Robert J. McGrath and Josh M. Ryan, "Party Effects in State Legislative Committees"

Supporting Information for Review and Online Publication Only

Appendix A: Statistical Outliers in our Data

Although our empirical strategy is ultimately quite distinct from previous research in this vein, we also replicate what others have done with our more comprehensive dataset. We first use these data to test for committees that are statistical outliers as compared to their parent chambers. As noted, comparisons using interest group ratings of legislator ideology are most common in the state politics literature (Overby & Kazee 2000, Overby, Kazee & Prince 2004, Prince & Overby 2005), while work at the federal level has used scaled measures of ideology based on recorded roll call votes (such as NOMINATE scores (Poole & Rosenthal 1997)) (Londregan & Snyder 1994, Groseclose 1994), or distributive measures of jurisdiction-specific district demand (Hall & Grofman 1990, Adler & Lapinski 1997)[28] to create committee and chamber level measures of central tendency. In using Shor and McCarty (2011) scores, we are able to extend our analysis beyond small subsamples of states and take advantage of the common space on which these measures are mapped, making ideology, and ideological congruence, comparable across states and years. The measure of central tendency most commonly assessed at the state level has been committee and chamber *means* (Overby & Kazee 2000, Overby, Kazee & Prince 2004, Prince & Overby 2005). This contrasts with some work at the federal level which has argued that the *medians* of these institutions are the proper theoretical units to compare (Battista 2004, Groseclose 1994). We begin by examining means, as they lend themselves to more straightforward hypothesis tests, but we primarily analyze medians in the body of the paper.

Consistent with previous research in the states, we find that of the 30,509 committee years in our data only 315 committee means (about 1.03% of the total) differ from their chamber means when compared using two-sample t-tests (significance determined at $p < 0.05$, two-tailed test). Thus, upon expanding the sample and using a more reliable measure of ideology than did previous research, we come to the same substantive conclusion: "preference outliers" appear to be extremely rare in state legislatures. Our findings regarding the paucity of outlying committees in the states are entirely consistent with previous research on the topic (Overby & Kazee 2000, Overby, Kazee & Prince 2004, Prince & Overby 2005). These studies generally conclude that state legislative committees are broadly representative of their parent chambers, providing little evidence that parties exert significant control over committee makeup. Yet, simply concluding that most committees are not statistical outliers belies the variation that does exist in the relationships between committees and chambers both across states and over time. In the main body of the paper, we apply the logic of the regression discontinuity design to the substantive question of *how much* majority parties can, on average, bias committees (even without biasing them so much that they become statistical outliers).

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[28]Although, see Aldrich & Battista (2002) and Battista (2004) for state studies using scaled NOMINATE scores as a measure of committee and chamber characteristics.

Appendix B: Regression Discontinuity Design Validation and Falsification Tests

First, we plot the density of our running variable (figure B1) and see that the histogram does not seem to indicate non-random manipulation around the 0.5 threshold. We test this more formally using the local polynomial density estimator described in Cattaneo, Jansson & Ma (2015) and are unable to reject a null hypothesis that the density of this variable is continuous at the threshold ($p \approx 0.2178$). In the same vein, we show in the top two panels of table B1 and in figures B2 and B3 that lagged values for our running variable are balanced around the threshold. This is furtehr evidence in favor of the validity of the running variable in this context.

The bottom panel of table B1 and figure B4 further demonstrate that chambers near the 0.5 threshold are balanced with respect to a potential driver of committee bias: the chamber mean of the number of members in committees. In addition, these figures, and the formal results found in table B1, tell us that majority status does not indiscriminately affect placebo committee outcomes, which stands in stark contrast with the main results. In addition, table B2 and figures B5 and B6 examine whether there are any discontinuities in our outcomes of interest at placebo threshold values. That is, we have arbitrarily chosen values that we know do not assign majority status as a treatment (0.4 and 0.6) and looked for any evidence of a spurious treatment effect. The fact that we have falsified these incorrect thresholds as drivers of our outcomes adds credence to our design.

Table B1: Effects of Democratic Chamber Majority with Placebo Outcomes. Local Polynomial Analysis

Outcome: Democratic Seat Share in Chamber, Year $t-1$

| Polynomial | Bandwidth | Point Estimate | Conventional | | Robust | |
			p-val	95% CI	p-val	95% CI
1	0.107	0.001	0.8	[-0.011, 0.014]	0.748	[-0.013, 0.018]
2	0.162	0.002	0.755	[-0.013, 0.019]	0.785	[-0.016, 0.021]

Outcome: Democratic Seat Share in Chamber, Year $t-2$

| Polynomial | Bandwidth | Point Estimate | Conventional | | Robust | |
			p-val	95% CI	p-val	95% CI
1	0.082	0.004	0.695	[-0.017, 0.026]	0.544	[-0.017, 0.033]
2	0.117	0.006	0.675	[-0.024, 0.037]	0.732	[-0.029, 0.042]

Outcome: Chamber Mean of Number of Members in Committees

| Polynomial | Bandwidth | Point Estimate | Conventional | | Robust | |
			p-val	95% CI	p-val	95% CI
1	0.097	-1.099	0.291	[-3.139, 0.941]	0.373	[-3.692, 1.385]
2	0.131	-1.501	0.332	[-4.533, 1.531]	0.295	[-5.487, 1.668]

Note: Dependent variable for *Chamber Mean of Number of Members in Committees* outcome is measured using individual committee data and aggregating to the chamber level by taking the mean of all chamber committees. Output from `rdrobust`. For Polynomial order=1, point estimated by OLS, regressing outcome on the running variable on either side of the 0.5 threshold within the optimal bandwidth. For Polynomial order=2, point estimated with quadratic function of running variable. Conventional and robust (Calonico, Cattaneo & Titiunik 2014*b*) p-values and 95% confidence intervals reported.

Table B2: Effects of Democratic Chamber Majority on Committee Outcomes with Placebo Thresholds. Local Polynomial Analysis

Outcome: Chamber Mean of Democratic Seat Share in Committees

			Conventional		Robust	
				Placebo Threshold at 0.4		
Polynomial	Bandwidth	Point Estimate	p-val	95% CI	p-val	95% CI
1	0.049	0.013	0.325	[-0.013, 0.041]	0.328	[-0.016, 0.048]
2	0.111	0.012	0.351	[-0.013, 0.039]	0.341	[-0.015, 0.044]

			Conventional		Robust	
				Placebo Threshold at 0.6		
Polynomial	Bandwidth	Point Estimate	p-val	95% CI	p-val	95% CI
1	0.051	-0.003	0.748	[-0.026, 0.019]	0.863	[-0.023, 0.028]
2	0.089	-0.0002	0.986	[-0.025, 0.025]	0.730	[-0.032, 0.022]

Outcome: Chamber Mean of Median Ideology (Shor-McCarty) in Committees

			Conventional		Robust	
				Placebo Threshold at 0.4		
Polynomial	Bandwidth	Point Estimate	p-val	95% CI	p-val	95% CI
1	0.043	-0.058	0.224	[-0.152, 0.035]	0.195	[-0.191, 0.039]
2	0.069	-0.082	0.146	[-0.192, 0.028]	0.101	[-0.223, 0.021]

			Conventional		Robust	
				Placebo Threshold at 0.6		
Polynomial	Bandwidth	Point Estimate	p-val	95% CI	p-val	95% CI
1	0.052	0.047	0.528	[-0.100, 0.195]	0.823	[-0.148, 0.186]
2	0.128	-0.019	0.784	[-0.160, 0.121]	0.736	[-0.183, 0.129]

Note: Dependent variables measured using individual committee data and aggregating to the chamber level by taking the mean of all chamber committees for each outcome. Output from `rdrobust`. For Polynomial order=1, point estimated by OLS, regressing outcome on the running variable on either side of the 0.5 threshold within the optimal bandwidth. For Polynomial order=2, point estimated with quadratic function of running variable. Conventional and robust (Calonico, Cattaneo & Titiunik 2014*b*) p-values and 95% confidence intervals reported.

