Noisy Retrospection: The Effect of Party Control on Policy Outcomes

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Retrospective voting is vital for democracy. But, are the objective performance metrics widely thought to be relevant for retrospection—such as the performance of the economy, criminal justice system, and schools, to name a few—valid criteria for evaluating government performance? That is, do political coalitions actually have the power to influence the performance metrics used for retrospection on the timeline introduced by elections? Using difference-in-difference and regression discontinuity techniques, we find that US states governed by Democrats and those by Republicans perform equally well on economic, education, crime, family, social, environmental, and health outcomes on the timeline introduced by elections (2-4 years downstream). Our results suggest that voters may struggle to truly hold government coalitions accountable, as objective performance metrics appear to be largely out of the immediate control of political coalitions.

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Online Appendix:
Noisy Retrospection: The Effect of Party Control on Policy Outcomes

Not intended for publication in printed versions

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1 States' Party Control Over Time

One may wonder what party control looks like within states over time. Or, put differently, which states are close to switching over time and, hence, help identify the diff/diff and regression discontinuity models estimated in the text. Figures A1–A7 show how close legislative chambers and governors are to being controlled by a Democratic majority from 1960–2010 (when the time series in our dataset ends).[a] Figure A1 shows the distribution of the running variables across states over the time period of study. Points marked in blue are states controlled by Democrats, and points colored in red are states controlled by Republicans. Each of the figures also has a local nonparametric regression model superimposed on the figure—showing the trend towards Republican domination of state legislatures and governorships in recent years. These shows that some states switch between party control (like Illinois, Pennsylvania, or Montana), while others stay more constantly under Democratic (e.g. Massachusetts or Maryland) or Republican (e.g. Kansas, Utah, or Wyoming) control. These graphs suggest that there is a substantial amount of variation in party control across and within states.[b]

[a] Nebraska is omitted, given the state's unicameral nonpartisan legislature. The District of Columbia is also omitted because it has not state legislature as it is not a state.

[b] Here are the intrastate correlation coefficients for the House, Senate, and Governorship: 0.44, 0.47, 0.08.

Figure A1: Proximity to Democratic Majorities Over Time

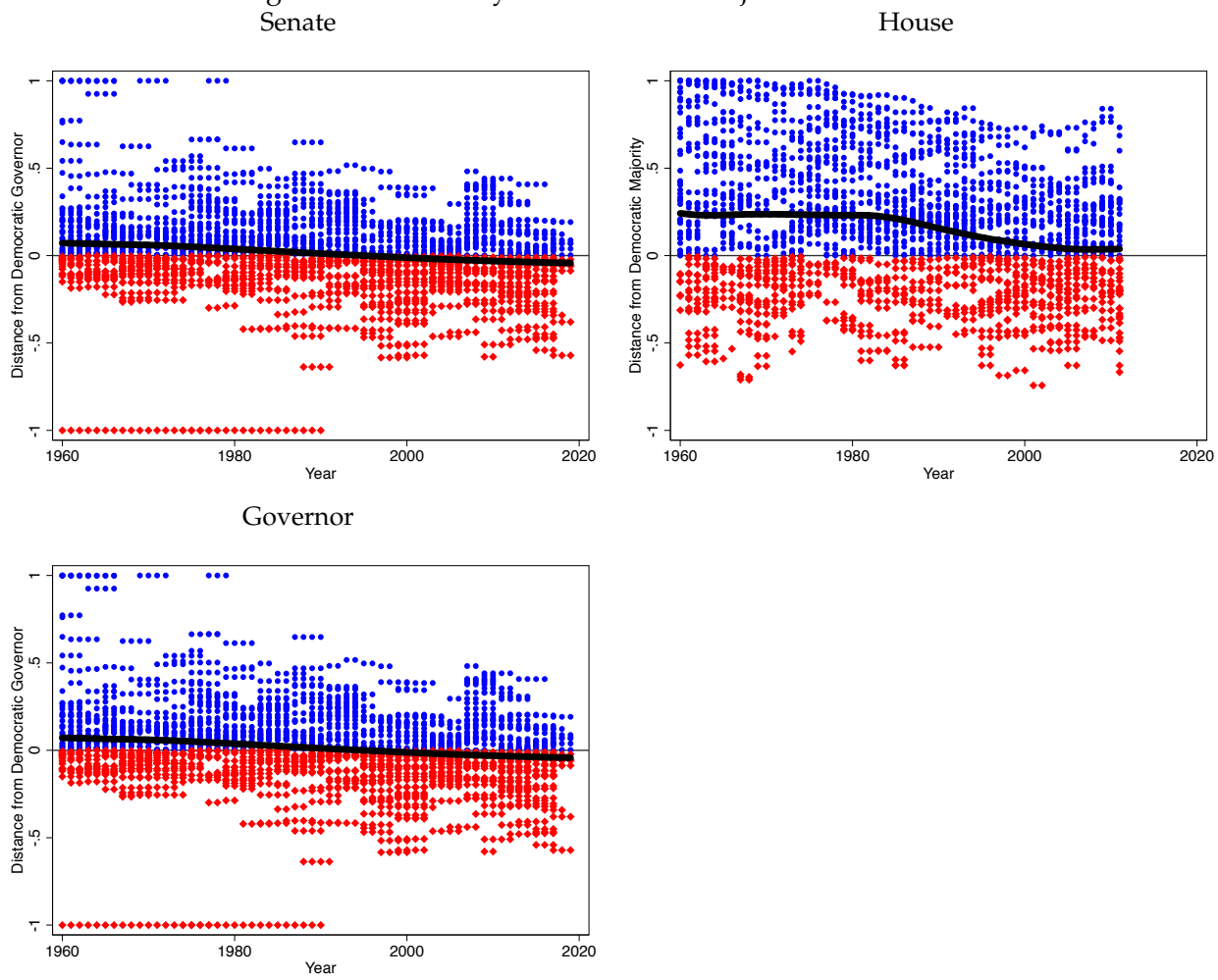


Figure A1 plots the proximity to Democratic control of the two legislative chambers and the governorship. Each point represents a state–year observation. Blue points represent states controlled by Democrats; whereas red points represent states controlled by Republicans. The grey line overlaid plots a local non-parametric regression.

Figure A2: States' Proximity to Democratic Majorities Over Time (Lower, 1)

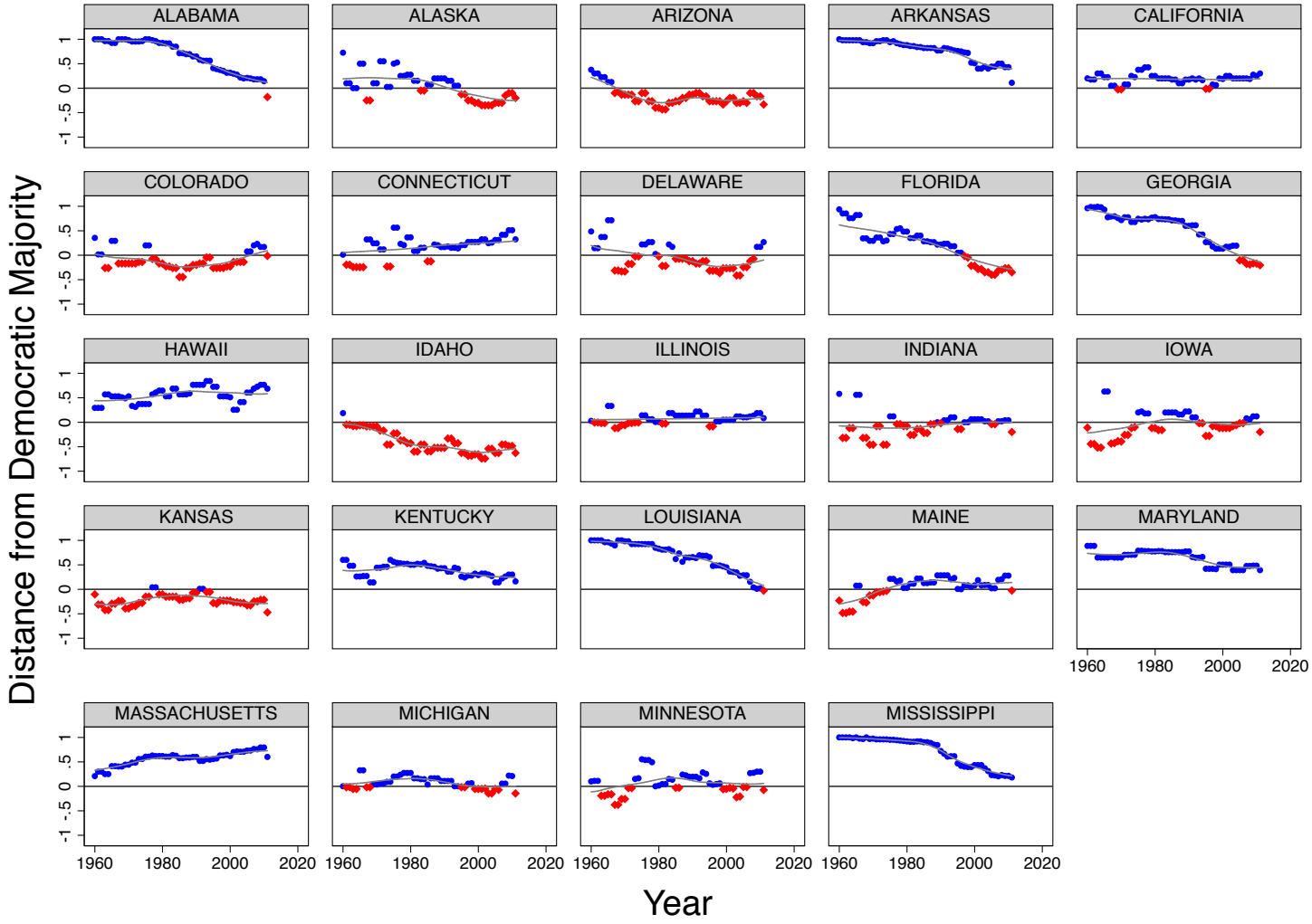


Figure A3: States' Proximity to Democratic Majorities Over Time (Lower, 2)

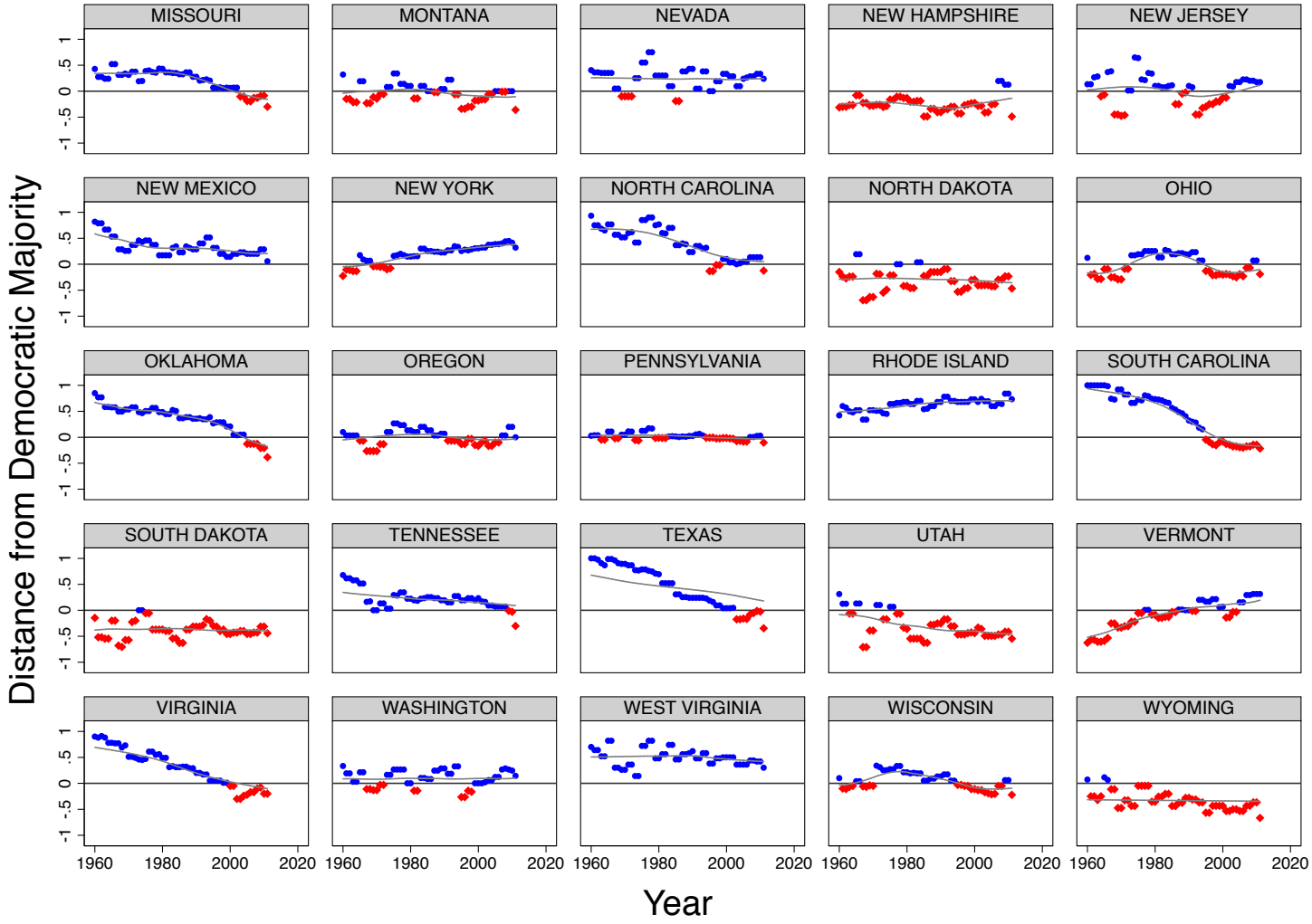


Figure A4: States' Proximity to Democratic Majorities Over Time (Upper, 1)

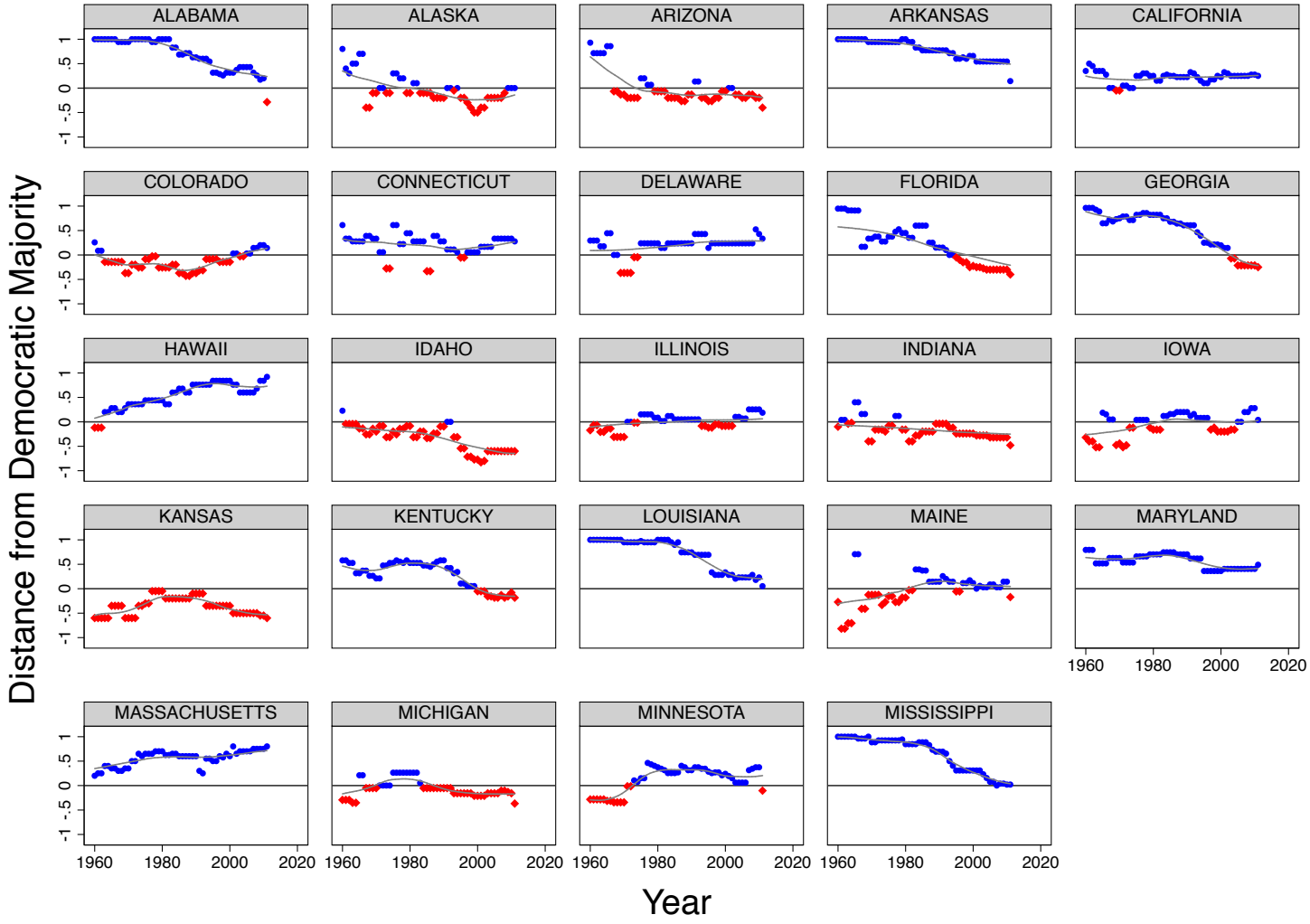


Figure A5: States' Proximity to Democratic Majorities Over Time (Upper, 2)

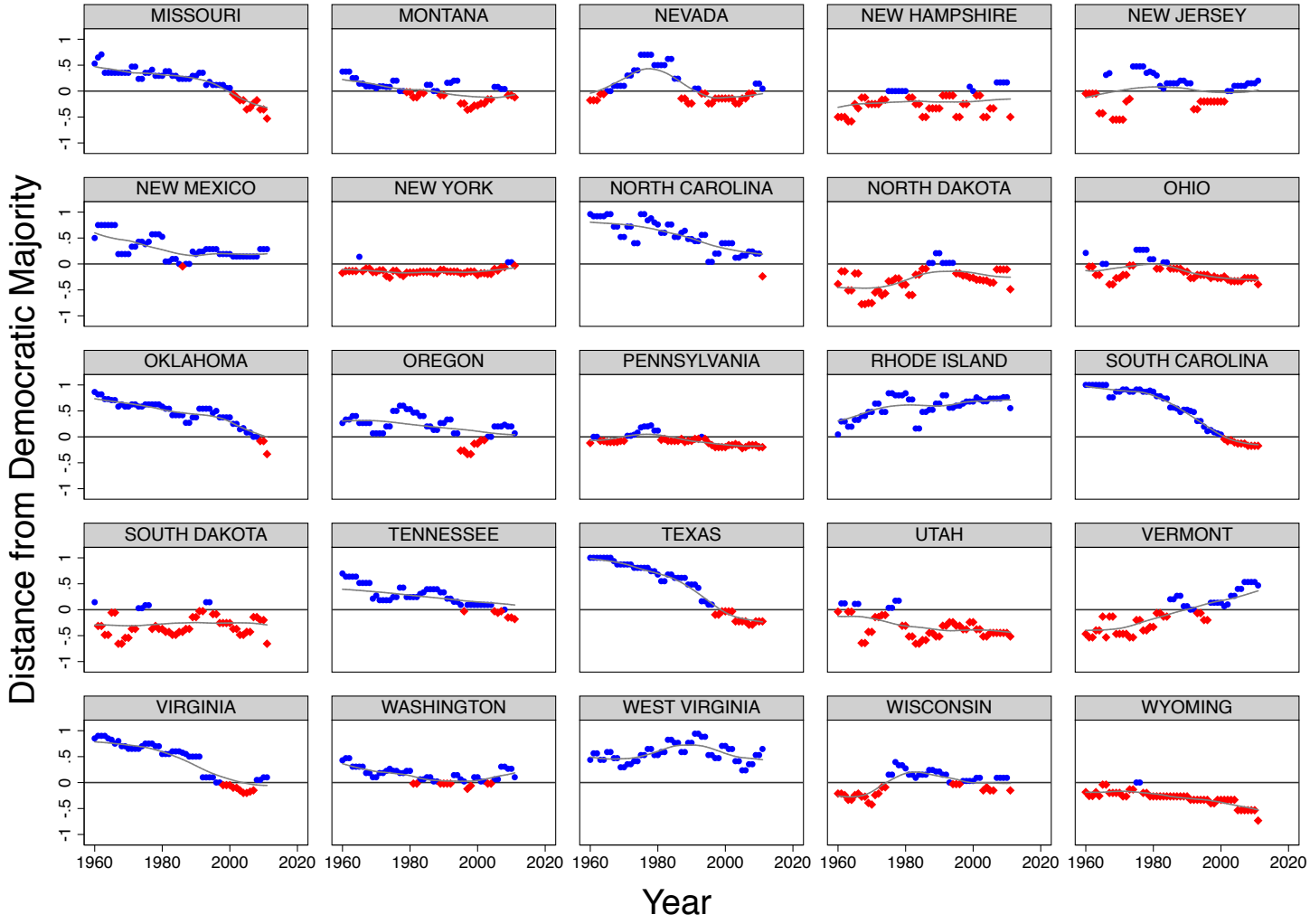


Figure A6: States' Proximity to Democratic Majorities Over Time (Governor, 1)

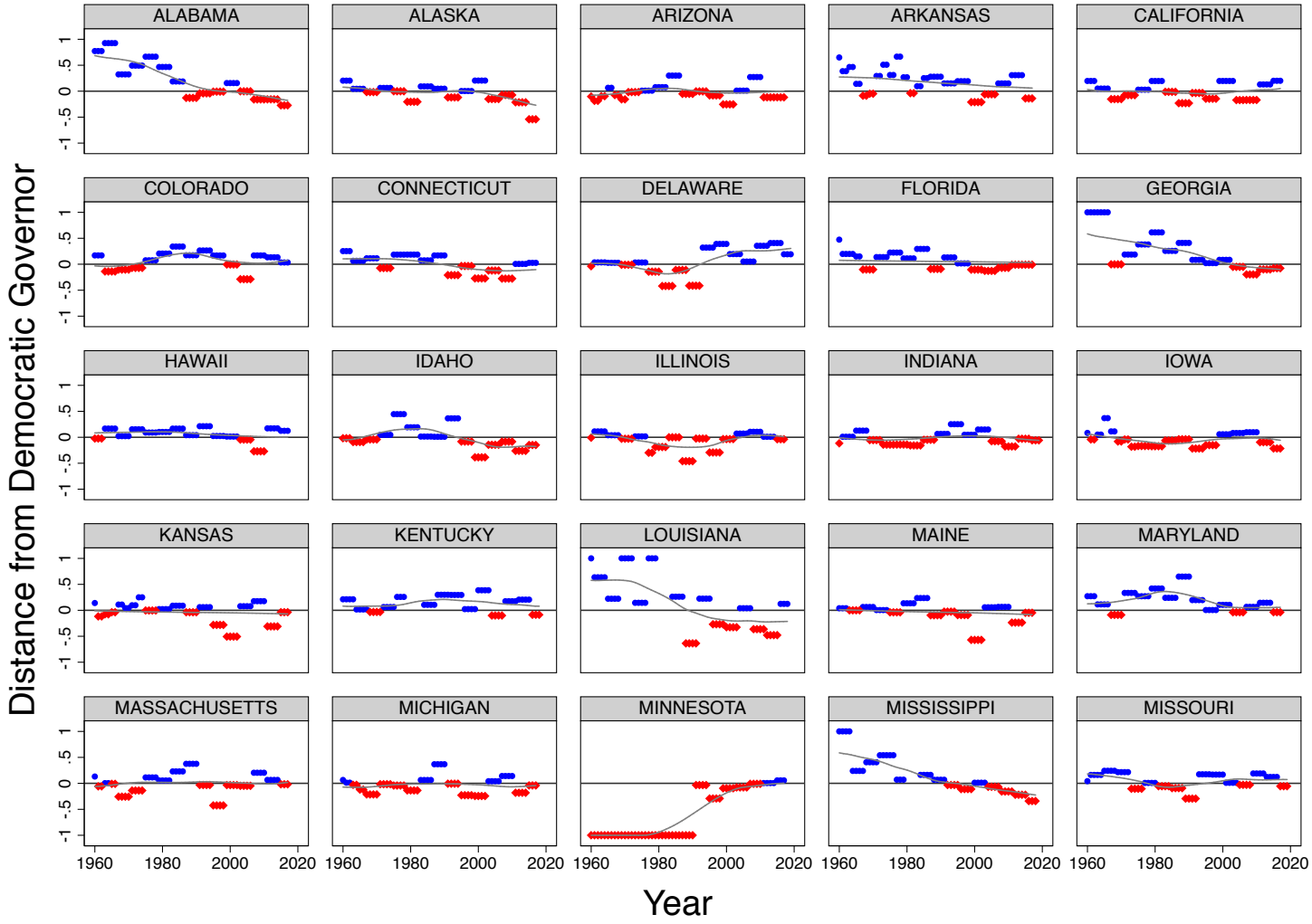
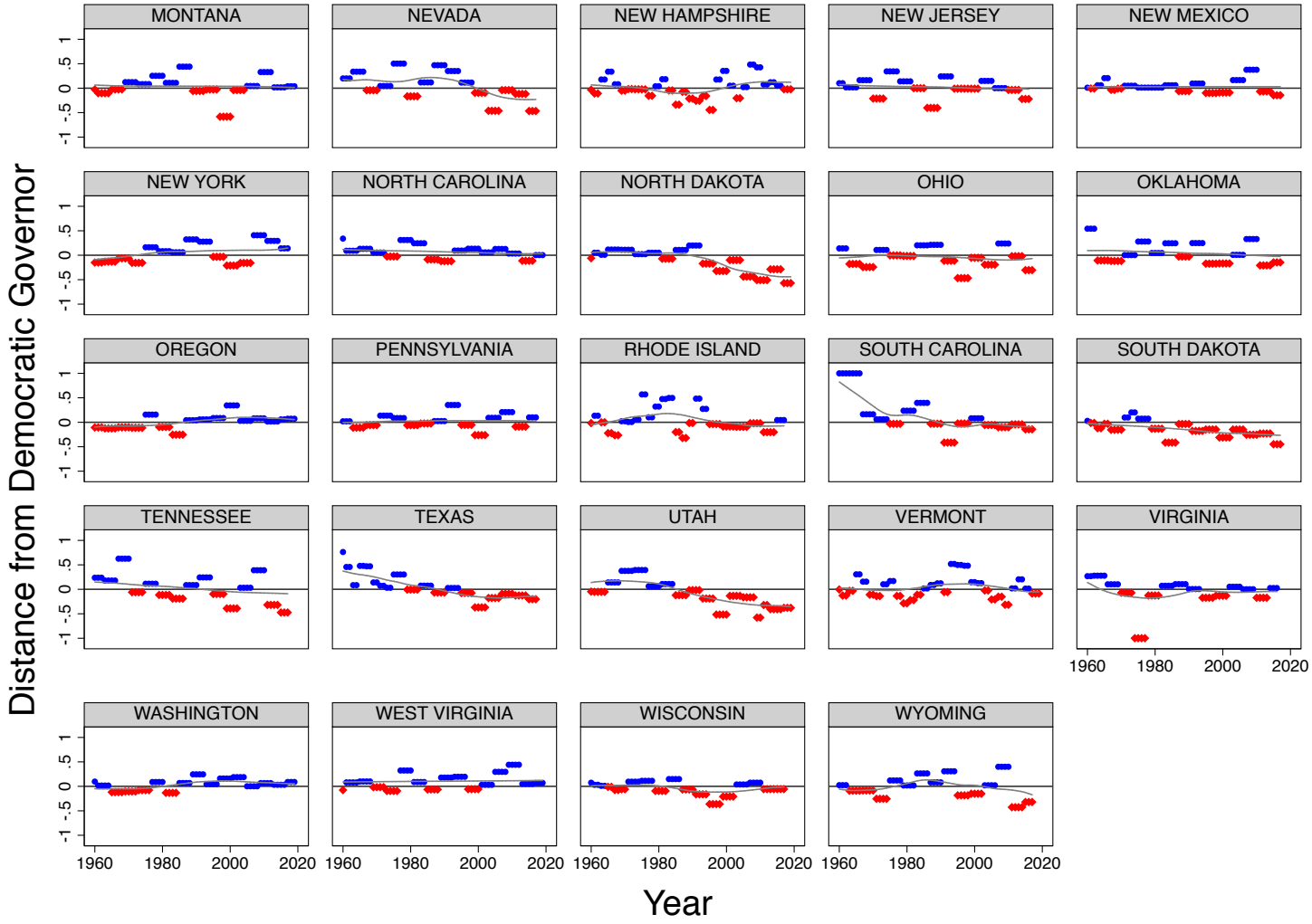


Figure A7: States' Proximity to Democratic Majorities Over Time (Governor, 2)



2 States' Policy Outcomes Over Time

Figures A8–A19 show variation in some of our dependent variables across states. Each of these breaks the states in our sample in half. As can be seen here, there is a substantial amount of variation across states and within states over time across all of our outcomes. Put differently, it is not the case that we are simply getting null effects in our paper because there is no intrastate variation to explain. For example, levels of educational attainment have grown rapidly (but at different rates across states) over time. In the 1960's in a typical state only 45% of adults with have a high school diploma; in 2018 that number is closer to 90%. Unemployment and turnout rates likewise vary greatly depending on what state and what time period is in.[c] Even Co2 emissions, which appear to be quite stable over time given the large scale on the y-axis actually do exhibit a great deal of variation—the average state in our dataset varies by a whole standard deviation. Some states clearly have seen rapid growth in emissions (e.g. California and Texas). But, many other states have seen a clear evolution in this outcome. This holds true in varying degrees across all our outcomes.[d]

[c] Voter turnout follows a well-known up, then down pattern for Midterm and Presidential Elections.

[d] Here are the intraclass correlation coefficients for our outcomes: income (0.14), population growth (0.49), CPI (0.01), housing prices (0.14), GSP (0.7), agriculture (0.68), unemployment (0.28), income to top 1% (0.21),income to top 0.1% (0.21), number of businesses (0.41), healthcare spending (0.11), abortion rate (0.85), divorce rate (0.78), birth rate (0.84), new immigrants (0.79), vep voting rate (0.26), number of felons ineligible to vote (0.8), business energy consumption (0.4), residential energy prices (0.26), co2 emissions (0.92), property crime rate (0.38), rape rate (0.34), robbery rate (0.73), violent crime rate (0.67), car theft rate (0.55), murder rate (0.7), high school diploma (0.14), school attendance (0.62).

