Appendix:

Methodological Clarifications:

Kriging: Kriging is the preferred method only when data is (1) normally distributed, (2) stationary, and (3) has no trends or drift. If the data is normally distributed, then the estimator perfectly fits a linear function. Despite this, the normally distributed data assumption does not hold for many cases, especially in ecological and social science applications where data usually fit a non-linear function. Therefore, some applications of kriging rely on transformations and detrending of the data as an initial step (e.g. Box-Cox, logarithmic) or the use of other kriging models that relax this assumption (e.g. universal kriging). Stationarity means that the statistical relationship between two points depends only on the distance between them. In other words, these last two assumptions specify that the mean and the semivariogram (a function of variance and distance) are the same at all points, indicating an absence of significant trends or drift (Haining 2013, Cressie 1993).

EBK: We use Empirical Bayesian Kringing (EBK) to transfer data from weather station points to the legislative districts. EBK is the appropriate method in this case given that a single semivariogram is unlikely to capture all the variation in the variable of interest (anomalies) with such a large number of data points. Also, because we focus on temperature anomalies, and not absolute temperature value these are less dependent on local environmental covariates such as elevation, in which case corking or multivariate regression-based methods might be more adequate. Finally, the structure of our data is semi-Gaussian which is the best fit for kriging methods. Other methods based on lattice might be inappropriate because climatic measurements from meteorological stations are spatially arrayed in an irregular, coarse grid, often providing only sparse coverage (Holdaway 1996).
We follow Krivoruchko and Gribov (2012), who outline the three steps of EBK work: First, a semivariogram model is estimated from the data. Next, using this semivariogram, a new value is simulated at each of the input data locations. Finally, a new semivariogram model is estimated from the simulated data. A weight for this semivariogram is then calculated using Bayes' rule, which shows how likely it is that the observed data can be generated from the semivariogram. Empirical Bayesian Kriging (EBK) function is available in ArcGIS software package 10.5.

Settings used for EBK on Climate data
Software: ArcMap
Version: 10.5
License: Geostatistical Analyst Tools

Parameters	Value
Output cell size	3000
Data transformation type	None
Semivariogram model type	Power

Maximum number of points in each local model	100 (default)
Local model area overlap factor	1.5
Number of simulated semivariograms	100 (default)
Search Neighborhood	Standard-Circular (default)
Maximum neighbors	5
Minimum neighbors	1
Ouput surface type	Prediction