Figure B1: Histogram of Running Variable: Proportion Democrats in Chamber
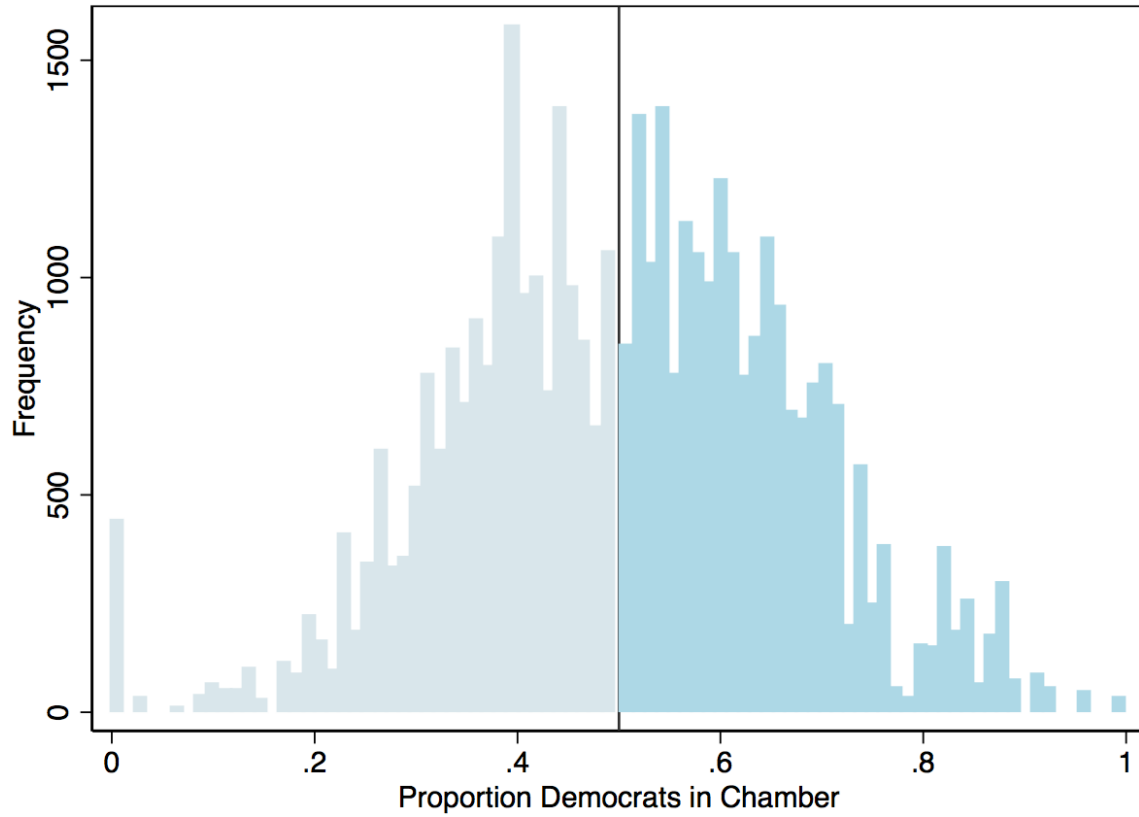
Note: Density test using `rdrobust` in Stata. P-value of density test: 0.2178. Density is not discontinuous at a threshold of 0.5.

Figure B2: Regression Discontinuity Plots with Placebo Covariate. Outcome: Democratic Seat Share in Chamber, Year $t-1$
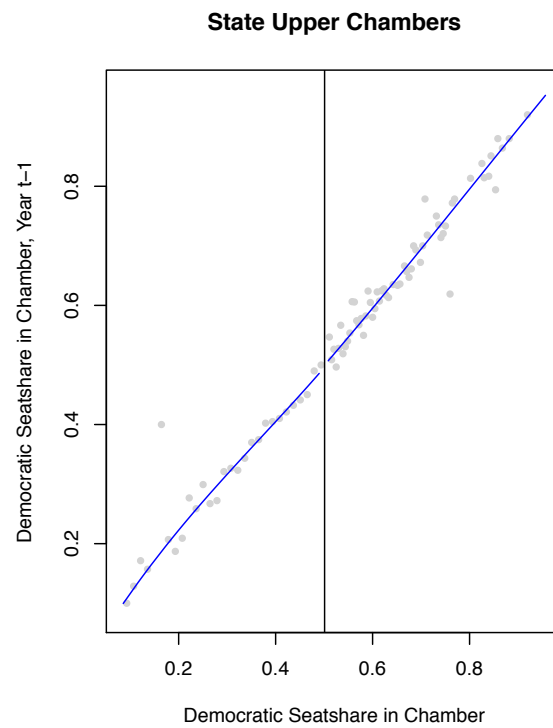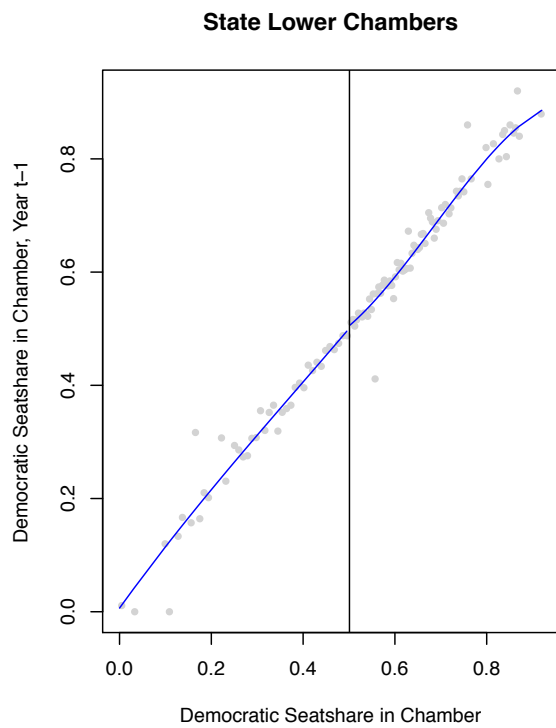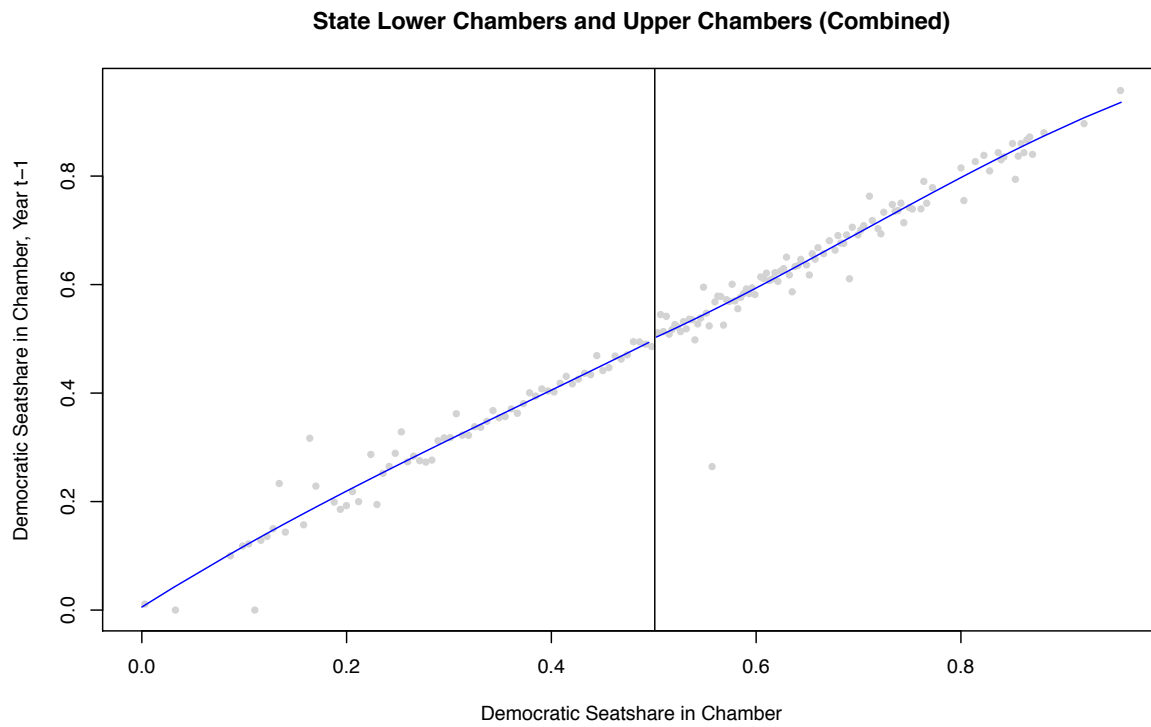
State Lower Chambers and Upper Chambers (Combined)

Democratic Seatshare in Chamber

State Lower Chambers

Democratic Seatshare in Chamber

State Upper Chambers

Democratic Seatshare in Chamber

Figure B3: Regression Discontinuity Plots with Placebo Covariate. Outcome: Democratic Seat Share in Chamber, Year $t - 2$

State Lower Chambers and Upper Chambers (Combined)