Figure A8: States' Educational Attainment Over Time (1)

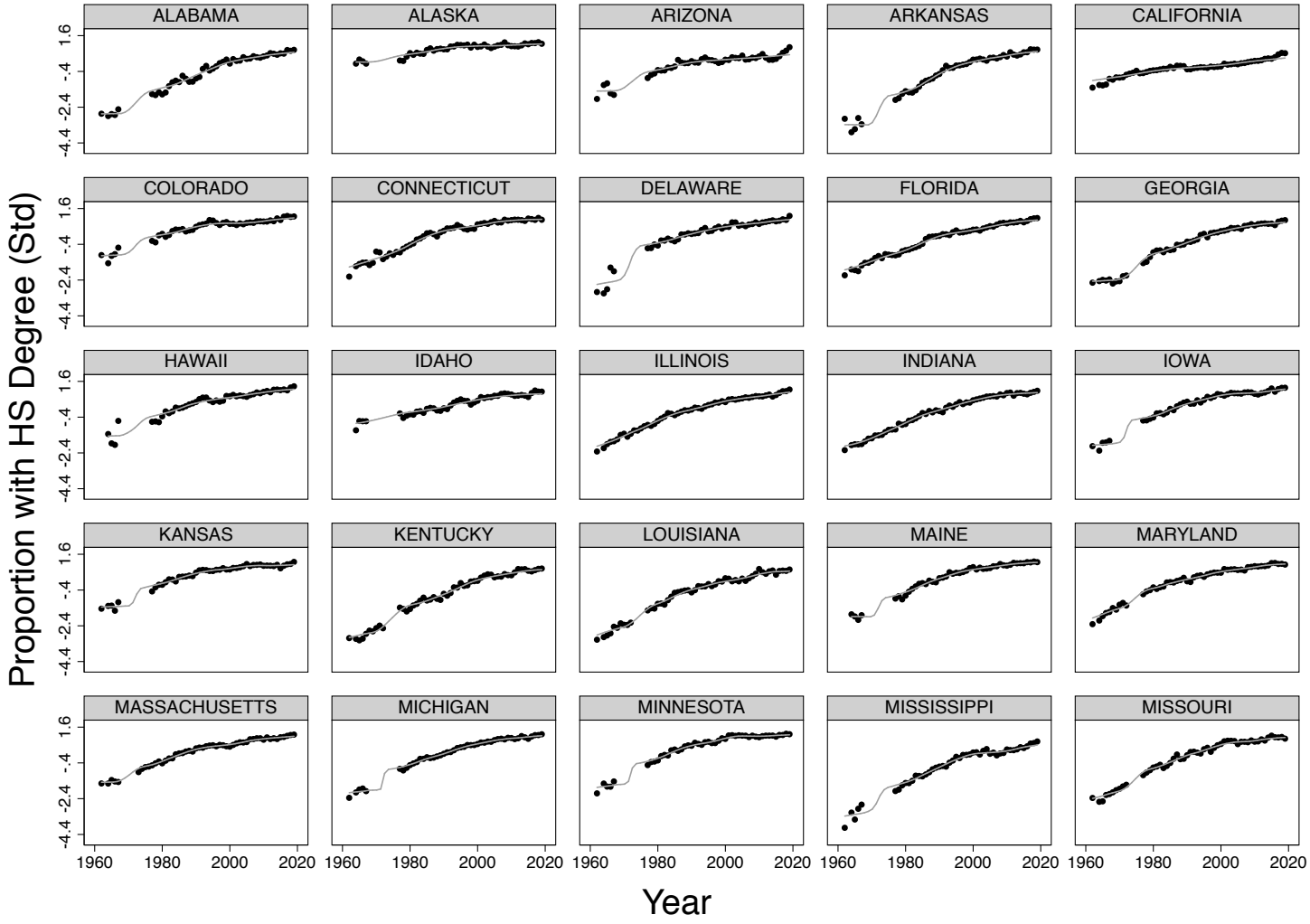


Figure A9: States' Educational Attainment Over Time (2)

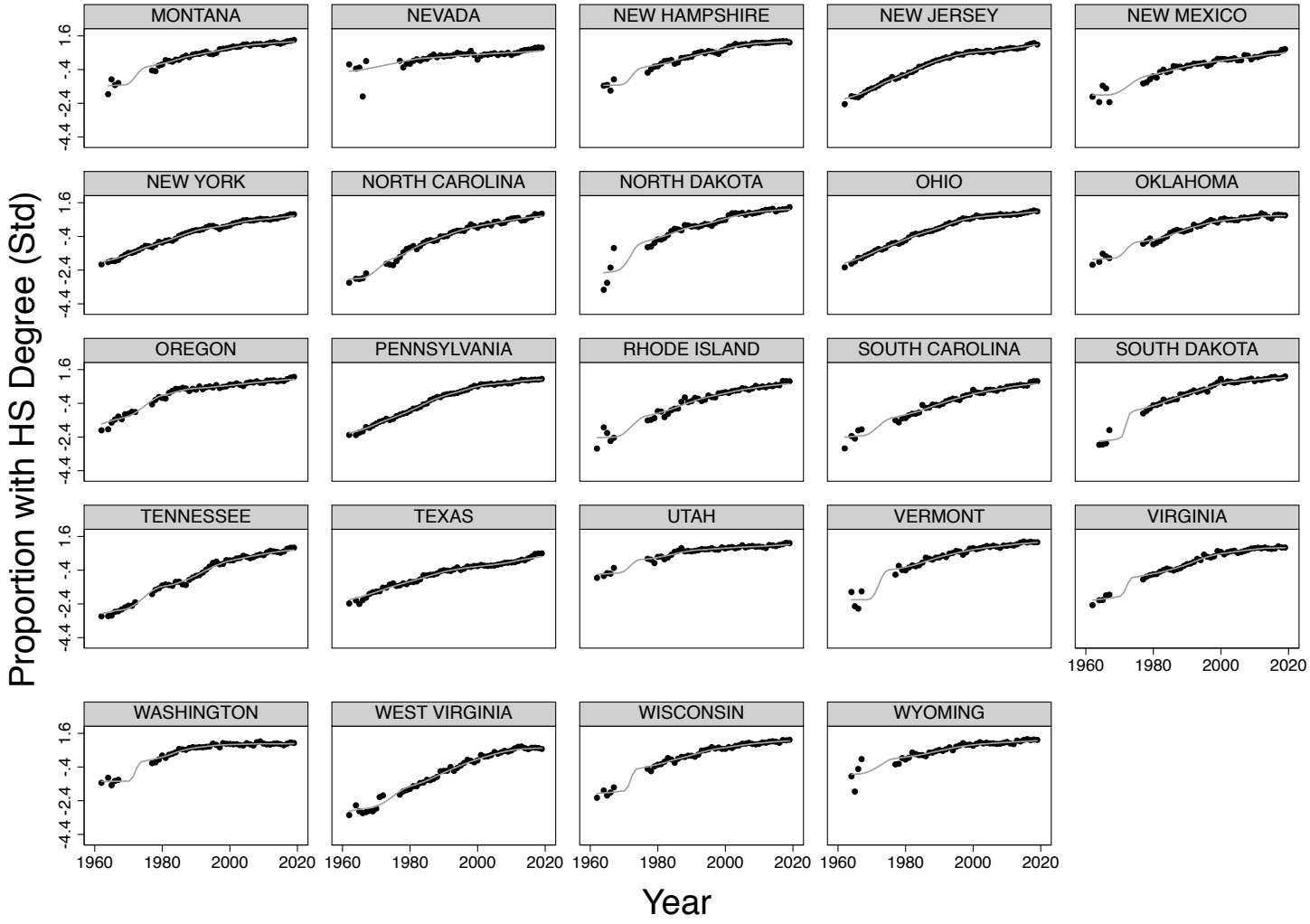


Figure A10: States' Unemployment Over Time (1)

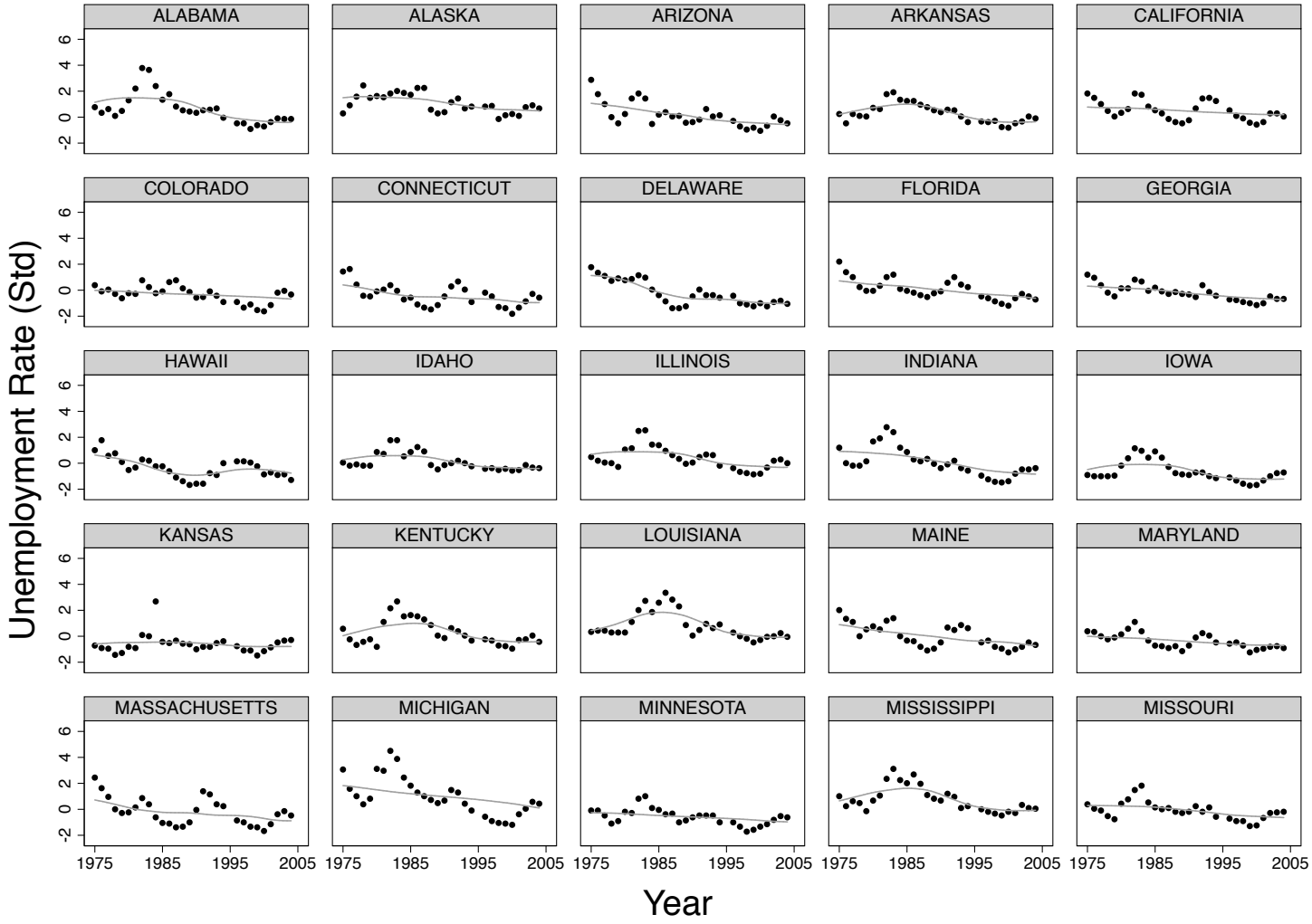


Figure A11: States' Unemployment Over Time (2)

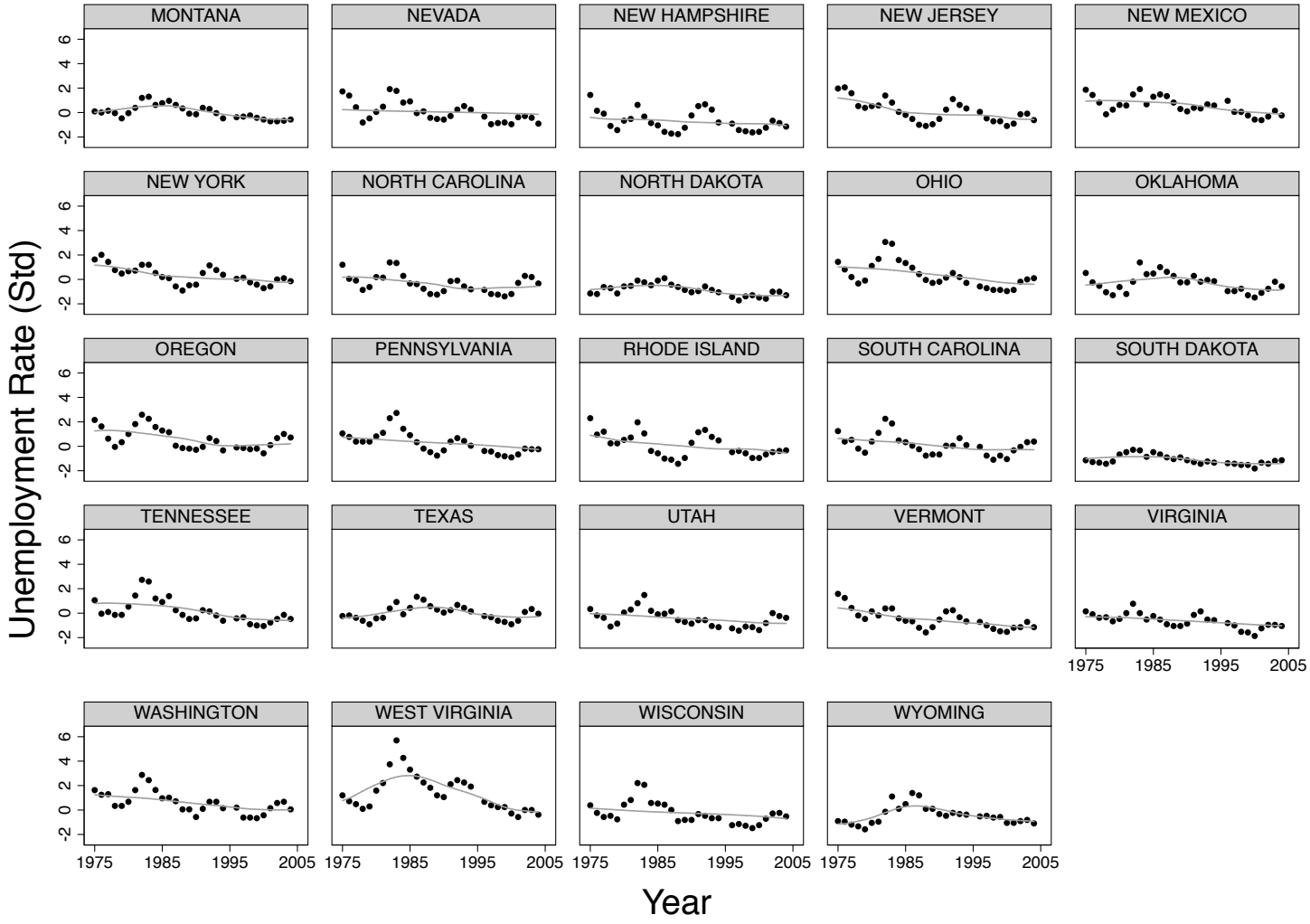
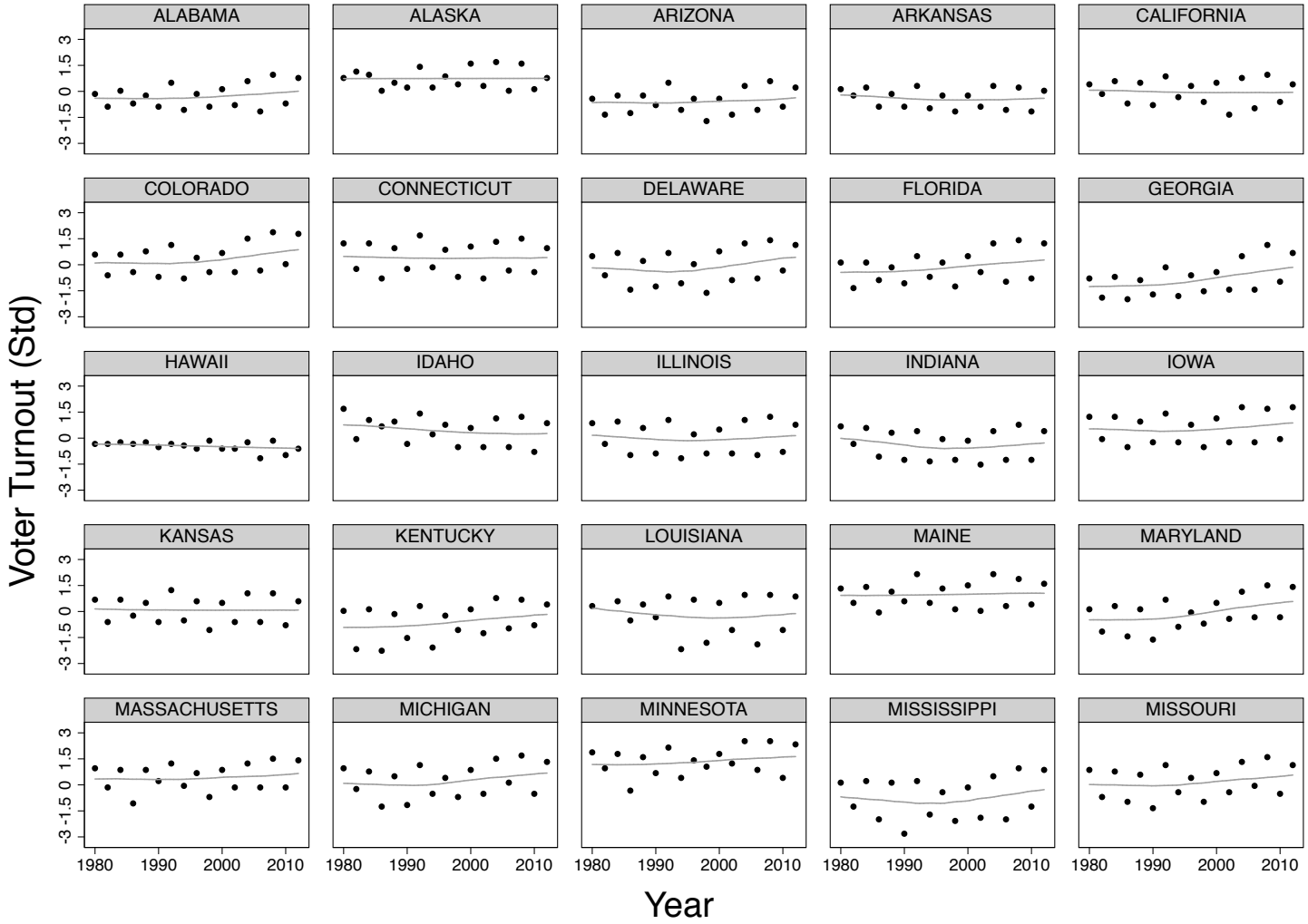


Figure A12: States' Turnout Over Time (1)



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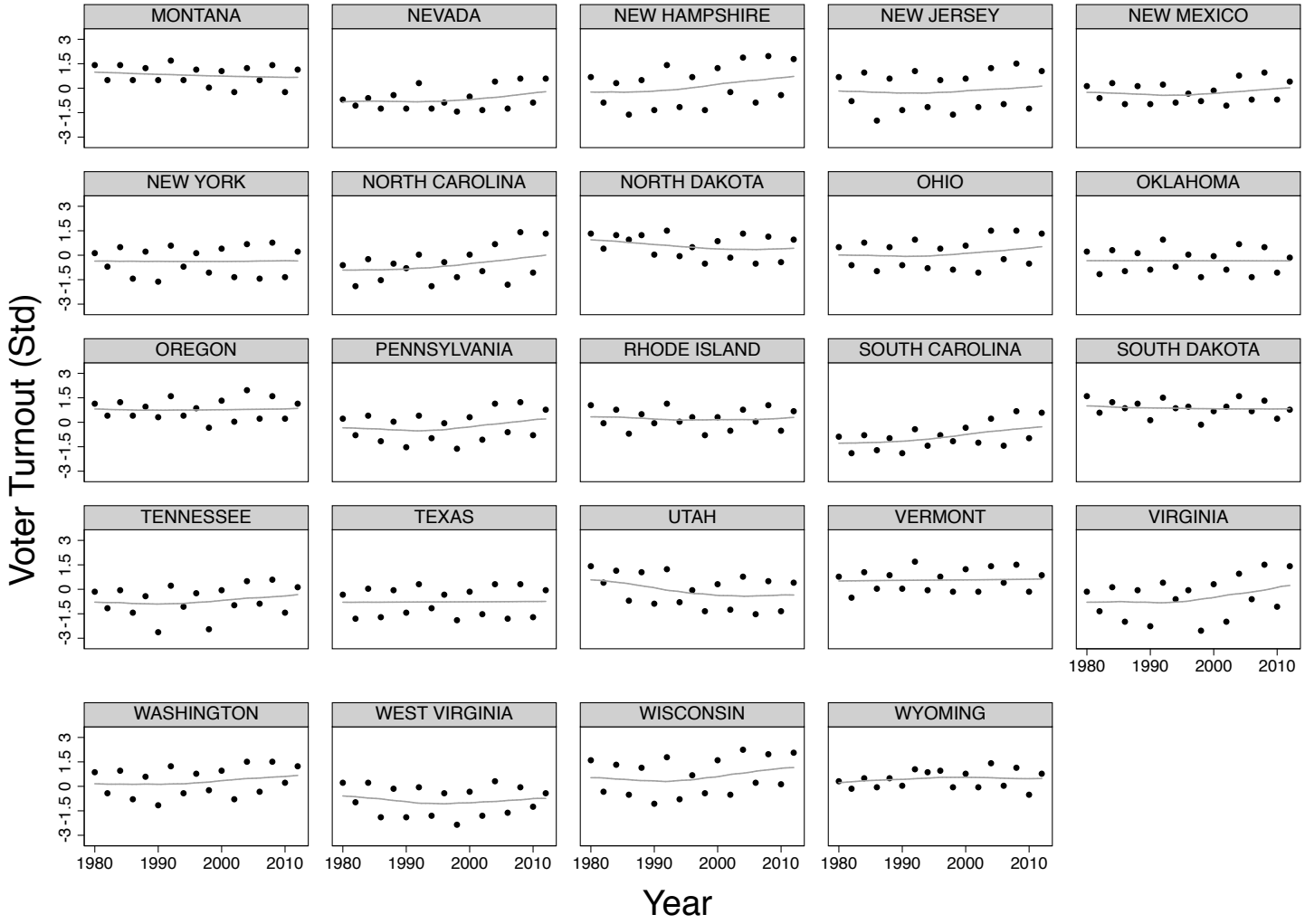


Figure A14: States' Violent Crime Rate Over Time (1)

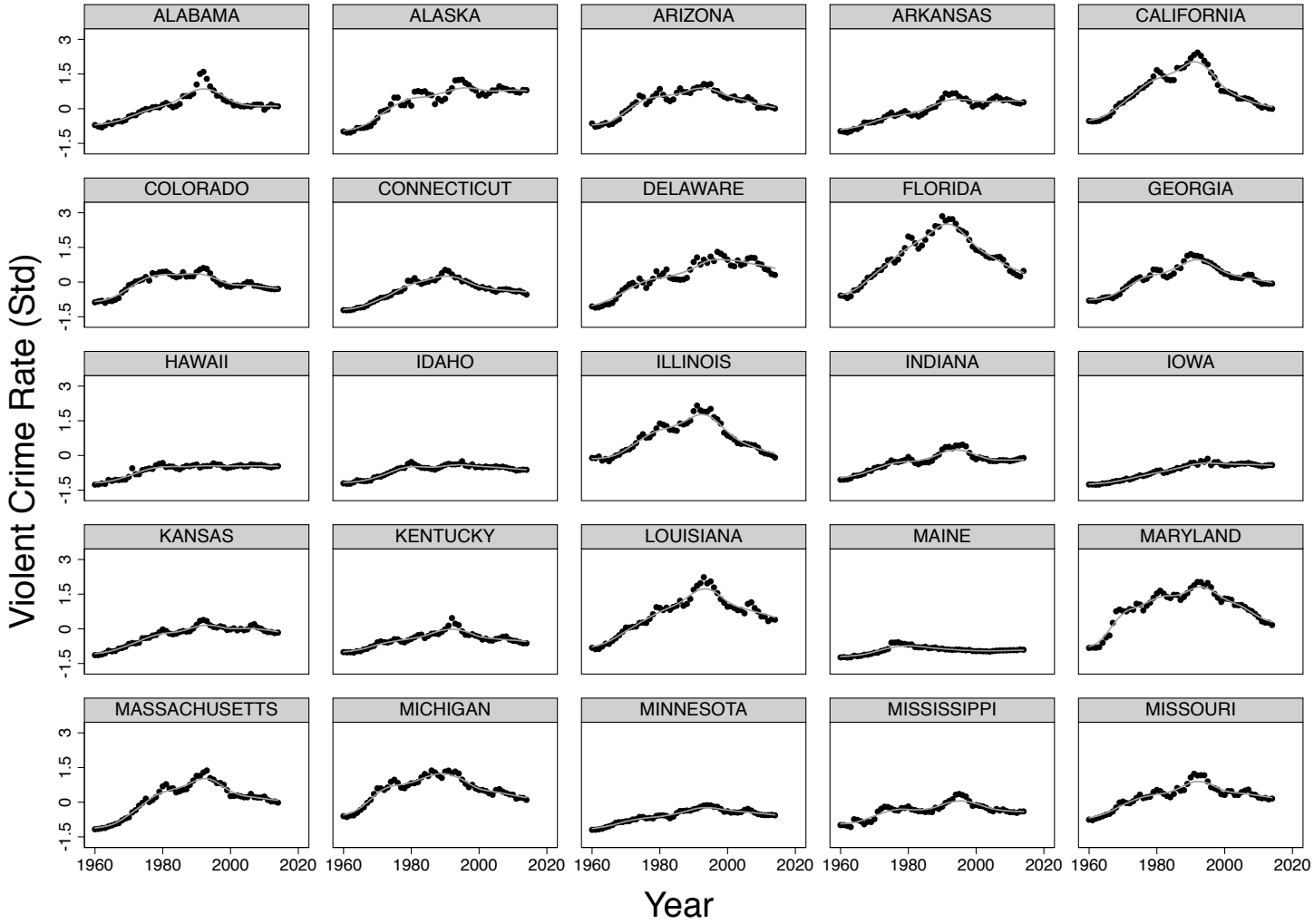


Figure A15: States' Violent Crime Rate Over Time (2)

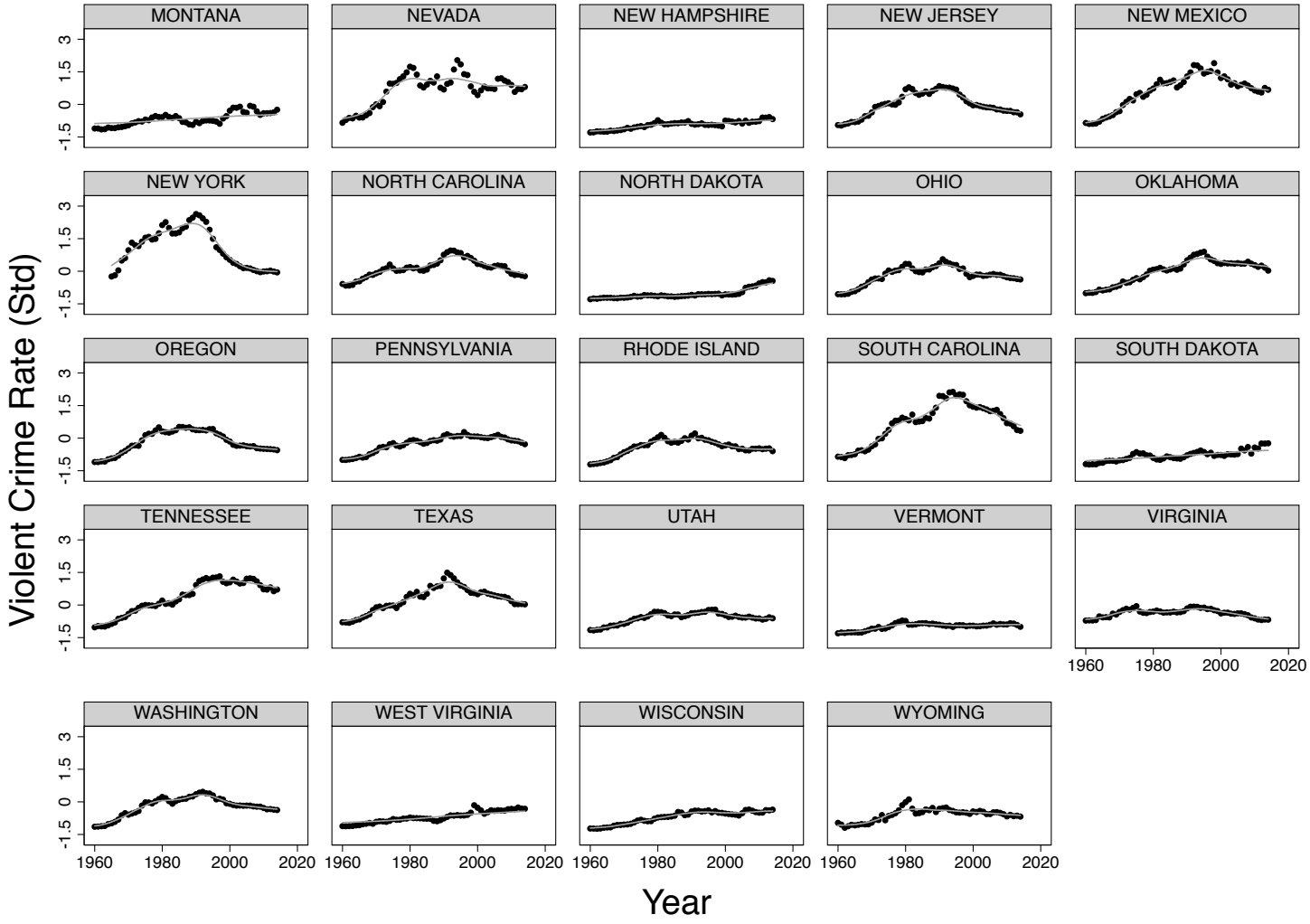


Figure A16: States' Health Spending Over Time (1)

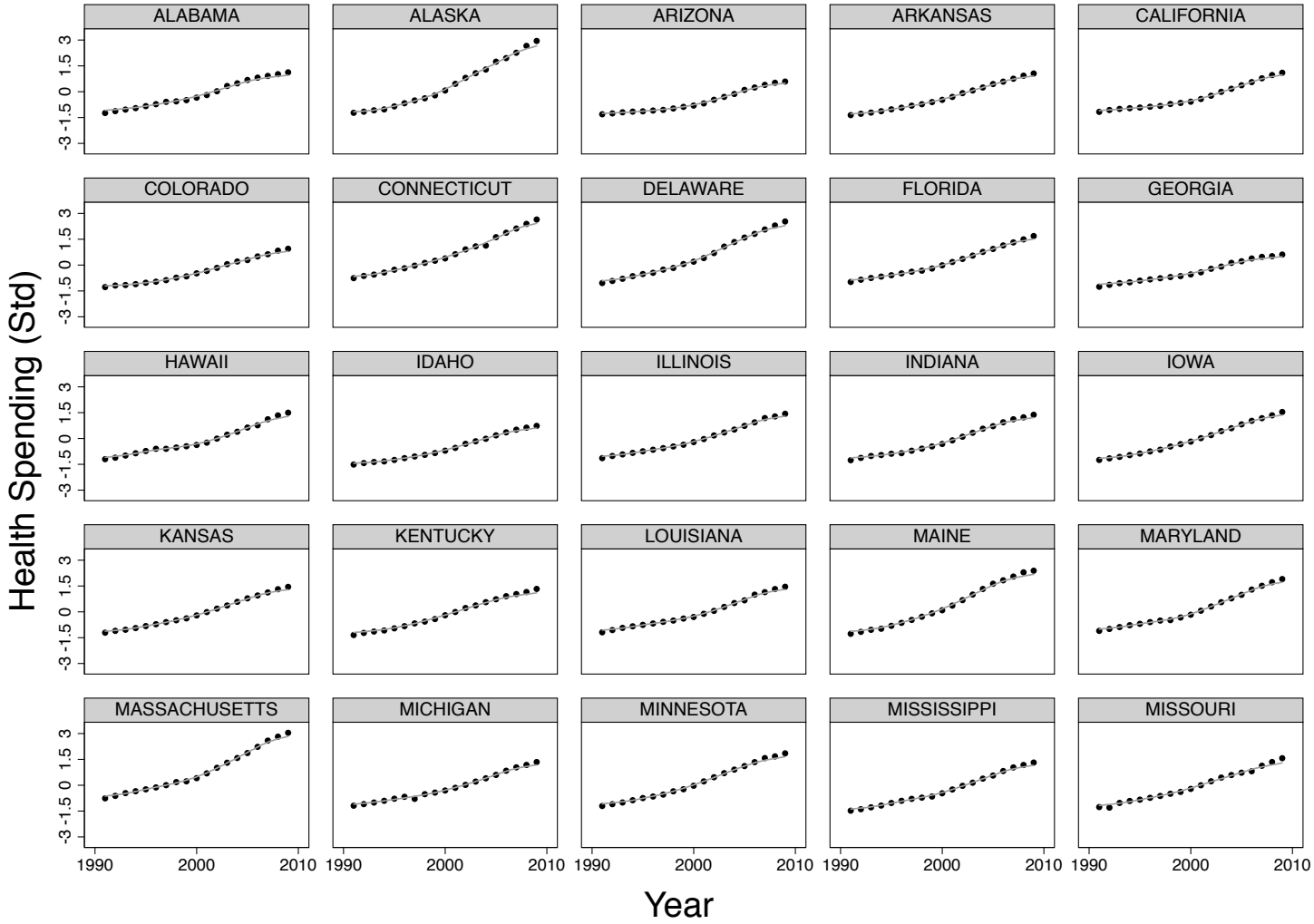


Figure A17: States' Health Spending Over Time (2)

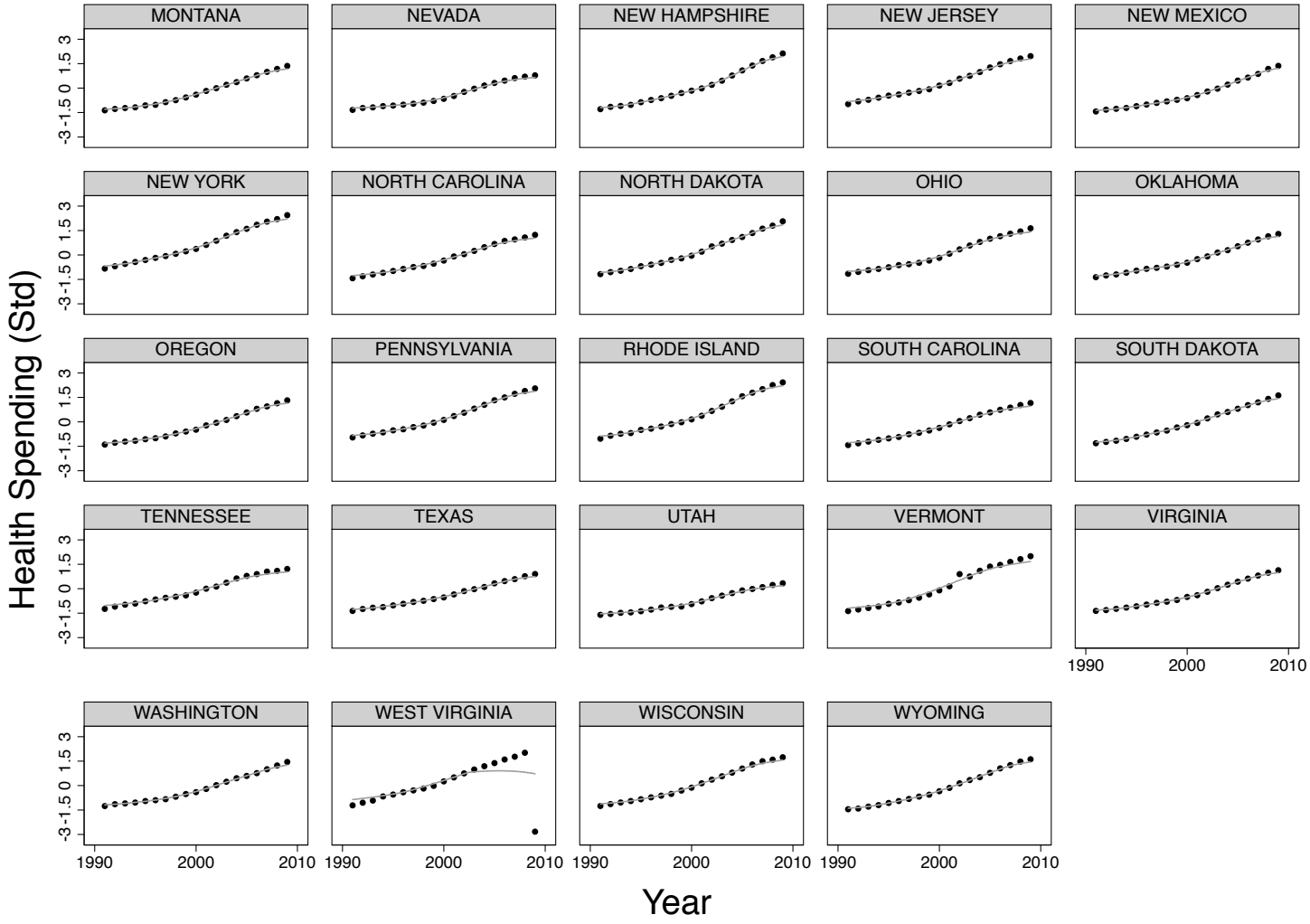


Figure A18: States' CO2 Emissions Over Time (1)

