APPENDICES FOR
THE VALUE OF POLITICAL GEOGRAPHY:
EVIDENCE FROM THE REDISTRICTING OF FIRMS

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This document contains appendices that present additional tables and robustness results for online publication only.

APPENDIX A: ADDITIONAL TABLES

Table A1 displays the dates when new district maps first entered the public domain. States with missing dates have only a single congressional district and are thus not subject to redistricting.

Table A1 – Dates Credible Maps are Released

State	Date Credible Map Released	State	Date Credible Map Released
Alabama	19/05/2011	Montana	-
Alaska	-	Nebraska	05/05/2011
Arizona	03/10/2011	Nevada	14/10/2011
Arkansas	13/04/2011	New Hampshire	22/03/2012
California	10/06/2011	New Jersey	23/12/2011
Colorado	10/11/2011	New Mexico	29/12/2011
Connecticut	13/01/2012	New York	06/03/2012
Delaware	-	North Carolina	25/07/2011
Florida	02/02/2011	North Dakota	-
Georgia	22/08/2011	Ohio	14/12/2011
Hawaii	26/09/2011	Oklahoma	14/04/2011
Idaho	17/10/2011	Oregon	29/06/2011
Illinois	27/05/2011	Pennsylvania	13/12/2011
Indiana	11/04/2011	Rhode Island	19/12/2011
Iowa	29/03/2011	South Carolina	26/07/2011
Kansas	07/06/2011	South Dakota	-
Kentucky	06/02/2011	Tennessee	06/01/2012
Louisiana	20/03/2011	Texas	28/02/2012
Maine	27/09/2011	Utah	17/10/2011
Maryland	04/10/2011	Vermont	-
Massachusetts	07/11/2011	Virginia	10/01/2012
Michigan	17/06/2011	Washington	01/01/2012
Minnesota	21/02/2012	West Virginia	05/08/2011
Mississippi	19/12/2011	Wisconsin	08/07/2011
Missouri	27/04/2011	Wyoming	-

Table A2 presents regression results on the relationship between the degree of geographic change in congressional districts and cumulative abnormal returns of the affected firms. The first column regresses CARs on a continuous variable measuring the percentage change in district area. The second column additionally includes a squared term since the effect of geographic change may plausibly be non-linear. In Column 3, which corresponds to the results shown in Figure 2 in the main text, geographic change is captured by dummy variables based on 10% intervals of change.

Table A2 – Effects of Change in Geographic Overlap on CARs

Dependent Variable	Cumulative Abnormal Return (%)			*Fraction of observations in Data*
	(1)	(2)	(3)	
Percentage Change in Geographic Overlap	-0.003	-0.040		
	(0.004)	(0.025)		
Percentage Change in Geographic Overlap Squared		0.000		
		(0.000)		
Dummy - Change by 10-20%			0.777**	12.7%
			(0.360)	
Dummy - Change by 20-30%			-0.042	12.4%
			(0.577)	
Dummy - Change by 30-40%			-0.137	7.9%
			(0.592)	
Dummy - Change by 40-50%			-0.885	8.1%
			(0.567)	
Dummy - Change by 50-60%			-0.449	5.4%
			(0.551)	
Dummy - Change by 60-70%			0.436	6.9%
			(0.589)	
Dummy - Change by 70-80%			-0.766*	6.6%
			(0.392)	
Dummy - Change by 80-90%			-1.560**	5.8%
			(0.764)	
Dummy - Change by 90-100%			0.698	11.5%
			(0.623)	
State-Fixed Effects	Yes	Yes	Yes	
N	2,656	2,657	2,656	

Notes:

Robust standard errors clustered by state are reported.

* indicates significance at the .1 level, ** at the .05 level, and *** at the .01 level.

Cumulative Abnormal Returns are estimated for an event window of (-1, +7) using a Fama-French 3 Factor model and a 250 day estimation window.

Dummy variables are calculated based on percentage changes in how much of the geography between a firms' pre-redistricting and post-redistricting district overlap with higher numbers indicating greater change.

APPENDIX B: ROBUSTNESS

This Appendix contains additional analysis aimed at robustness.

Falsification of and Robustness to Urbanization/Population Density Hypothesis

Our result that changes in the competitiveness of districts affect firm valuations around redistricting could also be explained by changes in population characteristics, such as urbanization. For example, we might expect suburban districts to be the most competitive, given that most rural districts are Republican and most urban districts are Democratic. Moreover, suburban districts becoming more urbanized might be related to the economic vibrancy of the area in which firms are headquartered which could have positive spillovers on firms.

Table B1 – Urbanization Transition Matrix

		After Redistricting			
		Urban	**Suburban**	**Rural**	
Before Redistricting	**Urban**	30.4%	5.0%	0.3%	***35.8%***
	Suburban	9.1%	20.2%	2.2%	***31.5%***
	Rural	1.7%	5.8%	25.2%	***32.8%***
		41.2%	***31.1%***	***27.8%***	***100.0%***

We created a series of population density-based metrics to capture these potential effects. First, we created a measure of rural, suburban, and urban districts. We define rural districts as having population densities of less than 500 people per square mile, urban districts as having population densities of greater than 2500 people per square mile, and suburban districts as anything in between. Table B1 presents a transition matrix between these various district types before and

after redistricting. It looks very similar to our transition matrix between types of partisan competition in that 75% of firm-district pairings reside on the diagonal and do not change type.