Democratic Seatshare in Chamber

State Lower Chambers

Democratic Seatshare in Chamber

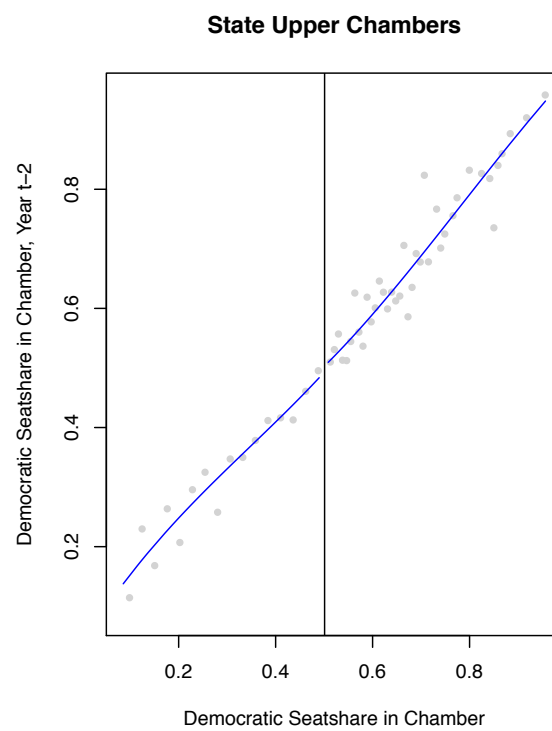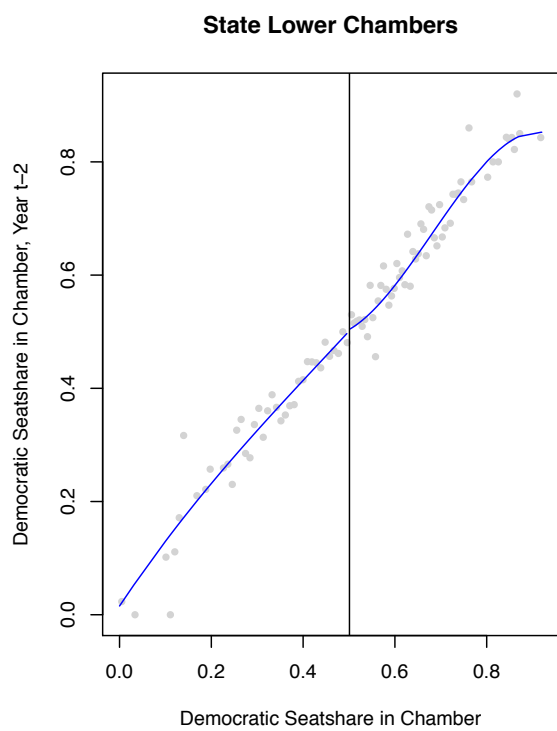**State Upper Chambers**
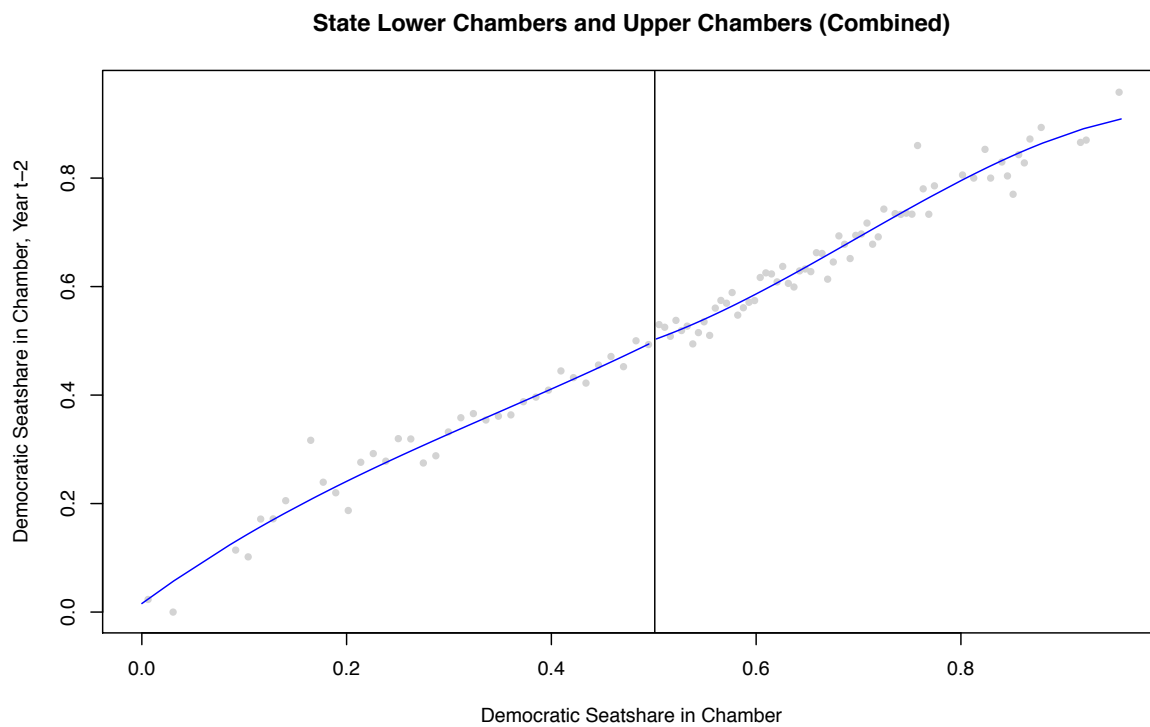

Democratic Seatshare in Chamber

Figure B4: Regression Discontinuity Plots with Placebo Covariate. Outcome: Chamber Mean of Number of Members in Committees

State Lower Chambers and Upper Chambers (Combined)
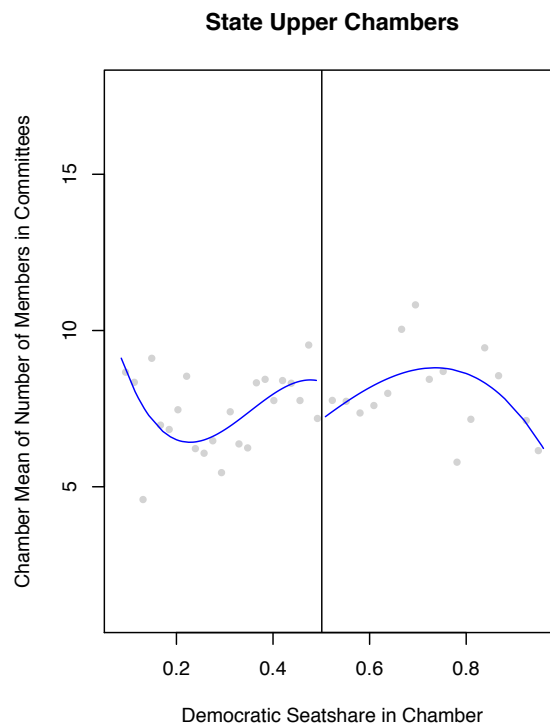

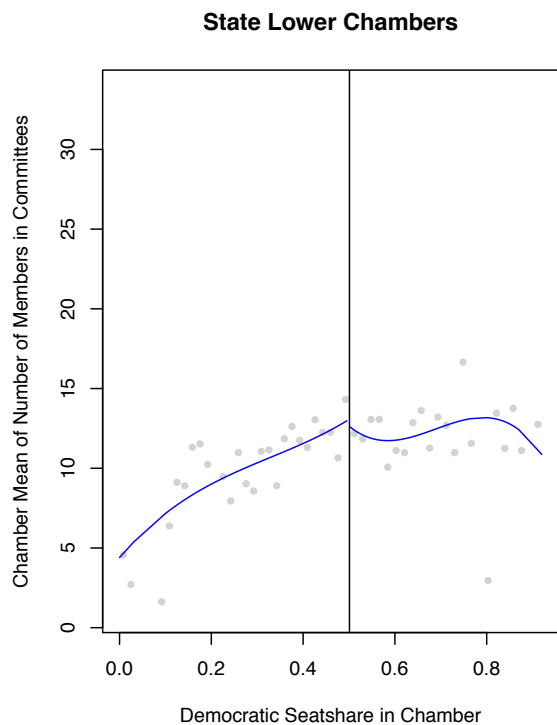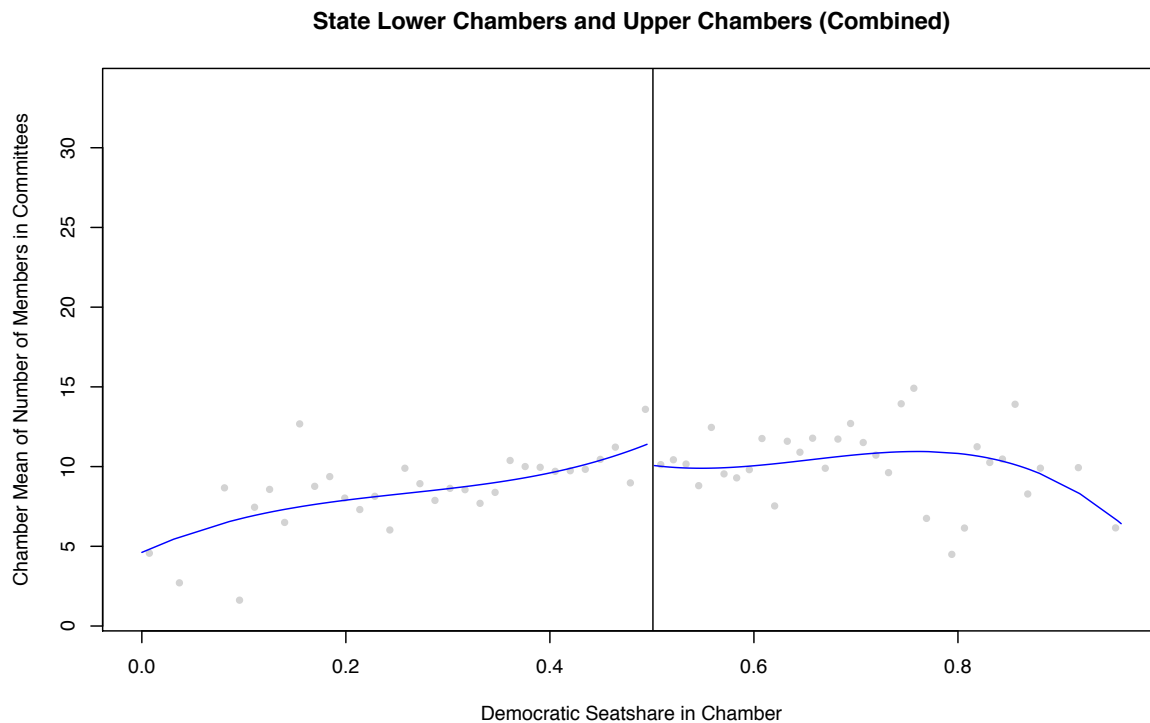State Lower Chambers