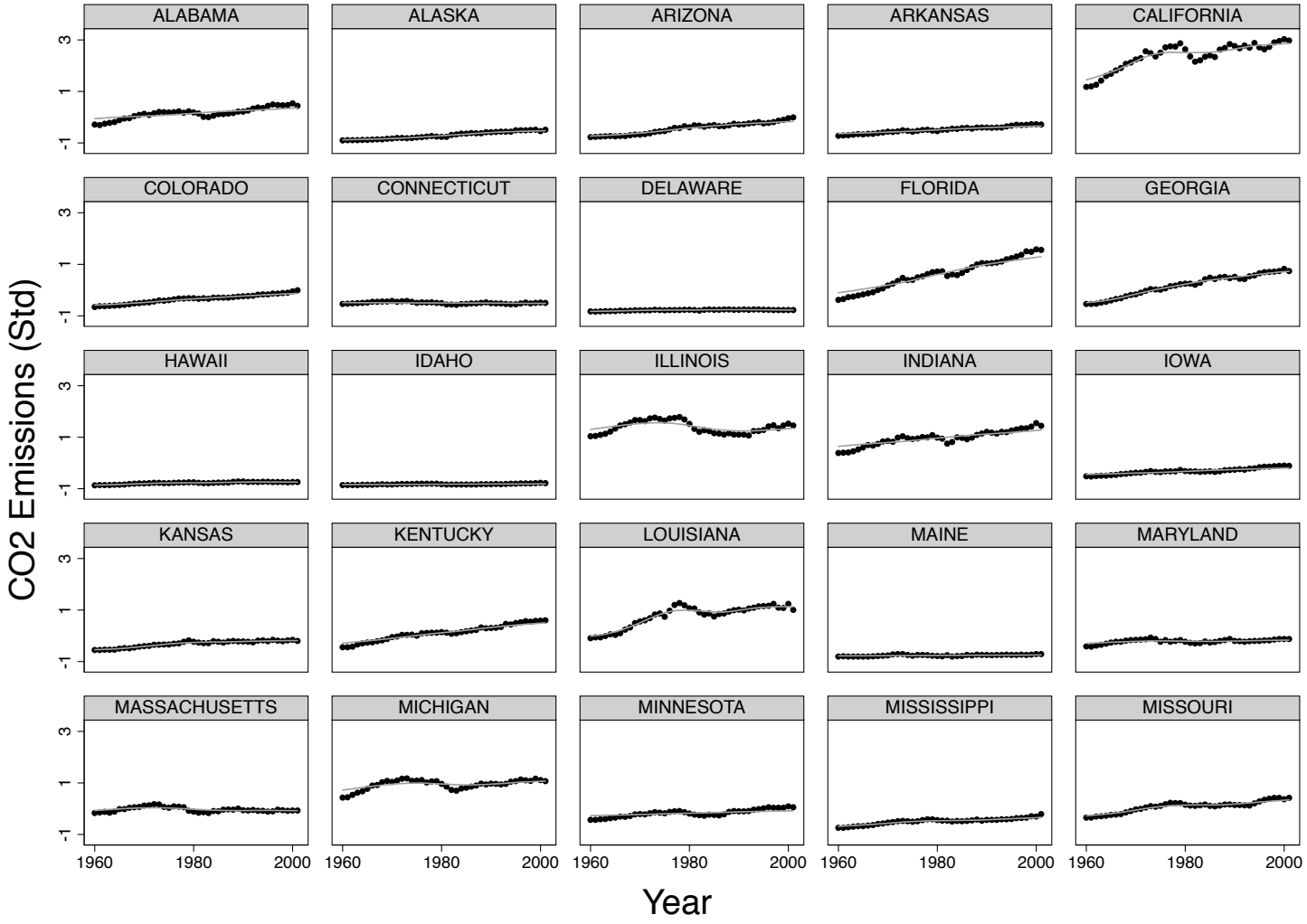
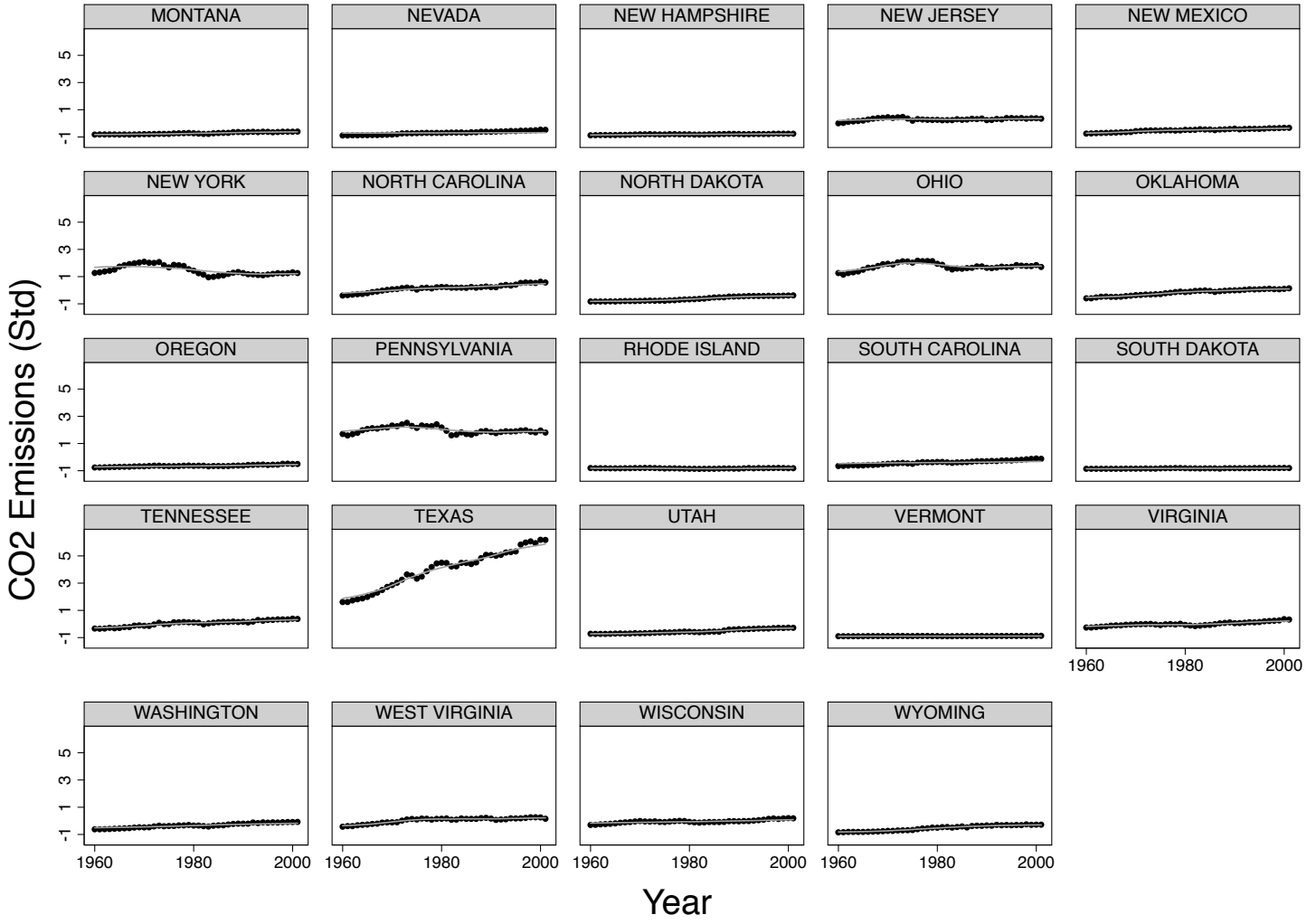


Figure A19: States' CO2 Emissions Over Time (2)



3 Data Description and Summary Statistics

Tables A1 and A2 provide definitional details on our outcomes. The first column shows the variable, the second provides a description of what that variable measures, and the third column reports where the data is collected. Measures are grouped by the six policy domains that we examine (dashed lines separate measures within the same domain; solid line separate domains from one another). Our measures all come from reputable original datasources; many of them come from the Federal Government who maintains ample information on state-level economic, education, crime, etc. data. These measures are widely used across numerous disciplines and both in and outside of academic research.

Table A3 provides additional information about our measures of interest. For all 28 of our outcomes, we report the mean, standard deviation, number of observations, and length of the time series. In the last column, we report states/years when our data is missing in our sample. As can be seen, out of our 28 measures, most are fully (or almost fully) populated within the window that we have data. Several measures have systematic missingness. The most egregious of these is the Number of Businesses and the size of the Agricultural sector. Still, both of these have information for more than 1,000 observations in the sample.[e]

[e]There are reasons to suspect that this missingness in the minority of our variables is not influencing our results substantially. If we generate variables that are equal to 1 when a variable is missing and 0 when it is not and then rerun our model specifications, there is strong evidence for balance. None of the effects in the model are significant at the unadjusted levels and all are small–the largest (in absolute terms) is 2.9% of a standard deviation. One challenge with this approach is that missingness is highly correlated within a year and outcome.

Table A1: Description of Policy Outcomes Measures [1]

Policy Outcome	Definition	Sources of Measure
Voter Turnout	Proportion of the votes cast for highest office by the voting-eligible population total.	McDonald, Michael P. United States Election Project. Turnout 1980–2012.
# Felons Ineligible to Vote	The total number of felons who are ineligible to vote.	McDonald, Michael P. United States Election Project. Turnout 1980–2012.
Violent Crime Rate	The number of reported violent crime offenses per 100,000 population by state. Includes murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault	U.S. Department of Justice, Uniform Crime Reporting Statistics - UCR Data Online.
Robbery Rate	Robberies per 100,000 people by state. The taking or attempting to take anything of value from the care, custody, or control of a person or persons by force or threat of force or violence and/or by putting.	U.S. Department of Justice, Uniform Crime Reporting Statistics - UCR Data Online.
Rape Rate	Rapes per 100,000 people by state. The carnal knowledge of a female forcibly and against her will. Rapes by force and attempts or assaults to rape, regardless of the age of the victim, are included. Statutory offenses (no force used - victim under age of consent) are excluded.	U.S. Department of Justice, Uniform Crime Reporting Statistics - UCR Data Online.
Property Crime Rate	Property crime offenses per 100,000 population by state. Includes the unlawful taking of property from another's possession without force, violence or fraud. Includes attempts, excludes motor vehicle theft.	U.S. Department of Justice, Uniform Crime Reporting Statistics - UCR Data Online.
Murder Rate	Murders per 100,000 population by state. Includes willfully killing one human. Excludes attempts, suicides, accidents, and negligence.	U.S. Department of Justice, Uniform Crime Reporting Statistics.
Car Theft Rate	Motor vehicle theft reported offenses per 100,000 population by state: The theft or attempted theft of a motor vehicle.	U.S. Department of Justice, Uniform Crime Reporting Statistics - UCR Data Online.
Agricultural Sector	The agriculture sector's contribution to the National economy, the sum of the income from production earned by all factors of production, regardless of ownership. (Thousands of Dollars)	Economic Research Service/USDA. 2011. "Value Added to the U.S. Economy by the agricultural sector via the production of goods and services 1949-2011."
Unemployment Rate	Unemployment rate, measured as percentage of a state's labor force that it is out of work.	Bureau of Labor Statistics. 2012. "Labor Force Statistics from the Current Population Survey."
Fraction Income top 1%	Share of total income earned by the top 1% of earners, calculated from income tax.	Frank, Mark W. "U.S. State-Level Income Inequality Data."
Fraction Income top 0.1%	Share of total income earned by the top 0.1% of earners, calculated from income tax.	Frank, Mark W. "U.S. State-Level Income Inequality Data."
Consumer Price Index	State and year specific consumer price index, measured in July.	Klarner, Carl, 2013, "State Economic Data"
Real Per Capita Income	Real per capita personal income (in 2007 dollars), deflated with Berry, Fording and Hanson cost of living index.	Klarner, Carl, 2013, "State Economic Data"
Population Growth	This is the amount that last year's population has to be multiplied by to get this year's population.	Klarner, Carl, 2013, "State Economic Data"
Quarterly Housing Price Index	All-transaction index estimated using sales prices and appraisal data. Some years are estimated using the average from the same indicator for the four quarters of the calendar year.	Klarner, Carl, 2013, "State Economic Data"
Gross State Product Per Capita	Current dollars per state resident. The sum of the GDP originating in all the industries in a state divided by state population.	US Department of Commerce Bureau of Economic Analysis. 2012. "NAICS Per Capita GDP by state/SIC Per Capita GDP by state."
Number of Businesses	Business organizations consisting of one or more establishments in the same state and industry that were specified under common ownership.	US Census Bureau- Statistics of US Businesses. 2012. "SUSB totals for U.S. & states."
High School Diploma Rate	Raw percent; measures percent of population that has a high school diploma or higher.	"Downloadable Tables from the compendium: State Comparisons of Education Statistics: 1969-70 to 1996-97". 1998. Center for Education Statistics.
Average School Attendance Rate	Average daily attendance, defined by state law or by NCES, divided by the total number of students in a state who are enrolled in public school. Year recorded is the start of the school year.	National Center for Education Statistics. "Average Daily Attendance (StateFin.); Total Students (State)."

Table A2: Description of Policy Outcomes Measures [2]

Policy Outcome	Definition	Sources of Measure
Residential Sector Energy Price	The state-level total energy average price estimator (the ratio of the money consumers spent on energy, and the use of energy as a source of heat or power.)	U.S. Energy Information Administration. "State Energy Data System -Prices & Expenditures , Prices 1970-2010."
CO2 emissions	Original data was only the amount of Carbon (C) and calculation has been done to convert Carbon into Carbon Dioxide (CO2)	Blasing, T.J., C.T. Broniak, and G. Marland, 2004. "Estimates of Annual Fossil-Fuel CO2 Emitted for Each State in the U.S.A. and the District of Columbia for Each Year from 1960 through 2001." Carbon Dioxide Information Analysis Center, U.S. Department of Energy
Commercial Energy Consumed	The sum of all energy sources consumed by the sector divided by the total population. (Trillion BTU)	U.S. Energy Information Administration. "Commercial Sector Energy Consumption Estimates, Selected Years, 1960-2010."
New Green Card Holders	Persons Obtaining Legal Permanent Resident Status by State of Residence	U.S. Department of Homeland Security. "Persons Obtaining Legal Permanent Resident Status by State of Residence: Fiscal Years 1988 to 2011."
Health Spending per Capita	Health Care Expenditures per capita (in dollars), measuring spending for all privately and publicly funded personal health care services and products (hospital care, physician services, nursing home care, prescription drugs, etc.) by state of residence.	Kaiser Family Foundation. "Health Care Expenditures per Capita by State of Residence." http://kff.org/other/state-indicator/health-spending-per-capita
Divorce Rate	Provisional counts of divorces by state of occurrence per 1,000 total population.	National Center for Health Statistics. "Divorce Rates by State."
Birth Rate	Children per woman (total fertility) with projections; births per 1,000 women aged 15?44	Centers for Disease Control and Prevention. National Center for Health Statistics. VitalStats.
Abortion Rate	Abortion rate per 1,000 women aged 15- 44.	Guttmacher Institute. 2019. "Data Center." February 5, 2019. https://data.guttmacher.org/states/trend?

Table A3: Descriptive Statistics of Policy Outcomes in Analysis

	Policy Outcome	Mean	Std. Dev.	Obs.	Series	Missing in Series
Civic	Voter Turnout (VEP)	0.51	0.11	866	1980-2012	None
	# Felons Ineligible to Vote	42107.19	68898.33	816	1980-2010	None
Crime	Violent Crime Rate	397.60	297.36	2800	1960-2014	NY pre 1965
	Robbery Rate	7654.42	15190.53	2800	1960-2014	NY pre 1965
	Rape Rate	28.36	15.56	2800	1960-2014	NY pre 1965
	Property Crime Rate	3646.57	1426.12	2800	1960-2014	NY pre 1965
	Murder Rate	6.59	6.10	2800	1960-2014	NY pre 1965
	Car Theft Rate	352.10	227.65	2805	1960-2014	None
Economy	Agricultural Sector	1753147.19	2396363.19	1050	1960-2011	1961-1964, 1966-1969, 1971-1974, 1976-1979, 1981-1984, 1986-1989, 1991-1994, 1996, 1998, 1999
	Unemployment Rate	6.10	2.09	1450	1975-2004	None
	Fraction Income top 1%	13.01	4.75	2856	1960-2015	None
	Fraction Income top 0.1%	5.23	3.12	2856	1960-2015	None
	Consumer Price Index	0.48	0.29	2400	1960-2007	None
	Real Per Capita Income	27823.95	6437.05	2550	1960-2010	None
	Population Growth	1.01	0.01	2703	1960-2012	None
	Quarterly Housing Price Index	1.97	1.13	1887	1975-2011	None
	Gross State Product Per Capita	35521.59	15122.85	1224	1987-2010	None
	Number of Businesses	109343.79	115036.46	1518	1961-2016	1961 (28 states), 1962, 1963 (34), 1964 (45), 1965 (49), 1966 (30), 1967, 1968 (28), 1969, 1970 (28), 1971, 1972 (43), 1973 (36), 1974, 1975 (28), , 19761977 (28), 1978, 1979 (37), 1980 (42), 1981, 1982 (28), 1983, 1984 (28), 1985, 1986 (31), 1987 (48), 2011 (43), 2012 (36), 2013, 2014 (28), 2015, 2016 (28)
Ed.	High School Diploma Rate	0.77	0.14	2584	1962-2019	1962 (14 states), 1963, 1968-1972 (32), 1973-1976 (38)
	Average School Attendance Rate	92.72	2.89	1224	1986-2009	None
Enviro.	Residential Sector Energy Price	11.75	7.35	2091	1970-2010	None
	CO2 emissions (metric tons)	88.82	93.88	2142	1960-2001	None
	Commercial Energy Consumed	41575.09	24068.63	2499	1960-2008	None
Health/Fam.	New Green Card Holders	19386.21	49200.32	1224	1988-2011	None
	Health Spending Per Capita	4513.42	1567.09	969	1991-2009	None
	Divorce Rate	4.96	1.75	1418	1975-2004	1996, 1997 (6 states), 1998-2000 (5), 2001 (4), 2002 (4), 2003 (6)
	Birth Rate	2.01	0.20	918	1991-2008	None
	Abortion Rate	21.83	9.44	932	1975-1996	1975-1992 (WY), 1993-1995

Table A3 displays basic descriptive statistics of the 28 policy outcomes examined in this analysis including the years for which these data are available. The last column documents years (and states) that are missing in the time series listed in the column to the left.

4 Bivariate Alternate Specifications

Figure A20 shows the bivariate relationship between each of the chambers when 2 or 3 chambers are held. 60% of the coefficients here are significant at the 5% level. If we run the same bivariate comparison when only 1 chamber is held, only 41% are significant.

Figure A20: Simple Relationship Between Democratic Control & Policy Outcomes (2/3 Chambers Held)

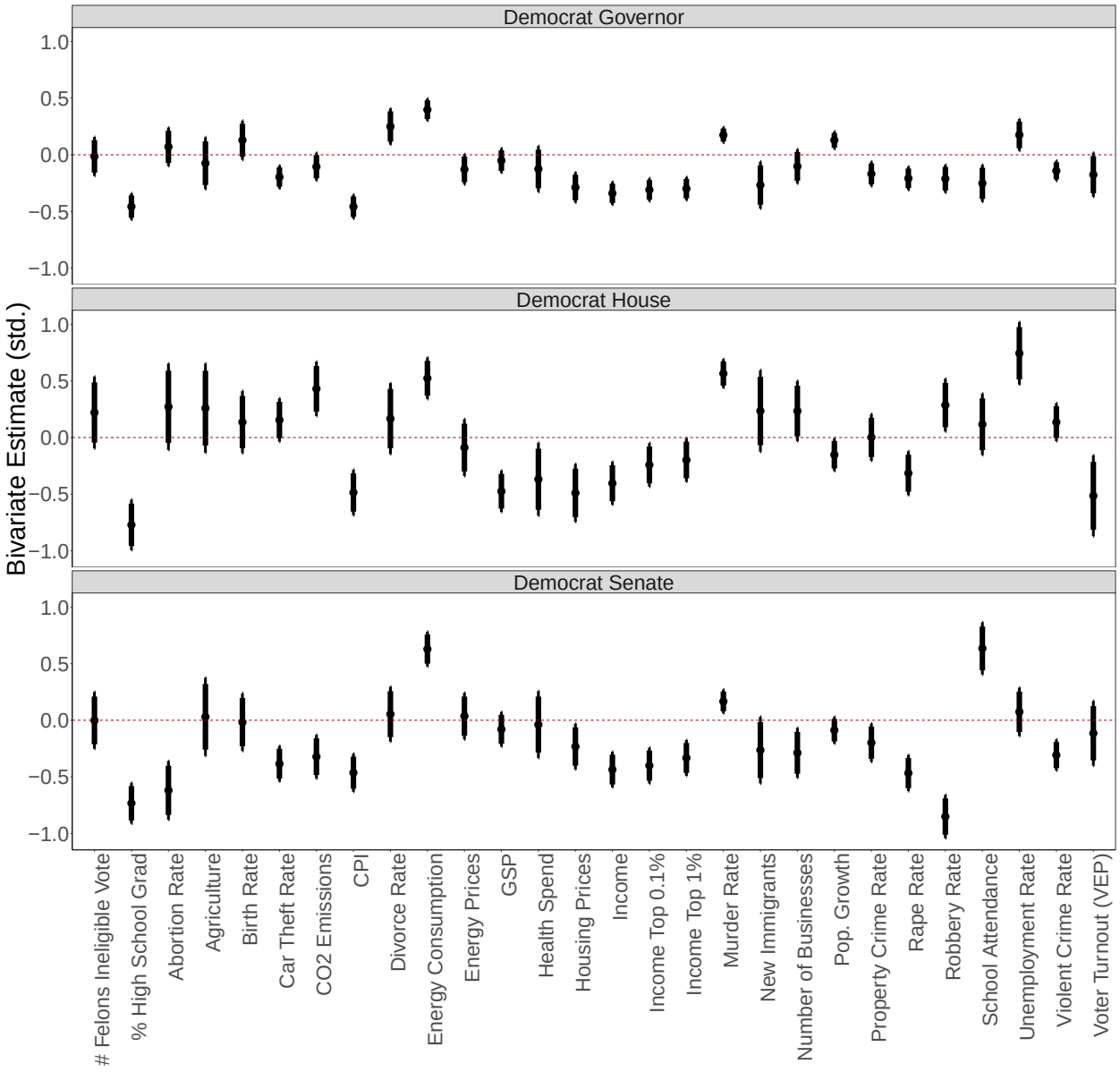


Figure A20 displays coefficient plots of the simple estimates between party control in the three bodies (upper, lower, governor) and policy outcomes in the second year for states that have 2 or 3 chambers of power. Point estimates are shown with dots and 90/95% confidence intervals with bars. The outcomes are standardized simply to allow for a similar scale in the figure.

5 Difference-in-Difference Specifications

5.1 MDEs for Figure 2

Tables A4 and A5 show all the of the estimates—coefficient, standard error, p-value, 95% confidence interval, and sample size–for Figure 2 in the text. The 95% confidence intervals can be used to illustrate the minimum detectable effect (MDE) for our models—i.e. the smallest effect (on either side) that our design allows us to rule out. As can be seen, across all model specifications, we can confidently rule out the default meaningful effect size suggested by Hartman and Hidalgo (2018). Often, we are able to rule out effects that are *much* smaller. Readers should also reference Figure A30 and Tables A6/A7 to see how we are able to get even more precise when we look at changes in our outcomes variables.

Table A4: MDEs for Figure 2 [1]

Variable	Chamber	Coef_*std*	SE	P	95% CI		N
Average School Attendance Rate	Governor	0.00	0.06	0.94	-0.13	0.12	1220
Average School Attendance Rate	Senate	-0.01	0.11	0.91	-0.23	0.20	1176
Average School Attendance Rate	House	0.12	0.10	0.22	-0.07	0.32	1176
% High School Diploma	Governor	-0.01	0.01	0.48	-0.04	0.02	2532
% High School Diploma	Senate	0.00	0.01	0.73	-0.03	0.02	2196
% High School Diploma	House	-0.01	0.02	0.40	-0.04	0.02	2196
Murder Rate	Governor	0.00	0.02	0.92	-0.05	0.04	2638
Murder Rate	Senate	0.01	0.02	0.79	-0.04	0.05	2546
Murder Rate	House	0.03	0.02	0.29	-0.02	0.07	2546
Car Theft Rate	Governor	0.02	0.05	0.72	-0.08	0.12	2640
Car Theft Rate	Senate	0.04	0.07	0.53	-0.09	0.18	2548
Car Theft Rate	House	0.08	0.05	0.13	-0.02	0.18	2548
Violent Crime Rate	Governor	0.01	0.03	0.85	-0.06	0.08	2638
Violent Crime Rate	Senate	0.06	0.05	0.24	-0.04	0.15	2546
Violent Crime Rate	House	0.05	0.04	0.25	-0.03	0.13	2546
Robbery Rate	Governor	0.00	0.06	0.97	-0.12	0.12	2638
Robbery Rate	Senate	0.05	0.06	0.36	-0.06	0.17	2546
Robbery Rate	House	0.11	0.06	0.06	0.00	0.22	2546
Rape Rate	Governor	-0.01	0.04	0.80	-0.10	0.08	2638
Rape Rate	Senate	0.08	0.06	0.23	-0.05	0.20	2546
Rape Rate	House	0.00	0.07	0.96	-0.14	0.15	2546
Property Crime Rate	Governor	0.01	0.03	0.81	-0.05	0.06	2638
Property Crime Rate	Senate	0.01	0.05	0.84	-0.09	0.11	2546
Property Crime Rate	House	0.01	0.04	0.79	-0.08	0.10	2546
CO2 emissions	Governor	0.00	0.01	0.84	-0.02	0.02	1989
CO2 emissions	Senate	-0.03	0.02	0.13	-0.06	0.01	1911
CO2 emissions	House	-0.01	0.01	0.13	-0.03	0.00	1911
Residential Sector Energy Price	Governor	-0.04	0.02	0.13	-0.08	0.01	2084
Residential Sector Energy Price	Senate	0.02	0.02	0.37	-0.02	0.05	2009
Residential Sector Energy Price	House	0.02	0.02	0.27	-0.02	0.06	2009
Commercial Sector Energy Consume	Governor	0.01	0.04	0.86	-0.06	0.08	2345
Commercial Sector Energy Consume	Senate	-0.06	0.05	0.26	-0.16	0.04	2254
Commercial Sector Energy Consume	House	-0.09	0.07	0.17	-0.22	0.04	2254
# Felons Ineligible to Vote	Governor	0.01	0.02	0.60	-0.03	0.05	812
# Felons Ineligible to Vote	Senate	0.01	0.03	0.84	-0.06	0.08	784
# Felons Ineligible to Vote	House	0.03	0.07	0.68	-0.11	0.16	784
Voter Turnout (VEP)	Governor	0.02	0.03	0.47	-0.04	0.08	860
Voter Turnout (VEP)	Senate	0.01	0.03	0.64	-0.04	0.07	832
Voter Turnout (VEP)	House	-0.05	0.04	0.24	-0.13	0.03	832
New Immigrant Green Card Holders	Governor	0.00	0.03	0.90	-0.05	0.05	1214
New Immigrant Green Card Holders	Senate	-0.01	0.02	0.63	-0.05	0.03	1176
New Immigrant Green Card Holders	House	0.02	0.06	0.71	-0.11	0.15	1176

Table A5: MDEs for Figure 2 [2]

Variable	Chamber	Coef_*std*	SE	P	95% CI		N
Birth Rate	Governor	0.01	0.04	0.87	-0.07	0.08	917
Birth Rate	Senate	-0.02	0.04	0.69	-0.09	0.06	882
Birth Rate	House	-0.01	0.04	0.81	-0.10	0.08	882
Divorce Rate	Governor	-0.02	0.02	0.32	-0.06	0.02	1418
Divorce Rate	Senate	0.04	0.04	0.35	-0.04	0.12	1389
Divorce Rate	House	0.02	0.03	0.56	-0.04	0.07	1389
Abortion Rate	Governor	0.06	0.04	0.10	-0.01	0.14	932
Abortion Rate	Senate	-0.05	0.05	0.34	-0.14	0.05	913
Abortion Rate	House	0.00	0.07	0.98	-0.15	0.14	913
Health Spending Per Capita	Governor	0.00	0.02	0.97	-0.03	0.03	965
Health Spending Per Capita	Senate	0.03	0.02	0.06	0.00	0.06	931
Health Spending Per Capita	House	0.01	0.01	0.44	-0.02	0.04	931
Number of Businesses	Governor	-0.02	0.04	0.62	-0.11	0.06	1486
Number of Businesses	Senate	-0.03	0.05	0.57	-0.14	0.08	1413
Number of Businesses	House	0.08	0.06	0.15	-0.03	0.20	1413
Fraction Income top 0.1%	Governor	0.00	0.03	0.89	-0.06	0.07	2691
Fraction Income top 0.1%	Senate	0.01	0.05	0.88	-0.08	0.10	2548
Fraction Income top 0.1%	House	0.02	0.04	0.54	-0.05	0.10	2548
Fraction Income top 1%	Governor	0.00	0.03	0.87	-0.05	0.06	2691
Fraction Income top 1%	Senate	0.00	0.03	0.96	-0.07	0.07	2548
Fraction Income top 1%	House	0.00	0.03	0.95	-0.07	0.07	2548
Unemployment rate	Governor	0.02	0.08	0.80	-0.14	0.18	1450
Unemployment rate	Senate	0.08	0.08	0.34	-0.09	0.24	1421
Unemployment rate	House	-0.15	0.07	0.04	-0.30	-0.01	1421
Value Added by Agricultural Sector	Governor	0.01	0.02	0.63	-0.04	0.06	990
Value Added by Agricultural Sector	Senate	0.05	0.04	0.30	-0.04	0.14	980
Value Added by Agricultural Sector	House	0.02	0.06	0.71	-0.09	0.14	980
Gross State Product Per Capita	Governor	0.01	0.01	0.68	-0.02	0.03	1217
Gross State Product Per Capita	Senate	0.03	0.02	0.13	-0.01	0.06	1176
Gross State Product Per Capita	House	-0.01	0.02	0.49	-0.05	0.02	1176
Quarterly Housing Price Index	Governor	0.00	0.02	0.96	-0.05	0.05	1877
Quarterly Housing Price Index	Senate	0.04	0.03	0.17	-0.02	0.09	1813
Quarterly Housing Price Index	House	0.00	0.03	0.95	-0.07	0.07	1813
Consumer Price Index	Governor	-0.01	0.00	0.07	-0.02	0.00	2250
Consumer Price Index	Senate	0.01	0.01	0.08	0.00	0.03	2205
Consumer Price Index	House	0.01	0.01	0.42	-0.01	0.02	2205
Population Growth	Governor	0.06	0.03	0.04	0.00	0.13	2538
Population Growth	Senate	-0.05	0.04	0.20	-0.12	0.03	2450
Population Growth	House	-0.03	0.05	0.51	-0.13	0.06	2450
Real Per Capita Personal Income	Governor	0.03	0.02	0.05	0.00	0.07	2393
Real Per Capita Personal Income	Senate	-0.04	0.03	0.15	-0.09	0.01	2352
Real Per Capita Personal Income	House	-0.02	0.03	0.51	-0.08	0.04	2352

5.2 Two-Way Fixed Effects Only

Figure A21 shows our specification check that we mention in the text—a difference-in-difference with only state and year fixed effects looking at our outcomes lagged. This is a common check suggested in the difference-in-difference literature (Wing, Simon and Bello-Gomez 2018). We should *not* see effects here if this specification were to be producing causal estimates. Examining our 28 lagged outcomes across our 3 treatments (Democratic House, Senate, and Governor) reveals that 12% of our tests show signs of statistically significant effects in the year *before* treatment is observed. While these effects are small (median effect $= -2\%$ of standard deviation (σ)) and many do not clear multiple comparison thresholds (only 4.8%), there are still reasons to want to move to a more sophisticated specification to purge out potential sources of bias.

Also of note here is the fact that two-way fixed effect models actually given us a very similar answer to our preferred difference-in-difference specification—one that includes state-specific time trends. Figures A22 and A23 show our estimates of single chamber effects across the second and fourth year downstream. As can be seen, most of the effects (88.1%) are not statistically distinct from zero at unadjusted significant levels. While this is higher than we would expect by chance alone, it's important to note that only 3.0% of the tests run clear multiple hypothesis testing levels. Moreover, many of the effects are small (the average effect size is a mere -1.0% of a standard deviation) and 97.9% of our models can rule out a meaningful effect. Also, as we show in the paper many of these effects are not robust to the inclusion of state-specific time trends.

Figure A21: Difference-in-Difference (Two-Way FE Only) Estimates of Single Chamber Changes to Democratic Control (Lagged Outcomes)

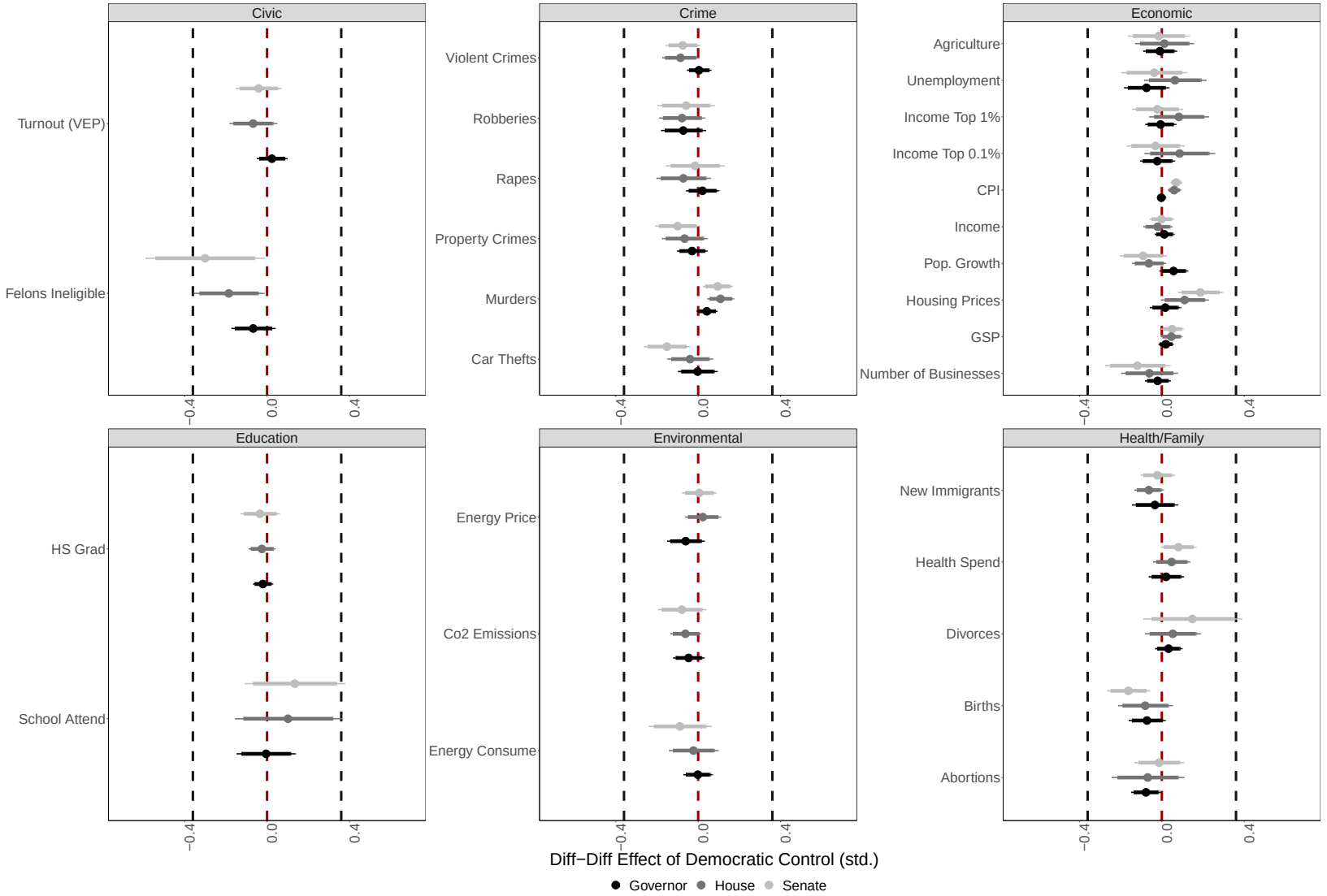


Figure A21 plots coefficient estimates (points) and corresponding 90% (thick) and 95% (thin) confidence intervals for the difference-in-difference estimates for the effects of each individual chamber. Coefficients are faceted by policy area and broken by individual chamber within facets. Following previous work estimating the effects of party control (Caughey, Warshaw and Xu 2017; Hall, Feigenbaum and Fouirnaies 2017), standard errors are clustered at the state level.