Supplementary Tables and Figures

Figure A: Basic model without covariates

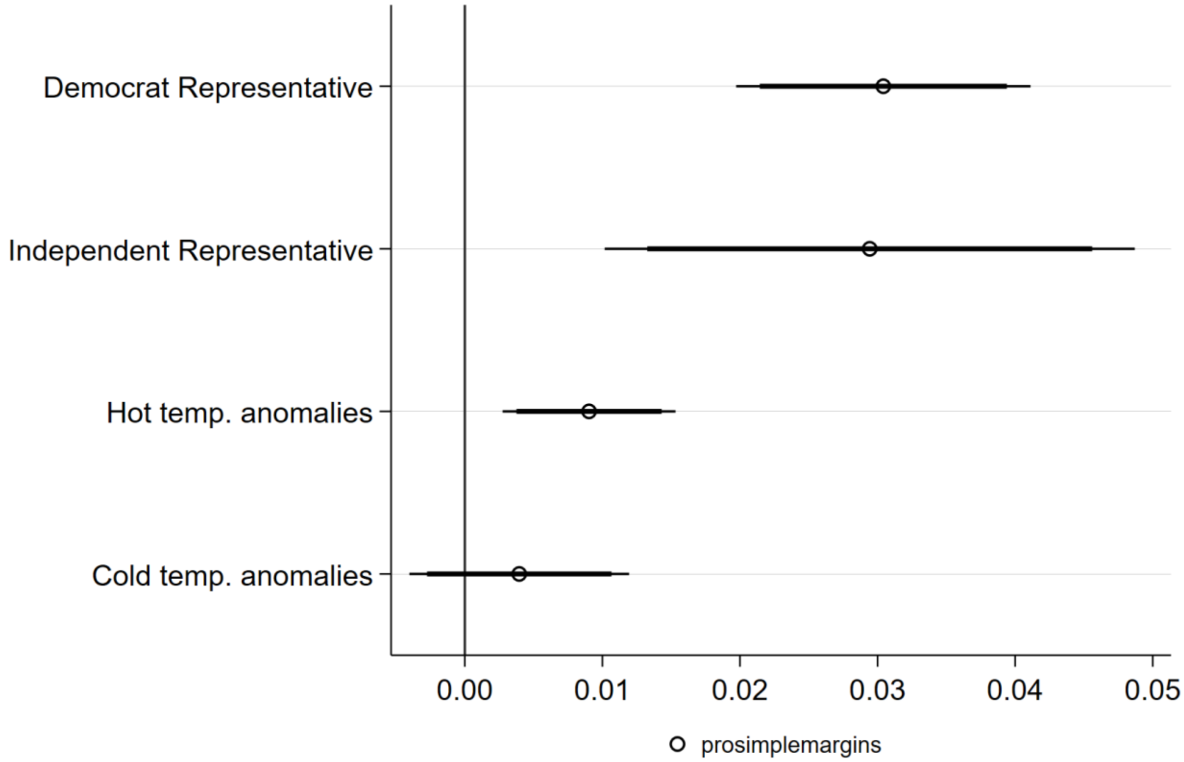
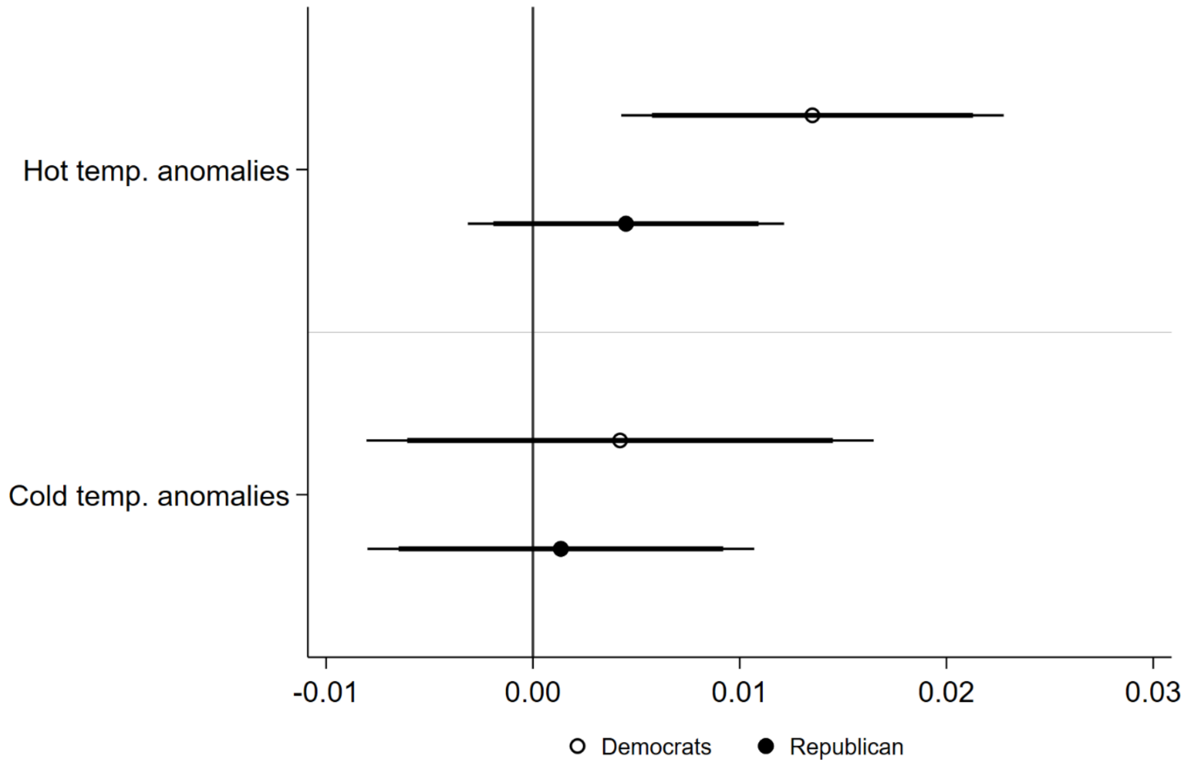
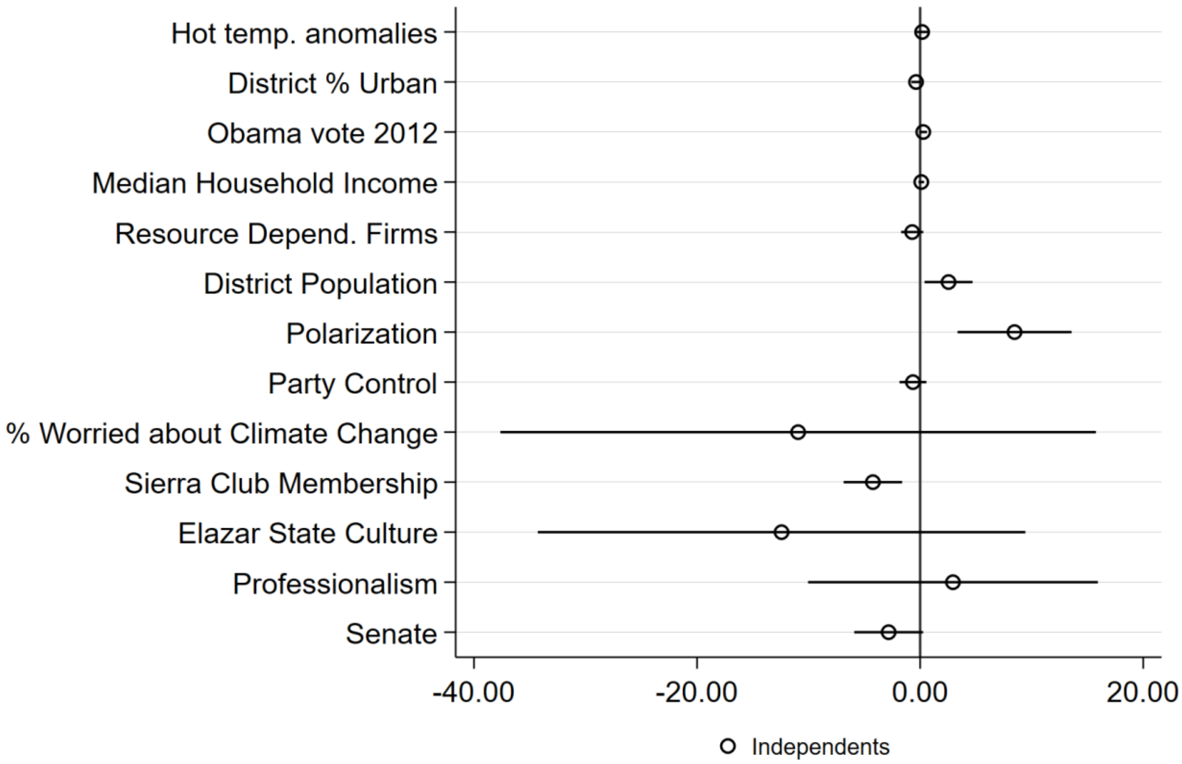