State Upper Chambers

Figure B5: Regression Discontinuity Plots with Placebo Thresholds (at 0.4 and 0.6).
Outcome: Chamber Mean of Democratic Seat Share in Committees
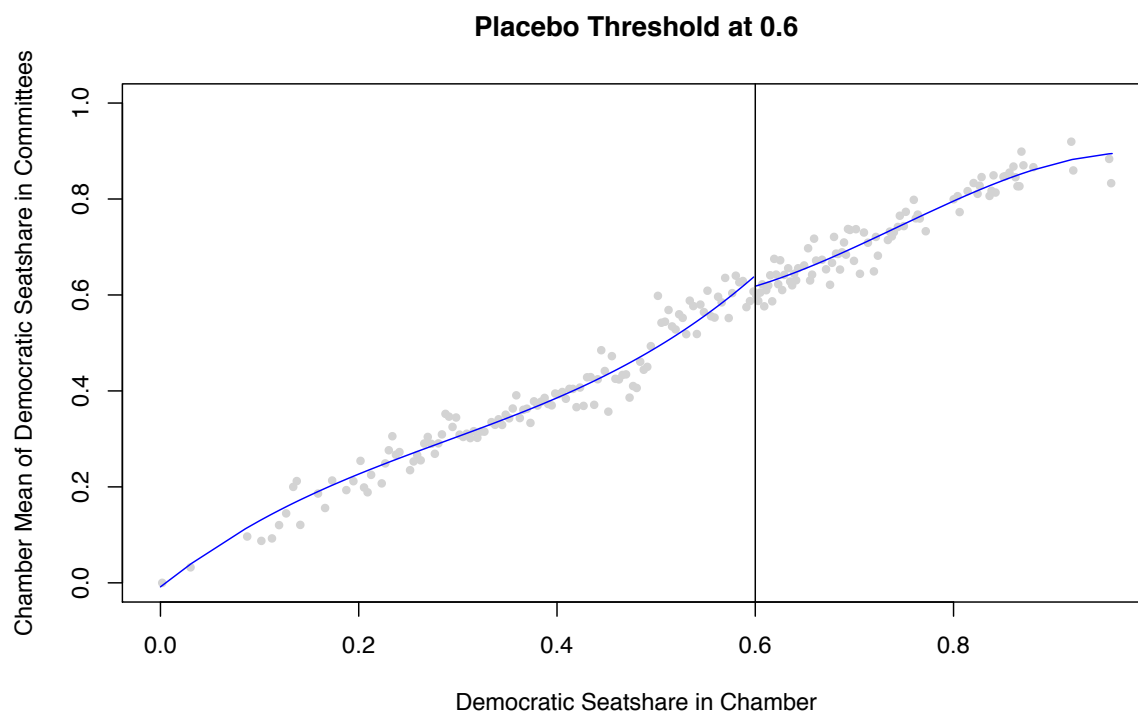
Placebo Threshold at 0.4
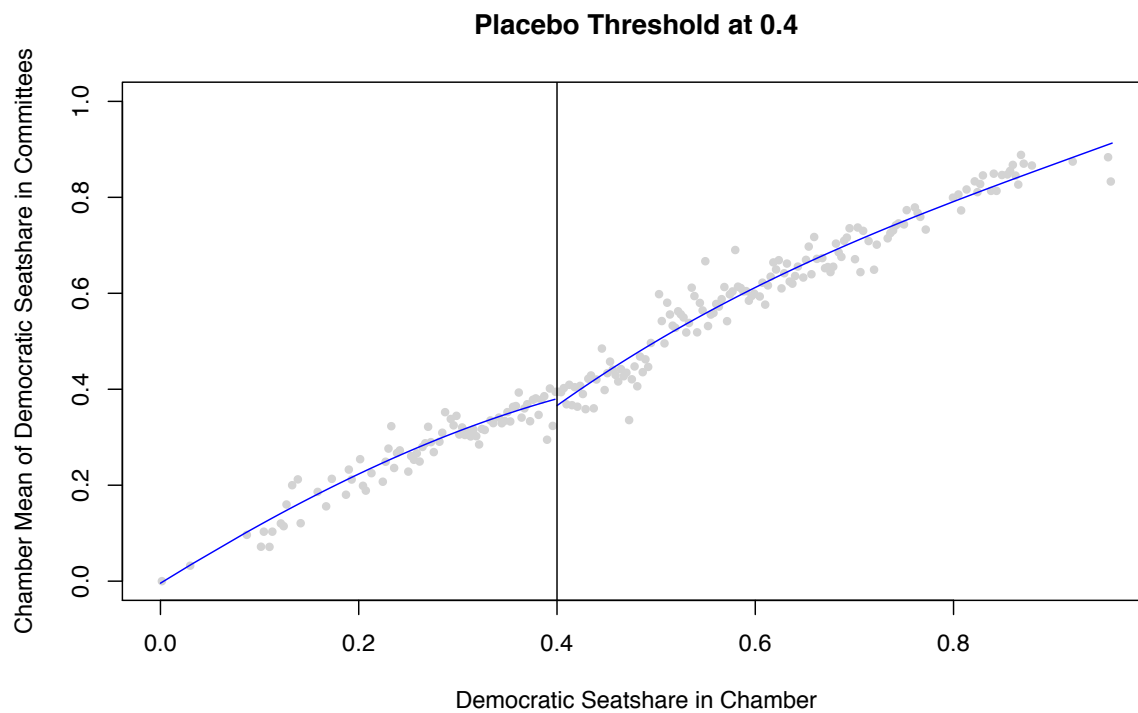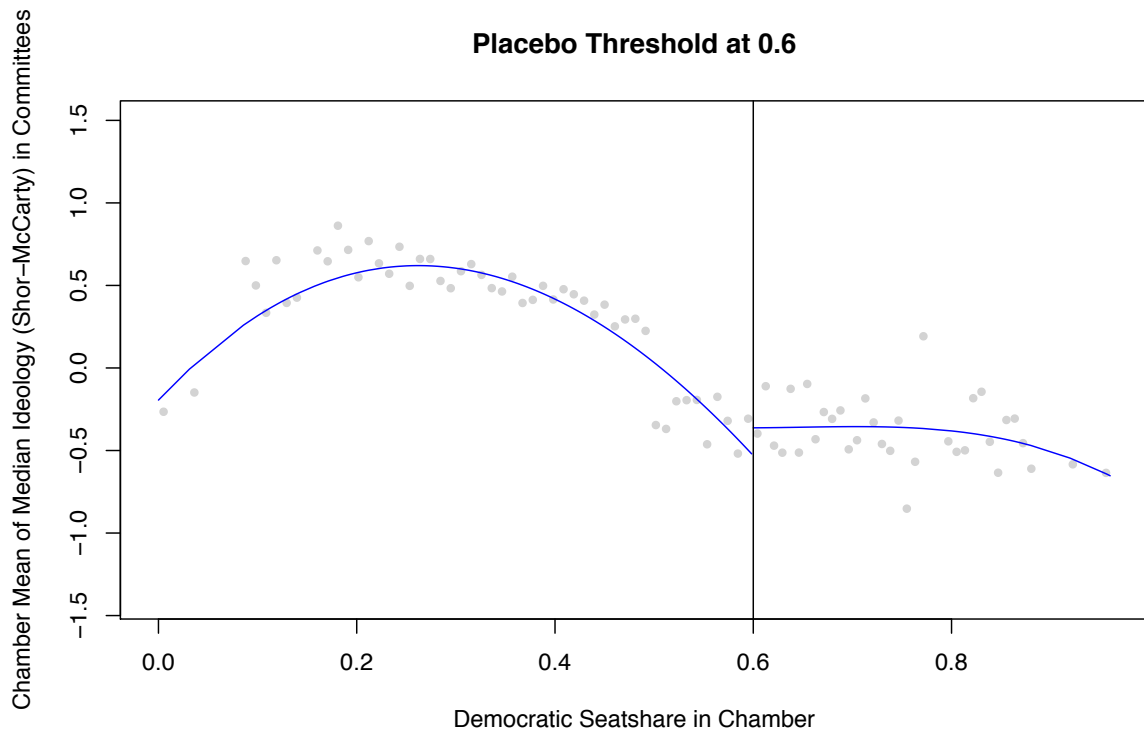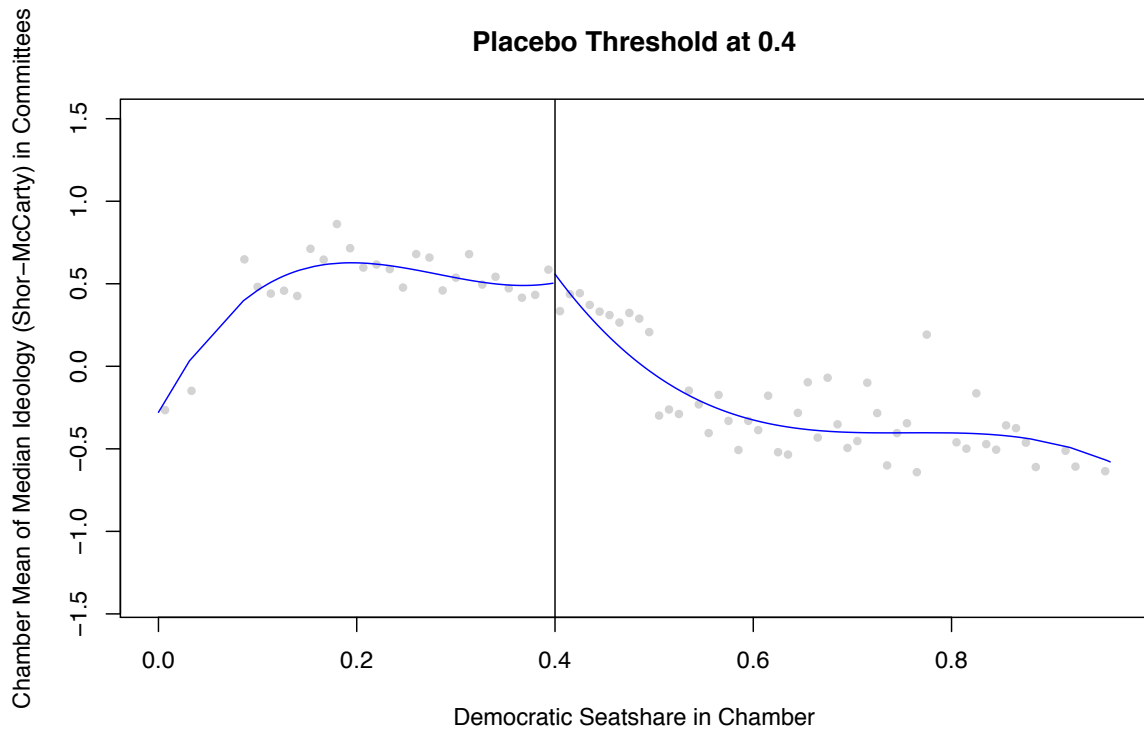