Figure A22: Difference-in-Difference (Two-Way FE Only) Estimates of Single Chamber Changes to Democratic Control (Second Year)

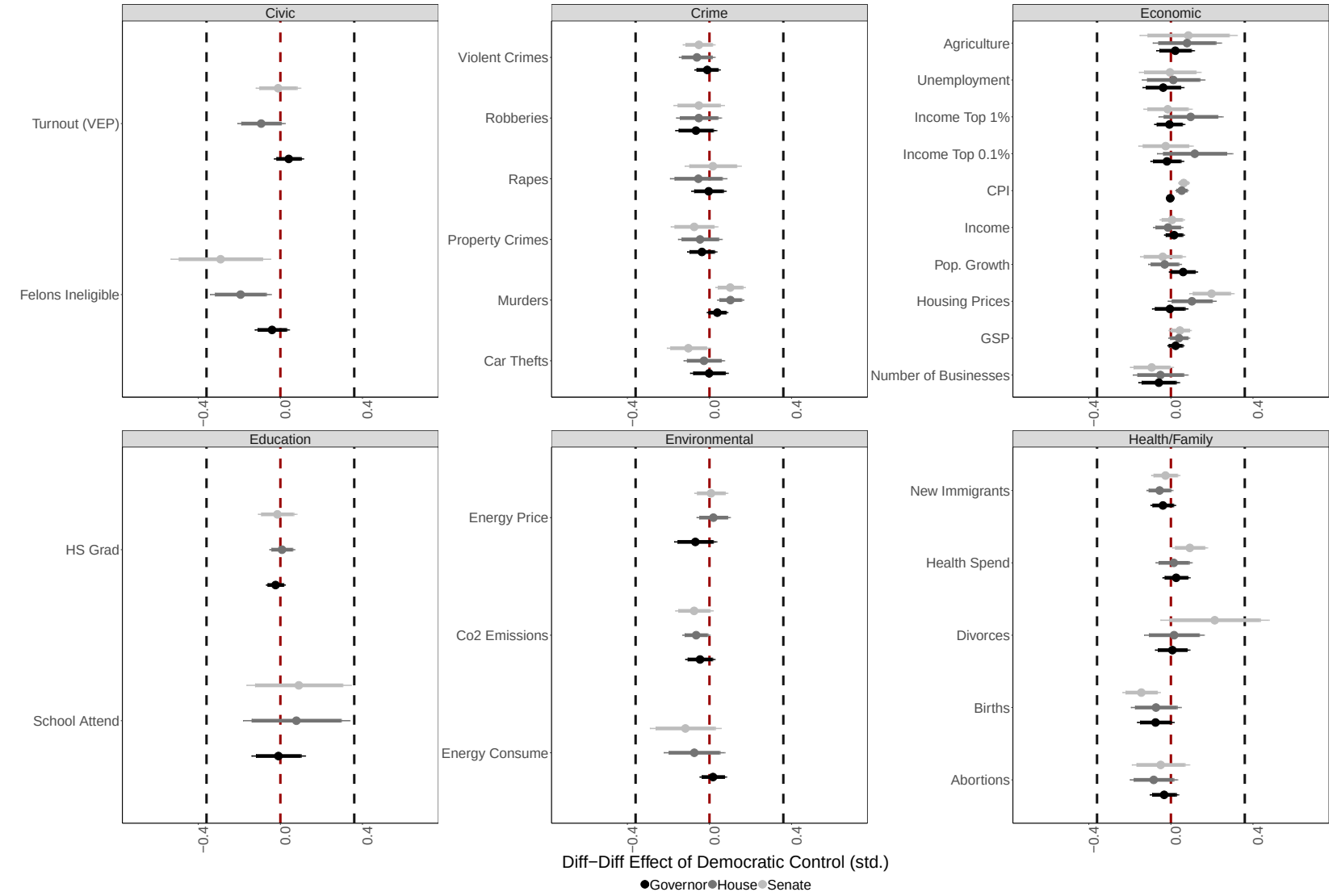


Figure A22 plots coefficient estimates (points) and corresponding 90% (thick) and 95% (thin) confidence intervals for the difference-in-difference estimates for the effects of each individual chamber. Coefficients are faceted by policy area and broken by individual chamber within facets. Following previous work estimating the effects of party control (Caughey, Warshaw and Xu 2017; Hall, Feigenbaum and Fouirnaies 2017), standard errors are clustered at the state level.

Figure A23: Difference-in-Difference (Two-Way FE Only) Estimates of Single Chamber Changes to Democratic Control (Fourth Year)

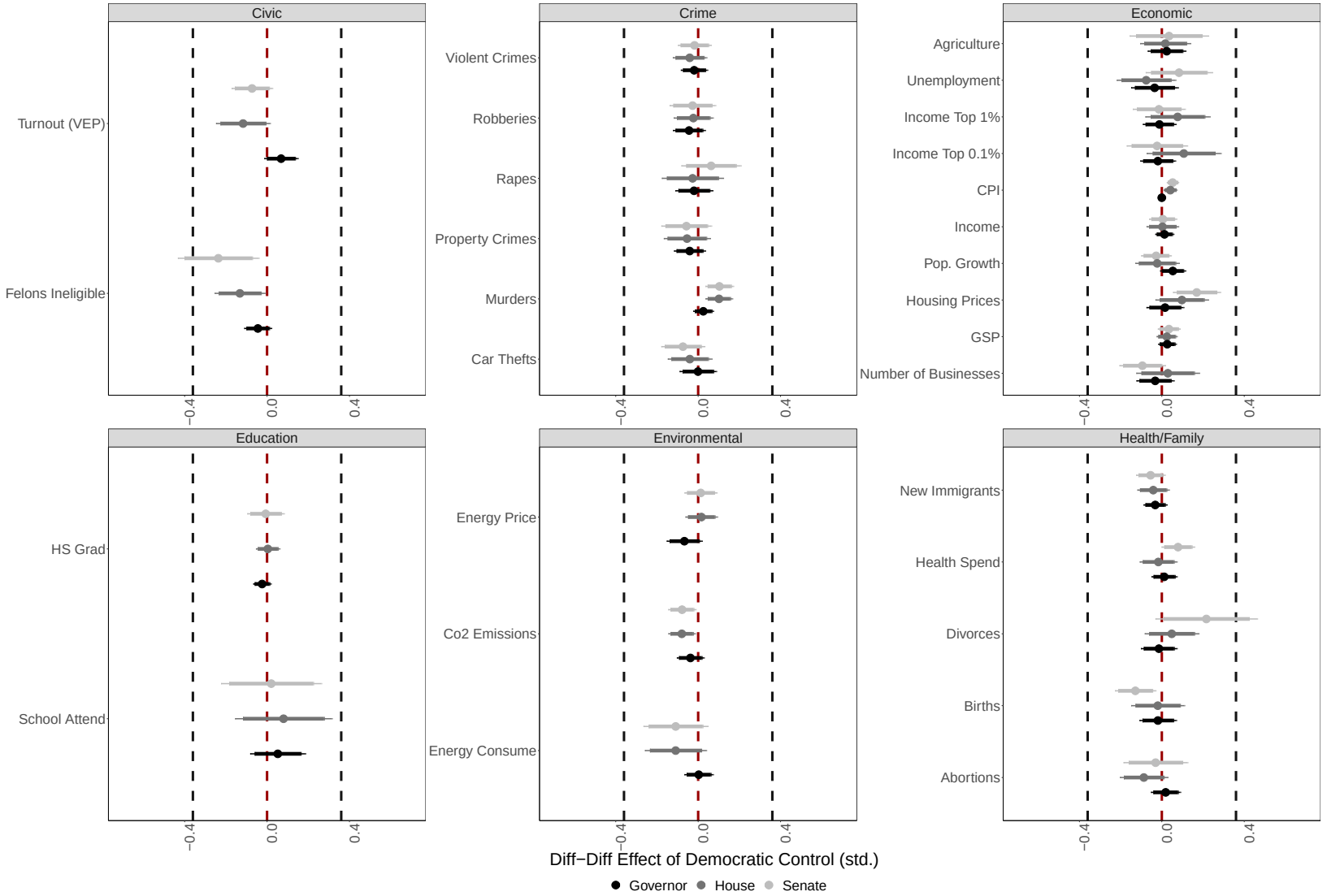


Figure A23 plots coefficient estimates (points) and corresponding 90% (thick) and 95% (thin) confidence intervals for the difference-in-difference estimates for the effects of each individual chamber. Coefficients are faceted by policy area and broken by individual chamber within facets. Following previous work estimating the effects of party control (Caughey, Warshaw and Xu 2017; Hall, Feigenbaum and Fouirnaies 2017), standard errors are clustered at the state level.

5.3 Difference-in-Difference with Linear State Trends Estimates for Lagged Outcomes

Figure A24 shows our specification check that we mention in the text—a difference-in-difference with state time trends looking at our outcomes lagged. This is a common check suggested in the difference-in-difference literature (Wing, Simon and Bello-Gomez 2018). We should *not* see effects here if this specification were to be producing causal estimates. This is exactly what we observe. Examining our 28 lagged outcomes across our 3 treatments (Democratic House, Senate, and Governor) reveals that 4.8% of our tests show signs of statistically significant effects in the year *before* treatment is observed. This is substantially lower than the imbalances shown in the two-way fixed effects model without state-specific time trends. Moreover, none of the imbalances clear multiple hypothesis testing levels. These effects are also small (median effect $= 0.06$ % of standard deviation (σ)).

Figure A24: Difference-in-Difference Estimates of Single Chamber Changes to Democratic Control (Lagged Outcomes)

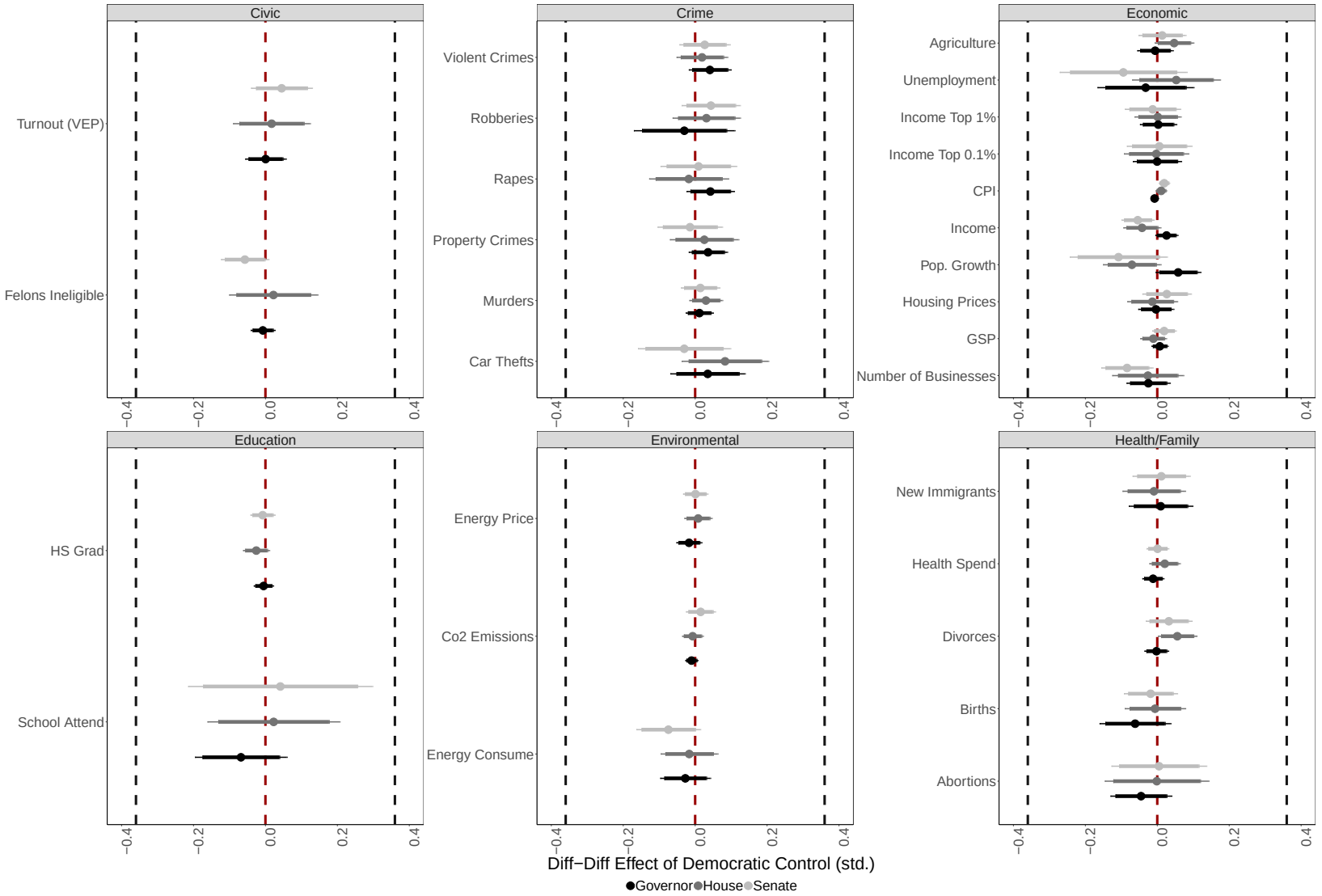


Figure A24 plots coefficient estimates (points) and corresponding 90% (thick) and 95% (thin) confidence intervals for the difference-in-difference estimates for the effects of each individual chamber. Coefficients are faceted by policy area and broken by individual chamber within facets. Following previous work estimating the effects of party control (Caughey, Warshaw and Xu 2017; Hall, Feigenbaum and Fouirnaies 2017), standard errors are clustered at the state level.

5.4 Difference-in-Difference with Linear State Trends Estimates for Single Chamber Switches

Figure A25 provides the difference-in-difference estimates for the second year. These correspond to Figure 2 in the text (which shows the fourth year). As can be seen, most of the effects (96.4%) are not significant at traditional unadjusted levels. None of the effects are significant at multiple correction levels. The median effect is 0.6% of a standard deviation and all effects can rule out the default effects set by Hartman and Hidalgo (2018) (many of our effects are precise enough to rule out much smaller effects than that even.)

Figures A26 and A27 show the distribution of coefficient estimates and p-values for our estimates up to 8 years downstream. As can be seen, all of the coefficient distributions are centered at zero and the p-value distributions are almost entirely above the 0.05 threshold. Across all 672 models run (28 outcomes * 3 chambers * 8 years), only 21 (3.1%) are significant—slightly less than we would expect just by chance. And none of these clear multiple hypothesis testing thresholds. The median effect is a paltry 0.5% of a standard deviation and 99.9% of our coefficients (671/672) allow us to rule out the default effects set by Hartman and Hidalgo (2018).

Figure A25: Difference-in-Difference Estimates of Single Chamber Changes to Democratic Control (Second Year)

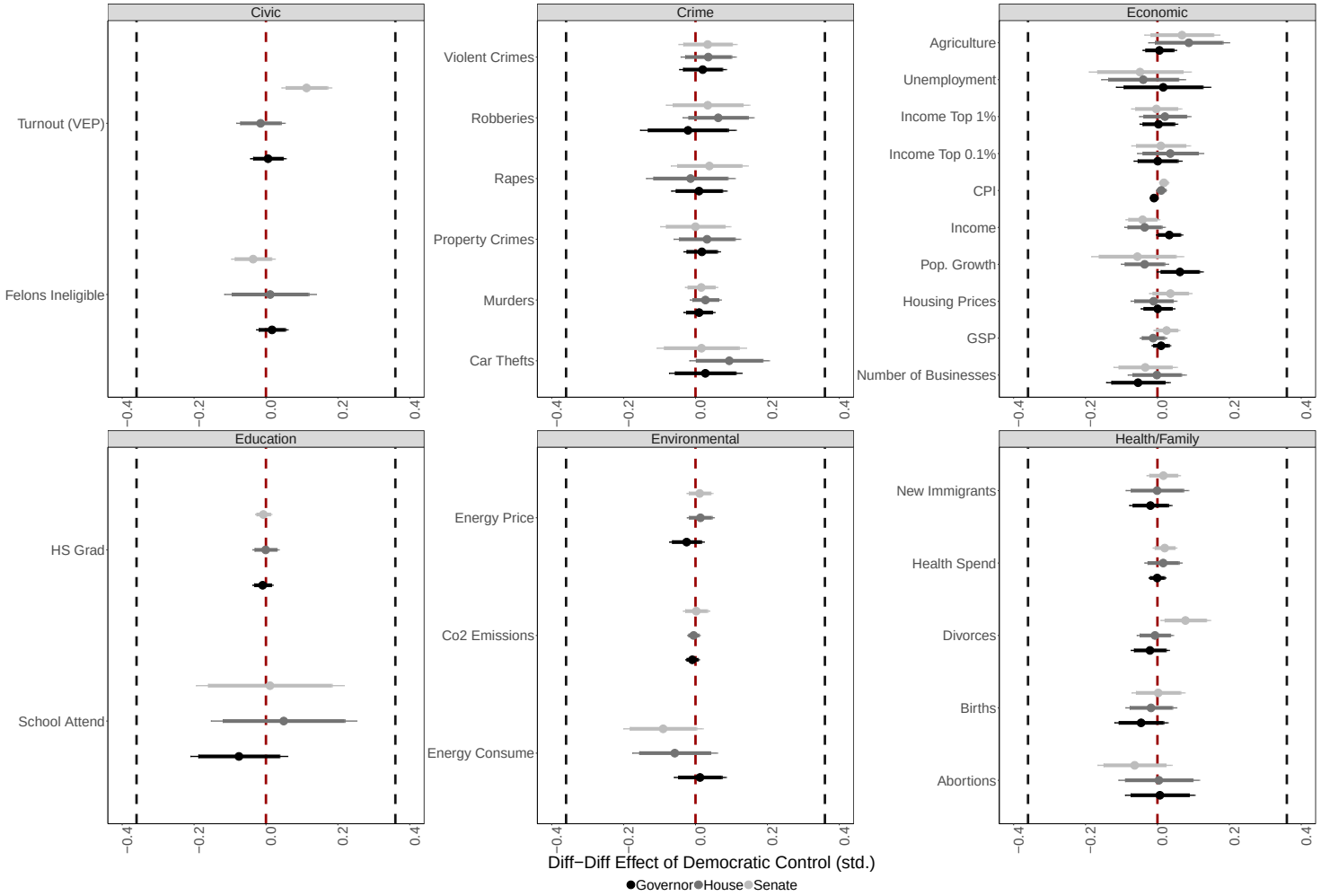


Figure A25 plots coefficient estimates (points) and corresponding 90% (thick) and 95% (thin) confidence intervals for the difference-in-difference estimates for the effects of each individual chamber. Coefficients are faceted by policy area and broken by individual chamber within facets. Following previous work estimating the effect of party control (Caughey, Warshaw and Xu 2017; Hall, Feigenbaum and Fouirnaies 2017), standard errors are clustered at the state level.

Figure A26: Distribution of Coefficient Estimates for Single Chamber Changes to Democratic Control (Diff-Diff, Years 1-8)

(a) House (b) Governor (c) Senate

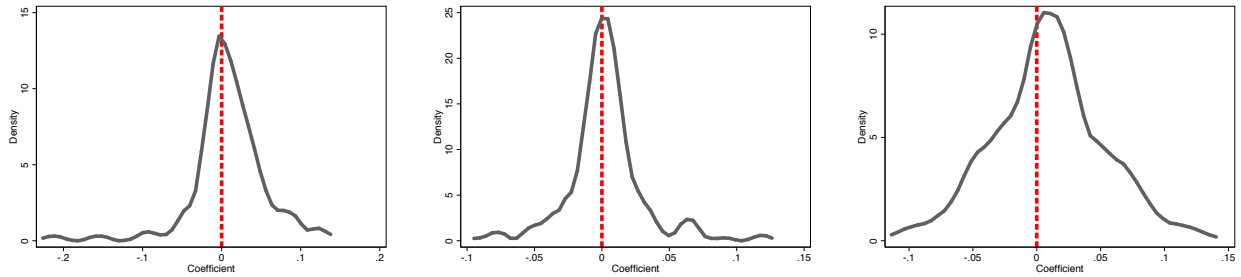


Figure A26 plots the distribution of coefficients from the single chamber switches difference-in-difference estimates for years 1-8 downstream.

Figure A27: Distribution of P-Value Estimates for Single Chamber Changes to Democratic Control (Diff-Diff, Years 1-8)

(a) House (b) Governor (c) Senate

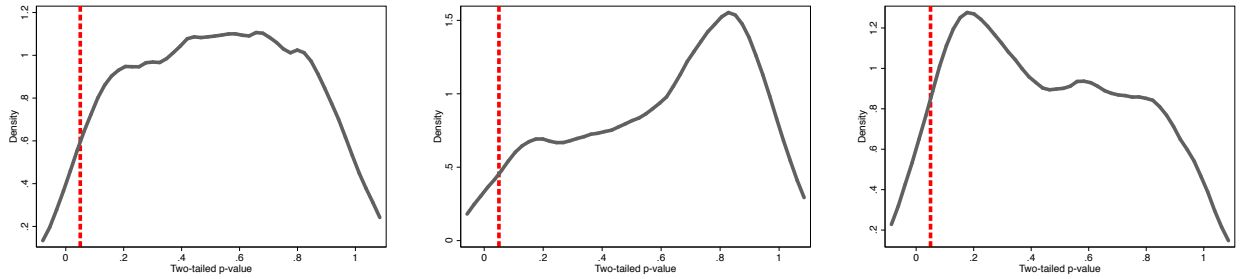


Figure A27 plots the distribution of coefficients from the single chamber switches difference-in-difference estimates for years 1-8 downstream.

5.5 Difference-in-Difference with Quadratic State Trends Estimates for Single Chamber Switches

Our results are robust to alternate modelings of the state-specific trends. As can be seen in Figures A8–A19 above, even though our dependent variables vary over time within states, many of the lowess models we fit actually look closer to linear than anything else. That said, we can also fit the equation listed below that allows for a quadratic relationship between time and our outcomes within states.

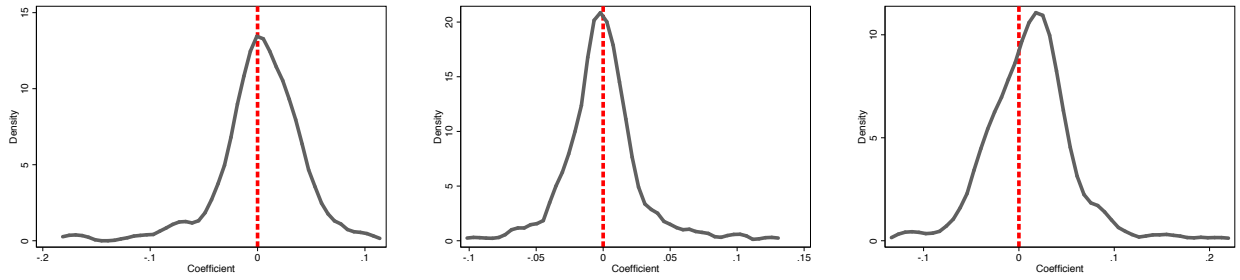
$$O_{st} = \beta_0 + \beta_1 \, D_{st} + \alpha_t + \gamma_s + \gamma_s * t + \gamma_s * t * t + \epsilon_{st} \tag{4}$$

Figures A28 and A27 show the distribution of coefficient estimates and p-values for our estimates of this model specification up to 8 years downstream. As can be seen, all of the coefficient distributions are centered at zero and the p-value distributions are almost entirely above the 0.05 threshold. Across all 672 models run (28 outcomes * 3 chambers * 8 years), only 30 (4.5%) are significant—slightly less than we would expect just by chance. And none of these clear multiple hypothesis testing thresholds. The median effect is a paltry 0.3% of a standard deviation and 99.4% of our coefficients allow us to rule out the default effects set by Hartman and Hidalgo (2018). Unfortunately, we do not have enough common support to estimate models that allow for even more flexibility within states.[f] However, these results suggest that our not sensitive to common variations in the types of state-specific time trends we include.

[f] Even with the quadratic specification, two of our 672 models (28 outcomes * 3 chambers * 8 years) cannot be estimated.

Figure A28: Distribution of Estimates for Single Chamber Changes to Democratic Control (Diff-Diff, Quadratic State Trend, Years 1-8)

(a) House, β (b) Governor, β (c) Senate, β



(d) House, p (e) Governor, p (f) Senate, p

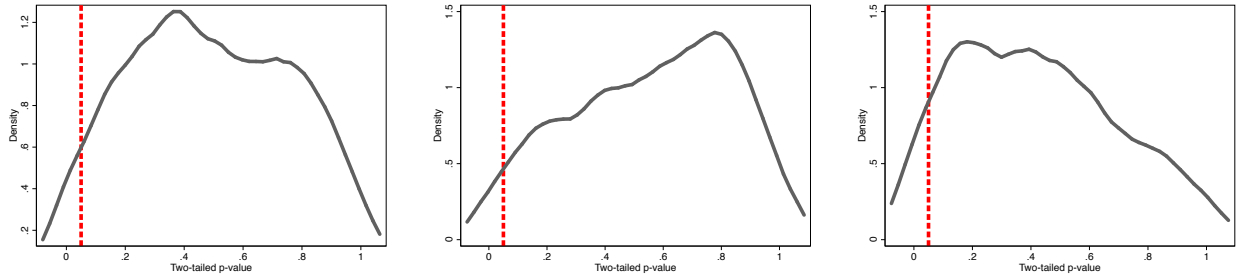


Figure A28 plots the distribution of coefficients from the single chamber switches difference-in-difference (with a quadratic state trend) estimates for years 1-8 downstream.

5.6 Difference-in-Difference with Linear State Trends Estimates Iteratively Holding a State Out

To make sure that the estimates we have provided are not being driven by a single state, we ran a robustness check where we iteratively held out a state at a time and estimated our difference in difference models for each of these updated samples. Across the 4,284 models run here (28 outcomes by 3 chambers by 51 states held out), only 128 (3%) are significant at the 5% level. None of these, however, clear multiple hypothesis testing adjusted levels. The effects center at zero (mean = 0.8% of a standard deviation) and all of our coefficients allow us to rule out the default meaningful effects set by Hartman and Hidalgo (2018).[g]

Figure A29: Distribution of Estimates for Single Chamber Changes to Democratic Control Holding One State Out at a Time (Diff-Diff, Years 1-8)

(a) β (b) p

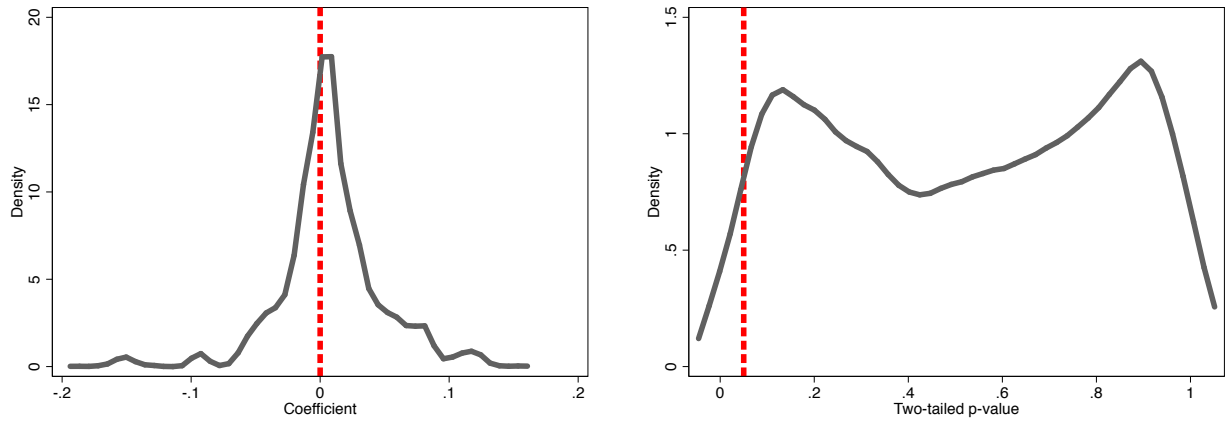


Figure A29 plots the distribution of coefficients from the single chamber switches difference-in-difference (with a linear state trend) estimates for year 4 iteratively holding a state out at a time.

[g]None of the coefficients are larger (in absolute value) than 18.9% of a standard deviation. In 92% of our estimates, we can rule out effects of 20% of a standard deviation. In 56% of our estimates, we can rule out effects of 10% of a standard deviation. In 18.1% of our models, we can rule out effects as small as 5% of a standard deviation.

5.7 Difference-in-Difference with Linear State Trends Estimates Modeling Change in the Dependent Variables

Here we leverage the added precision of looking at changes in our outcomes of interest. This is by *far* the most precise estimates that we can get. (As we discuss below, we use this approach again with our composite scale outcomes, which adds an additional layer of certainty.) Again, this approach confirms the results of our other approaches—that party control has little impact on policy outcomes in the timeline introduced by elections.

Figure A30 displays the effect estimates from this approach. Under this approach, 95.2% of the coefficients estimated are not significant at the unadjusted 5% level (98.8% are not significant at adjusted levels). Most coefficients are *very* small—the average effect size is a paltry 0.2% of a standard deviation, all coefficients are smaller (in absolute value) than 7.2% of a standard deviation. Again, with the 95% confidence intervals we can use equivalence testing to estimate the minimum detectable effects that we can rule out. All of our estimates can rule out the default meaningful effects set by Hartman and Hidalgo (2018). Many of our estimates are even more precise than that; all of our estimates can rule out effects of 20% of a standard deviation, 84.5% can rule out effects as small as 10% of a standard deviation, and 67% of our estimates can rule out effects as small as 5% of a standard deviation. Interestingly, all of our coefficients for our crime variables are very precise. However, this is not unique to this policy domain—many of our economic, environmental, and health/family outcomes are *very* precisely-estimated.

This complementary methodological approach helps strengthen the conclusion drawn in the paper that who is in control has very little to no immediate impact on policy outcomes.

Figure A30: Difference-in-Difference with Year to Year Changes in the Dependent Variable (First Year)

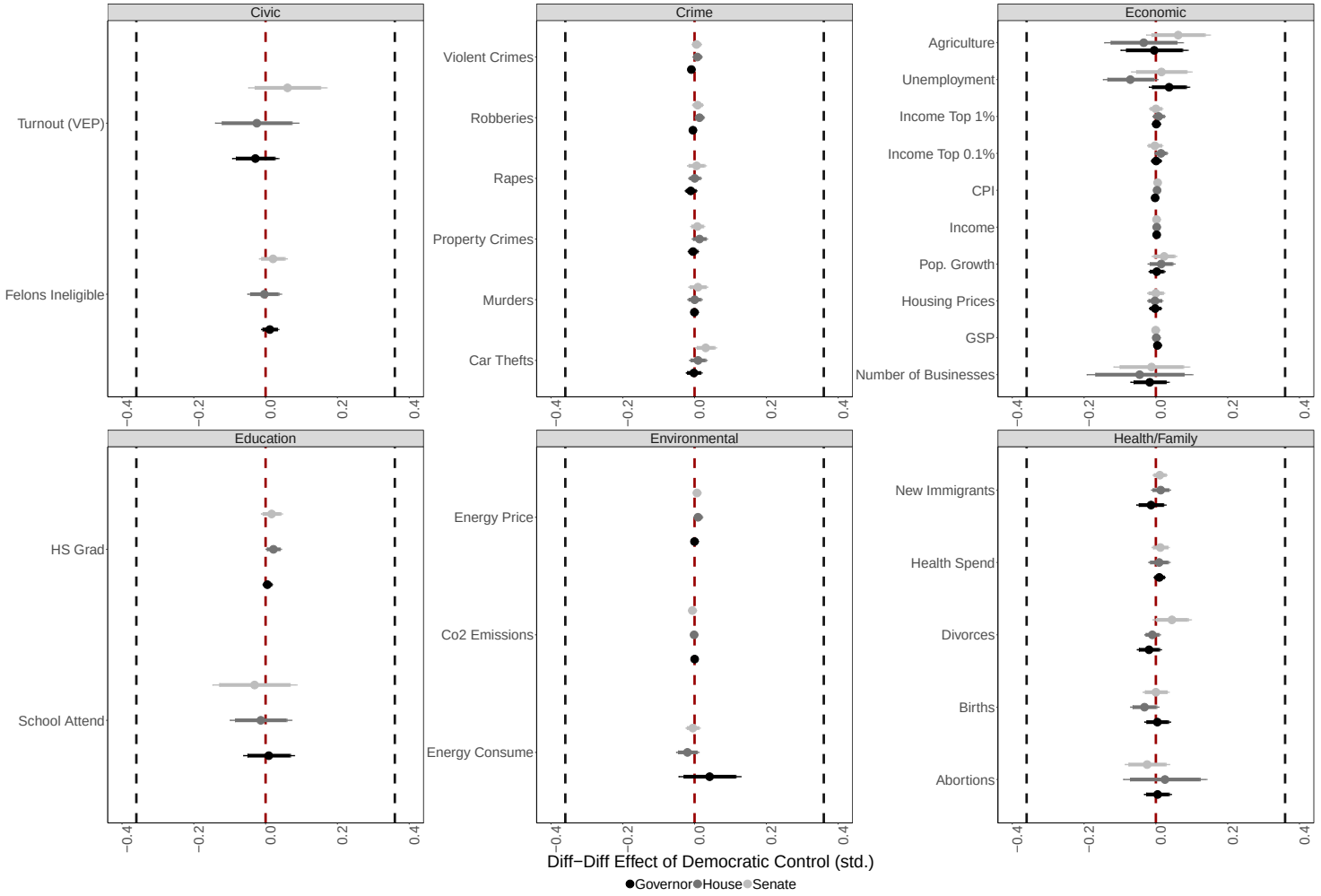


Figure A30 plots coefficient estimates (points) and corresponding 90% (thick) and 95% (thin) confidence intervals for the difference-in-difference estimates for the effects of each individual chamber. Coefficients are faceted by policy area and broken by individual chamber within facets. Following previous work estimating the effect of party control (Caughey, Warshaw and Xu 2017; Hall, Feigenbaum and Fouirnaies 2017), standard errors are clustered at the state level.

