Online Appendix

Additional Notes on Methodology

The U.S. Census data that allows us to count the voting-age population within each district can allow us to examine the population residing within the *sets* of jurisdictions that correspond to the six levels of office we study. To do so, we use population counts at the lowest level of aggregation provided by the Census bureau — the census block — and rely on Census-provided correspondence tables to aggregate counts to the unique intersection of all of the electoral boundaries used in the elections we study.[1] Since the correspondence tables also indicate the pre and post-redistricting districts each block was assigned to, we can also account for shifting district boundaries. As a result, we can examine not only the temporal and geographic variation in competition experienced by U.S. adults, but also the hierarchical variation in competition brought forth by the overlapping jurisdictional boundaries corresponding to different elected offices.

As an example, consider Connecticut in Figure **??**. Leveraging the TIGER/Line geographic shapefiles also constructed by the Census,[2] we used GIS software to combine all of the district boundaries both before and after redistricting. In black lines, we divide the state into its Congressional districts. Notice that there are small areas outlined by black lines that represent areas that switched Congressional districts between 2010 and 2012. In thick gray lines, we overlay state senate districts, including changes made in redistricting. In thin gray lines, we show the state house districts. Each unique polygon in this map saw a different set of elections over our time frame.

For each non-overlapping polygon, we aggregate the number of voting-age Americans re-

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[1]Block-level data is only available for the voting-age population in 2010. The American Communities Survey (ACS), Current Population Survey (CPS), and other survey-based Census products with information on citizenship and voter turnout are not available at the block level and thus cannot be used in our analysis. Also, a very small number of census blocks are "split" in the districting process, with portions of a block assigned to different districts. We do not account for these block splits in the analysis.

[2]Available at https://www.census.gov/geo/maps-data/data/tiger-line.html

siding in this area in April 2010, the month in which the census was administered.[3] Since each of these geographic areas witnessed the same set of elections over the period from 2006-2012, we are able to merge these counts with the aforementioned data on electoral competition and thus generate a consistent measure of how many adults experienced competitive elections in different years, in different areas, or for different levels of office.
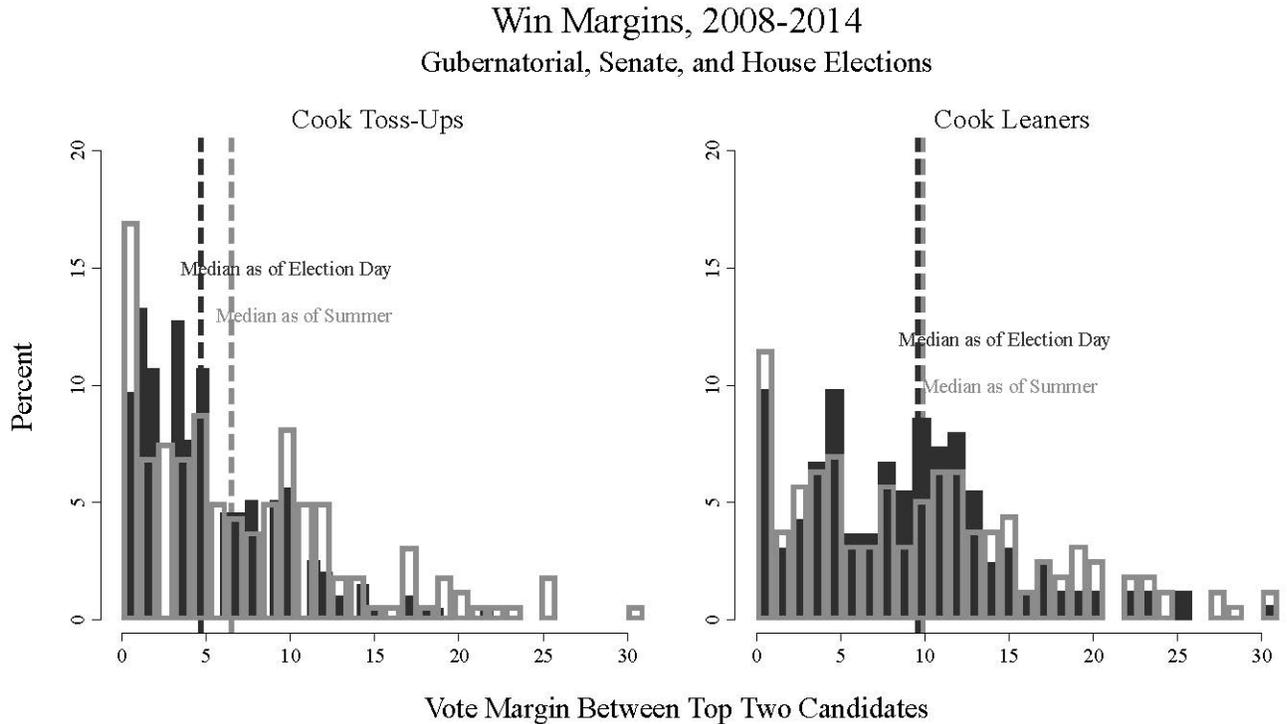
Figure A1: Unique Jurisdictions in Connecticut, 2006-2012
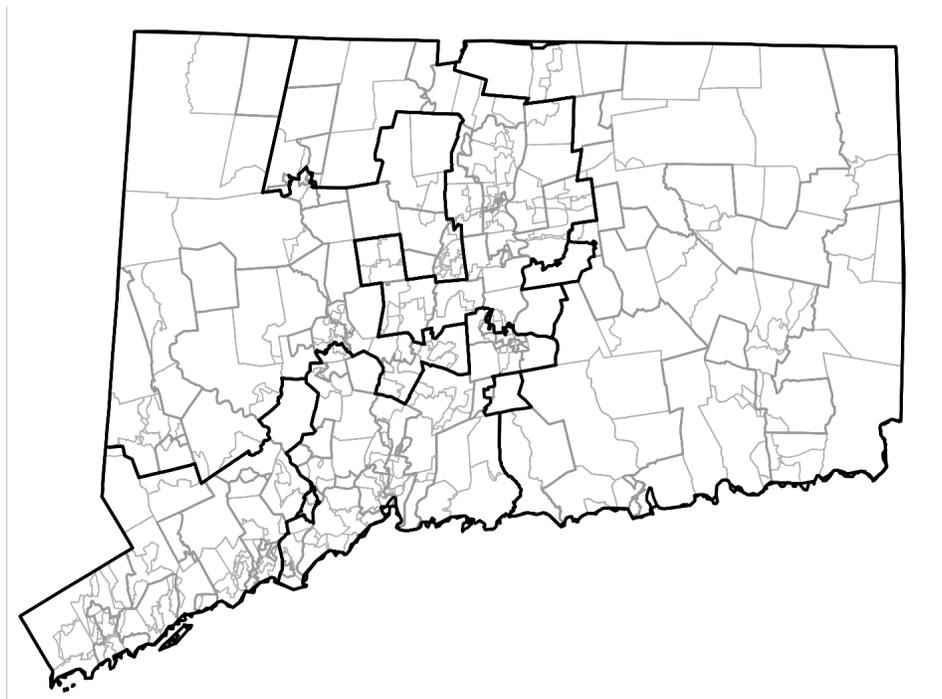
Note: This map of Connecticut illustrates the individual units that we study in our analysis. We count the number of voters residing in each non-overlapping polygon to determine the state, Congressional, and state legislative races they witnessed between 2006 and 2012. The black lines designate Congressional districts. Thick gray lines designate State Senate districts. Thin gray lines designate State House districts.