Placebo Threshold at 0.6

Figure B6: Regression Discontinuity Plots with Placebo Thresholds (at 0.4 and 0.6).
Outcome: Chamber Mean of Median Ideology (Shor-McCarty) in Committees

Appendix C: Party Power versus Proportional Representation Chambers

In the spirit of the placebo tests found in appendix B, we wish to demonstrate that differences in chamber rules governing committee member should affect the majority party's ability to stack committees in their favor. We used information found in the National Conference of State Legislatures' *Inside the Legislative Process* resource (`http://www.ncsl.org/research/about-state-legislatures/inside-the-legislative-process.aspx`). Table 4.10 of this publication gives the state legislative chambers that *require* committee membership by party to be proportional to chamber membership. These are what we call "proportional representation" chambers. As majority leaders lack the discretion to stack committee memberships here, we consider this an additional placebo test.

On the other hand, in other chambers, party leaders have discretion to pursue party stacking. We call these "party power" chambers, and expect that these chambers drive our aggregate results. However, we prefer in the main text to present results including both chamber types because 1) it would only produce downward bias in our main estimates, and 2) the NCSL categorizations are dated (they were calculated from surveys given in 1996) and cross-sectional – it may be the case that chamber rules have evolved over time. And, if rules have evolved, they would have evolved at the behest of majority parties and would likely have changed to give majorities more control over chamber organization and outputs.

Table C1: Effects of Democratic Chamber Majority on Committee Outcomes in Party Power and Proportional Representation Chambers. Local Polynomial Analysis

Outcome: Chamber Mean of Democratic Seat Share in Committees

			Party Power Chambers			
			Conventional		Robust	
Polynomial	Bandwidth	Point Estimate	p-val	95% CI	p-val	95% CI
1	0.069	0.087	<0.001	[0.0501, 0.1253]	<0.001	[0.0421, 0.1338]
2	0.1595	0.0904	<0.001	[0.0561, 0.1247]	<0.001	[0.0510, 0.1304]

			Proportional Representation Chambers			
			Conventional		Robust	
Polynomial	Bandwidth	Point Estimate	p-val	95% CI	p-val	95% CI
1	0.0498	0.0470	0.229	[-0.0297, 0.1237]	0.224	[-0.0354, 0.1510]
2	0.110	0.0724	0.103	[-0.0148, 0.1597]	0.155	[-0.0287, 0.1802]

Outcome: Chamber Mean of Median Ideology (Shor-McCarty) in Committees

			Party Power Chambers			
			Conventional		Robust	
Polynomial	Bandwidth	Point Estimate	p-val	95% CI	p-val	95% CI
1	0.0343	-0.6366	<0.001	[-0.9229, -0.3504]	<0.001	[-1.0257, -0.3726]
2	0.0854	-0.715	<0.001	[-0.9732, -0.4567]	<0.001	[-1.0426, -0.4698]

			Proportional Representation Chambers			
			Conventional		Robust	
Polynomial	Bandwidth	Point Estimate	p-val	95% CI	p-val	95% CI
1	0.0458	-0.1309	0.732	[-0.8824, 0.6205]	0.930	[-0.9369, 0.8574]
2	0.1149	-0.1904	0.540	[-0.8007, 0.4199]	0.715	[-0.8615, 0.5916]

Note: Dependent variables measured using individual committee data and aggregating to the chamber level by taking the mean of all chamber committees for each outcome. Output from `rdrobust`. For Polynomial order=1, point estimated by OLS, regressing outcome on the running variable on either side of the 0.5 threshold within the optimal bandwidth. For Polynomial order=2, point estimated with quadratic function of running variable. Conventional and robust (Calonico, Cattaneo & Titiunik 2014*b*) p-values and 95% confidence intervals reported.

Appendix D: States' Proximity to the Democratic Majority Threshold Over Time

In figures D1-D3 below, we demonstrate each state chamber's proximity to the threshold for Democratic majorities over time (positive values indicate Democratic majorities; negative values indicate Republican majorities; values near 0 approach the .5 seat share threshold in our RD design). Although the state chambers that contribute to each RD estimator reported above depends on the value of the optimal bandwidth used; as a rule, chambers that are regularly near the threshold contribute more critically to our RD estimates. While there are some chambers that never get close to switching to or from Democratic majority control, these figures demonstrate that a good number of chambers do contribute to our estimates and that these chambers vary with respect to their levels of polarization and professionalism.