Table A6: MDEs for Change in the DV [1]

Variable	Chamber	Coef_*std*	SE	P	95% CI		N
Average School Attendance Rate	Governor	0.01	0.04	0.81	-0.06	0.08	1161
Average School Attendance Rate	Senate	-0.03	0.06	0.61	-0.15	0.09	1127
Average School Attendance Rate	House	-0.01	0.04	0.76	-0.10	0.07	1127
% High School Diploma	Governor	0.01	0.01	0.46	-0.01	0.02	2441
% High School Diploma	Senate	0.02	0.02	0.28	-0.01	0.05	1961
% High School Diploma	House	0.02	0.01	0.05	0.00	0.04	1961
Murder Rate	Governor	0.00	0.01	0.93	-0.01	0.01	2737
Murder Rate	Senate	0.01	0.01	0.49	-0.02	0.04	2494
Murder Rate	House	0.00	0.01	0.97	-0.02	0.02	2494
Car Theft Rate	Governor	0.00	0.01	0.86	-0.02	0.02	2742
Car Theft Rate	Senate	0.03	0.02	0.05	0.00	0.06	2499
Car Theft Rate	House	0.01	0.01	0.44	-0.02	0.03	2499
Violent Crime Rate	Governor	-0.01	0.00	0.06	-0.02	0.00	2737
Violent Crime Rate	Senate	0.01	0.01	0.43	-0.01	0.02	2494
Violent Crime Rate	House	0.01	0.01	0.25	-0.01	0.02	2494
Robbery Rate	Governor	0.00	0.00	0.33	-0.01	0.00	2737
Robbery Rate	Senate	0.01	0.01	0.28	-0.01	0.02	2494
Robbery Rate	House	0.01	0.01	0.05	0.00	0.03	2494
Rape Rate	Governor	-0.01	0.01	0.21	-0.03	0.01	2737
Rape Rate	Senate	0.01	0.01	0.68	-0.02	0.03	2494
Rape Rate	House	0.00	0.01	0.96	-0.02	0.02	2494
Property Crime Rate	Governor	0.00	0.01	0.57	-0.02	0.01	2737
Property Crime Rate	Senate	0.01	0.01	0.44	-0.01	0.03	2494
Property Crime Rate	House	0.01	0.01	0.21	-0.01	0.04	2494
CO2 emissions	Governor	0.00	0.00	0.92	0.00	0.01	2091
CO2 emissions	Senate	-0.01	0.01	0.28	-0.02	0.01	2009
CO2 emissions	House	0.00	0.00	0.79	-0.01	0.01	2009
Residential Sector Energy Price	Governor	0.00	0.01	0.97	-0.01	0.01	2028
Residential Sector Energy Price	Senate	0.01	0.01	0.24	0.00	0.02	1960
Residential Sector Energy Price	House	0.01	0.01	0.14	0.00	0.02	1960
Commercial Sector Energy Consume	Governor	0.04	0.04	0.35	-0.05	0.13	2438
Commercial Sector Energy Consume	Senate	0.00	0.01	0.64	-0.03	0.02	2352
Commercial Sector Energy Consume	House	-0.02	0.02	0.22	-0.05	0.01	2352
# Felons Ineligible to Vote	Governor	0.01	0.01	0.34	-0.01	0.04	759
# Felons Ineligible to Vote	Senate	0.02	0.02	0.30	-0.02	0.06	735
# Felons Ineligible to Vote	House	0.00	0.02	0.88	-0.05	0.04	735
Voter Turnout (VEP)	Governor	-0.03	0.03	0.39	-0.09	0.04	808
Voter Turnout (VEP)	Senate	0.06	0.06	0.28	-0.05	0.17	733
Voter Turnout (VEP)	House	-0.02	0.06	0.68	-0.14	0.09	733
New Immigrant Green Card Holders	Governor	-0.01	0.02	0.52	-0.06	0.03	1161
New Immigrant Green Card Holders	Senate	0.01	0.01	0.28	-0.01	0.03	1127
New Immigrant Green Card Holders	House	0.01	0.01	0.33	-0.01	0.04	1127

Table A7: MDEs for Change in the DV [2]

Variable	Chamber	Coef_*std*	SE	P	95% CI		N
Birth Rate	Governor	0.00	0.02	0.82	-0.03	0.04	857
Birth Rate	Senate	0.00	0.02	1.00	-0.04	0.04	833
Birth Rate	House	-0.03	0.02	0.12	-0.07	0.01	833
Divorce Rate	Governor	-0.02	0.02	0.27	-0.05	0.02	1318
Divorce Rate	Senate	0.04	0.03	0.11	-0.01	0.10	1291
Divorce Rate	House	-0.01	0.01	0.38	-0.03	0.01	1291
Abortion Rate	Governor	0.00	0.02	0.80	-0.03	0.04	833
Abortion Rate	Senate	-0.02	0.03	0.44	-0.09	0.04	816
Abortion Rate	House	0.03	0.06	0.67	-0.09	0.14	816
Health Spending Per Capita	Governor	0.01	0.01	0.24	-0.01	0.03	906
Health Spending Per Capita	Senate	0.01	0.01	0.32	-0.01	0.04	882
Health Spending Per Capita	House	0.01	0.02	0.56	-0.02	0.04	882
Number of Businesses	Governor	-0.02	0.03	0.53	-0.07	0.04	1121
Number of Businesses	Senate	-0.01	0.05	0.82	-0.12	0.10	1089
Number of Businesses	House	-0.05	0.08	0.55	-0.20	0.11	1089
Fraction Income top 0.1%	Governor	0.00	0.01	0.92	-0.01	0.02	2844
Fraction Income top 0.1%	Senate	0.00	0.01	0.80	-0.02	0.02	2548
Fraction Income top 0.1%	House	0.01	0.01	0.12	0.00	0.03	2548
Fraction Income top 1%	Governor	0.00	0.01	0.86	-0.01	0.01	2844
Fraction Income top 1%	Senate	0.00	0.01	1.00	-0.02	0.02	2548
Fraction Income top 1%	House	0.01	0.01	0.39	-0.01	0.03	2548
Unemployment rate	Governor	0.04	0.03	0.21	-0.02	0.09	1350
Unemployment rate	Senate	0.02	0.04	0.72	-0.07	0.10	1323
Unemployment rate	House	-0.07	0.04	0.07	-0.15	0.01	1323
Value Added by Agricultural Sector	Governor	0.00	0.05	0.92	-0.10	0.09	538
Value Added by Agricultural Sector	Senate	0.06	0.05	0.18	-0.03	0.15	539
Value Added by Agricultural Sector	House	-0.03	0.06	0.55	-0.15	0.08	539
Gross State Product Per Capita	Governor	0.00	0.01	0.46	-0.01	0.02	1161
Gross State Product Per Capita	Senate	0.00	0.01	0.91	-0.01	0.01	1127
Gross State Product Per Capita	House	0.00	0.01	0.84	-0.01	0.01	1127
Quarterly Housing Price Index	Governor	0.00	0.01	0.83	-0.02	0.02	1824
Quarterly Housing Price Index	Senate	0.00	0.01	0.99	-0.02	0.02	1764
Quarterly Housing Price Index	House	0.00	0.01	0.81	-0.02	0.02	1764
Consumer Price Index	Governor	0.00	0.00	0.14	0.00	0.00	2343
Consumer Price Index	Senate	0.00	0.00	0.00	0.00	0.01	2303
Consumer Price Index	House	0.00	0.00	0.03	0.00	0.01	2303
Population Growth	Governor	0.00	0.01	0.84	-0.02	0.03	2691
Population Growth	Senate	0.02	0.02	0.19	-0.01	0.06	2548
Population Growth	House	0.01	0.02	0.44	-0.02	0.05	2548
Real Per Capita Personal Income	Governor	0.00	0.00	0.54	-0.01	0.01	2488
Real Per Capita Personal Income	Senate	0.00	0.01	0.72	-0.01	0.01	2450
Real Per Capita Personal Income	House	0.00	0.00	0.59	-0.01	0.01	2450

5.8 Difference-in-Difference with Linear State Trends Estimates for Composite Outcomes

Another way to improve the precision of our estimates (beyond looking at changes in our outcome variables—see the last section) is to look for effects on composite outcomes. Creating scales is a standard approach to increase statistical power, as it reduces measurement error (Anderson 2008; Ansolabehere, Rodden and Snyder 2008; Caughey, Warshaw and Xu 2017). While it's possible that we could create an overall wellbeing scale score that is a product of all of our policy outcomes—similar to the approach that Caughey, Warshaw and Xu (2017) use to create a single scale of policy liberalism from states' policy outputs/laws they pass—we think this is not ideal. Unlike policy outputs, which illuminate a latent measure of state ideology, policy outcomes appear to be multidimensional. Put differently, state wellbeing appears to have many different components—there are no states that are doing "well" (or, conversely, poorly) on all measures. We also think that creating scales by policy domain is much more theoretically and substantively interesting. As such, we think it best to make 6 scales—one for each of the policy domains we explore (the economy, education, civic, crime, environment, and health/family).[h] This is done by using the weights from a principal component factor analysis. In running our factor models, we sought to maximize statistical power by including the items that had the most overlap in the time series. This resulted in a scale for the economy that included income, CPI, housing prices, GSP, and income inequality.[i] We follow a similar approach for health/family—where we only include divorce rate, birth rates, and the number of new immigrants. In all other policy domains, we include all of our scale inputs.[j]

We then reestimate our statistical models with these six composite scales. We show the results from these in Figures A31—A34 and Table A8. Figure A31 shows our effects of individual chambers in the second year downstream. As can be seen, out of the 18 estimates provided here, 2 (11.1%) are significant at the 5% level. This is higher than we would expect. However, only 1 of these (Civic, Senate Democrat) is significant when we take into account multiple hypothesis corrections. Also important to note is that all of our coefficients are small—none are larger 9.8% of a standard deviation (on the high end) and -4.8% of a standard deviation (on the low end). Moreover, our effects here are precise. Equivalence testing reveals that all of our effects are

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[h] That said, below we provide estimates from a composite wellbeing scale created by Pallay (2013) (see Figure A50).

[i] This factor model has an N of 1,050 and shows clear evidence of only one factor (Factor 1 Eigen = 4.34; Factor 2 Eigen = 0.83, with all scale inputs having factor weights above 0.81).

[j] In creating our scales, we are seeking to balance theory and empirics. Hence, we note that some of our scales appear to be more reliable than others. In addition to the economy, crime (N = 2,800; Factor 1 Eigen = 3.57; Factor 2 Eigen = 0.89; all scale inputs having factor weights above 0.5), civic (N = 815; Factor 1 Eigen = 1.16; Factor 2 Eigen = 0.84; all scale inputs having factor weights above 0.76), and education (N = 1,224; Factor 1 Eigen = 1.02; Factor 2 Eigen = 0.97; all scale inputs having factor weights above 0.71) domains appear to clearly load on a common factor. Health/family and environmental outcomes have lower factor loadings, with the scales perhaps showing signs of two factors. Still, given the strong theoretical connection between these measures, we create them as individual scales. Our null results are robust to looking at factor two from these scales.

precisely-estimate enough to rule out the default meaningful effects set by Hartman and Hidalgo (2018).[k]

Our estimates get even more precise when we look at *changes* in our composite outcomes—see Table A8. When we combine these two tools for increasing statistical precision, we can rule out the default meaningful effects set by Hartman and Hidalgo (2018) in all cases, 20% of a standard deviation in all cases, 10% of a standard deviation in 67% of cases, and even as small as 5% of a standard deviation in 39% of cases.

Moreover, no effects appear four years downstream (see Figure A32), where no effects are significant, all effects are small (none greater in absolute value than 8.6% of a standard deviation), and all estimates allow us to rule out meaningful effects.[l] (For the distribution of all estimates from years 1-4, see Figure A33.) Finally, even if we consider unified control of state government, there is little evidence of an effect (see Figure A34).[m]

In short, we find little evidence of effects even when we consider composite scales.

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[k] 94.4% of our coefficients can rule out effects of 20% of a standard deviation and 39.9% can rule out effects as small as 10% of a standard deviation.

[l] 100% rule out effects of 36% of a standard deviation, 89% rule out effects of 20% of standard deviation, 50% rule out effects of 10% of a standard deviation, and 5% rule out effects as small as 5% of a standard deviation.

[m] With the unified government treatment, no effects are significant at unadjusted or adjusted levels. The average effect is 1.6% of a standard deviation. All effects can rule out the default meaningful effects set by Hartman and Hidalgo (2018) and 91.7% of estimates allow us to rule out 20% of a standard deviation.

Figure A31: Difference-in-Difference Estimates of Single Chamber Changes to Democratic Control (Composite Outcome, Year 2)

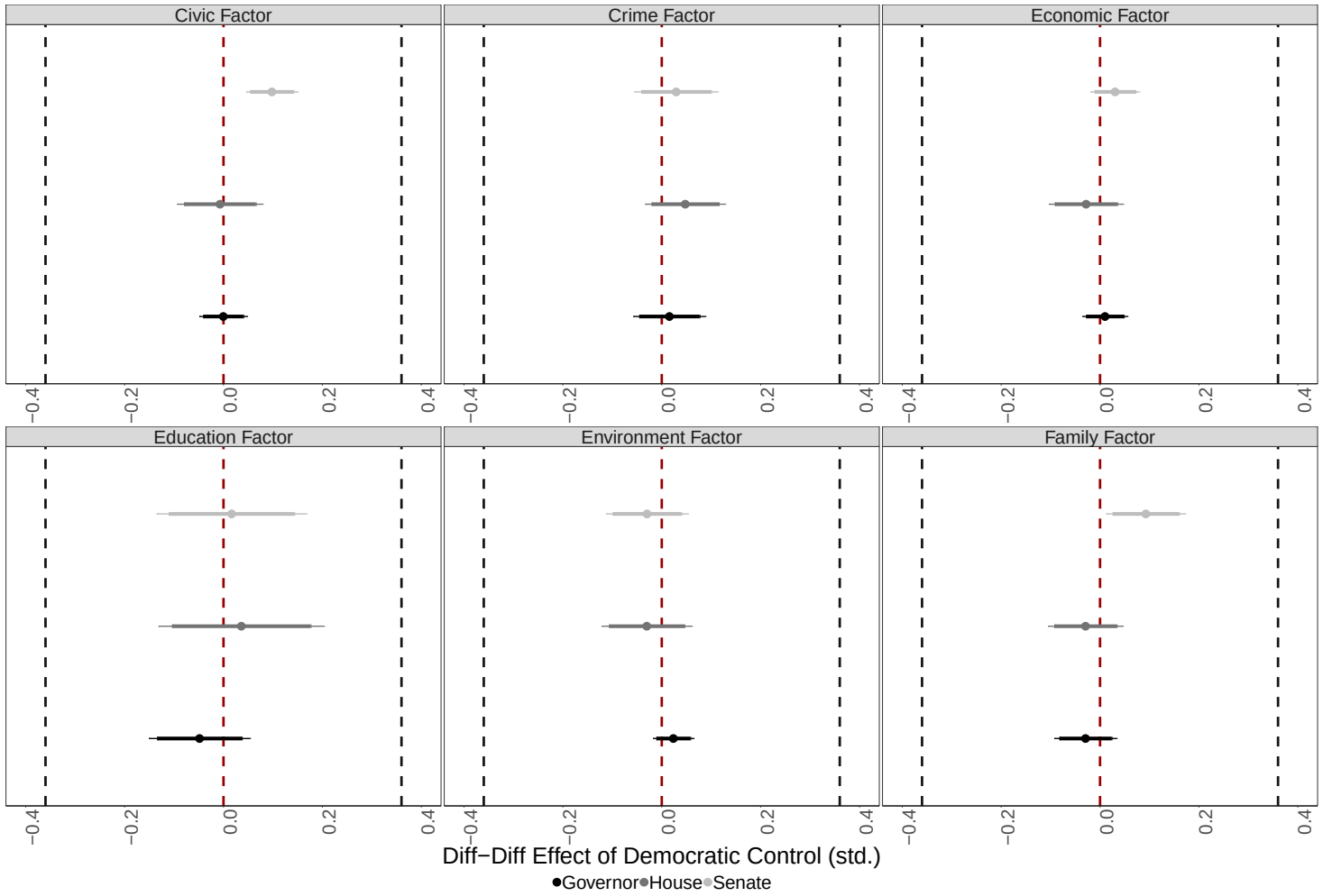


Figure A31 plots coefficient estimates (points) and corresponding 90% (thick) and 95% (thin) confidence intervals for the difference-in-difference estimates for the effects of each individual chamber. Coefficients are faceted by policy area and broken by individual chamber within facets. Following previous work estimating the effect of party control (Caughey, Warshaw and Xu 2017; Hall, Feigenbaum and Fouirnaies 2017), standard errors are clustered at the state level.

Figure A32: Difference-in-Difference Estimates of Single Chamber Changes to Democratic Control (Composite Outcome, Year 4)

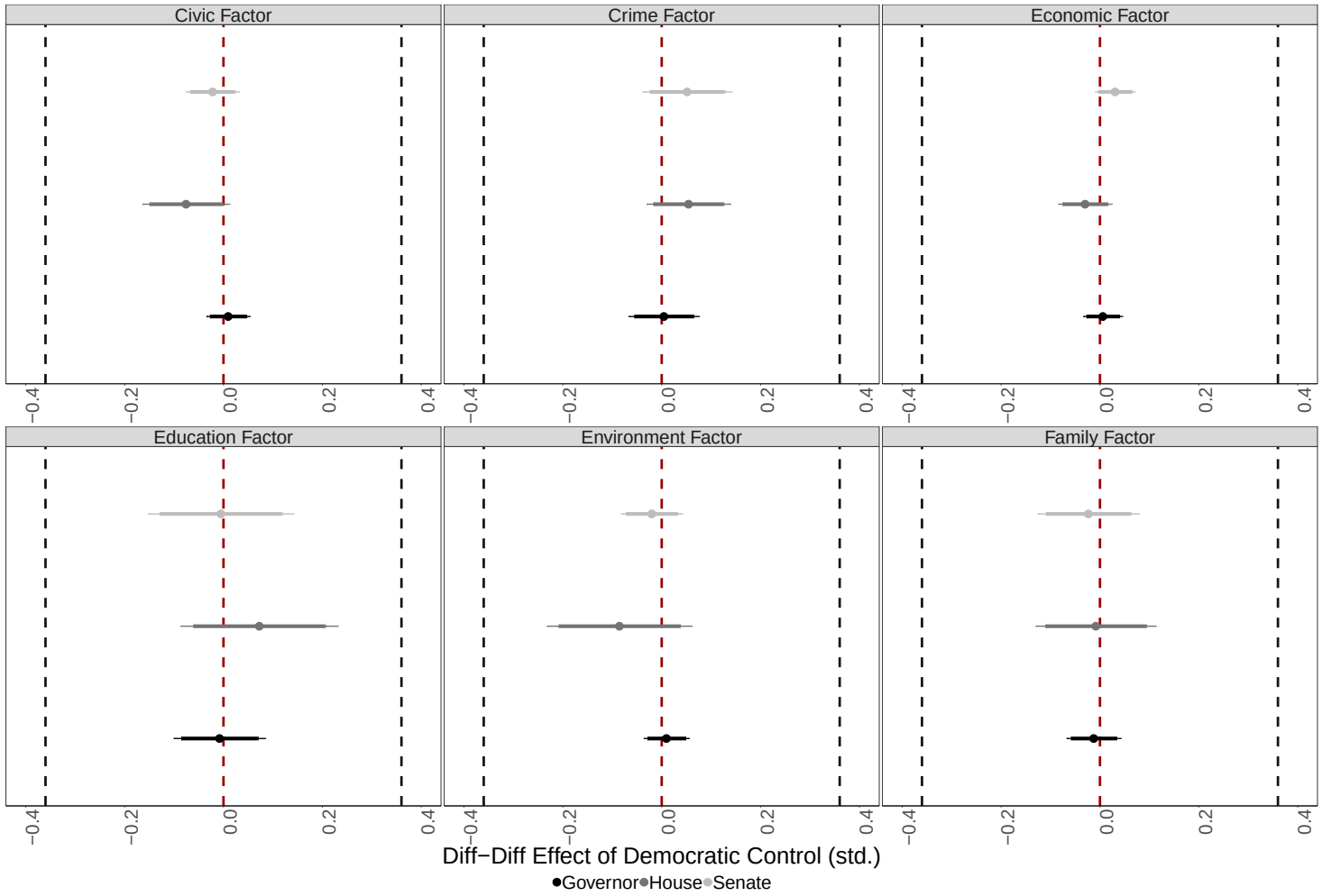
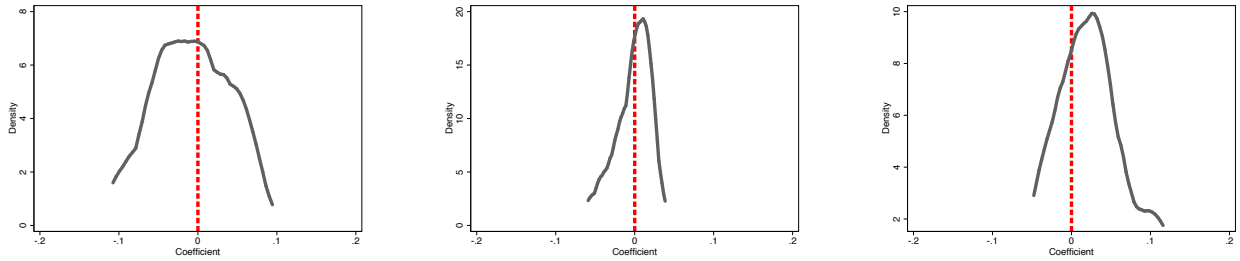


Figure A32 plots coefficient estimates (points) and corresponding 90% (thick) and 95% (thin) confidence intervals for the difference-in-difference estimates for the effects of each individual chamber. Coefficients are faceted by policy area and broken by individual chamber within facets. Following previous work estimating the effect of party control (Caughey, Warshaw and Xu 2017; Hall, Feigenbaum and Fouirnaies 2017), standard errors are clustered at the state level.

Figure A33: Distribution of Estimates for Single Chamber Changes to Democratic Control (Composite Outcomes, Diff-Diff, Years 1-4)

(a) House, β (b) Governor, β (c) Senate, β



(d) House, p (e) Governor, p (f) Senate, p

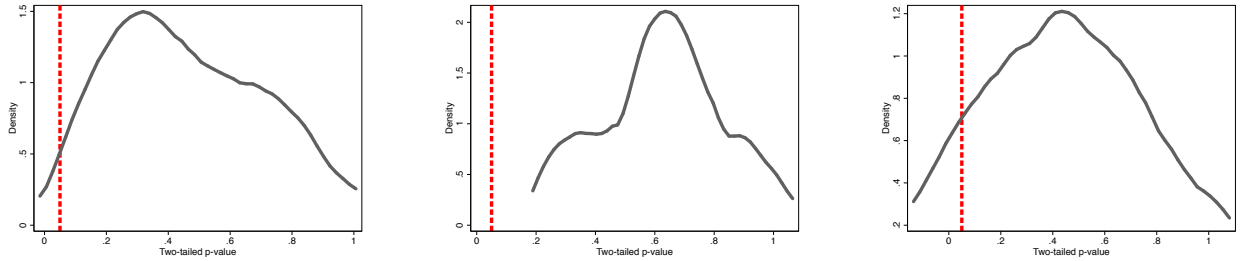


Figure A33 plots the distribution of coefficients from the single chamber switches difference-in-difference estimates for our composite outcomes years 1-4 downstream.

Figure A34: Difference-in-Difference Estimates of Unified Democrat Compared to Unified Republican (Composite Outcomes, Years 2 and 4)

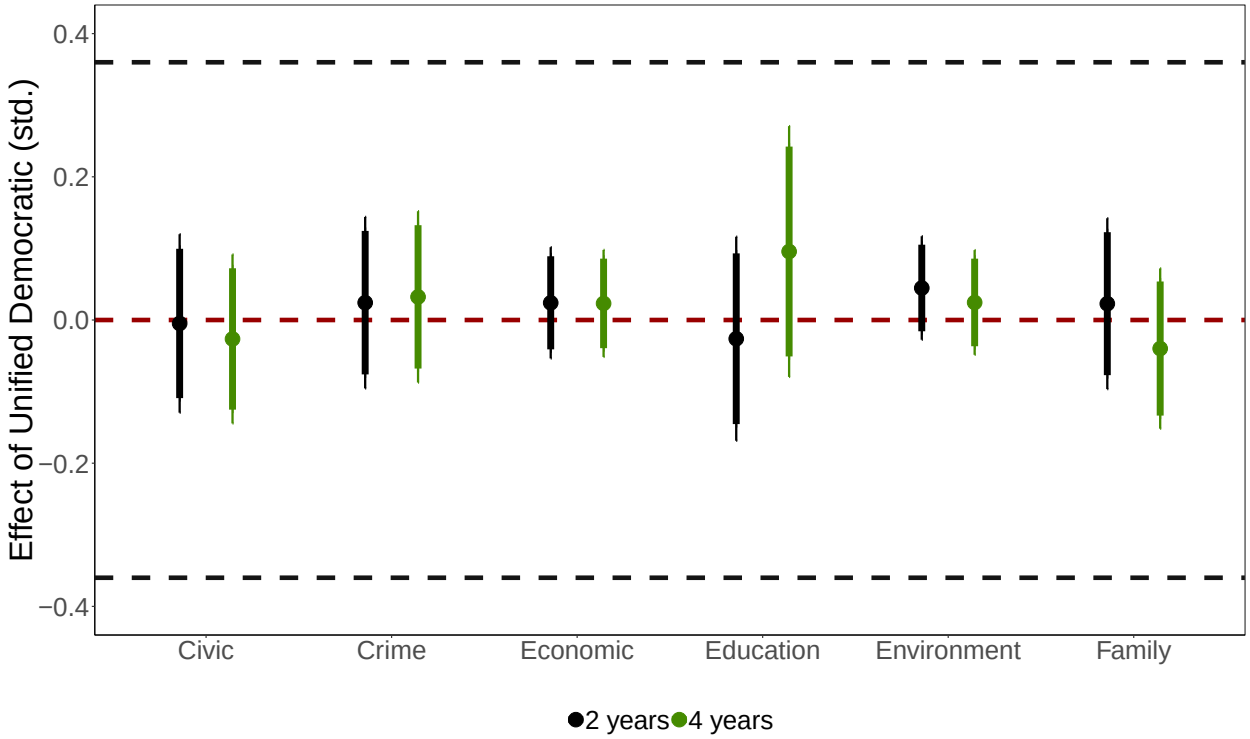


Figure A34 plots coefficient estimates (points) and corresponding 90% (thick) and 95% (thin) confidence intervals for the difference-in-difference estimates for unified Democrat to unified Republican control. Following previous work estimating the effect of party control (Caughey, Warshaw and Xu 2017; Hall, Feigenbaum and Fouirnaies 2017), standard errors are clustered at the state level.

Table A8: MDEs for Changes in the Composite Measure

Variable	Chamber	Coef_*std*	SE	P	95% CI		N
Education Factor	Governor	0.01	0.03	0.80	-0.05	0.06	1161
Education Factor	Senate	-0.01	0.04	0.89	-0.09	0.08	1127
Education Factor	House	-0.02	0.03	0.59	-0.09	0.05	1127
Crime Factor	Governor	-0.01	0.01	0.24	-0.02	0.00	2737
Crime Factor	Senate	0.01	0.01	0.13	0.00	0.03	2494
Crime Factor	House	0.01	0.01	0.19	0.00	0.02	2494
Environment Factor	Governor	0.06	0.06	0.30	-0.06	0.18	1581
Environment Factor	Senate	0.00	0.01	0.84	-0.03	0.02	1519
Environment Factor	House	0.00	0.03	0.87	-0.05	0.05	1519
Civic Factor	Governor	-0.02	0.02	0.32	-0.07	0.02	757
Civic Factor	Senate	0.03	0.04	0.48	-0.05	0.10	733
Civic Factor	House	-0.01	0.04	0.75	-0.10	0.07	733
Family Factor	Governor	-0.04	0.04	0.28	-0.11	0.03	518
Family Factor	Senate	0.05	0.04	0.24	-0.03	0.13	507
Family Factor	House	-0.03	0.04	0.43	-0.12	0.05	507
Economic Factor	Governor	0.01	0.01	0.27	-0.01	0.02	993
Economic Factor	Senate	0.00	0.01	0.73	-0.03	0.02	980
Economic Factor	House	0.01	0.01	0.26	-0.01	0.03	980

5.9 Other Estimates for Difference-in-Difference with Linear State Trends, Models with Unified Party Control

Tables A9 and A10 show all the of the estimates—coefficient, standard error, p-value, 95% confidence interval, and sample size–for Figure 3 in the text. The 95% confidence intervals can be used to illustrate the minimum detectable effect (MDE) for our models—i.e. the smallest effect (on either side) that our design allows us to rule out. As can be seen, across all model specifications, we can confidently rule out the default meaningful effect size suggested by Hartman and Hidalgo (2018). Often, we are able to rule out effects that are *much* smaller. Readers should also reference Figure A34 to see how we are able to get even more precise when we look at our composite measures.

Table A9: MDEs for Figure 3 [1]

Variable	Year	Coef_*std*	SE	P	95% CI		N
# Felons Ineligible Vote	2 years	0.09	0.09	0.32	-0.09	0.26	779
# Felons Ineligible Vote	4 years	0.10	0.08	0.24	-0.07	0.26	780
% High School Grad	2 years	-0.03	0.03	0.22	-0.09	0.02	2127
% High School Grad	4 years	-0.03	0.02	0.21	-0.08	0.02	2186
Abortion Rate	2 years	-0.07	0.09	0.48	-0.25	0.12	913
Abortion Rate	4 years	0.12	0.09	0.17	-0.06	0.30	913
Agriculture	2 years	0.06	0.05	0.20	-0.04	0.16	970
Agriculture	4 years	0.06	0.06	0.28	-0.05	0.18	971
Birth Rate	2 years	-0.05	0.07	0.53	-0.19	0.10	875
Birth Rate	4 years	0.01	0.07	0.84	-0.12	0.14	881
CO2 Emissions	2 years	0.00	0.02	0.80	-0.04	0.03	2009
CO2 Emissions	4 years	-0.01	0.02	0.62	-0.04	0.03	1911
CPI	2 years	0.00	0.01	0.77	-0.02	0.02	2299
CPI	4 years	0.00	0.01	0.64	-0.02	0.01	2205
Car Theft Rate	2 years	0.05	0.07	0.44	-0.08	0.19	2538
Car Theft Rate	4 years	0.06	0.07	0.39	-0.08	0.20	2538
Divorce Rate	2 years	0.01	0.04	0.80	-0.07	0.09	1389
Divorce Rate	4 years	0.03	0.04	0.49	-0.06	0.12	1389
Energy Consumption	2 years	-0.01	0.05	0.82	-0.10	0.08	2345
Energy Consumption	4 years	0.00	0.04	0.98	-0.08	0.09	2253
Energy Prices	2 years	-0.03	0.04	0.51	-0.12	0.06	1999
Energy Prices	4 years	-0.04	0.04	0.32	-0.12	0.04	2002
GSP	2 years	0.02	0.03	0.58	-0.04	0.07	1166
GSP	4 years	0.01	0.03	0.60	-0.04	0.07	1169
Health Spend	2 years	0.02	0.02	0.40	-0.02	0.06	922
Health Spend	4 years	0.02	0.03	0.57	-0.04	0.07	927

Table A10: MDEs for Figure 3 [2]

Variable	Year	Coef_*std*	SE	P	95% CI		N
Housing Prices	2 years	0.02	0.05	0.64	-0.08	0.13	1803
Housing Prices	4 years	0.03	0.05	0.49	-0.06	0.13	1804
Income	2 years	0.03	0.03	0.40	-0.03	0.09	2440
Income	4 years	0.03	0.03	0.31	-0.03	0.08	2345
Income Top 0.1%	2 years	0.01	0.05	0.87	-0.10	0.12	2538
Income Top 0.1%	4 years	-0.01	0.05	0.86	-0.11	0.09	2538
Income Top 1%	2 years	0.00	0.04	0.97	-0.08	0.09	2538
Income Top 1%	4 years	-0.02	0.04	0.68	-0.10	0.07	2538
Murder Rate	2 years	0.00	0.03	0.96	-0.06	0.06	2534
Murder Rate	4 years	-0.02	0.03	0.61	-0.08	0.05	2536
New Immigrants	2 years	-0.08	0.06	0.18	-0.20	0.04	1166
New Immigrants	4 years	-0.03	0.05	0.49	-0.13	0.06	1167
Number of Businesses	2 years	-0.11	0.09	0.20	-0.29	0.06	1404
Number of Businesses	4 years	-0.03	0.07	0.71	-0.17	0.12	1405
Pop. Growth	2 years	0.03	0.06	0.64	-0.10	0.16	2538
Pop. Growth	4 years	0.04	0.05	0.42	-0.06	0.14	2440
Property Crime Rate	2 years	0.02	0.06	0.80	-0.11	0.15	2534
Property Crime Rate	4 years	0.01	0.06	0.85	-0.11	0.14	2536
Rape Rate	2 years	0.02	0.06	0.81	-0.11	0.14	2534
Rape Rate	4 years	0.02	0.06	0.72	-0.11	0.15	2536
Robbery Rate	2 years	-0.01	0.08	0.88	-0.17	0.15	2534
Robbery Rate	4 years	0.04	0.08	0.63	-0.11	0.19	2536
School Attendance	2 years	0.00	0.09	0.96	-0.19	0.19	1167
School Attendance	4 years	0.13	0.12	0.26	-0.10	0.37	1172
Unemployment Rate	2 years	-0.02	0.12	0.89	-0.26	0.22	1421
Unemployment Rate	4 years	0.01	0.14	0.92	-0.26	0.29	1421
Violent Crime Rate	2 years	0.04	0.06	0.49	-0.07	0.15	2534
Violent Crime Rate	4 years	0.04	0.06	0.51	-0.08	0.16	2536
Voter Turnout (VEP)	2 years	0.07	0.05	0.16	-0.03	0.18	827
Voter Turnout (VEP)	4 years	0.07	0.06	0.22	-0.04	0.19	827

Figures A35 and A36 display the estimates for unified control making comparisons between divided government and republican control and then unified democratic control vs. divided government (respectively). This allows us to provide all relevant comparisons. Recall that in the paper we are including variables for unified democrat control and divided government, so the base category is unified republican control. We think this is the substantively most interesting comparison; however, the figures below provide the reader with the full set of potential comparisons here. Neither of these comparisons changes the substantive conclusions. Comparing divided government to unified republican control reveals few differences. The average effect size in Figure A35 is a paltry 1.8% of a standard deviation, only 1 (1.8%) of the displayed coefficients is significant at the unadjusted 5% level (this lone exception does not clear multiple comparisons thresholds), and the estimates are all precise enough to rule out the default meaningful effects set by Hartman and Hidalgo (2018).[n] The comparison between unified democratic control and divided government is even more negligible and more precisely-estimated. The average effect size in Figure A36 is a paltry -0.6% of a standard deviation, none of the displayed coefficients is significant at the unadjusted 5% level, and the estimates are all precise enough to rule out the default meaningful effects set by Hartman and Hidalgo (2018).[o]

[n] 85.7% can rule out effects of 20% of a standard deviation, 42.9% can rule out effects as small as 10% of a standard deviation, and 12.5% can rule out effects as small as 5% of a standard deviation.

[o] 96.4% can rule out effects of 20% of a standard deviation, 58.9% can rule out effects as small as 10% of a standard deviation, and 21.4% can rule out effects as small as 5% of a standard deviation.

Figure A35: Difference-in-Difference Estimates of Divided Government Compared to Unified Republican Control

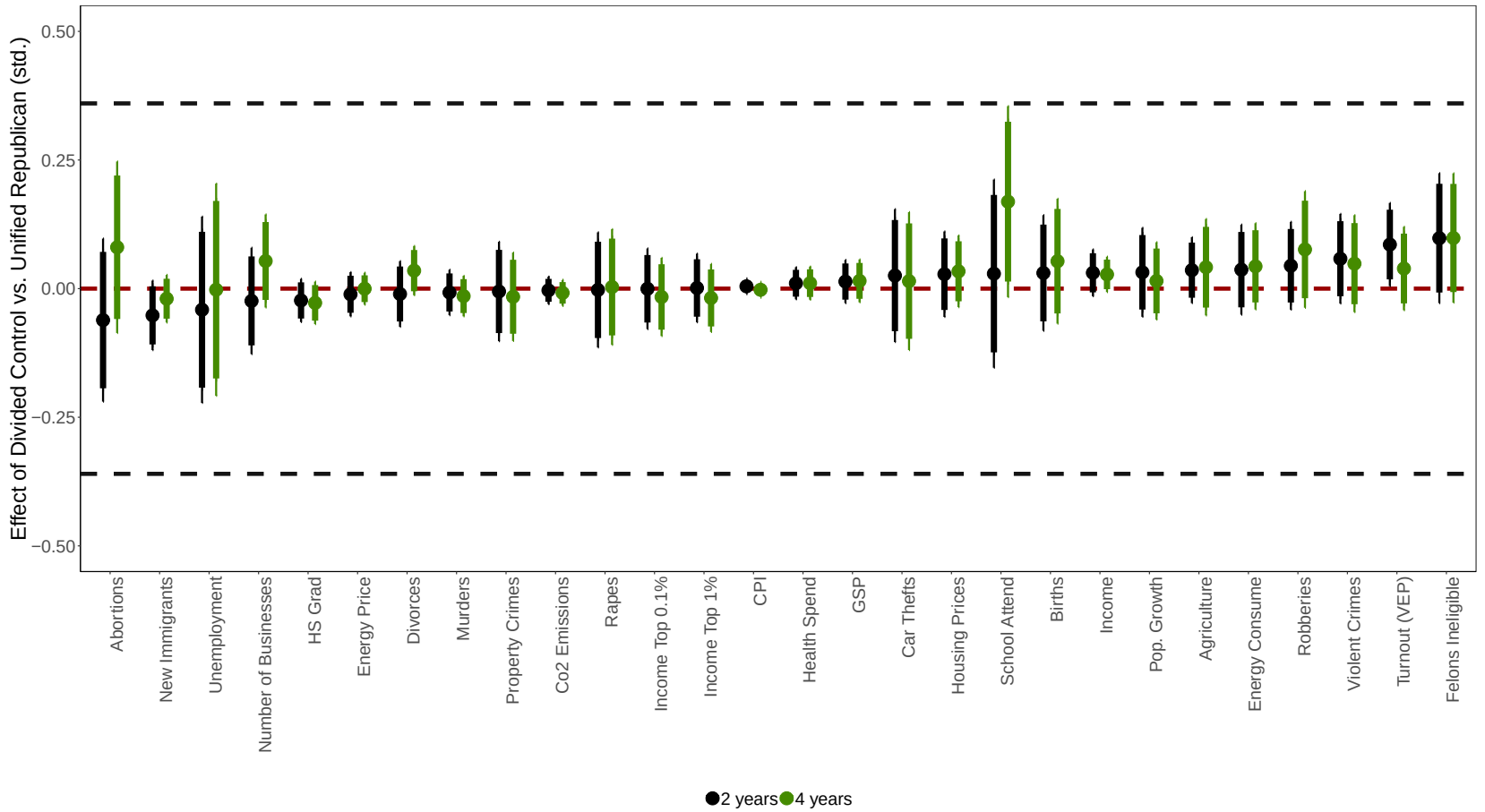


Figure A35 plots coefficient estimates (points) and corresponding 90% (thick) and 95% (thin) confidence intervals for the difference-in-difference estimates for divided government to unified Republican control. Coefficients are sorted from smallest to largest for year 2 effects. Following previous work estimating the effect of party control (Caughey, Warshaw and Xu 2017; Hall, Feigenbaum and Fouirnaies 2017), standard errors are clustered at the state level.