Table B2 – Falsification/Robustness to Urbanization of District Hypothesis

Dependent Variable	Cumulative Abnormal Return (%)			
	(1)	(2)	(3)	(4)
Dummy - Reassigned to Safe District			1.051	1.079
			(0.754)	(0.766)
Dummy - Reassigned to Competitive District			-1.586***	-1.575**
			(0.587)	(0.597)
Dummy - Reassigned to More Dense Category	0.032		0.036	
	(0.345)		(0.356)	
Dummy - Reassigned to Less Dense Category	-0.459395		-0.456249	
	(0.422)		(0.449)	
Dummy - Reassigned to >25% More Density		-0.095		-0.038
		(0.353)		(0.364)
Dummy - Reassigned to >25% Less Density		-0.333576		-0.358133
		(0.336)		(0.352)
State-Fixed Effects	Yes	Yes	Yes	Yes
N	2,657	2,657	2,657	2,657

Notes:
Robust standard errors clustered by state are reported.
* indicates significance at the .1 level, ** at the .05 level, and *** at the .01 level.
CARs are estimated for a (-1, +7) event window using a Fama-French 3 Factor model and a 250 day estimation window.
District Safety is defined as a 10% total margin so party balance outside a 45/55 or 55/45 split defines a "safe district" while party balance falling within those ranges define "competitive districts".
Districts defined as reassigned to more dense category / less dense category if transitioned in that direction where urban is defined as >2500 people per square mile and rural is defined as <500 people per square mile.
Districts defined as reassigned to 25% more density / less density if population per square mile changed by >25% in that direction.

We show results using population density metrics in Table B2. Columns 1 and 2 show no independent and measurable effects of transitioning to a more or less dense district. Columns 3

and 4 show our core result about partisan competition being the main driver of changes in CARs survives when measures of population density are included in the regression.[1]

Robustness to Different Cut-Points for Safe Districts

Another measurement question we might be concerned about is how we define districts as being safe or competitive. Throughout the paper, we use a 55/45 vote margin, where firms inside that range are considered to be in competitive districts and those outside that range are considered to be in safe districts. Alternatively, we could have defined that range as 52.5/47.5—or any number of other bands. We may be concerned about whether our results remain robust to this narrower margin defining which districts are safe versus which are competitive. The results in Table B3—which replicate Table 2 exactly but switch the definition of safe/competitive districts to the narrower range—show that our results remain robust to the alternatively defined measure.

Placebo Test Using Firms from Single-District States

Since there is no change in district boundaries in states that contain only a single congressional district, firms residing in such states do not experience any change in their political geography. These firms are therefore excluded from the regressions presented in the main text. Here, we use these firms to run an additional placebo test. We assign each firm in a single-district state an event date based on the release of maps in the largest neighboring state.[2] The average of the CARs

[1] We also ran tests with interactions between changing competitiveness and changing density before and after redistricting, but do not display the results. Those regressions once again show our core results survive, without yielding any new inferences about the role of changes in population density around firms as a result of redistricting.

[2] We assign Alaska the date corresponding to the release of maps in Washington State; Delaware that of Pennsylvania; Montana that of Idaho; North Dakota and South Dakota that of Minnesota; Vermont that of New York State; and Wyoming that of Colorado.

calculated based on these event dates should not be significantly different from zero since the release of maps in a neighboring state should not systematically affect firm valuations. We verify this by adding the corresponding observations to our main sample and re-running the regression presented in Column 1 of Table 2 with an added dummy variable indicating that a firm resides in a single-district state. The results are presented in Table B4. As should be expected, the corresponding coefficient is not significantly different from zero.

Table B3 – Regressions with Alternative Margin on Competitive/Safe Districts

Dependent Variable	**Cumulative Abnormal Return (%)**			
	(1)	(2)	(3)	(4)
Dummy - Move to Safe District	0.802		0.592	0.584
	(0.616)		(0.587)	(0.604)
Dummy - Move to Competitive District	-1.211*		-1.214*	-1.158
	(0.697)		(0.697)	(0.721)
Dummy - Move to Safe District of Other Party			0.319	-0.365
			(0.694)	(0.804)
Dummy - Move to Democratic District		0.353		0.132
		(0.487)		(0.911)
Dummy - Move to Republican District		1.649*		1.494*
		(0.907)		(0.829)
State-Fixed Effects	Yes	Yes	Yes	Yes
N	2,657	2,657	2,657	2,657

Notes:
Robust standard errors clustered by state are reported.
* indicates significance at the .1 level, ** at the .05 level, and *** at the .01 level.
Cumulative Abnormal Returns are estimated for a (-1, +7) event window using a Fama-French 3 Factor model and a 250 day estimation window.
District Safety is defined as a 5% total margin so party balance outside a 47.5/52.5 or 52.5/47.5 split defines a “safe district” while party balance falling within those ranges defines a “competitive district”. Districts defined as belonging to a party (Democratic or Republican) if more than 50% of voters lean towards it.

Table B4 – Placebo Test Using Single-District States

Dependent Variable	Cumulative Abnormal Return (%)
	(1)
Dummy - Move to Safe District	1.0461
	(0.747)
Dummy - Move to Competitive District	-1.592**
	(0.587)
Dummy - Single-District State	-1.122
	(1.334)
Fixed Effects for Multiple-District States	Yes
N	2,689

Notes:

Robust standard errors clustered by state are reported.

* indicates significance at the .1 level, ** at the .05 level, and *** at the .01 level.

CARs are estimated for a (-1, +7) event window using a Fama-French 3 Factor model and a 250 day estimation window.