Figure D1: Proximity to the Democratic Majority Threshold - All States, Pooled Chambers
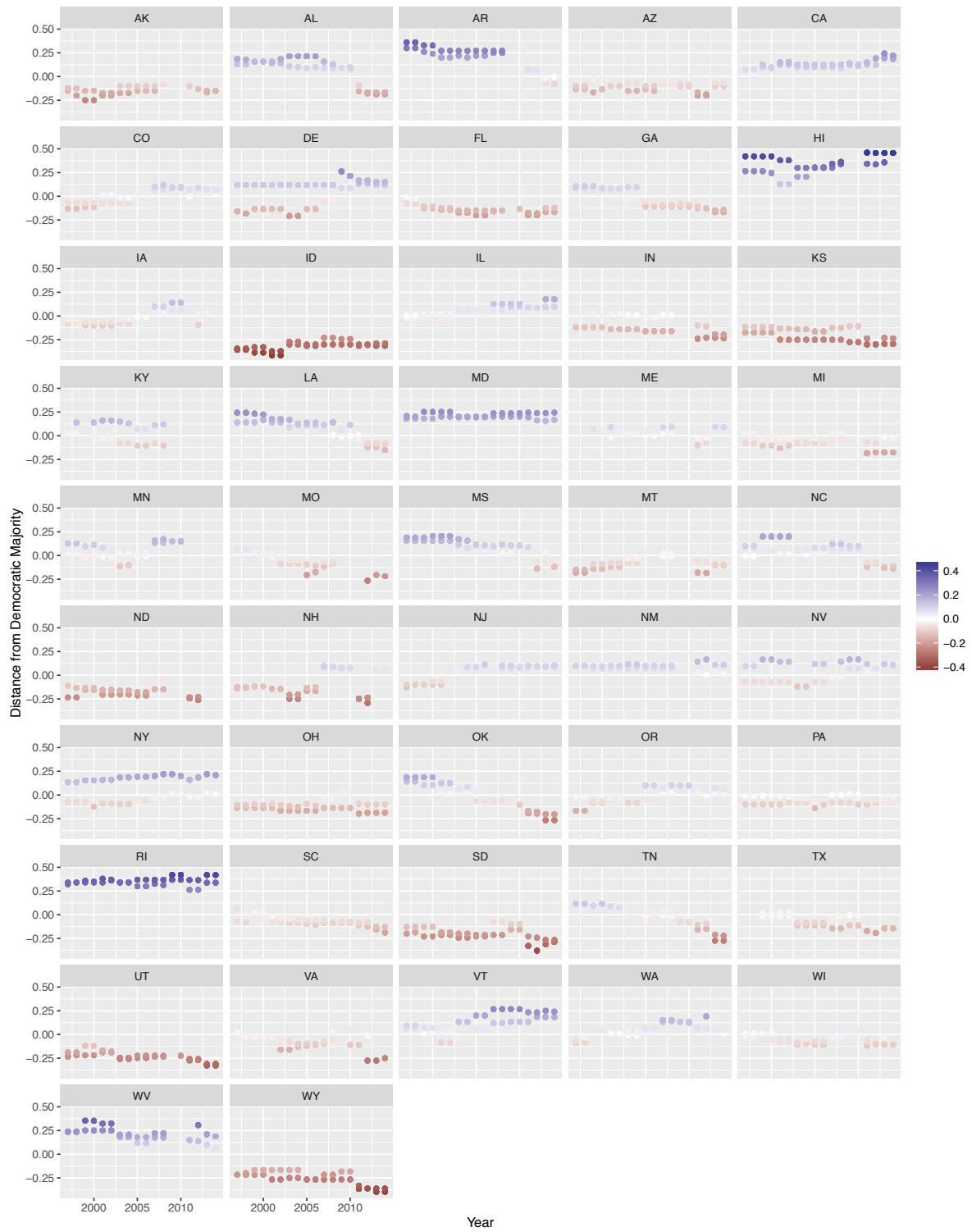
Figure D2: Proximity to the Democratic Majority Threshold - All States, Lower Chambers
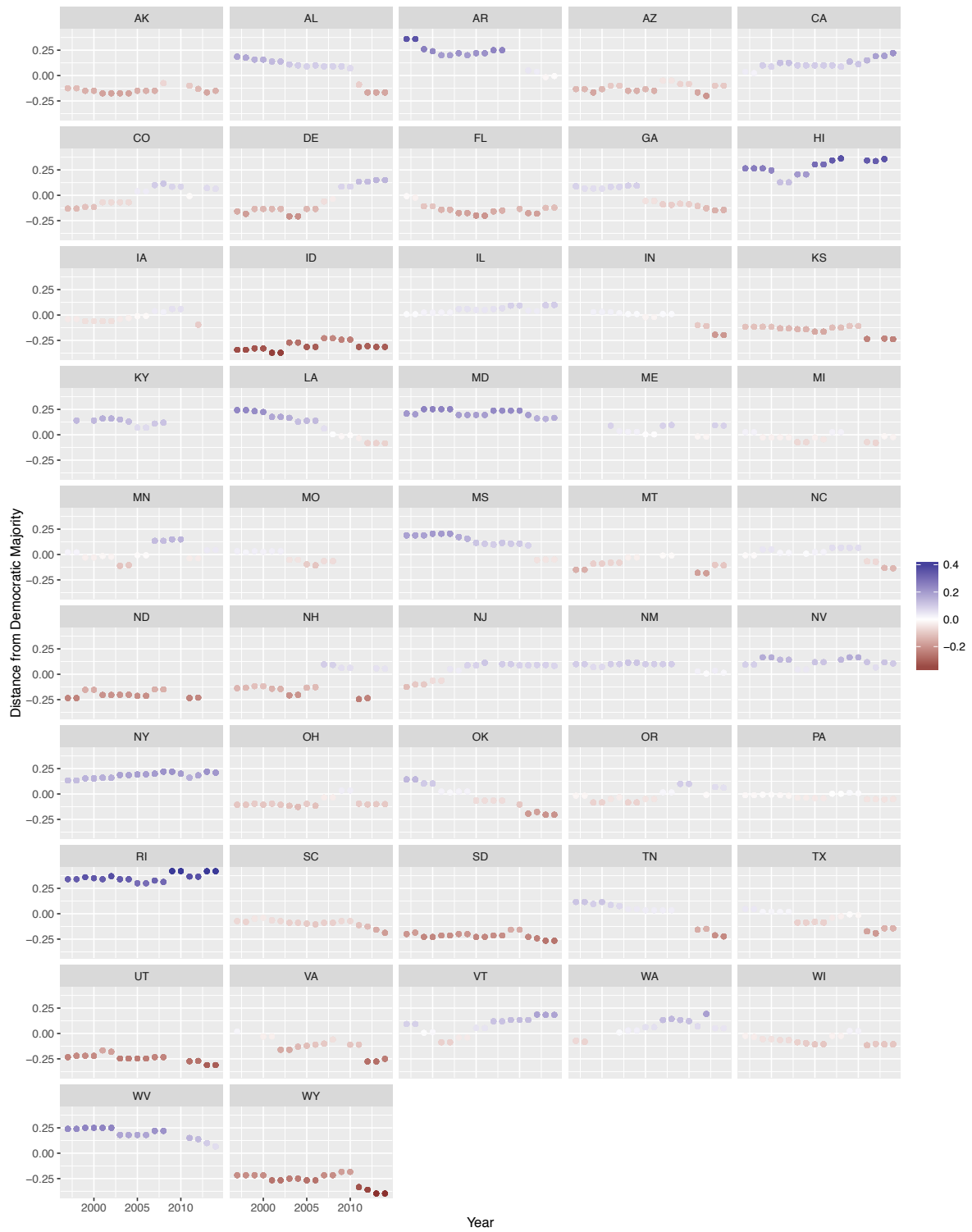
Figure D3: Proximity to the Democratic Majority Threshold - All States, Upper Chambers
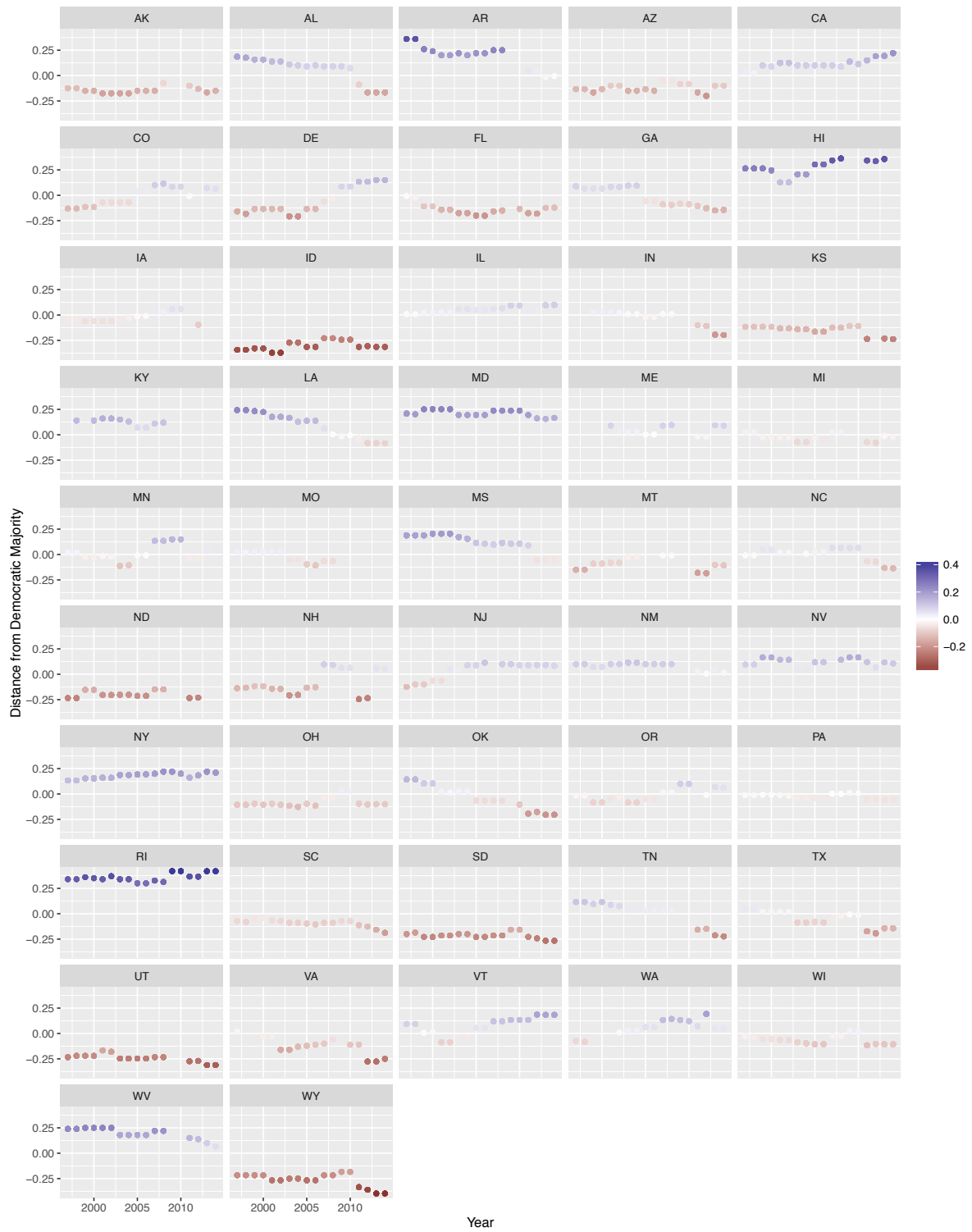
Appendix E: Disaggregated Committee-level Outcome

Here, we replicate our main results using the more elemental committee-level data that we have collected. Recall that we aggregate committee outcomes to the chamber (by taking the means for each outcome across all chamber committees) in the main analyses, as the majority status treatment occurs at the chamber level and we are sensitive to artificially increasing our observations and deflating our standard errors. The following results confirm that our findings are robust to disaggregation.