Figure A36: Difference-in-Difference Estimates of Unified Democrat Control Compared to Divided Government

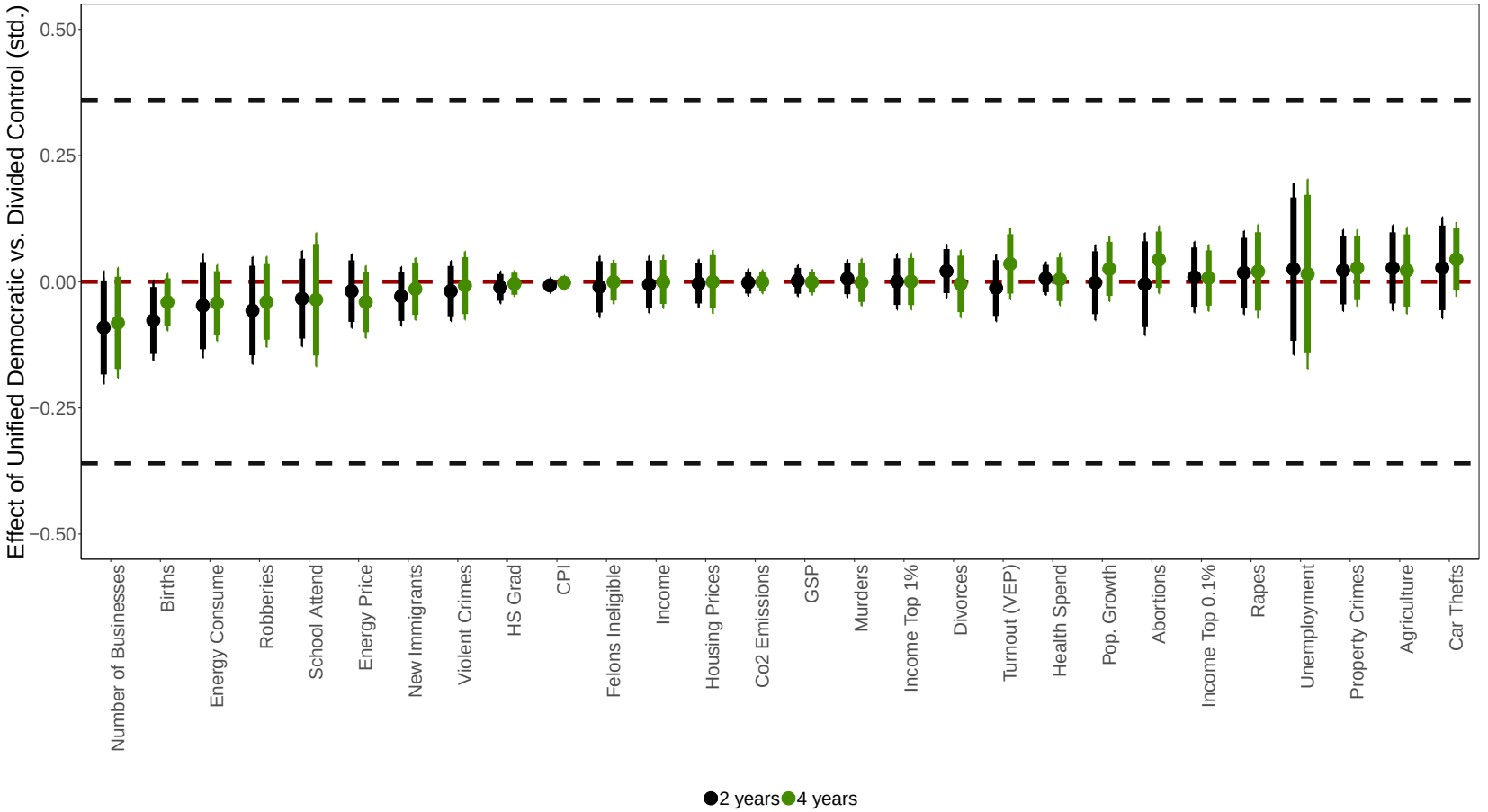


Figure A36 plots coefficient estimates (points) and corresponding 90% (thick) and 95% (thin) confidence intervals for the difference-in-difference estimates for unified Democratic control compared to divided government. Coefficients are sorted from smallest to largest for year 2 effects. Following previous work estimating the effect of party control (Caughey, Warshaw and Xu 2017; Hall, Feigenbaum and Fouirnaies 2017), standard errors are clustered at the state level.

Figure A37 displays the coefficient and p-value distributions for our unified democrat treatment (compared to unified republican government) for years 2 and 4 and then from all years from 1-8 downstream. As can be seen, the distribution of coefficients are spiked at zero and the p-values are almost always above 0.05, regardless of the time period studied.

Figure A37: Summary of Difference-in-Difference Estimates for Unified Democrat vs. Unified Republican

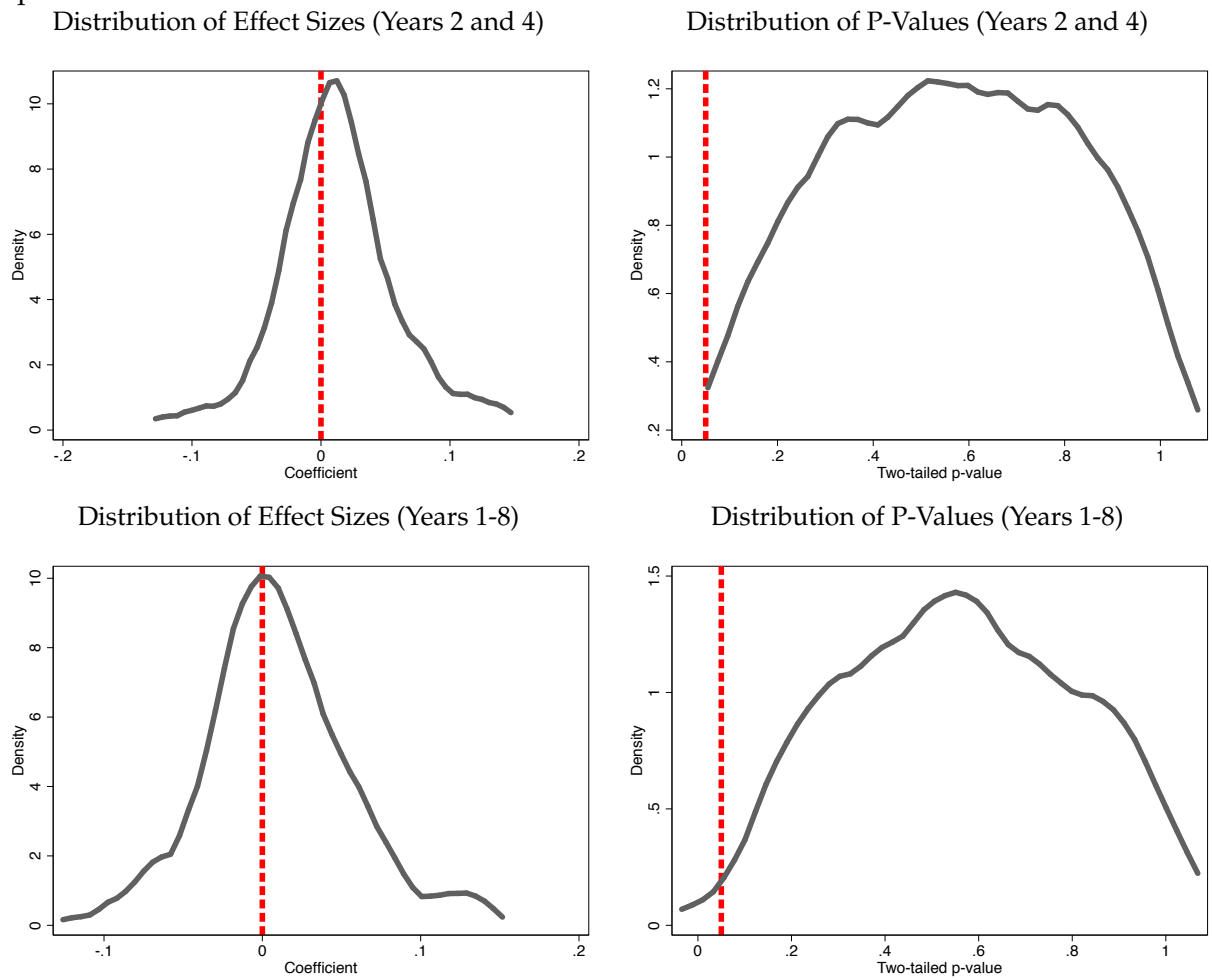


Figure A37 plots the distribution of p-values and coefficients from the unified power difference-in-difference estimates shown in Figure 3 in the text along with corresponding distributions for years 1-8 downstream.

Figure A38 tests whether our partisan effects vary by year. To do so it estimates the model in Equation (5). Here the model is very similar to those run for the other unified democrat effects. The only difference is that we add an interaction between time and our treatment variables. The coefficient of interest here is β_2, which shows whether the effect of unified democratic control varies over time. As can be see in Figure A38, there is little evidence that this is the case. None of the 56 estimates (28 outcomes by 2 downstream time periods) is significant at the unadjusted 5% level (much less the adjusted level), the average effect size is 0.1% of a standard deviation, and in all cases we can rule out effects as minuscule as 5% of a standard deviation. This suggests that while we use a wide time series, as best we can tell the effects do not vary over the time period of study.

$$O_{st} = \beta_0 + \beta_1\, UnifiedDem_{st} + \beta_2\, UnifiedDem_{st} * t + \beta_3\, UnifiedDem_{st} + \beta_4\, UnifiedDem_{st} * t + \alpha_t + \gamma_s + \gamma_s * t + \epsilon_{st} \quad (5)$$

Figure A38: Difference-in-Difference Estimates of Unified Democratic Control Compared to Divided Government, Time Interaction

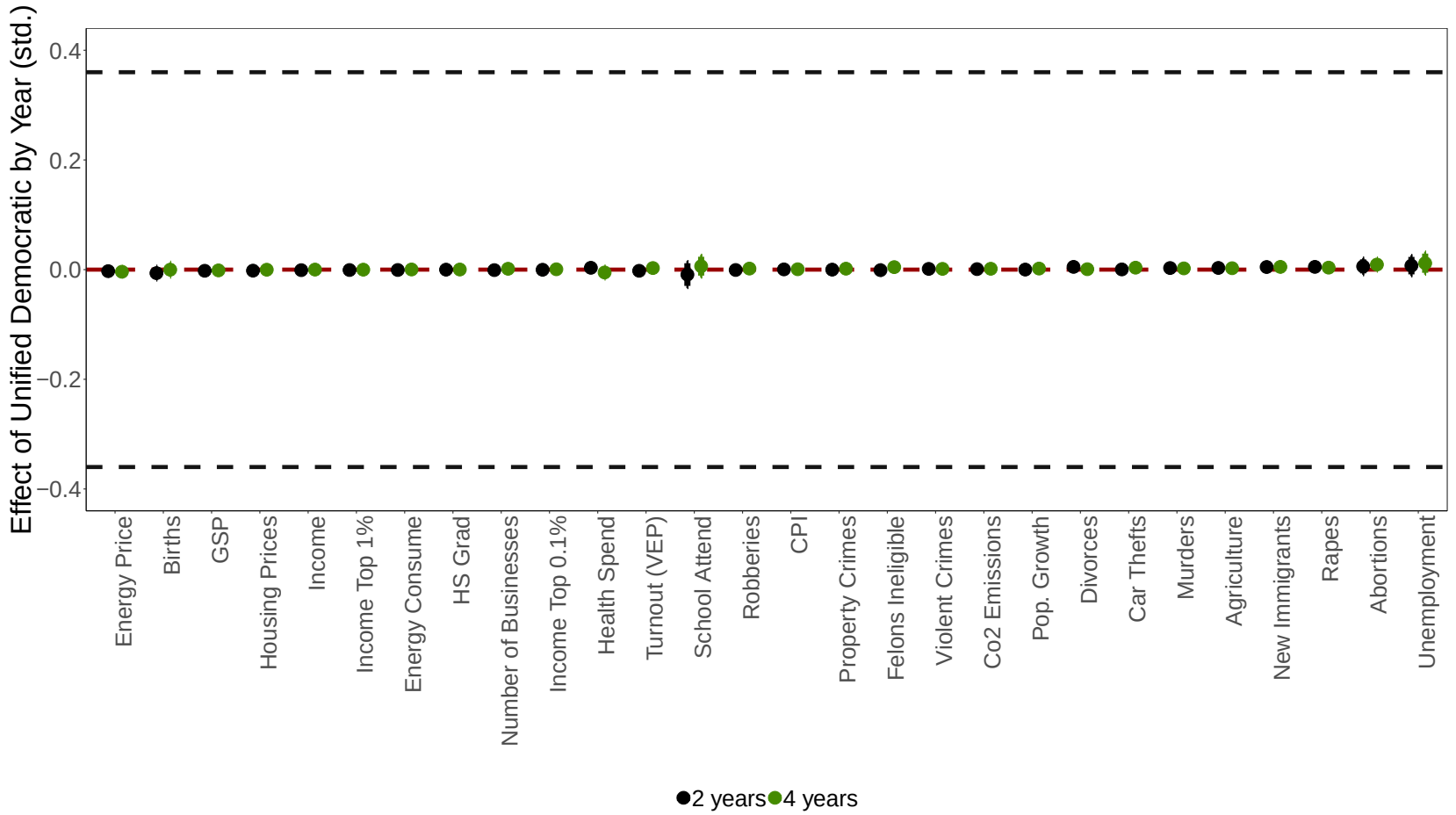


Figure A38 plots coefficient estimates (points) and corresponding 90% (thick) and 95% (thin) confidence intervals for the difference-in-difference estimates for unified democratic control compared to unified Republican control interacted by a continuous year measure. Coefficients are sorted from smallest to largest for year 2 effects. Following previous work estimating the effect of party control (Caughey, Warshaw and Xu 2017; Hall, Feigenbaum and Fouirnaies 2017), standard errors are clustered at the state level.

Tables A11 and A12 show all the of the estimates—coefficient, standard error, p-value, 95% confidence interval, and sample size–for Figure 4 in the text. The 95% confidence intervals can be used to illustrate the minimum detectable effect (MDE) for our models—i.e. the smallest effect (on either side) that our design allows us to rule out. As can be seen, across all model specifications, we can confidently rule out the default meaningful effect size suggested by Hartman and Hidalgo (2018). Often, we are able to rule out effects that are *much* smaller.

Table A11: MDEs for Figure 4 [1]

Variable	Year	Coef_*std*	SE	P	95% CI		N
Abortion Rate	2 years	0.03	0.02	0.20	-0.02	0.08	932
Abortion Rate	4 years	0.04	0.02	0.05	0.00	0.07	932
Average School Attendance Rate	2 years	0.06	0.04	0.16	-0.02	0.13	1224
Average School Attendance Rate	4 years	0.04	0.05	0.37	-0.05	0.14	1224
Birth Rate	2 years	0.00	0.05	0.92	-0.10	0.09	918
Birth Rate	4 years	0.04	0.02	0.07	0.00	0.07	918
CO2 emissions	2 years	0.01	0.01	0.15	0.00	0.03	2091
CO2 emissions	4 years	0.01	0.01	0.22	-0.01	0.04	1989
Car Theft Rate	2 years	-0.01	0.04	0.78	-0.10	0.07	2754
Car Theft Rate	4 years	-0.01	0.04	0.83	-0.08	0.06	2652
Commercial Sector Energy Consume	2 years	0.00	0.03	0.92	-0.05	0.06	2448
Commercial Sector Energy Consume	4 years	0.00	0.02	1.00	-0.03	0.03	2346
Consumer Price Index	2 years	0.00	0.00	0.34	-0.01	0.01	2350
Consumer Price Index	4 years	0.00	0.00	0.35	-0.01	0.00	2250
Divorce Rate	2 years	-0.01	0.02	0.52	-0.04	0.02	1418
Divorce Rate	4 years	-0.01	0.02	0.66	-0.04	0.02	1418
Fraction Income top 0.1%	2 years	0.03	0.01	0.05	0.00	0.05	2805
Fraction Income top 0.1%	4 years	0.03	0.01	0.06	0.00	0.05	2703
Fraction Income top 1%	2 years	0.03	0.01	0.01	0.01	0.05	2805
Fraction Income top 1%	4 years	0.03	0.01	0.01	0.01	0.05	2703
Gross State Product Per Capita	2 years	0.00	0.01	0.76	-0.03	0.02	1224
Gross State Product Per Capita	4 years	0.00	0.01	0.93	-0.02	0.02	1224
Health Spending Per Capita	2 years	-0.02	0.02	0.25	-0.06	0.01	969
Health Spending Per Capita	4 years	-0.01	0.02	0.54	-0.05	0.03	969
Murder Rate	2 years	-0.01	0.02	0.74	-0.05	0.03	2750
Murder Rate	4 years	0.00	0.02	0.76	-0.03	0.04	2650
New Immigrant Green Card Holders	2 years	-0.01	0.02	0.51	-0.05	0.03	1224
New Immigrant Green Card Holders	4 years	-0.01	0.01	0.55	-0.03	0.02	1224

Table A12: MDEs for Figure 4 [2]

Variable	Year	Coef_*std*	SE	P	95% CI		N
Number of Businesses	2 years	-0.05	0.03	0.12	-0.11	0.01	1518
Number of Businesses	4 years	-0.04	0.03	0.22	-0.09	0.02	1495
Population Growth	2 years	-0.01	0.01	0.49	-0.04	0.02	2652
Population Growth	4 years	-0.02	0.02	0.31	-0.05	0.02	2550
Property Crime Rate	2 years	-0.02	0.04	0.55	-0.10	0.05	2750
Property Crime Rate	4 years	-0.02	0.03	0.57	-0.09	0.05	2650
Quarterly Housing Price Index	2 years	-0.02	0.02	0.38	-0.06	0.02	1887
Quarterly Housing Price Index	4 years	-0.02	0.02	0.29	-0.05	0.02	1887
Rape Rate	2 years	-0.03	0.03	0.23	-0.09	0.02	2750
Rape Rate	4 years	-0.03	0.02	0.17	-0.08	0.01	2650
Real Per Capita Personal Income	2 years	0.01	0.02	0.46	-0.02	0.04	2500
Real Per Capita Personal Income	4 years	0.01	0.01	0.56	-0.02	0.03	2400
Residential Sector Energy Price	2 years	-0.04	0.03	0.29	-0.10	0.03	2091
Residential Sector Energy Price	4 years	-0.04	0.03	0.27	-0.10	0.03	2091
Robbery Rate	2 years	-0.03	0.03	0.36	-0.09	0.03	2750
Robbery Rate	4 years	-0.03	0.03	0.33	-0.08	0.03	2650
Unemployment rate	2 years	0.15	0.07	0.03	0.02	0.29	1450
Unemployment rate	4 years	0.11	0.07	0.10	-0.02	0.25	1450
Value Added by Agricultural Sector	2 years	-0.01	0.02	0.59	-0.04	0.03	1000
Value Added by Agricultural Sector	4 years	-0.02	0.02	0.24	-0.06	0.02	1000
Violent Crime Rate	2 years	-0.03	0.03	0.21	-0.09	0.02	2750
Violent Crime Rate	4 years	-0.03	0.03	0.31	-0.08	0.03	2650
Voter Turnout (VEP)	2 years	0.06	0.02	0.02	0.01	0.10	866
Voter Turnout (VEP)	4 years	0.03	0.03	0.45	-0.04	0.09	866
# Felons Ineligible to Vote	2 years	0.02	0.02	0.43	-0.02	0.05	816
# Felons Ineligible to Vote	4 years	-0.02	0.03	0.56	-0.09	0.05	816
% High School Diploma	2 years	0.01	0.01	0.64	-0.02	0.03	2584
% High School Diploma	4 years	0.00	0.01	0.78	-0.03	0.02	2544

In the paper, we looked that effect of persistent control by using a continuous treatment of how long the state had been unified democrat. The second approach that we use to look at the effects of persistent unified (the triple interaction), provides estimates are less precise—probably due to the strain that two sets of triple interactions (for the Democratic control and divided government) place on our state panel (see Figure A39). Still, we get the same answer—the estimates are spread almost normally around zero. Moreover, only 3.6% of the coefficients reach statistical significance at the 5% level (these do not clear multiple hypothesis adjustments). The mean estimated effect of persistent unified Democratic control is a small -0.1% of a standard deviation.The average unadjusted p-value is 0.39. The standard errors for these models are larger and, as such, we can only rule out the default meaningful effects set by Hartman and Hidalgo (2018) in 53.6% of our estimates; however, the estimates are, for the most part, substantively small (with some exceptions). These results suggest that it doesn't matter a great deal how we estimate the effect of persistent unified control. We stick with the continuous treatment measure given the increased levels of precision that come with this approach.

Figure A39: Difference-in-Difference Estimate of Persistent Unified Democratic Control

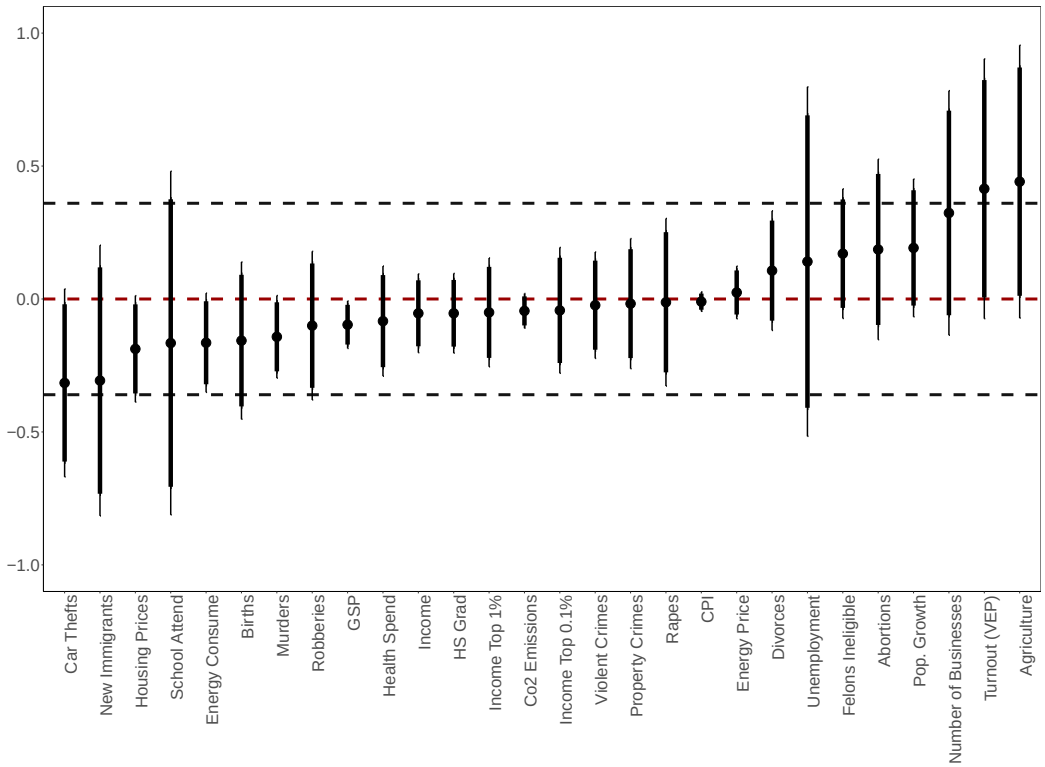


Figure A39 plots coefficient estimates (points) and corresponding 90% (thick) and 95% (thin) confidence intervals for the difference-in-difference estimates for persistent (i.e. control in periods t, $t-3$, and $t-5$) unified democratic control compared to persistent unified Republican control. Coefficients are sorted from smallest to largest for year 2 effects. Following previous work estimating the effect of party control (Caughey, Warshaw and Xu 2017; Hall, Feigenbaum and Fouirnaies 2017), standard errors are clustered at the state level. This approach uses the triple interaction model described in the paper.

5.10 Full Set of Difference-in-Difference with Linear State Trends Results for Party Control Elements

Figures A40–A50 summarize the effects of the fully interacted models that consider all potential combinations between the three chambers fully interacted. This specification is detailed in Equation (6). Here, $\beta(SenateDemocrat_{st} * HouseDemocrat_{st} * GovernorDemocrat_{st})$ denotes a vector of coefficients for the full set of interactions between these three variables. This allows us another way to estimate the effect of unified control and all other potential combinations will controlling for all other potential scenarios. Again, as in the dynamic interactive model, this triple interaction places a bit of strain on our state-level panel. Still the results below are quite consistent with all the results we have discussed. All of the potential combinations are centered at zero and most are not statistically significant.

$$O_{st} = \beta_0 + \beta(SenateDemocrat_{st} * HouseDemocrat_{st} * GovernorDemocrat_{st}) + \alpha_t + \gamma_s + \gamma_s * t + \epsilon_{st} \quad (6)$$

Figure A40: Summary of Difference-in-Difference Estimates Treatment Types, All Three Chambers Democrat

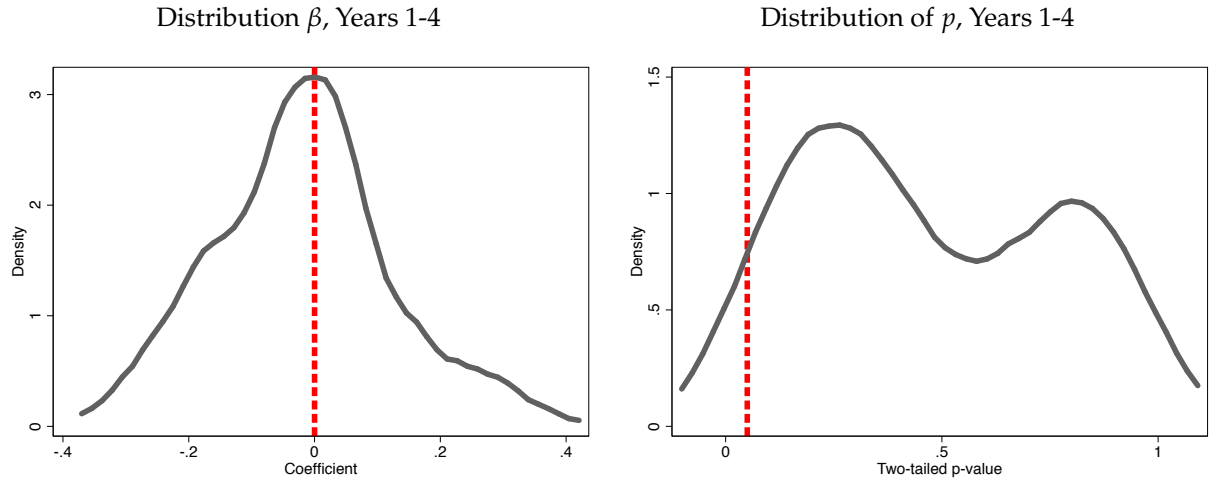


Figure A40 plots the distribution of p-values and coefficients from the multi-treatment difference-in-difference estimates for all three chambers being held be Democrats.

Figure A41: Summary of Difference-in-Difference Estimates Treatment Types, Just Senate + Governor Democrat

Distribution β, Years 1-4 | Distribution of p, Years 1-4

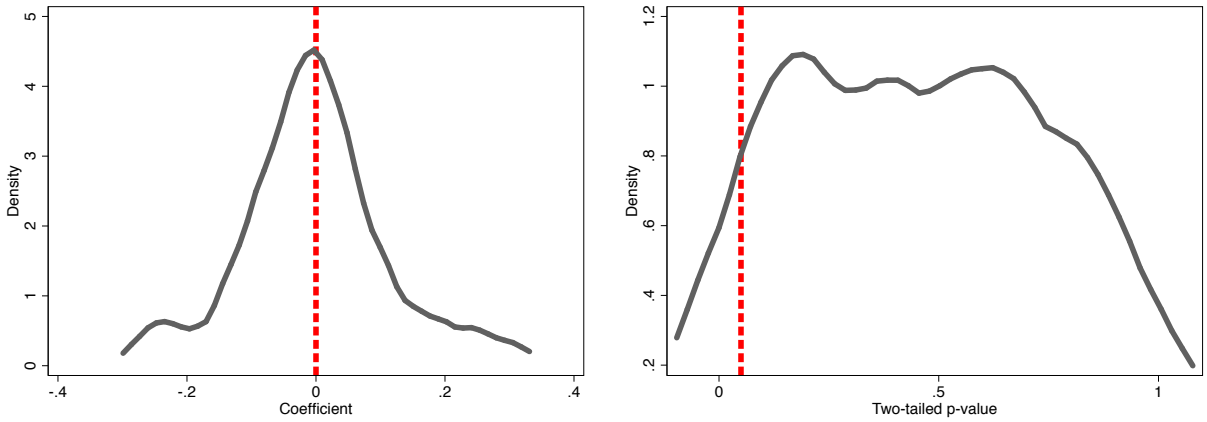


Figure A41 plots the distribution of p-values and coefficients from the multi-treatment difference-in-difference estimates for just the Senate and Governor being held be Democrats.

Figure A42: Summary of Difference-in-Difference Estimates Treatment Types, Just Senate + House Democrat

Distribution β, Years 1-4 | Distribution of p, Years 1-4

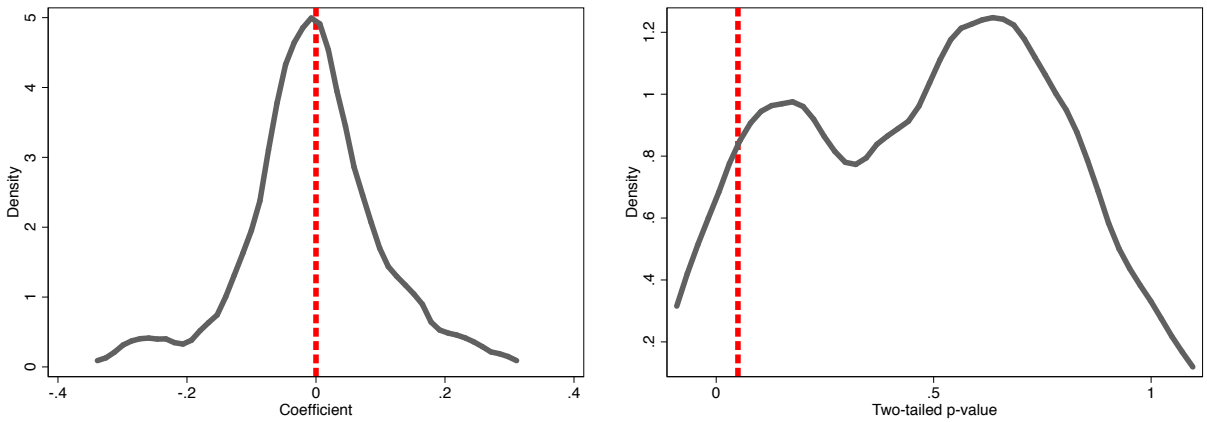


Figure A42 plots the distribution of p-values and coefficients from the multi-treatment difference-in-difference estimates for just the Senate and House being held be Democrats.

Figure A43: Summary of Difference-in-Difference Estimates Treatment Types, Just Governor + House Democrat

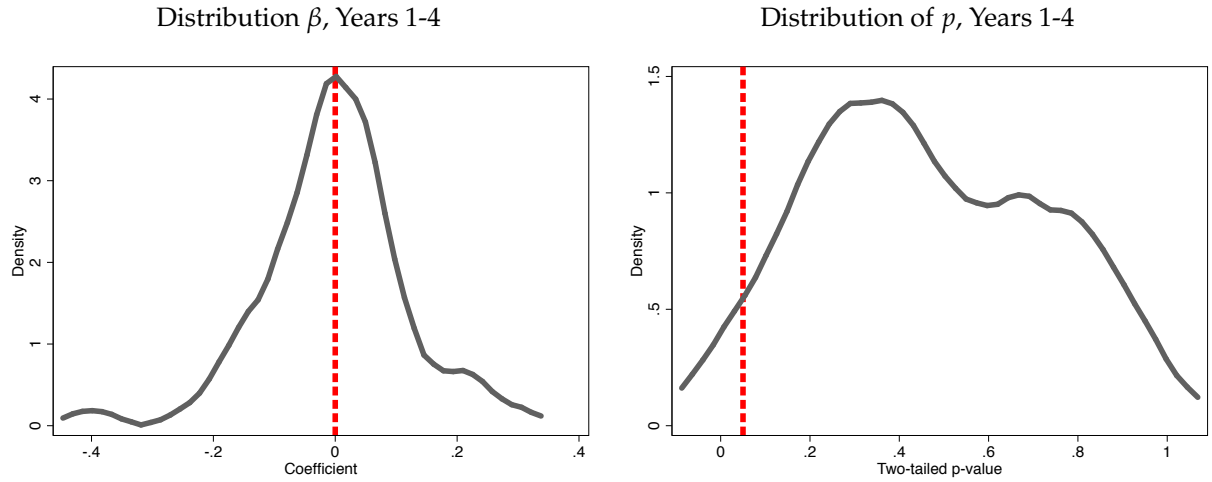


Figure A43 plots the distribution of p-values and coefficients from the multi-treatment difference-in-difference estimates for just the Governor and House being held be Democrats.

Figure A44: Summary of Difference-in-Difference Estimates Treatment Types, Just House Democrat

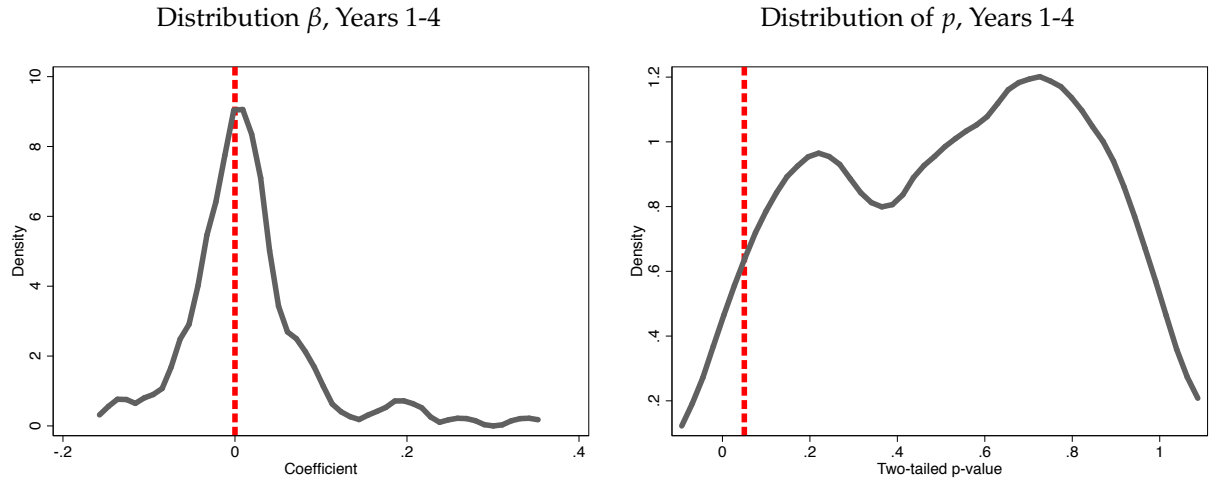


Figure A44 plots the distribution of p-values and coefficients from the multi-treatment difference-in-difference estimates for just the House being held be Democrats.

