcomes

Variables	Probit Equation I Minority Running Coeff.	(SE)	Probit Equation II Minority Winning Coeff.	(SE)
White social capital	-0.188***	(0.044)	-0.229***	(0.056)
Latino population	0.032***	(0.004)	0.018***	(0.004)
White social capital * & Latino Pop.	0.010***	(0.003)	0.017***	(0.004)
% Minority legislator	-0.011**	(0.004)	0.001	(0.005)
Liberal citizen ideology	0.006***	(0.001)	0.004**	(0.002)
Black population	0.014***	(0.004)	0.010**	(0.005)
County-level poverty rate	0.002	(0.004)	0.002	(0.005)
Single-member districts	-0.026	(0.087)	-0.336***	(0.123)
Term limit	-0.048	(0.043)	-0.012	(0.049)
Total seats	-0.001***	(0.0003)	-0.0003	(0.0003)
Average legislator Salary	0.024***	(0.008)	-0.005	(0.009)
Number of candidates	0.039***	(0.011)	-0.051*	(0.031)
Open-seat election	0.302***	(0.040)	0.812***	(0.053)
Majority minority district	1.156***	(0.068)	0.987***	(0.064)
Minority incumbent	2.809***	(0.088)	3.272***	(0.094)
Age	-0.015***	(0.001)	-0.017***	(0.002)
Campaign contribution	-0.003	(0.0001)	0.002**	(0.0008)
Experience	-0.207***	(0.041)	0.237***	(0.063)
Party affiliation	0.139***	(0.019)	0.275***	(0.028)
N	9,685		9,685	

Significance levels: *** p<0.01, ** p<0.05, * p<0.1.

4 Models Including All Three Social Capital Indexes (White, Black and Latino Social Capital)

In the manuscript, we report separate models including the two minority social capital indexes and the white social capital index. Table 7 presents the results of models with all three social capital indexes in the same model. The three social capital indexes are positively correlated. The correlation is 0.62 for White Social Capital and Latino Social Capital, 0.48 for White Social Capital and Black Social Capital, and 0.51 for Black Social Capital and Latino Social Capital.

Based on this alternative specification, we find that high stocks of White Social Capital make it less likely that a minority ran in a 2012 state legislative election (the second column), but did not have a significant effect on the electoral success of minority candidates. These results are consistent with the findings presented in the manuscript. While the indexes of minority social capital capital were insignificant in the models from the manuscript, both have statistically significant effects here. Likely because of the correlation between the social capital indexes, the second column of Table 7 shows that high stocks of Black Social Capital and Latino Social Capital increase the likelihood that a minority candidate runs for election. This aligns with our expectations that high stocks of social capital yield "private" benefits for in-group members. The third column of Table 7 shows that only Latino Social Capital has a significant effect; high stocks of this measure of social capital increase the likelihood of a minority candidate winning an election. In the models presented here, Black Social Capital loses statistical significance and the effect of White Social Capital remain the same (negative and statistically insignificant). Across both models, there is consistency in the control variables that are statistically significant.

Table 7: Alternative Specification: Including All Three Social Capital Indexes in the Same Model

Variables	Minority Running Coeff. (SE)	Minority Winning Coeff. (SE)
White social capital	-0.187***	-0.134
	(0.0484)	(0.107)
Black social capital	0.0485*	-0.062
	(0.0287)	(0.051)
Latino social capital	0.0707**	0.167**
	(0.0289)	(0.067)
% Minority legislators	-0.0178***	0.007
	(0.00439)	(0.007)
Liberal citizen ideology	0.00375**	0.001
	(0.00148)	(0.003)
Black population	0.0167***	-0.005
	(0.00441)	(0.008)
Latino population	0.0273***	-0.024***
	(0.00364)	(0.007)
County-level poverty rate	0.00555	0.0002
	(0.00411)	(0.0073)
Single-member districts	0.0601	-0.487**
	(0.0906)	(0.227)
Term limit	-0.0964**	-0.012
	(0.0438)	(0.089)
Total seats	-0.00152***	0.001*
	(0.000307)	(0.001)
Average legislator salary	4.13e-06***	-4.83e-06***
	(8.38e-07)	(1.56e-06)
Number of candidates	0.0405***	-0.162***
	(0.0117)	(0.057)
Open-seat election	0.304***	1.070***
	(0.0402)	(0.080)
Majority minority district	1.126***	0.374***
	(0.0679)	(0.081)
Minority incumbent	2.830***	2.592***
	(0.0885)	(0.139)
Age	-0.0152***	-0.008***
	(0.00149)	(0.003)
Campaign contribution	-3.57e-07***	9.86e-07***
	(1.02e-07)	(2.61e-07)
Experience	-0.210***	0.5709
	(0.0419)	(0.0937)
Party affiliation	0.142***	0.3310***
	(0.0193)	(0.0447)
Constant	-1.069***	-0.3344***
	(0.195)	(0.260)
Observations	9,451	2,022