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[3]We ignore population mobility within our six year period of analysis, as the block-level data necessary for our analysis is based solely on the enumerated count of individuals done in the decennial census.

Figure A2: Using Cook Political Report's Classification to Determine Cutoff for Close Elections

Win Margins, 2008-2014
Gubernatorial, Senate, and House Elections

Vote Margin Between Top Two Candidates

Defining Competition

In Figure **??**, on the left panel, we plot the vote share for all of Cook's toss-up races in House, Senate, and Gubernatorial contests from 2008-2014. We show two versions of the data. First, we use the Cook rating from the organization's final update ahead of the election. Second, we use the rating from the summer prior to the election.[4] It is worth noting that pre-election measures of closeness are volatile. An election that is closely contested four months ahead of Election Day may turn into a rout.

As Figure **??** shows, the typical (median) toss-up race ended up with a vote margin of about 5 percentage points (e.g. a 52.5 to 47.5 spread). The median race considered a toss-up in the summer had a slightly higher margin (6.5 points).

In the right side of Figure **??**, we show races marked as leaning Democratic or leaning

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[4]We utilized the Cook rating closest to July 1 of the election year. We did not use Cook's presidential ratings in this scale because the presidential years were not publicly available for both summer and pre-Election Day in the years under investigation.

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Republican, according to Cook's pre-Election Day and summer estimates. This is Cook's measure of next-closest races. These contests are generally hotly contested as well. For instance, at the end of October 2016, Cook considered the states of Nevada, New Hampshire, Pennsylvania, Wisconsin, Georgia, and Utah to be leaning Democratic or leaning Republican in the Presidential contest. Most of these states received substantial attention from the presidential campaigns and would widely considered to be competitive environments. Whether measured in summer or before Election Day, the median leaning race ends up with a vote margin of 10 percentage points (a 55-45 race).