Figure A45: Summary of Difference-in-Difference Estimates Treatment Types, Just Senate Democrat

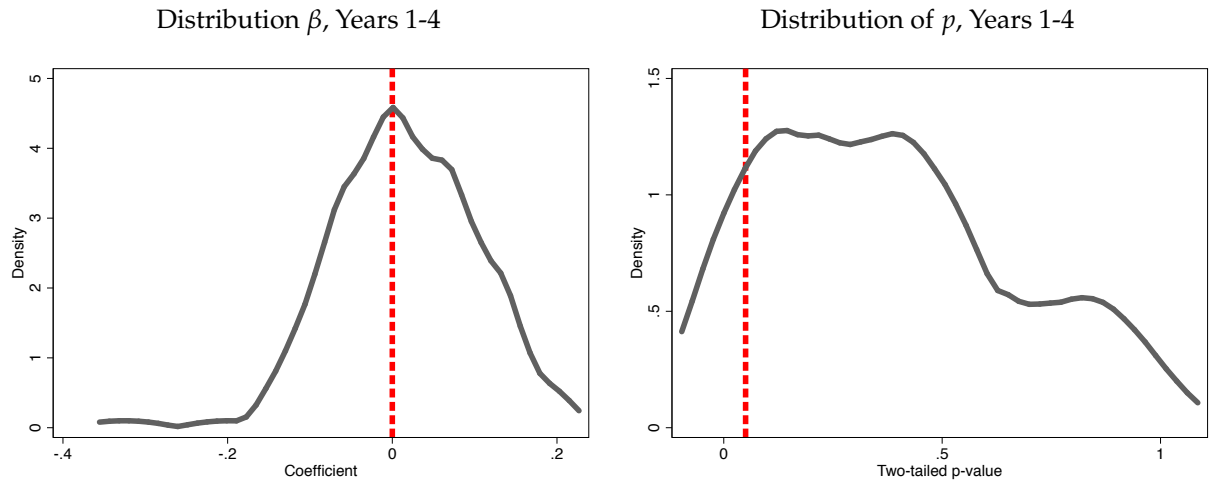


Figure A45 plots the distribution of p-values and coefficients from the multi-treatment difference-in-difference estimates for just the Senate being held be Democrats.

Figure A46: Summary of Difference-in-Difference Estimates Treatment Types, Just Governor Democrat

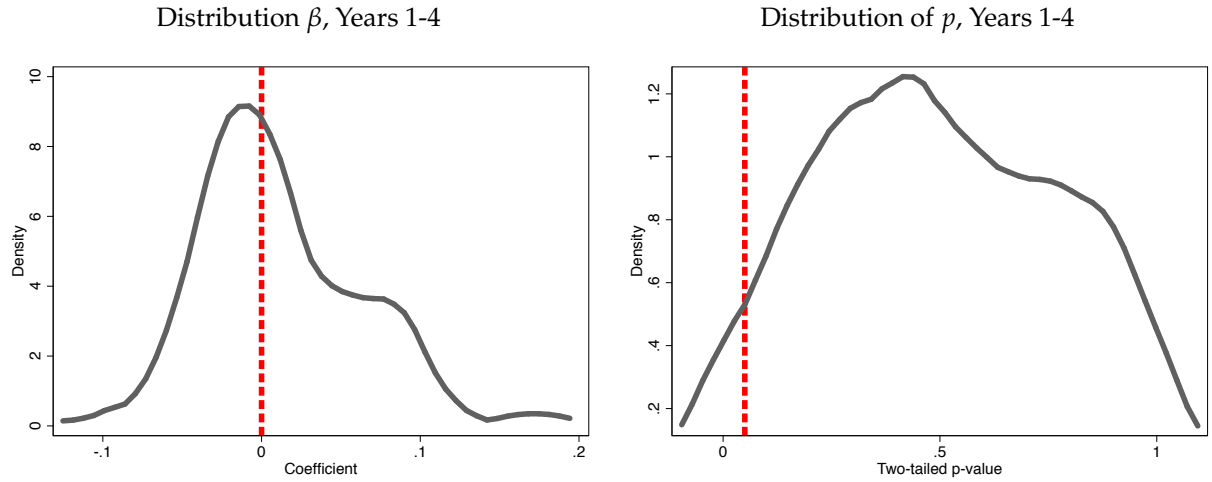


Figure A46 plots the distribution of p-values and coefficients from the multi-treatment difference-in-difference estimates for just the Governor being held be Democrats.

5.11 Full Set of Difference-in-Difference with Linear State Trends, Results Accounting for Other Chamber Control

Here we eliminate the interactions estimated in Equation (6). Equation (7) shows the nature of this specification. This approach gives us added precision while still allowing us to account for whether simultaneous treatments are driving any single chamber results listed in the paper.

$$O_{st} = \beta_0 + \beta_1 * SenateDemocrat_{st} + \beta_2 * HouseDemocrat_{st} + \beta_3 * GovernorDemocrat_{st} + \alpha_t + \gamma_s + \gamma_s * t + \epsilon_{st} \quad (7)$$

We find little evidence that this is the case. Figures A47, A48, and A49 summarize what we find across the 336 models run (28 outcomes by 4 years by 3 chambers). As in our other specifications, few (3.6%) of the effects estimated are significant at unadjusted levels, none of these clear multiple hypothesis testing levels, the average coefficient is 0.3% of a standard deviation, and we can rule out meaningful effects in most cases.[p] This suggests that our single chamber results are not being biased by cross-chamber effects.

Figure A47: Summary of Difference-in-Difference Estimates Treatment Types, House Democrat

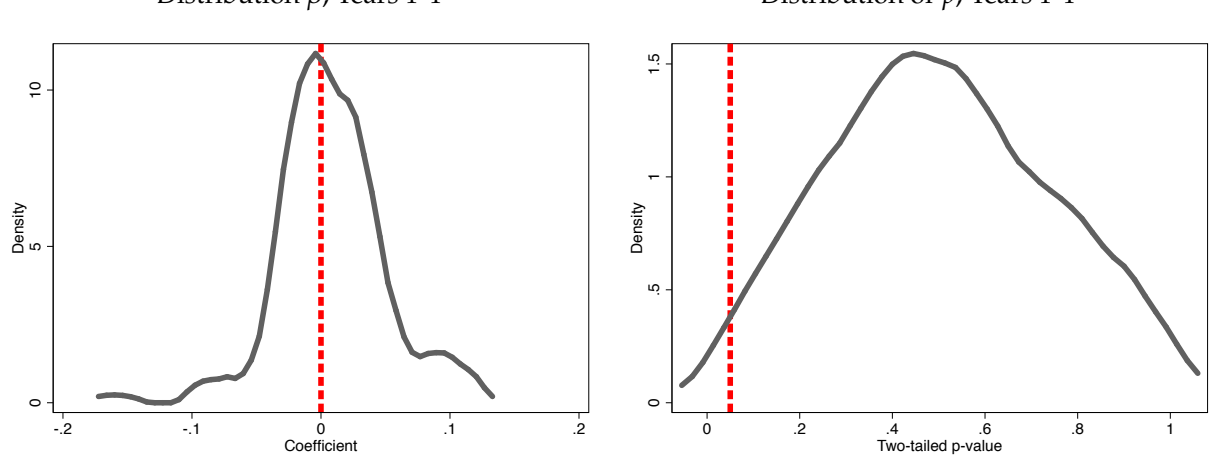


Figure A47 plots the distribution of p-values and coefficients from the multi-treatment difference-in-difference with no interactions estimates for just the House being held be Democrats.

[p]Different from 36% of a standard deviation: 100.0%, different from 20% of a standard deviation: 93.2%, different from 10% of a standard deviation: 55.4%, different from 5% of a standard deviation: 19.1%

Figure A48: Summary of Difference-in-Difference Estimates Treatment Types, Senate Democrat

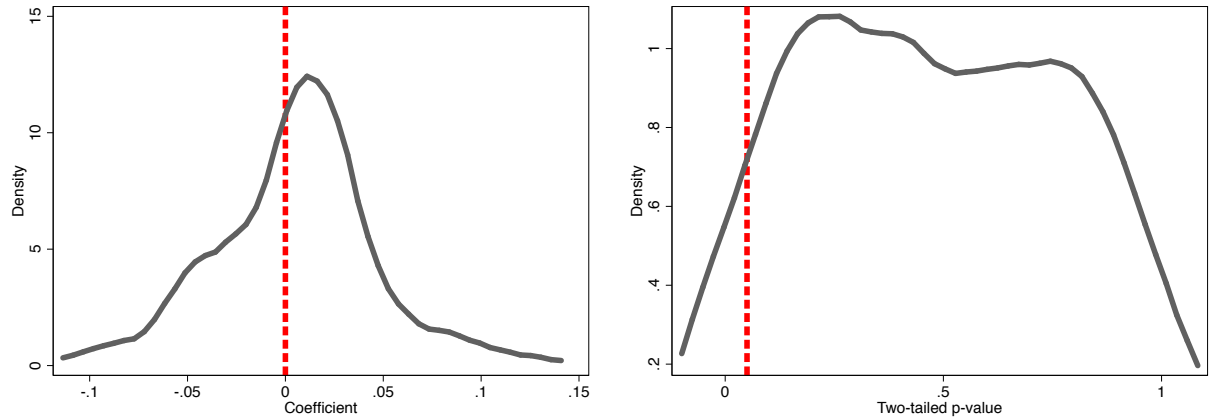


Figure A48 plots the distribution of p-values and coefficients from the multi-treatment difference-in-difference with no interactions estimates for just the Senate being held be Democrats.

Figure A49: Summary of Difference-in-Difference Estimates Treatment Types, Governor Democrat

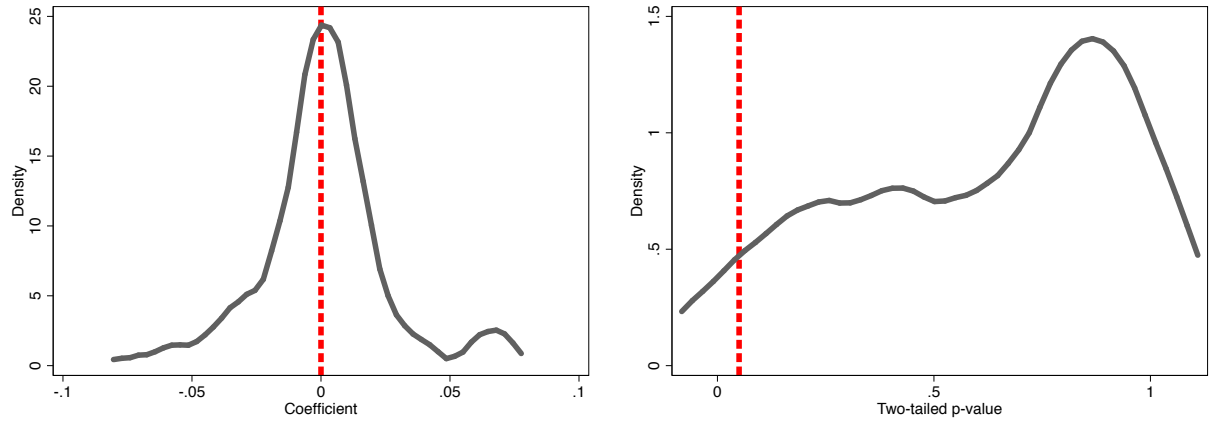


Figure A49 plots the distribution of p-values and coefficients from the multi-treatment difference-in-difference with no interactions estimates for just the Governor being held be Democrats.

6 Additional Outcomes: Difference in Difference Specifications

Some may wonder whether the results we have presented are a product of cherrypicking in our outcome measures. As we mentioned in the text, in examining the effect of party control on policy outcomes, we are trying to strike a delicate balance. On the one hand, our objective is to be as thorough as possible to avoid any potential "file-drawer" problems that could result by examining only a few policy outcomes (Franco, Malhotra and Simonovits 2014). That is, we do not want to cherry-pick one or two outcomes most likely to see an effect, or, worse still, to look at the results, select items that are statistically significant and then write up our results. This dubious approach would run counter to the goal of understanding the broader effects of party control. At the same time, however, we do not wish to introduce policy outcomes that are irrelevant to the party in power and/or for retrospective voting. This might skew our conclusions in the opposite direction and mute party control's effects, making them seem to be more noisy than they really are. As such, we have sought very carefully to focus on outcomes that could plausibly be linked to changes made by party coalitions or by which voters can/do/should judge elected officials in elections. This approach balances our desire to be thorough in our analysis with our recognition that not all policy outcomes are theoretically connected to party control.

Ultimately, we think our end list of policy outcomes is well-justified. However, even if the reader is skeptical that we have missed a specific outcome and we add additional outcomes in the six policy domains the story would (also) remain the same. As we show here, the results (null effects) are remarkably consistent across additional outcomes. Figure A50 shows the effect of unified democratic control on another 19 outcomes that citizens could easily be interested in from a retrospective voting. We exclude these from our 28 outcomes in the paper as they tend to have data from fewer years. Table A13 describes these variables in detail and provides information on where this data comes from.

Table A13: Description of Additional Policy Outcomes

Policy Outcome	Definition	Sources of Measure
# of Interest Groups	Measure for the number of interest groups registered within a state.	Gray, Virginia, and David Lowery. 1988. "Interest Group Politics and Economic Growth in the U.S. States." The American Political Science Review, 82(1): 109–31. Lowery, David, Virginia Gray, and John Cluverius. 2015. "Temporal Change in the Density of State Interest Communities 1980 to 2007." State Politics & Policy Quarterly, 15(2): 263–86.
# of Refugees	Number of refugees arriving per state per fiscal year. A refugee is defined by the federal government as "a person who is unable or unwilling to return to his or her country of nationality because of persecution or a well-founded fear of persecution on account of race, religion, nationality, membership in a particular social group, or political opinion."	U.S. Department of Health & Human Services–Office of Refugee Resettlement. "Refugee Arrival Data."
% Women Earn V. Men	Percent of women's median weekly earnings as a percent of men's (all races). Data calculated from median usual weekly earnings of full-time wage and salary workers.	U.S. Bureau of Labor Statistics. 2016. "Women's Earnings as a Percent of Men's Earnings." A
All Health Insurance	Numbers of people, in thousands, with no health insurance. They report not having either private insurance provided through an employer, union, or purchased from a private insurance company, or government insurance funded at the state, federal, or local level. People as of March of the following year.	United States Census Bureau. "Table HIB-4. Health Insurance Coverage Status and Type of Coverage by State All People: 1999 to 2011."
Bankruptcies	the total number of bankruptcy case filings in each state	The United States Department of Justice. 2012. "Total Case Filings, Calendar Years 1999-2009."
Business Climate [1]	Rank in CNBC's analysis of the best states to conduct business in.	CNBC. "America's Top States for Business."
Business Climate [2]	Rank in Forbes' analysis of the best states to conduct business in.	Forbes. "Best States for Business."
Children Health Insurance	Number of uninsured children below 200% of the poverty line	University of Kentucky Center for Poverty Research. 2016. "UKCPR National Welfare Data, 1980-2015." Gatton College of Business and Economics, University of Kentucky, Lexington, KY.
Health Ranking	United Health Foundation's Ranking of Overall Health. (Based on: smoking, binge drinking, obesity, sedentary lifestyle, high graduation, violent crime, occupational fatalities, children in poverty, infectious disease, air pollution, lack of health insurance, public health funding, immunization coverage, low birthweight, primary care physicians, and preventable hospitalizations).	United Health Foundation. "America's Health Rankings."
Infant Mortality	Number of infant deaths per thousand live births.	Centers for Disease Control and Prevention Vital Stats. Fetal Death Files.
Lottery Sales	Lottery ticket sales for instant tickets, three-digit, four-digit, lotto and other tickets (excluding commissions). (in thousands)	U.S. Census Bureau. 2009. "Lottery Sales?Type of Game and Use of Proceeds."
Math	Composite scale score on mathematics portion of National Assessment of Educational Progress exam.	National Center for Education Statistics. "Mathematics - 4th Grade - Composite Scale."
Patents	the number of U.S. patents distributed by U.S. state and by calendar year of grant, and it counts documents of utility patents (i.e. patents for invention) granted by the U.S. Patent and Trademark Office.	U.S. Patent and Trademark Office. 2012. "Number of Patents Granted as Distributed by Year of Patent Grant, Breakout by U.S. State and Foreign Country of Origin." A
Reading	Composite scale score on reading portion of National Assessment of Educational Progress exam.	National Center for Education Statistics. "Reading - 4th Grade - Composite Scale."
Wellbeing	State Quality of Life Index Ranking	Pallay, Geoff. 2012. Ballotopedia and The Lucy Burns Institute.
Credit Rating	Ranking of States from best to worst bond rating, according to Standard and Poors	S&P State Credit Rating Rank
Poverty Rate	Percent living in poverty. The official poverty definition uses money income before taxes and does not include capital gains or noncash benefits.	U.S. Census Bureau, Housing and Household Economic Statistics Division.
Social Capital	Hawes et al. Weighted Moving Average Measure of Social Capital	Hawes, Daniel P., Rene R. Rocha, and Kenneth J. Meier. 2013. "Social Capital in the Fifty States: Measuring State—Level Social Capital 1986—2004." State Politics & Policy Quarterly 13(1): 121-138.
Political Donations	Total political donations to House, Senate, or Governor	National Institute on Money in State Politics. 2016. Helena, Montana. Followthemoney.org

As can be seen in Figure A50, in many cases the estimated results are precise enough to rule out meaningful effects. None of the 76 additional estimates (19 outcomes by 4 years) is significant at the unadjusted 5% level, the average effect is -3.3% of a standard deviation, and 67.1% of our models can rule out the default meaningful effects set by Hartman and Hidalgo (2018). This slightly lower number reflects our lower levels of statistical power with (many) of these outcomes, given the shorter time series.

We think it useful here to pause and note the weight and scope of our findings. To do so, we use the economy as an illustrative example (given the importance scholars have given the economy in studies of retrospective voting). We have shown across 18 measures of economic well-being (10 in the paper and an additional 8 here) that the party in power has no effect whatsoever on the timeline introduced by elections. This is true regardless of whether we consider levels of overall performance or inequalities in economic returns (e.g. economic inequality, the percent of money women earn relative to men, and the poverty rate). While it is possible that there is some dimension of the economy that is affected by the party in power, we think this is unlikely. Various measures of economic performance are *strongly* correlated across measures. Hence, adding more economic measures is unlikely to tell a different story. While there may be a measure that scholars could find differences in, it's important to note that those differences would be quite the exception rather than the rule. This holds true across our other policy domains. It also holds true across composite measures of each of the policy domains (see Figures A31—A34 and Table A8). It also holds true across on omnibus measure of societal quality of life constructed by Pallay (2013).[q]

[q] That our findings are null does not diminish their importance. Our results speak to a question with clear theoretical predictions and important practical implications. #NullEffectsMatter #TeamPreciseNulls.

Figure A50: Difference-in-Difference Estimates for Unified Control on Additional Outcomes
Years 1-4

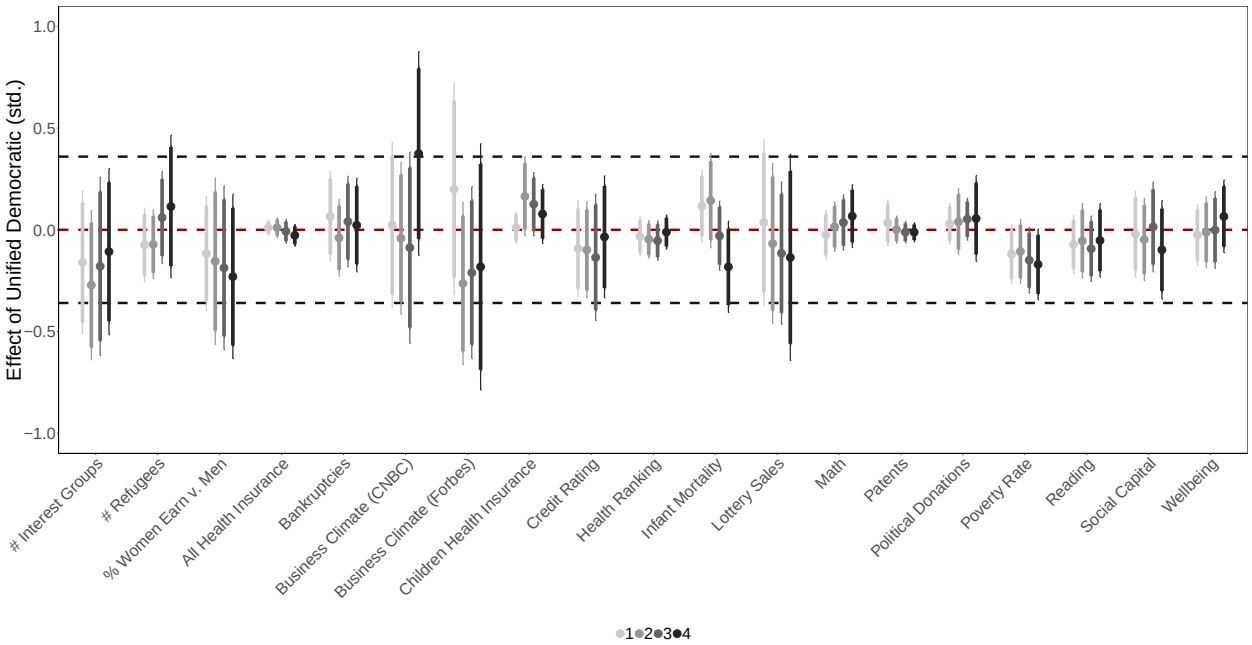


Figure A50 plots coefficient estimates (points) and corresponding 90% (thick) and 95% (thin) confidence intervals for the difference-in-difference estimates for unified Democratic control compared to unified Republican control. Following previous work estimating the effect of party control (Caughey, Warshaw and Xu 2017; Hall, Feigenbaum and Fouirnaies 2017), standard errors are clustered at the state level. Outcomes sorted by years 1-4 downstream. Three references lines are shown that allow for tests against a null hypothesis of a zero effect (center) and the default equivalence testing values suggested by Hartman and Hidalgo (2018) (top and bottom). N's from left to right: 284, 284, 286, 287, 578, 626, 626, 626, 480, 480, 480, 481, 627, 627, 627, 628, 709, 720, 711, 725, 239, 285, 284, 284, 285, 333, 333, 333, 627, 676, 725, 774, 970, 1019, 1019, 1019, 538, 539, 539, 539, 464, 464, 464, 464, 361, 361, 361, 361, 676, 676, 676, 677, 399, 399, 399, 399, 970, 1019, 1019, 1019.

7 Potential Heterogeneities

One potential reason for a null effect would be if we observed systematic heterogeneity of treatment effects. If the democratic party, for example, had positive effects in some areas but negative effects in others, (roughly speaking) we could get a zero average treatment effect. To test this possibility, we reestimate the models in equation (2) in the paper, but this time we interact Democratic control with all of our baseline variables listed in Table A14 below. To ease interpretation, we split these 40 lag values at their median and then interact these new indicators by the Democratic control treatments. This model specification is described in Equation (8) below. (Here H_{st} represents the variables being tested for heterogeneities.) This results in just under 7,000 model specifications that test for heterogeneity along a host of dimensions.

$$O_{st} = \beta_0 + \beta_1 D_{st} * h_{st} + h_{st} + \beta_2 D_{st} + \alpha_t + \gamma_s + \gamma_s * t + \epsilon_{st} \tag{8}$$

We find very little evidence of treatment effect heterogeneity across a host of dimensions. Among the almost 7,000 estimated interaction terms only 6.4% are significant at the 5% level and only 0.5% clear multiple comparisons thresholds. The average effect is a paltry 0.3% of a standard deviation. The average p-value is 0.48. And we can rule out meaningful effects in almost all cases.[r] In short, there is little evidence of treatment effect heterogeneity. The null effects we document here are systematic.

[r]Different from 36% of a standard deviation: 93.0%, different from 20% of a standard deviation: 67.3%, different from 10% of a standard deviation: 27.1%, different from 5% of a standard deviation: 6.6%

8 RDD Specification Checks

To explore whether our discontinuity satisfies the conditions necessary to draw causal inferences, this section provides the two standard checks for the validity of a regression discontinuity design. First, table A14 shows tests for covariate balance at the Democrat power discontinuity. Each row displays the results from a separate regression discontinuity model, with lagged versions of these outcomes included as the dependent variable. This test is suggested as a best practice by Eggers et al. (2015) to test for the validity of a discontinuity. The logic is, that if the treatment affects lagged variables, we should be suspicious of the validity of the discontinuity as sorting cases (in this case state legislatures) in an as-good-as random manner. This test is particularly potent for lagged versions of the dependent variables; if lagged versions of these variables are balanced pre-treatment and then the non-lagged versions show effects, we can be even more certain that the discontinuity is estimating an effect that is unbiased from other observed or unobserved factors.

Out of the 129 tests run for lagged measures of our dependent variable (43 measures by 3 chambers), only 9 (6.98%) are significant at the 5% level: a bit more than what we would expect by chance. Moreover, only 1 (0.8%) of these 9 clears the significance threshold for multiple hypothesis testing. If we use the full bandwidth (an approach desirable if we want more statistical power), only 5/129 are significant at the 5% level (3.9%) and only 1 (0.8%) of these clears the multiple hypothesis testing levels.

We observe somewhat better balance properties with the Hall, Feigenbaum and Fouirnaies (2017) running variable. Out of the 258 models run (43 measures by 2 chambers by 3 different running variable specifications) only 7 (2.7%) are significant. It is for that reason, we also estimate all of our regression discontinuity models with their running variables (see Figure A61 and Figure A62 below). When we do so, we find similar results—perhaps ones that suggest an even smaller effect on policy outcomes.

Table A14: Balance in Lagged Outcomes at the Party Control Discontinuity

		House		Senate		Governor	
	Variable	β_{std}	p	β_{std}	p	β_{std}	p
Civic	# Felons Ineligible to Vote	-0.12	0.75	-1.06	0.23	0.14	0.57
	Voter Turnout (VEP)	-0.14	0.70	0.67	0.05	-0.04	0.85
Crime	Car Theft Rate	-0.13	0.58	-0.15	0.58	-0.28	0.26
	Murder Rate	-0.05	0.75	0.04	0.81	-0.30	0.06
	Property Crime Rate	0.22	0.35	-0.36	0.34	-0.10	0.67
	Rape Rate	0.16	0.48	-0.14	0.70	-0.04	0.85
	Robbery Rate	-0.82	0.02	-0.20	0.53	-0.51	0.09
	Violent Crime Rate	-0.13	0.52	-0.07	0.79	-0.26	0.20
Economy	Fraction Income top 0.1%	0.13	0.56	0.14	0.58	0.15	0.52
	Fraction Income top 1%	0.11	0.60	0.16	0.52	0.18	0.49
	Number of Businesses	-0.57	0.12	-0.54	0.09	-0.01	0.94
	Gross State Product Per Capita	0.04	0.81	0.25	0.36	0.41	0.05
	Quarterly Housing Price Index	-0.01	0.96	0.30	0.23	0.16	0.55
	Population Growth	0.28	0.14	-0.02	0.93	0.06	0.73
	Real Per Capita Personal Income	0.05	0.82	0.19	0.54	0.23	0.34
	Consumer Price Index	0.23	0.36	0.16	0.55	0.15	0.50
	Unemployment rate	-0.27	0.31	-0.08	0.82	-0.54	0.06
	Value Added by Agricultural Sector	-0.23	0.46	-0.20	0.56	-0.04	0.88
Ed.	Average School Attendance Rate	-0.22	0.47	-0.25	0.48	-0.14	0.72
	% High School Diploma	0.30	0.23	0.20	0.50	0.46	0.03
Enviro.	Commercial Sector Energy Consume	-0.01	0.95	0.11	0.60	-0.08	0.68
	CO2 emissions	-1.33	0.01	-0.37	0.46	-0.36	0.26
	Residential Sector Energy Price	0.10	0.69	0.20	0.50	0.44	0.16
Health/Fam.	Abortion Rate	0.08	0.82	-0.36	0.53	-0.81	0.03
	Birth Rate	0.36	0.34	-0.09	0.85	0.51	0.13
	Divorce Rate	0.33	0.29	-0.18	0.57	0.22	0.44
	Health Spending Per Capita	0.11	0.70	0.84	0.05	0.21	0.51
	New Immigrant Green Card Holders	-0.34	0.19	-0.19	0.32	-0.30	0.35
IVs	Democratic Majority Status (G)	0.31	0.22	-0.08	0.80	0.85	0.00
	Democratic Majority Status (H)	0.30	0.16	-0.36	0.16	0.02	0.95
	Democratic Majority Status (S)	-0.11	0.68	-0.13	0.66	0.01	0.98
Other	Citizen Ideology Score	-0.12	0.52	0.02	0.92	-0.13	0.63
	% Students Attend	-0.27	0.51	0.11	0.82	-0.50	0.22
	% Students Black	0.07	0.83	-0.09	0.83	-0.48	0.22
	% Students Free/Reduced Lunch	0.44	0.39	-0.12	0.84	0.19	0.66
	% Students Hispanic	-0.16	0.65	-0.68	0.27	0.20	0.55
	% Students Limited English	-0.03	0.94	-1.51	0.04	0.61	0.14
	% Students Male	0.56	0.47	0.04	0.95	0.28	0.43
	% Students Disability	-0.08	0.80	0.96	0.13	0.58	0.06
	% Students White	-0.10	0.74	0.22	0.66	-0.28	0.39
	Population	-0.99	0.02	-0.16	0.70	-0.29	0.31
	Citizen Ideology Score	0.08	0.68	-0.40	0.11	-0.41	0.13
	Citizen Party Identification Score	-0.11	0.51	0.11	0.55	-0.18	0.42

Estimates come from regression discontinuity models with the optimal bandwidth, local non-parametric specification of the running variable, bias-correction, and robust intervals as specified by the `rdrobust` command in `Stata` created by Calonico, Cattaneo and Titiunik (2014). Columns labeled β_{lag} provide the RDD coefficient estimate for the lagged measures; columns labeled p provide the p-value for the coefficient estimate. Following previous work estimating the effect of party control (Caughey, Warshaw and Xu 2017; Hall, Feigenbaum and Fouirnaies 2017), standard errors are clustered at the state level. Lagged IVs come from two years previous.

The second specification test recommended is the precise sorting test provided by McCrary (2008). Precise sorting occurs when observations—in this case state legislative bodies—are able to rampantly manipulate their score on the running variable (Lee and Lemieux 2010). If this were to occur, the discontinuity would lose it's as-good-as random assignment. To test this possibility, McCrary (2008) recommends looking for clusters of observations around the cutoff. The logic is, if observations are able to manipulate what side of the cutoff they fall on, we should be able to see this by a discontinuity in the number of observations at the cutoff.

Figure A51 plots the distribution of legislatures at the party power discontinuity for the three cutoffs. As can be seen, the distribution of legislatures is relatively smooth at the cutoff for the Governor and House; in these, neither party appears to dominate scenarios close to the cutoff. In the Senate, however, there is some evidence of a discontinuity at the cutoff. We note two things about this imbalance. First, the McCrary Density Check is inherently limited. As McCrary himself notes, "a running variable with a continuous density is neither necessary nor sufficient for identification" except for strong auxiliary assumptions (2008, 701). In addition, the McCrary Density Check has not been generalized to situations where multiple running variables are used. Put differently, with multiple cutoffs, the expectations for balance across all of these are less straightforward. For these reasons, we take the position that the covariate balance checks just shown offer a more informative check for precise sorting. Given overwhelming balance, we deem precise sorting to be unlikely. Second, in attempt to address any potential for precise sorting, we run the recommended so called "donut RD" check (Barreca et al. 2011; Barreca, Lindo and Waddell 2016).[s] When we do so, the conclusions presented in the paper do not change.[t] Taken with the results from the covariate balance test, this check is assuring that the state legislature party power discontinuity sorts states in an as-good-as random manner. This allows for these cutoffs to be used to estimate the causal impact of party control on policy outcomes.

[s] Barreca, Lindo and Waddell (2016, 275) note that donut RDDs "that estimate the treatment effect after dropping observations in the immediate vicinity of the treatment threshold...should not be thought of as a general approach to addressing non-random heaping because data heaps away from the threshold may also introduce bias; instead dropping observations in the immediate vicinity of the treatment threshold should be thought of as a useful robustness check that has the potential to highlight misspecification in any RD design."

[t] As we note in the text, with these models we find that only1.2% of the effect estimates are significant at the 5% level.

Figure A51: McCrary Density Check for Precise Sorting

(a) Governor (b) House (c) Senate

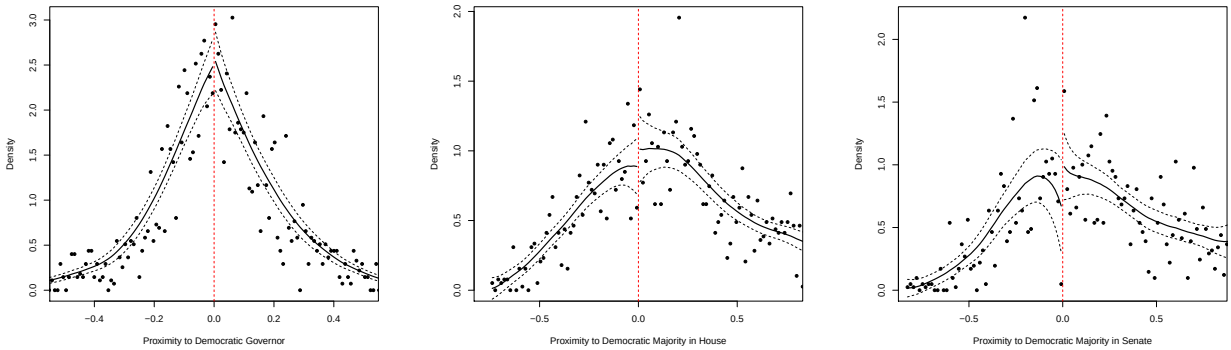


Figure A51 displays the McCrary Density Test for precise sorting (McCrary 2008). The x-axis displays the running variable for these three individual cutoffs. Corresponding p-values for H_0 = continuity at the cutoff: Governor = 0.59, House = 0.15, Senate = 0.00.

9 Single-Cutoff RDD Results

9.1 Single-Cutoff RDD without Fixed Effects

Figures A52 and A53 display the single cutoff RDD effect (without fixed effects). As we have mentioned throughout the text, the RDD specifications tend to be less precisely estimated than the difference-in-differences. Below we see whether we can increase the precision of our estimates by including fixed effects, increasing the bandwidth around the cutoff, and looking at changes in our outcomes.