Table E1: RD Effects of Democratic Chamber Majority on Committee Outcomes. Local Polynomial Analysis.

Outcome: Proportion Democrats in Committee

| Polynomial	Bandwidth	Point Estimate	Conventional		Robust	
			p-val	95% CI	p-val	95% CI
State Lower Chambers and Upper Chambers						
1	0.060	0.069	<0.001	[0.050, 0.087]	<0.001	[0.049, 0.093]
2	0.140	0.079	<0.001	[0.062, 0.096]	<0.001	[0.061, 0.100]
State Lower Chambers Only						
1	0.054	0.071	<0.001	[0.046, 0.094]	<0.001	[0.045, 0.102]
2	0.120	0.087	<0.001	[0.064, 0.110]	<0.001	[0.062, 0.114]
State Upper Chambers Only						
1	0.048	0.036	<0.1	[-0.008, 0.080]	<0.3	[-0.024, 0.076]
2	0.107	0.027	<0.17	[-0.012, 0.068]	<0.39	[-0.026, 0.065]

Outcome: Median Ideology in Committee

| Polynomial	Bandwidth	Point Estimate	Conventional		Robust	
			p-val	95% CI	p-val	95% CI
State Lower Chambers and Upper Chambers						
1	0.073	-0.429	<0.001	[-0.477, -0.381]	<0.001	[-0.480, -0.366]
2	0.135	-0.431	<0.001	[-0.484, -0.379]	<0.001	[-0.493, -0.373]
State Lower Chambers Only						
1	0.041	-0.339	<0.001	[-0.418, -0.260]	<0.001	[-0.413, -0.231]
2	0.102	-0.418	<0.001	[-0.490, -0.346]	<0.001	[-0.487, -0.326]
State Upper Chambers Only						
1	0.029	-0.889	<0.001	[-1.169, -0.608]	<0.001	[-1.253, -0.658]
2	0.095	-0.518	<0.001	[-0.679, -0.358]	<0.001	[-0.730, -0.358]

Note: Output from `rdrobust`. For Polynomial order=1, point estimated by OLS, regressing outcome on the running variable on either side of the 0.5 threshold within the optimal bandwidth. For Polynomial order=2, point estimated with quadratic function of running variable. Conventional and robust (Calonico, Cattaneo & Titiunik 2014*b*) p-values and 95% confidence intervals reported.

Figure E1: Regression Discontinuity Plot. Outcome: Proportion Democrats in Committee

State Lower Chambers and Upper Chambers (Combined)

State Lower Chambers

State Upper Chambers
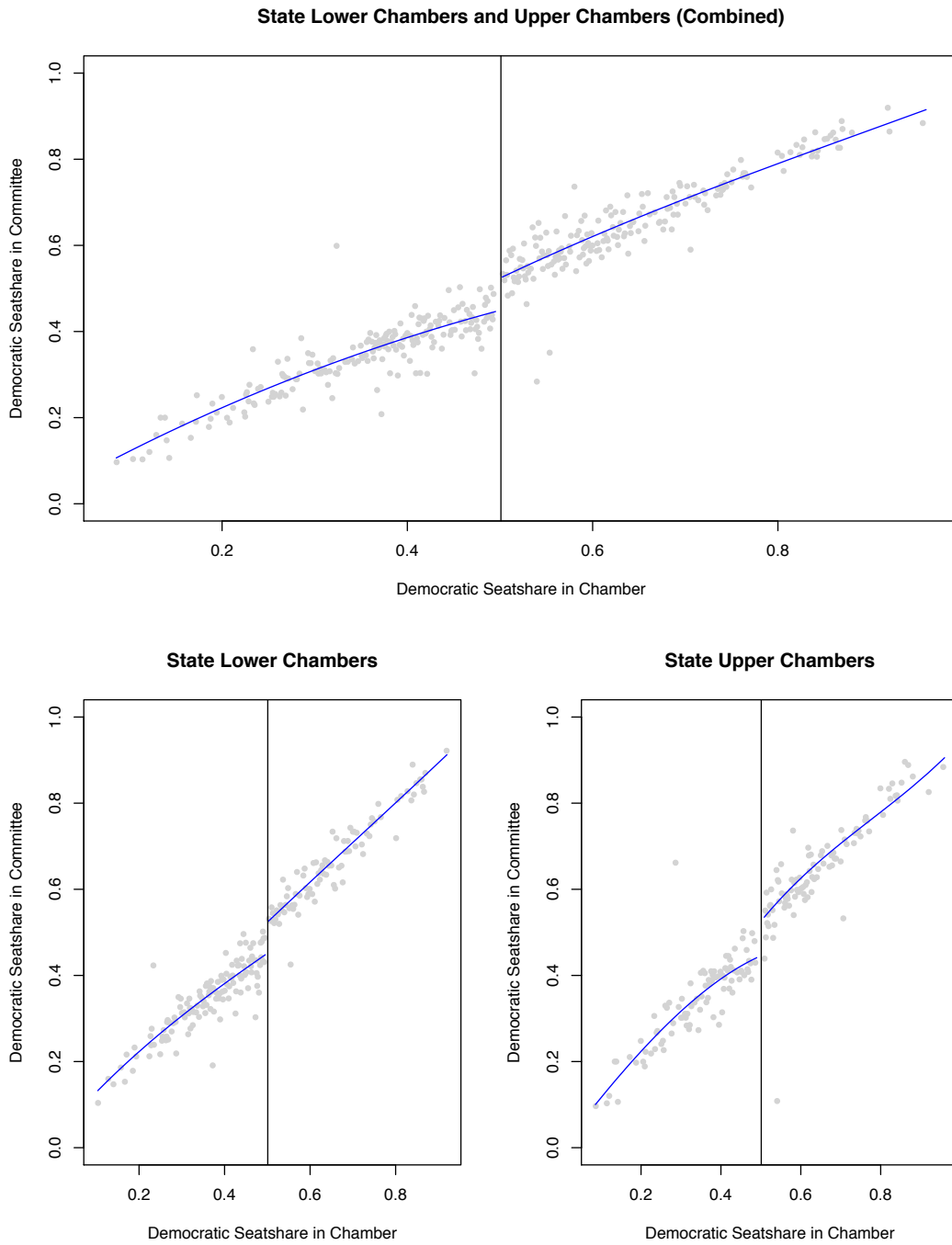
Note: Plot shows averages of the proportion of Democrats in committee by 1 percentage point bins of the proportion of Democrats in the chamber running variable. When the Democratic party crosses the threshold (located at 0.5) from minority party to majority party in a chamber, its share of seats in that chamber's committees increases substantially.

Figure E2: Regression Discontinuity Plot. Outcome: Median Ideology (Shor-McCarty) in Committee

State Lower Chambers and Upper Chambers (Combined)