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Lastly, we generated figures that present the predicted probabilities based on models that include all three social capital indexes. The three figures are below. The figures for the effects of Black Social Capital are in Figure 2. These results for Black Social Capital presented in this figure and those in the manuscript are nearly identical. Figure 3 shows a positive relationship between Latino Social Capital and the emergence of minority candidates *and* their electoral success. Figure 4, present the results of White Social Capital. While the negative, statistically significant effect of White Social Capital on the probability of a minority candidate running is apparent. Despite differences in the coefficients of some variables, the results and general conclusions in the models presented here (models with all three, subgroup social capital indexes) and those in the manuscript (models with White Social Capital and minority social capital indexes separate) are comparable. This suggests that including or excluding the White Social Capital index does not result in significantly different results. Overall, our findings are consistent across different model specifications.

Figure 2: The Effects of Black Social Capital on Minority Candidates' Electoral Outcomes

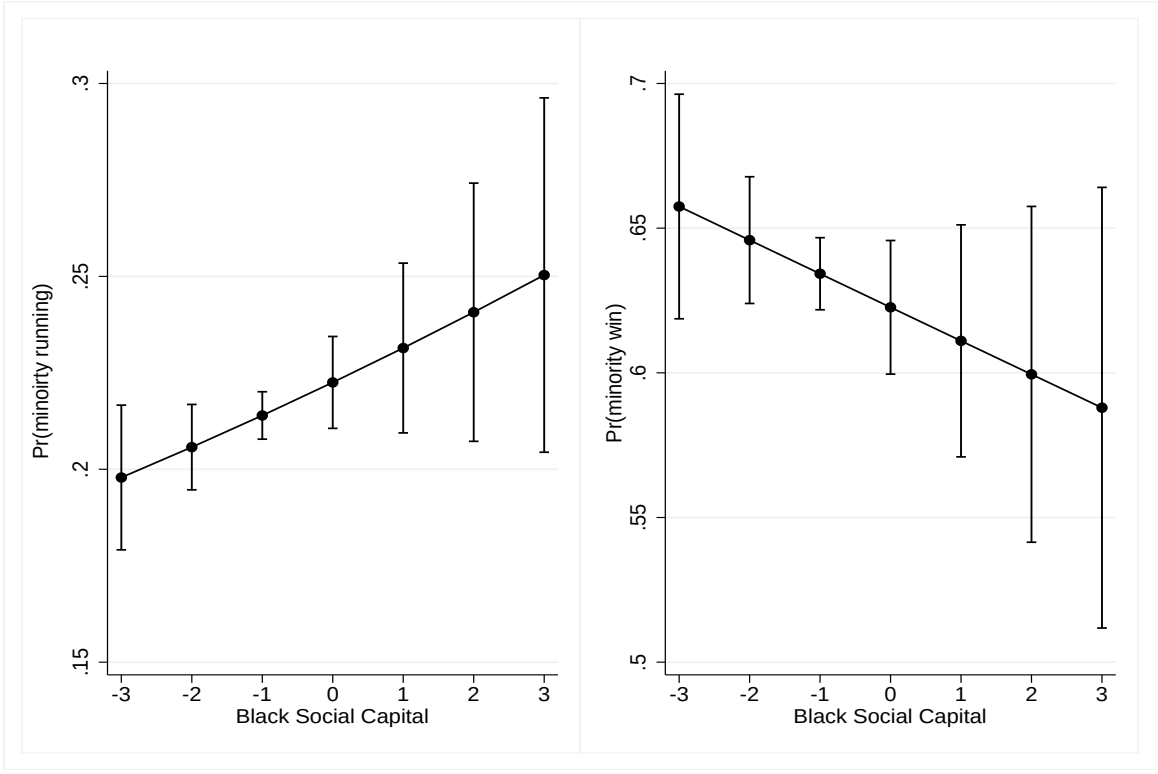


Figure 3: The Effects of Latino Social Capital on Minority Candidates' Electoral Outcomes