# Sensitivity of Analysis to Choice of Cutoff

Figure A3: Effect of Cutoff Definition on Results
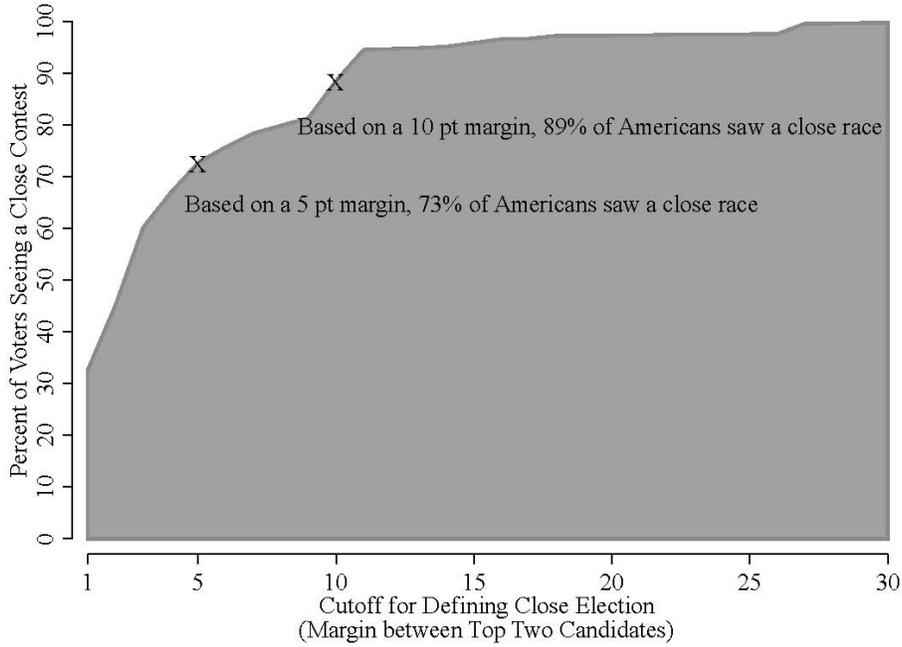
Note: *We define a close election as a contest in which the margin of victory is less than z, where z is measured in 1 percentage point increments from 1 to 30. The y-axis plots the percentage of voters who see at least one close election between 2006-2012, at each value of z. Where z= 5 and z= 10, X's are displayed.*
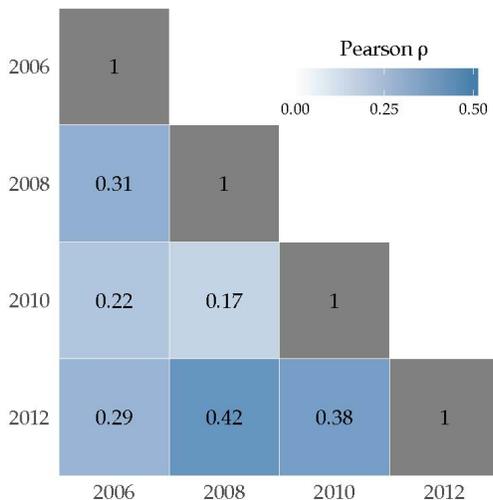
Experience with Competition

Figure A4: Competitive Contests as Share of Total Number of Elections
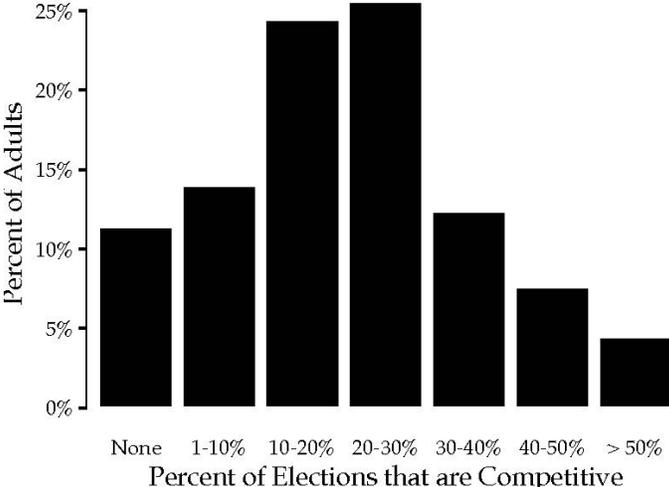
Note: Histogram reflects percent of adults living in areas where the indicated share of all elections held from 2006 to 2012 had a vote margin of less than 10 percentage points.

Interyear correlations

Figure A5: Year-to-Year Correlations of Competitiveness

Note: For each geographic area, we measure the percent of elections in which the vote margin was less than 10 percentage points. We plot the year-to-year correlations of the percent competitive.

Despite the fact that most Americans see one or more competitive elections over a relatively short time span, we might be concerned that some areas see many competitive elections year after year while close contests are a rarity in other parts of the country. To emphasize the temporal variation in the locus of competition, we measure year-to-year correlations in Figure A5. For each geographic area, we calculate the percent of all elections that had less than a ten-point margin of victory per year. The plot shows the correlations of these percentages. While competition is positively correlated year to year, the relationship is weak.[5]

Conditional probabilities can help us convey the positive, but weak, relationship. Consider that of voters who saw a competitive race in 2006, 64% of them saw a competitive race in 2008. But of those who did not see a competitive race in 2006, 44% of them saw a competitive race in 2008. Forty-one percent of voters who saw no competitive race in 2008 saw one in 2010. Thirty-eight percent who saw no competition in 2010 also saw a competitive

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[5]As an interesting aside, the correlation between 2010 and 2012 is on the higher side of the estimates, which may also come as a surprise considering strategic redistricting is often blamed for depressing competition.

race in 2012. With this amount of year-to-year fluctuation, it is easy to understand how, after just a few election cycles, nearly all Americans see a competitive race.