State Lower Chambers

State Upper Chambers
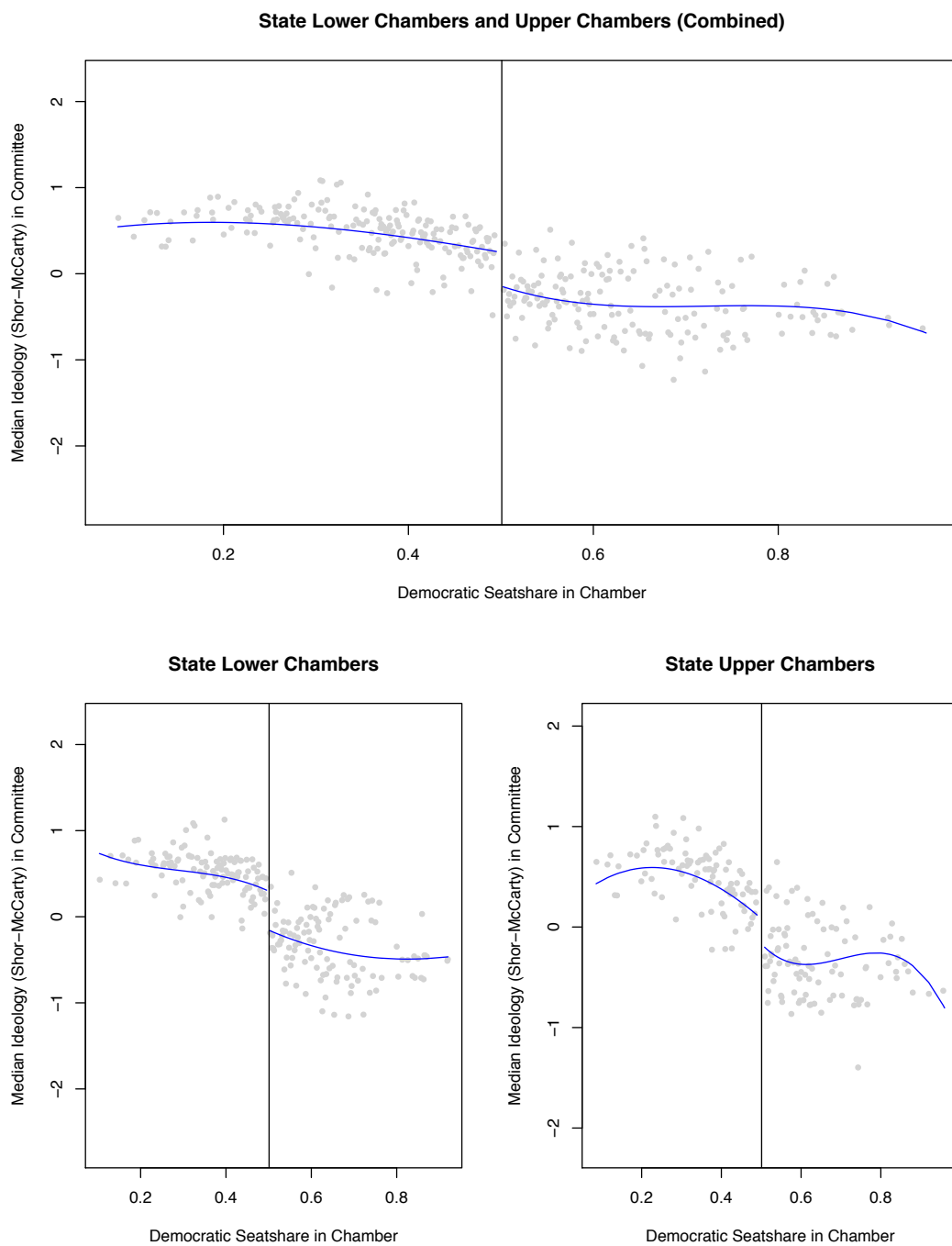
Note: Plot shows averages of median committee ideology by 1 percentage point bins of the proportion of Democrats in the chamber running variable. When the Democratic party crosses the threshold (located at 0.5) from minority party to majority party in a chamber, the ideology of the chamber's committees becomes noticeably more liberal.

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Appendix F: Committee-Level Difference-in-Difference Models

Appendix Table F1: Committee-Level Difference-in-Difference Models of Proportion Democrats in Committee

	(1)	(2)	(3)	(4)	(5)	(6)
Democratic Majority Indicator	0.139***	0.104***	0.037***	-0.400***	-0.328***	-0.279***
	(0.001)	(0.001)	(0.002)	(0.003)	(0.004)	(0.006)
Proportion Democrats in Chamber			0.803***			-0.577***
			(0.018)			(0.049)
Constant	0.496***	0.493***	0.061***	0.034***	0.483***	0.794***
	(0.001)	(0.007)	(0.011)	(0.003)	(0.018)	(0.032)
State FE	No	Yes	Yes	No	Yes	Yes
Year FE	No	Yes	Yes	No	Yes	Yes
Observations	33,113	33,113	33,113	32,208	32,208	32,208
R-squared	0.367	0.453	0.486	0.333	0.558	0.560

*$p < 0.10$, **$p < 0.05$, ***$p < 0.01$

Note: OLS models of Proportion Democrats in Committee (columns 1-3) and Median Ideology (Shor-McCarty) in Committee (columns 4-6). The Democratic Majority Indicator takes the value of 1 when Democrats control the chamber, 0 when a tied chamber, and -1 when Republicans control the chamber. Coefficients on this variable mirror the democratic majority status treatment from the regression discontinuity models. The effects here confirm the robustness of the existence and magnitude of the party effects we find in the main analyses.

Appendix G: Heterogeneous Treatment Effects Based on State Characteristics

Table G1: RD Effects of Democratic Chamber Majority on Committee Outcomes in Chamber. Local Polynomial Analysis. Sample Split by Levels of Chamber Polarization

Outcome: Chamber Mean of Democratic Seat Share in Committees

Polynomial	Bandwidth	Point Estimate	Conventional		Robust	
			p-val	95% CI	p-val	95% CI
In Polarized Chambers						
1	0.043	0.087	<0.05	[0.007, 0.166]	<0.05	[0.004, 0.190]
2	0.107	0.114	<0.001	[0.049, 0.180]	<0.01	[0.043, 0.201]
In Non-Polarized Chambers						
1	0.060	0.073	<0.001	[0.035, 0.111]	<0.01	[0.020, 0.111]
2	0.118	0.072	<0.001	[0.031, 0.112]	<0.01	[0.021, 0.110]

Outcome: Chamber Mean of Median Ideology (Shor-McCarty) in Committees

Polynomial	Bandwidth	Point Estimate	Conventional		Robust	
			p-val	95% CI	p-val	95% CI
In Polarized Chambers						
1	0.046	-0.555	<0.001	[-0.881, -0.229]	<0.01	[-0.989, -0.184]
2	0.109	-0.575	<0.001	[-0.873, -0.278]	<0.001	[-0.949, -0.228]
In Non-Polarized Chambers						
1	0.063	-0.553	<0.001	[-0.743, -0.362]	<0.001	[-0.792, -0.329]
2	0.121	-0.506	<0.001	[-0.710, -0.302]	<0.001	[-0.765, -0.305]

Note: As described in the text, polarized chambers are those in which the chamber difference between the Democratic and Republican party medians is greater than the mean difference in the full dataset. Dependent variables measured using individual committee data and aggregating to the chamber level by taking the mean of all chamber committees for each outcome. Output from `rdrobust`. For Polynomial order=1, point estimated by OLS, regressing outcome on the running variable on either side of the 0.5 threshold within the optimal bandwidth. For Polynomial order=2, point estimated with quadratic function of running variable. Conventional and robust (Calonico, Cattaneo & Titiunik 2014*b*) p-values and 95% confidence intervals reported.

Table G2: RD Effects of Democratic Chamber Majority on Committee Outcomes in Chamber. Local Polynomial Analysis. Sample Split by Levels of Legislative Professionalism

Outcome: Chamber Mean of Democratic Seat Share in Committees

			Conventional		Robust	
Polynomial	Bandwidth	Point Estimate	p-val	95% CI	p-val	95% CI
In Professional Legislatures ("Green" and "Light Green" States)						
1	0.039	0.064	<0.05	[0.0001, 0.129]	<0.19	[-0.026, 0.132]
2	0.095	0.091	<0.01	[0.018, 0.163]	<0.05	[0.0001, 0.167]
In Less Professional Legislatures ("Gray," "Gold," and "Light Gold" States)						
1	0.054	0.081	<0.001	[0.034, 0.129]	<0.01	[0.018, 0.135]
2	0.124	0.076	<0.001	[0.031, 0.121]	<0.01	[0.022, 0.129]

Outcome: Chamber Mean of Median Ideology (Shor-McCarty) in Committees

			Conventional		Robust	
Polynomial	Bandwidth	Point Estimate	p-val	95% CI	p-val	95% CI
In Professional Legislatures ("Green" and "Light Green" States)						
1	0.034	-0.494	<0.001	[-0.781, -0.207]	<0.05	[-0.798, -0.045]
2	0.079	-0.528	<0.01	[-0.865, -0.192]	<0.01	[-0.865, -0.087]
In Less Professional Legislatures ("Gray," "Gold," and "Light Gold" States)						
1	0.035	-0.464	<0.05	[-0.847, -0.082]	<0.05	[-0.984, -0.093]
2	0.084	-0.542	<0.01	[-0.895, -0.188]	<0.01	[-0.992,-0.202]

Note: Dependent variables measured using individual committee data and aggregating to the chamber level by taking the mean of all chamber committees for each outcome. Output from `rdrobust`. For Polynomial order=1, point estimated by OLS, regressing outcome on the running variable on either side of the 0.5 threshold within the optimal bandwidth. For Polynomial order=2, point estimated with quadratic function of running variable. Conventional and robust (Calonico, Cattaneo & Titiunik 2014*b*) p-values and 95% confidence intervals reported. Legislative professionalism categories from http://www.ncsl.org/research/about-state-legislatures/full-and-part-time-legislatures.aspx. "Green" refers to full-time, well paid legislatures, with large staff resources; "Light Green" are full-time legislatures with fewer resources; "Gray" denotes hybrid legislatures; "Light Gold" are part-time legislatures with moderate pay and staff; "Gold" are part-time legislatures with low pay and few staff.