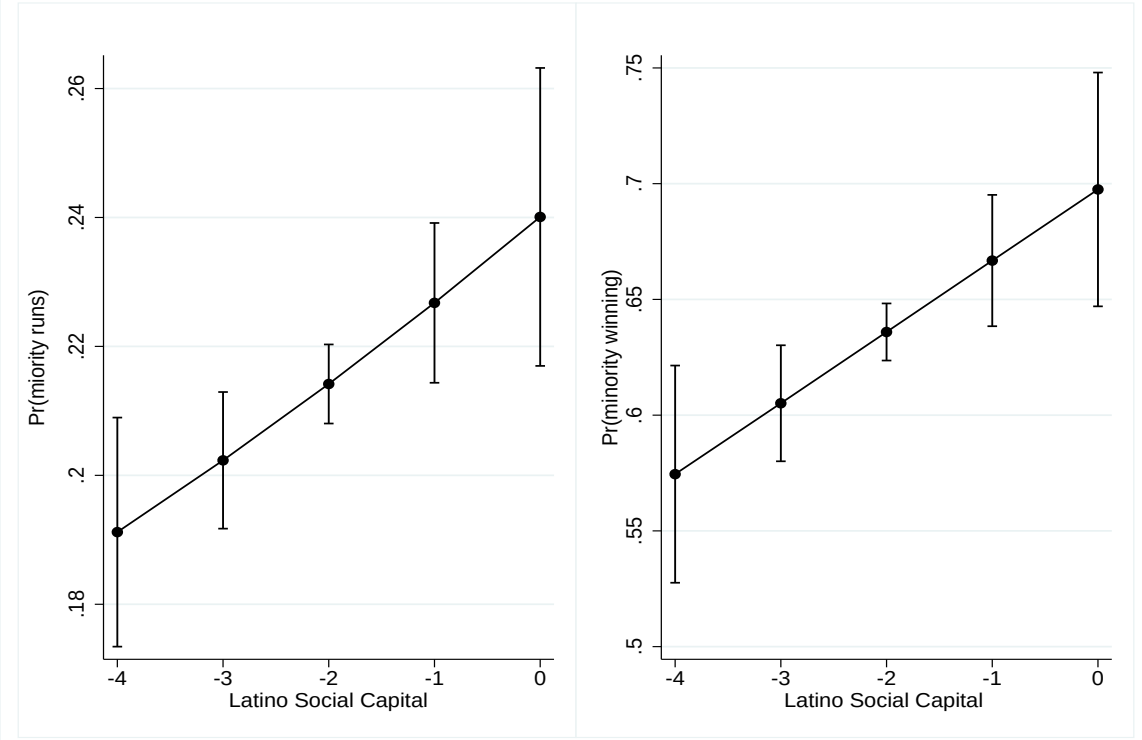
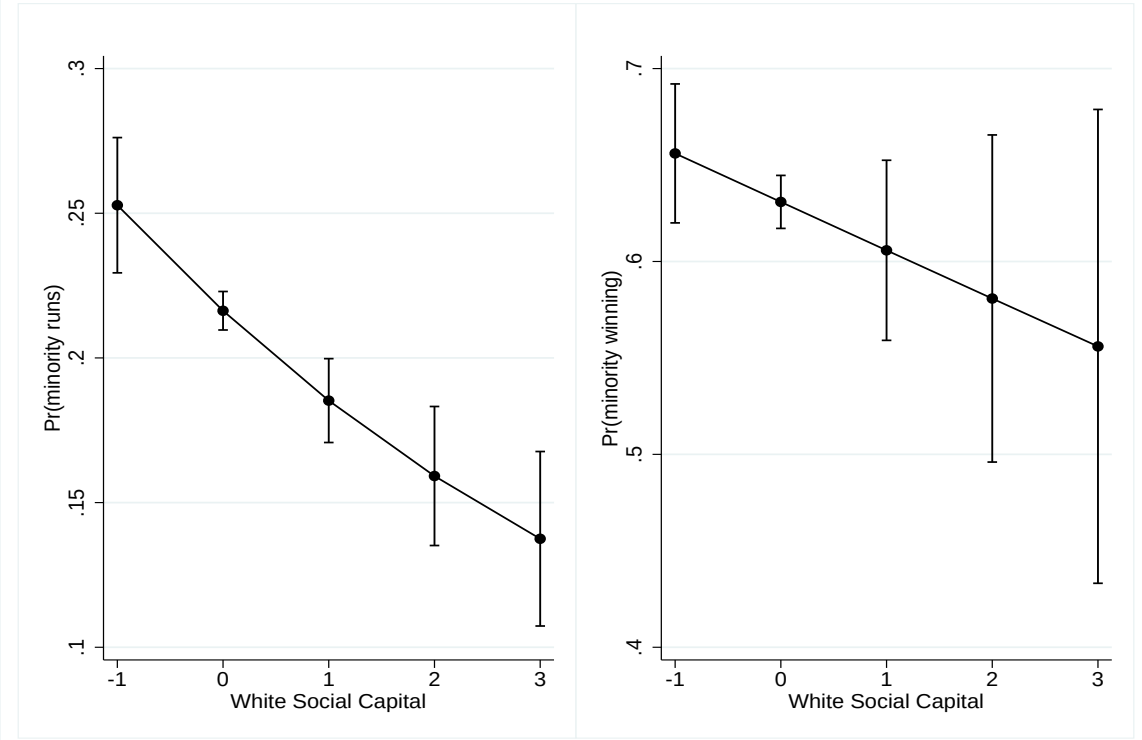


Figure 4: The Effects of White Social Capital on Minority Candidates' Electoral Outcomes



References

Fraga, Bernard L. 2016). "Redistricting and the causal impact of race on voter turnout." *The Journal of Politics* 78(1):19–34.