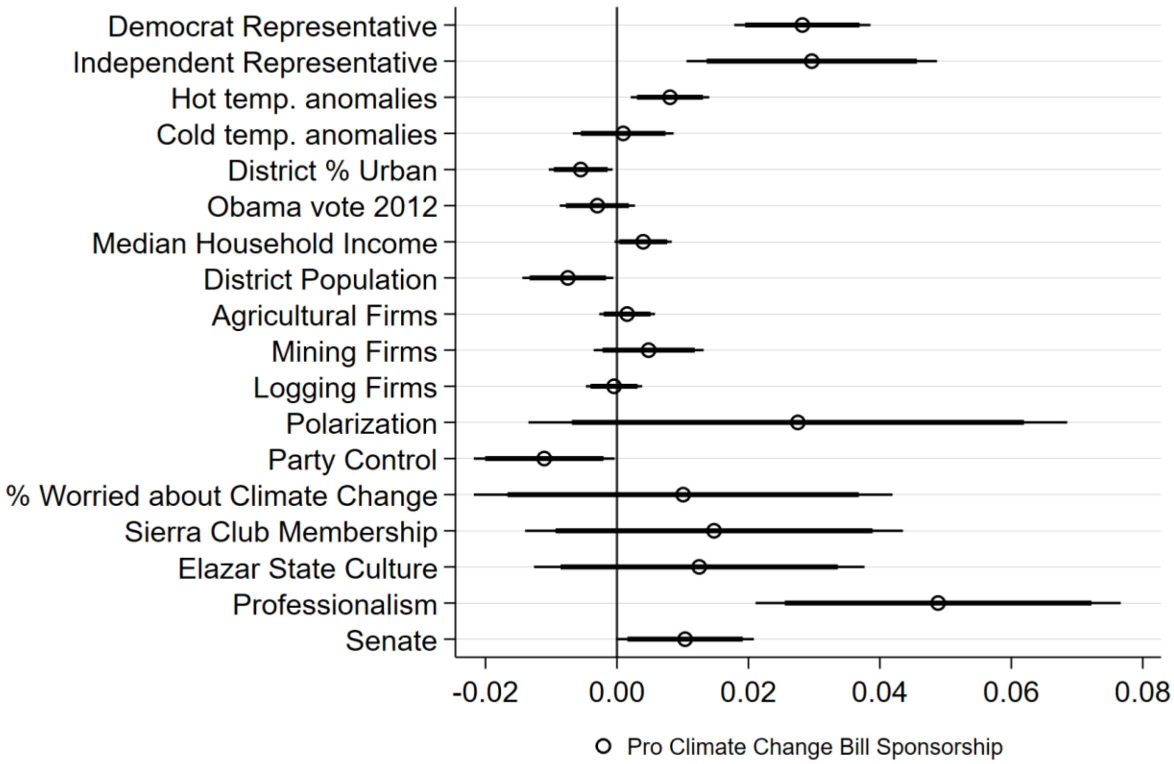
Figure B: Basic Model by Party Identification



Appendix Figure C: Independents and Pro-Climate Change Bill Sponsors



Appendix Figure D: Disaggregated Industries and Pro-Climate Change Bill Sponsorship



Appendix E: Other Climate Events