Figure A52: Single Cutoff RDD Effect of Democratic Control on Policy Outcomes (Fourth Year)

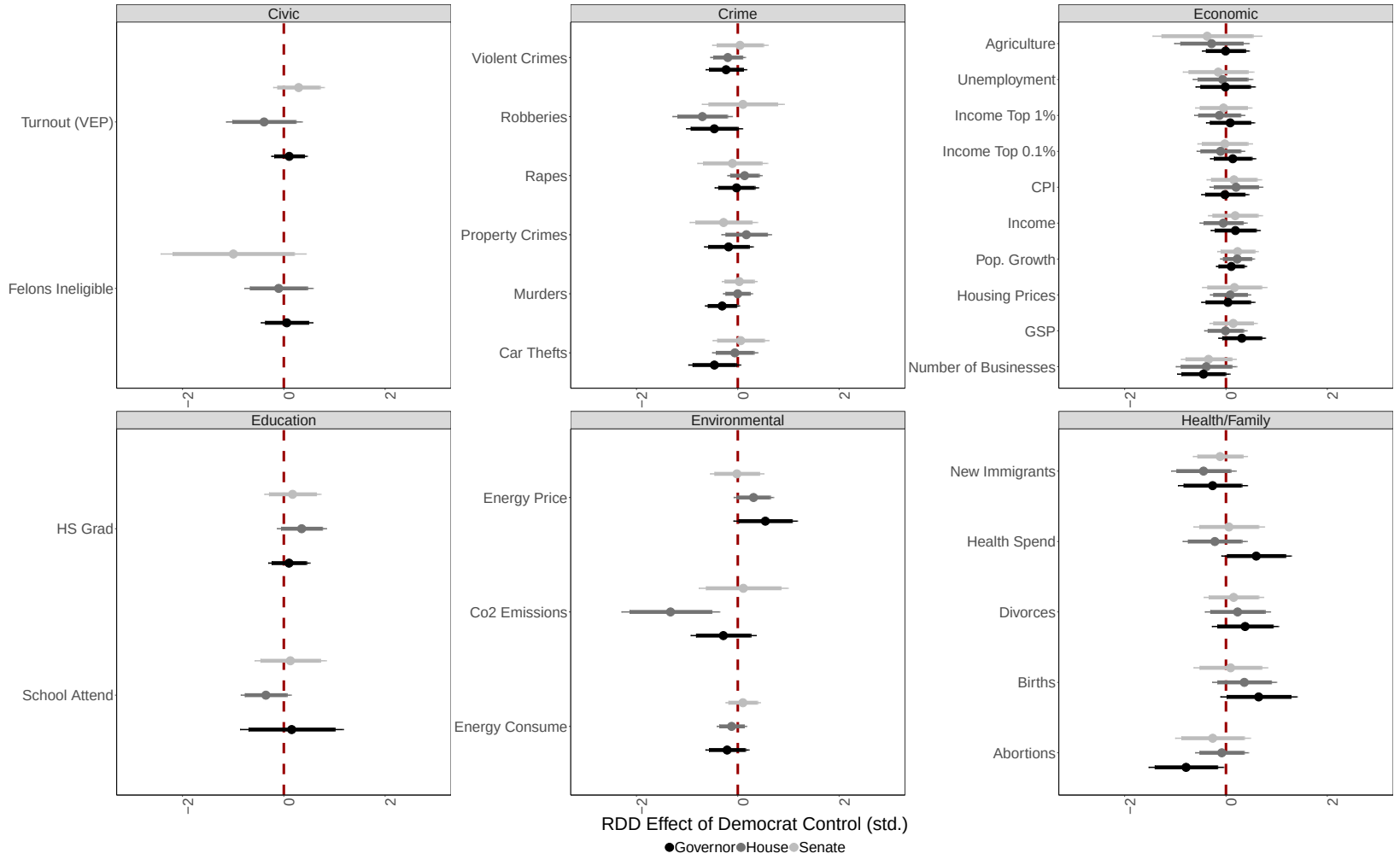


Figure A52 plots coefficient estimates (points) and corresponding 90% (thick) and 95% (thin) confidence intervals for the regression discontinuity estimates. The estimates are broken by the chamber that switches power. The running variable is modeled with a local kernel smoothed function. The estimates use the optimal bandwidth as specified by the `rdrobust` command in `STATA` created by Calonico, Cattaneo and Titiunik (2014). Following previous work estimating the effects of party control (Caughey, Warshaw and Xu 2017; Hall, Feigenbaum and Fouirnaies 2017), standard errors are clustered at the state level.

Table A15: Model Diagnostics for Figure A52 [1]

DV	Chamber	Bandwidth	Effective N
Birth Rate	Governor	0.14	474
Birth Rate	Senate	0.22	434
Birth Rate	House	0.24	454
Divorce Rate	Governor	0.16	823
Divorce Rate	Senate	0.16	409
Divorce Rate	House	0.20	544
Abortion Rate	Governor	0.10	406
Abortion Rate	Senate	0.16	250
Abortion Rate	House	0.21	348
Health Spending Per Capita	Governor	0.13	497
Health Spending Per Capita	Senate	0.13	249
Health Spending Per Capita	House	0.17	331
Number of Businesses	Governor	0.11	676
Number of Businesses	Senate	0.16	485
Number of Businesses	House	0.16	442
Fraction Income top 0.1%	Governor	0.15	1537
Fraction Income top 0.1%	Senate	0.17	788
Fraction Income top 0.1%	House	0.15	721
Fraction Income top 1%	Governor	0.15	1537
Fraction Income top 1%	Senate	0.17	788
Fraction Income top 1%	House	0.15	714
Unemployment rate	Governor	0.17	889
Unemployment rate	Senate	0.21	565
Unemployment rate	House	0.26	706
Value Added by Agricultural Sector	Governor	0.10	444
Value Added by Agricultural Sector	Senate	0.17	343
Value Added by Agricultural Sector	House	0.21	433
Gross State Product Per Capita	Governor	0.15	691
Gross State Product Per Capita	Senate	0.19	449
Gross State Product Per Capita	House	0.18	431
Quarterly Housing Price Index	Governor	0.21	1339
Quarterly Housing Price Index	Senate	0.16	556
Quarterly Housing Price Index	House	0.22	810
Consumer Price Index	Governor	0.16	1369
Consumer Price Index	Senate	0.24	944
Consumer Price Index	House	0.24	969
Population Growth	Governor	0.15	1434
Population Growth	Senate	0.14	575
Population Growth	House	0.16	730
Real Per Capita Personal Income	Governor	0.19	1622
Real Per Capita Personal Income	Senate	0.23	966
Real Per Capita Personal Income	House	0.18	780

Table A16: Model Diagnostics for Figure A52 [2]

DV	Chamber	Bandwidth	Effective N
New Immigrant Green Card Holders	Governor	0.11	573
New Immigrant Green Card Holders	Senate	0.14	319
New Immigrant Green Card Holders	House	0.13	304
Birth Rate	Governor	0.14	474
Birth Rate	Senate	0.22	434
Birth Rate	House	0.24	454
Divorce Rate	Governor	0.16	823
Divorce Rate	Senate	0.16	409
Divorce Rate	House	0.20	544
Abortion Rate	Governor	0.10	406
Abortion Rate	Senate	0.16	250
Abortion Rate	House	0.21	348
Health Spending Per Capita	Governor	0.13	497
Health Spending Per Capita	Senate	0.13	249
Health Spending Per Capita	House	0.17	331
Number of Businesses	Governor	0.11	676
Number of Businesses	Senate	0.16	485
Number of Businesses	House	0.16	442
Fraction Income top 0.1%	Governor	0.15	1537
Fraction Income top 0.1%	Senate	0.17	788
Fraction Income top 0.1%	House	0.15	721
Fraction Income top 1%	Governor	0.15	1537
Fraction Income top 1%	Senate	0.17	788
Fraction Income top 1%	House	0.15	714
Unemployment rate	Governor	0.17	889
Unemployment rate	Senate	0.21	565
Unemployment rate	House	0.26	706
Value Added by Agricultural Sector	Governor	0.10	444
Value Added by Agricultural Sector	Senate	0.17	343
Value Added by Agricultural Sector	House	0.21	433
Gross State Product Per Capita	Governor	0.15	691
Gross State Product Per Capita	Senate	0.19	449
Gross State Product Per Capita	House	0.18	431
Quarterly Housing Price Index	Governor	0.21	1339
Quarterly Housing Price Index	Senate	0.16	556
Quarterly Housing Price Index	House	0.22	810
Consumer Price Index	Governor	0.16	1369
Consumer Price Index	Senate	0.24	944
Consumer Price Index	House	0.24	969
Population Growth	Governor	0.15	1434
Population Growth	Senate	0.14	575
Population Growth	House	0.16	730
Real Per Capita Personal Income	Governor	0.19	1622
Real Per Capita Personal Income	Senate	0.23	966
Real Per Capita Personal Income	House	0.18	780

Figure A53: Single Cutoff RDD Effect of Democratic Control on Policy Outcomes (Second Year)

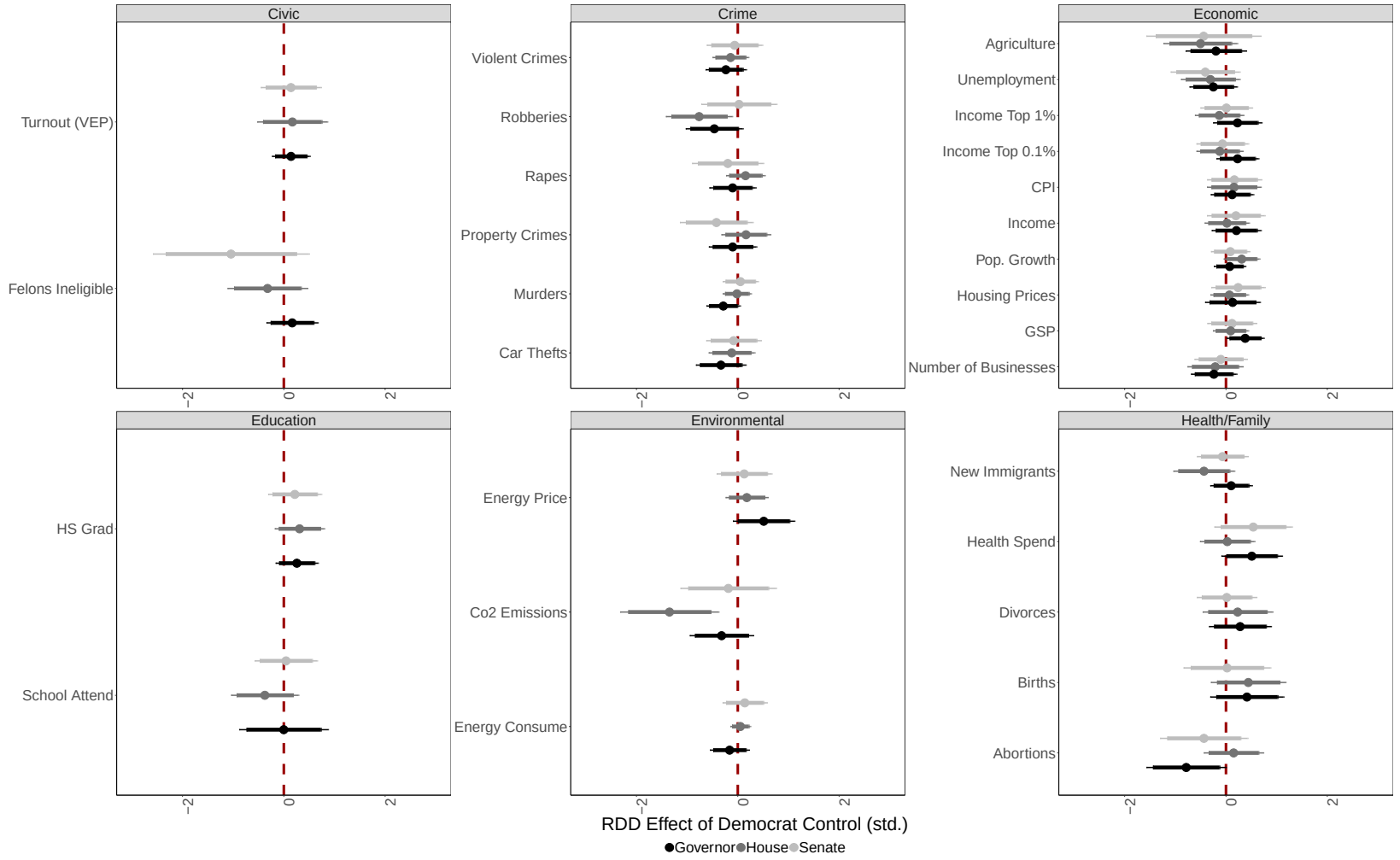


Figure A53 plots coefficient estimates (points) and corresponding 90% (thick) and 95% (thin) confidence intervals for the regression discontinuity estimates. The estimates are broken by the chamber that switches power. The running variable is modeled with a local kernel smoothed function. The estimates use the optimal bandwidth as specified by the `rdrobust` command in `STATA` created by Calonico, Cattaneo and Titiunik (2014). Following previous work estimating the effect of party control (Caughey, Warshaw and Xu 2017; Hall, Feigenbaum and Fouirnaies 2017), standard errors are clustered at the state level.

Table A17: Model Diagnostics for Figure A53 [1]

DV	Chamber	Bandwidth	Effective N
Average School Attendance Rate	Governor	0.11	581
Average School Attendance Rate	Senate	0.16	398
Average School Attendance Rate	House	0.18	427
% High School Diploma	Governor	0.19	1642
% High School Diploma	Senate	0.19	737
% High School Diploma	House	0.27	1116
Murder Rate	Governor	0.11	1300
Murder Rate	Senate	0.17	785
Murder Rate	House	0.23	1111
Car Theft Rate	Governor	0.12	1333
Car Theft Rate	Senate	0.18	819
Car Theft Rate	House	0.21	1017
Violent Crime Rate	Governor	0.14	1520
Violent Crime Rate	Senate	0.17	785
Violent Crime Rate	House	0.20	990
Robbery Rate	Governor	0.12	1325
Robbery Rate	Senate	0.18	807
Robbery Rate	House	0.16	755
Rape Rate	Governor	0.14	1501
Rape Rate	Senate	0.30	1358
Rape Rate	House	0.20	990
Property Crime Rate	Governor	0.15	1534
Property Crime Rate	Senate	0.14	657
Property Crime Rate	House	0.17	825
CO2 emissions	Governor	0.16	1231
CO2 emissions	Senate	0.20	726
CO2 emissions	House	0.13	448
Residential Sector Energy Price	Governor	0.16	1253
Residential Sector Energy Price	Senate	0.16	618
Residential Sector Energy Price	House	0.19	712
Commercial Sector Energy Consume	Governor	0.20	1720
Commercial Sector Energy Consume	Senate	0.14	609
Commercial Sector Energy Consume	House	0.15	671
# Felons Ineligible to Vote	Governor	0.14	416
# Felons Ineligible to Vote	Senate	0.14	200
# Felons Ineligible to Vote	House	0.23	373
Voter Turnout (VEP)	Governor	0.22	610
Voter Turnout (VEP)	Senate	0.19	311
Voter Turnout (VEP)	House	0.18	293
New Immigrant Green Card Holders	Governor	0.09	479
New Immigrant Green Card Holders	Senate	0.14	319
New Immigrant Green Card Holders	House	0.16	376

Table A18: Model Diagnostics for Figure A53 [2]

DV	Chamber	Bandwidth	Effective N
Birth Rate	Governor	0.13	458
Birth Rate	Senate	0.20	379
Birth Rate	House	0.19	366
Divorce Rate	Governor	0.16	808
Divorce Rate	Senate	0.15	423
Divorce Rate	House	0.22	568
Abortion Rate	Governor	0.11	436
Abortion Rate	Senate	0.15	227
Abortion Rate	House	0.20	307
Health Spending Per Capita	Governor	0.12	457
Health Spending Per Capita	Senate	0.14	308
Health Spending Per Capita	House	0.18	350
Number of Businesses	Governor	0.13	747
Number of Businesses	Senate	0.16	453
Number of Businesses	House	0.21	613
Fraction Income top 0.1%	Governor	0.22	2012
Fraction Income top 0.1%	Senate	0.15	722
Fraction Income top 0.1%	House	0.15	699
Fraction Income top 1%	Governor	0.17	1697
Fraction Income top 1%	Senate	0.16	771
Fraction Income top 1%	House	0.14	691
Unemployment rate	Governor	0.20	970
Unemployment rate	Senate	0.26	708
Unemployment rate	House	0.20	555
Value Added by Agricultural Sector	Governor	0.10	441
Value Added by Agricultural Sector	Senate	0.13	230
Value Added by Agricultural Sector	House	0.18	358
Gross State Product Per Capita	Governor	0.22	874
Gross State Product Per Capita	Senate	0.17	432
Gross State Product Per Capita	House	0.17	419
Quarterly Housing Price Index	Governor	0.22	1322
Quarterly Housing Price Index	Senate	0.15	549
Quarterly Housing Price Index	House	0.19	652
Consumer Price Index	Governor	0.18	1577
Consumer Price Index	Senate	0.21	873
Consumer Price Index	House	0.23	979
Population Growth	Governor	0.15	1537
Population Growth	Senate	0.16	722
Population Growth	House	0.15	714
Real Per Capita Personal Income	Governor	0.19	1716
Real Per Capita Personal Income	Senate	0.20	825
Real Per Capita Personal Income	House	0.19	851

9.2 Single-Cutoff RDD with Fixed Effects

Tables A19 and A20 show all the of the estimates—coefficient, standard error, p-value, 95% confidence interval, and sample size–for Figure 5 in the text. The 95% confidence intervals can be used to illustrate the minimum detectable effect (MDE) for our models—i.e. the smallest effect (on either side) that our design allows us to rule out. As can be seen, across all model specifications, we can confidently rule out the default meaningful effect size suggested by Hartman and Hidalgo (2018). Often, we are able to rule out effects that are *much* smaller.

Table A19: MDEs for Figure 5 [1]

Variable	Year	Coef_*std*	SE	P	95% CI		N
Average School Attendance Rate	Governor	-0.05	0.15	0.74	-0.36	0.26	821
Average School Attendance Rate	Senate	-0.04	0.21	0.84	-0.48	0.39	453
Average School Attendance Rate	House	0.12	0.12	0.33	-0.12	0.36	1176
% High School Diploma	Governor	0.00	0.02	0.91	-0.05	0.04	1703
% High School Diploma	Senate	-0.03	0.02	0.20	-0.07	0.02	759
% High School Diploma	House	-0.05	0.02	0.02	-0.09	-0.01	2196
Murder Rate	Governor	-0.01	0.03	0.69	-0.07	0.04	1805
Murder Rate	Senate	0.00	0.04	0.91	-0.09	0.08	859
Murder Rate	House	0.04	0.03	0.13	-0.01	0.10	2546
Car Theft Rate	Governor	0.00	0.08	0.99	-0.17	0.17	1807
Car Theft Rate	Senate	0.00	0.09	0.98	-0.19	0.19	861
Car Theft Rate	House	0.10	0.06	0.11	-0.02	0.21	2548
Violent Crime Rate	Governor	0.00	0.05	0.93	-0.10	0.09	1805
Violent Crime Rate	Senate	0.09	0.09	0.32	-0.09	0.28	859
Violent Crime Rate	House	0.09	0.04	0.04	0.00	0.18	2546
Robbery Rate	Governor	-0.10	0.09	0.28	-0.28	0.08	1805
Robbery Rate	Senate	0.02	0.10	0.81	-0.17	0.22	859
Robbery Rate	House	0.18	0.07	0.01	0.04	0.32	2546
Rape Rate	Governor	0.04	0.06	0.45	-0.07	0.16	1805
Rape Rate	Senate	0.08	0.11	0.47	-0.14	0.30	859
Rape Rate	House	0.03	0.07	0.70	-0.12	0.17	2546
Property Crime Rate	Governor	0.05	0.05	0.37	-0.06	0.15	1805
Property Crime Rate	Senate	-0.01	0.06	0.87	-0.13	0.11	859
Property Crime Rate	House	0.05	0.05	0.34	-0.05	0.14	2546
CO2 emissions	Governor	0.00	0.02	0.84	-0.04	0.04	1361
CO2 emissions	Senate	-0.06	0.05	0.24	-0.16	0.04	594
CO2 emissions	House	-0.02	0.01	0.10	-0.04	0.00	1911
Residential Sector Energy Price	Governor	-0.06	0.06	0.32	-0.17	0.06	1436
Residential Sector Energy Price	Senate	0.04	0.04	0.31	-0.04	0.13	703
Residential Sector Energy Price	House	0.03	0.02	0.25	-0.02	0.07	2009
Commercial Sector Energy Consume	Governor	-0.10	0.07	0.12	-0.24	0.03	1617
Commercial Sector Energy Consume	Senate	-0.02	0.04	0.58	-0.10	0.06	744
Commercial Sector Energy Consume	House	-0.10	0.06	0.13	-0.22	0.03	2254
# Felons Ineligible to Vote	Governor	0.02	0.06	0.74	-0.10	0.14	543
# Felons Ineligible to Vote	Senate	0.04	0.05	0.40	-0.06	0.13	286
# Felons Ineligible to Vote	House	0.07	0.08	0.35	-0.08	0.23	784
Voter Turnout (VEP)	Governor	0.11	0.07	0.12	-0.03	0.24	570
Voter Turnout (VEP)	Senate	-0.04	0.08	0.60	-0.19	0.11	305
Voter Turnout (VEP)	House	-0.04	0.05	0.44	-0.15	0.07	832
New Immigrant Green Card Holders	Governor	-0.04	0.06	0.51	-0.15	0.08	820
New Immigrant Green Card Holders	Senate	-0.05	0.04	0.23	-0.13	0.03	468
New Immigrant Green Card Holders	House	0.06	0.09	0.49	-0.12	0.25	1176

Table A20: MDEs for Figure 5 [2]

Variable	Year	Coef_*std*	SE	P	95% CI		N
Birth Rate	Governor	-0.06	0.08	0.45	-0.22	0.10	622
Birth Rate	Senate	0.08	0.05	0.17	-0.04	0.19	366
Birth Rate	House	0.00	0.05	0.98	-0.10	0.10	882
Divorce Rate	Governor	-0.06	0.04	0.19	-0.14	0.03	952
Divorce Rate	Senate	0.03	0.09	0.75	-0.16	0.22	466
Divorce Rate	House	-0.01	0.03	0.67	-0.06	0.04	1389
Abortion Rate	Governor	0.01	0.08	0.90	-0.16	0.18	635
Abortion Rate	Senate	-0.18	0.14	0.21	-0.47	0.11	269
Abortion Rate	House	-0.05	0.08	0.53	-0.21	0.11	913
Health Spending Per Capita	Governor	-0.01	0.02	0.78	-0.05	0.04	663
Health Spending Per Capita	Senate	0.05	0.01	0.00	0.02	0.07	386
Health Spending Per Capita	House	0.00	0.02	0.99	-0.03	0.03	931
Number of Businesses	Governor	-0.10	0.07	0.18	-0.24	0.05	1015
Number of Businesses	Senate	0.07	0.13	0.61	-0.19	0.33	533
Number of Businesses	House	0.18	0.07	0.01	0.05	0.32	1413
Fraction Income top 0.1%	Governor	-0.01	0.04	0.80	-0.08	0.06	1837
Fraction Income top 0.1%	Senate	-0.05	0.07	0.42	-0.19	0.08	861
Fraction Income top 0.1%	House	0.01	0.04	0.74	-0.07	0.10	2548
Fraction Income top 1%	Governor	-0.03	0.03	0.31	-0.09	0.03	1837
Fraction Income top 1%	Senate	0.00	0.06	0.99	-0.12	0.12	861
Fraction Income top 1%	House	0.00	0.04	0.92	-0.08	0.07	2548
Unemployment rate	Governor	0.00	0.14	1.00	-0.28	0.28	975
Unemployment rate	Senate	0.16	0.16	0.33	-0.17	0.48	478
Unemployment rate	House	-0.15	0.09	0.10	-0.33	0.03	1421
Value Added by Agricultural Sector	Governor	-0.02	0.05	0.68	-0.12	0.08	707
Value Added by Agricultural Sector	Senate	-0.06	0.07	0.38	-0.19	0.07	383
Value Added by Agricultural Sector	House	0.03	0.07	0.72	-0.12	0.17	980
Gross State Product Per Capita	Governor	-0.02	0.02	0.44	-0.07	0.03	822
Gross State Product Per Capita	Senate	0.01	0.02	0.75	-0.04	0.05	460
Gross State Product Per Capita	House	0.00	0.02	0.81	-0.04	0.03	1176
Quarterly Housing Price Index	Governor	0.02	0.06	0.72	-0.09	0.13	1273
Quarterly Housing Price Index	Senate	0.04	0.05	0.43	-0.06	0.14	652
Quarterly Housing Price Index	House	-0.03	0.03	0.29	-0.10	0.03	1813
Consumer Price Index	Governor	-0.02	0.01	0.13	-0.04	0.00	1574
Consumer Price Index	Senate	0.00	0.01	0.91	-0.02	0.02	725
Consumer Price Index	House	0.00	0.01	0.56	-0.01	0.02	2205
Population Growth	Governor	0.05	0.06	0.38	-0.06	0.17	1746
Population Growth	Senate	0.07	0.10	0.49	-0.13	0.27	826
Population Growth	House	-0.03	0.05	0.52	-0.14	0.07	2450
Real Per Capita Personal Income	Governor	0.05	0.03	0.07	0.00	0.10	1689
Real Per Capita Personal Income	Senate	0.02	0.04	0.58	-0.06	0.11	785
Real Per Capita Personal Income	House	0.00	0.03	0.95	-0.06	0.06	849

9.3 RDD Estimates For the Full Bandwidth

In Figure A54, we look at effects across the full bandwidth with no state and year fixed effects. Doing so increases our levels of precision, albeit less than other alternatives considered here. Still, only 2.4% of out tests are significant at the unadjusted 5% level (none of these clear the adjusted level). The effects are, on average, small (median = 0.8% σ) and relatively evenly balanced around 0. However, our 95% confidence intervals are still quite large—in our models without fixed effects we can only rule out the default meaningful effect size suggested by Hartman and Hidalgo (2018) in 7.1% of models.

Figure A54: Single Cutoff RDD Effect of Democratic Control on Policy Outcomes (Full Bandwidth)

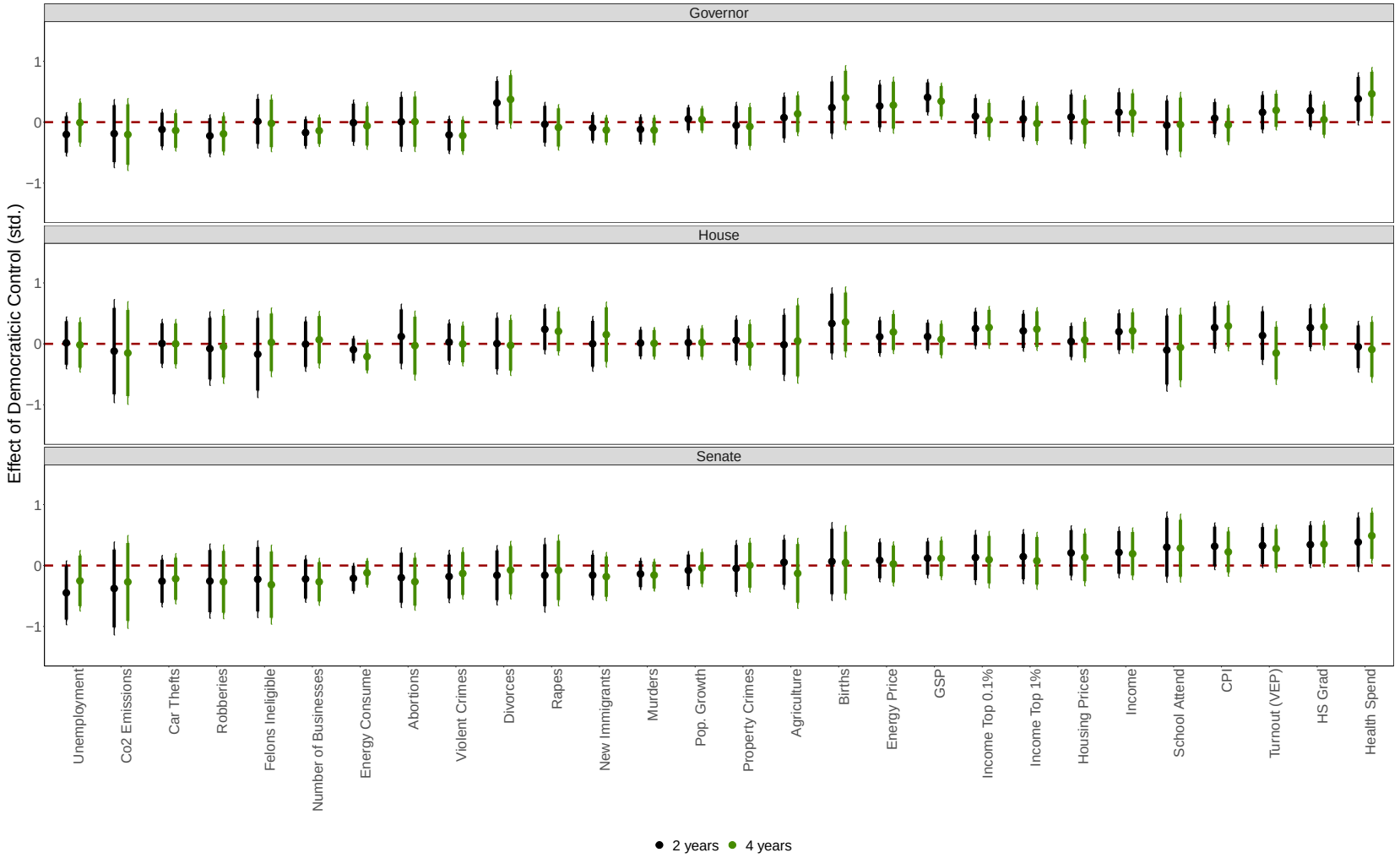


Figure A54 plots coefficient estimates (points) and corresponding 90% (thick) and 95% (thin) confidence intervals for the regression discontinuity estimates. The estimates are broken by the chamber that switches power. The running variable is modeled with a local kernel smoothed function. The estimates use the full bandwidth to maximize statistical power. Following previous work estimating the effect of party control (Caughey, Warshaw and Xu 2017; Hall, Feigenbaum and Fouirnaies 2017), standard errors are clustered at the state level.

Table A21: Model Diagnostics for Figure A54 [1]

DV	Chamber	Year	Bandwidth	Effective N
Fraction Income top 0.1%	Senate	2 years	1	2485
Fraction Income top 0.1%	House	2 years	1	2519
Fraction Income top 0.1%	Governor	2 years	1	2690
Fraction Income top 0.1%	House	4 years	1	2519
Fraction Income top 0.1%	Governor	4 years	1	2590
Fraction Income top 0.1%	Senate	4 years	1	2485
Fraction Income top 1%	Governor	2 years	1	2690
Fraction Income top 1%	House	2 years	1	2519
Fraction Income top 1%	Senate	2 years	1	2485
Fraction Income top 1%	Governor	4 years	1	2590
Fraction Income top 1%	House	4 years	1	2519
Fraction Income top 1%	Senate	4 years	1	2485
Abortion Rate	House	2 years	1	911
Abortion Rate	Senate	2 years	1	900
Abortion Rate	Governor	2 years	1	895
Abortion Rate	House	4 years	1	911
Abortion Rate	Governor	4 years	1	893
Abortion Rate	Senate	4 years	1	898
Birth Rate	Governor	2 years	1	899
Birth Rate	House	2 years	1	882
Birth Rate	Senate	2 years	1	882
Birth Rate	Governor	4 years	1	897
Birth Rate	House	4 years	1	882
Birth Rate	Senate	4 years	1	882
Commercial Sector Energy Consume	Senate	2 years	1	2289
Commercial Sector Energy Consume	Governor	2 years	1	2340
Commercial Sector Energy Consume	House	2 years	1	2323
Commercial Sector Energy Consume	House	4 years	1	2225
Commercial Sector Energy Consume	Senate	4 years	1	2191
Commercial Sector Energy Consume	Governor	4 years	1	2240
Car Theft Rate	Governor	2 years	1	2640
Car Theft Rate	House	2 years	1	2519
Car Theft Rate	Senate	2 years	1	2485
Car Theft Rate	Governor	4 years	1	2540
Car Theft Rate	Senate	4 years	1	2485
Car Theft Rate	House	4 years	1	2519
CO2 emissions	Governor	2 years	1	1990
CO2 emissions	House	2 years	1	1980
CO2 emissions	Senate	2 years	1	1946
CO2 emissions	Senate	4 years	1	1848
CO2 emissions	House	4 years	1	1882
CO2 emissions	Governor	4 years	1	1890
Divorce Rate	Governor	2 years	1	1381
Divorce Rate	Senate	2 years	1	1376
Divorce Rate	House	2 years	1	1387
Divorce Rate	House	4 years	1	1387
Divorce Rate	Governor	4 years	1	1378
Divorce Rate	Senate	4 years	1	1374
Average School Attendance Rate	Senate	2 years	1	1176
Average School Attendance Rate	House	2 years	1	1176
Average School Attendance Rate	Governor	2 years	1	1194
Average School Attendance Rate	Senate	4 years	1	1175
Average School Attendance Rate	House	4 years	1	1176
Average School Attendance Rate	Governor	4 years	1	1189
Number of Businesses	Governor	2 years	1	1472
Number of Businesses	Senate	2 years	1	1398
Number of Businesses	House	2 years	1	1411
Number of Businesses	House	4 years	1	1408
Number of Businesses	Senate	4 years	1	1401
Number of Businesses	Governor	4 years	1	1447

Table A22: Model Diagnostics for Figure A54 [2]

DV	Chamber	Year	Bandwidth	Effective N
Gross State Product Per Capita	Governor	2 years	1	1195
Gross State Product Per Capita	House	2 years	1	1176
Gross State Product Per Capita	Senate	2 years	1	1176
Gross State Product Per Capita	House	4 years	1	1176
Gross State Product Per Capita	Senate	4 years	1	1176
Gross State Product Per Capita	Governor	4 years	1	1193
Health Spending Per Capita	House	2 years	1	931
Health Spending Per Capita	Senate	2 years	1	931
Health Spending Per Capita	Governor	2 years	1	949
Health Spending Per Capita	Governor	4 years	1	947
Health Spending Per Capita	House	4 years	1	931
Health Spending Per Capita	Senate	4 years	1	931
Quarterly Housing Price Index	House	2 years	1	1811
Quarterly Housing Price Index	Governor	2 years	1	1813
Quarterly Housing Price Index	Senate	2 years	1	1800
Quarterly Housing Price Index	Senate	4 years	1	1798
Quarterly Housing Price Index	House	4 years	1	1811
Quarterly Housing Price Index	Governor	4 years	1	1810
% High School Diploma	House	2 years	1	2123
% High School Diploma	Governor	2 years	1	2447
% High School Diploma	Senate	2 years	1	2094
% High School Diploma	Governor	4 years	1	2443
% High School Diploma	Senate	4 years	1	2152
% High School Diploma	House	4 years	1	2179
Murder Rate	Senate	2 years	1	2481
Murder Rate	House	2 years	1	2515
Murder Rate	Governor	2 years	1	2636
Murder Rate	House	4 years	1	2517
Murder Rate	Senate	4 years	1	2483
Murder Rate	Governor	4 years	1	2538
New Immigrant Green Card Holders	Senate	2 years	1	1176
New Immigrant Green Card Holders	Governor	2 years	1	1196
New Immigrant Green Card Holders	House	2 years	1	1176
New Immigrant Green Card Holders	House	4 years	1	1176
New Immigrant Green Card Holders	Governor	4 years	1	1194
New Immigrant Green Card Holders	Senate	4 years	1	1176
# Felons Ineligible to Vote	Governor	2 years	1	786
# Felons Ineligible to Vote	House	2 years	1	784
# Felons Ineligible to Vote	Senate	2 years	1	779
# Felons Ineligible to Vote	Governor	4 years	1	783
# Felons Ineligible to Vote	House	4 years	1	784
# Felons Ineligible to Vote	Senate	4 years	1	779
Population Growth	Governor	2 years	1	2540
Population Growth	House	2 years	1	2519
Population Growth	Senate	2 years	1	2485
Population Growth	House	4 years	1	2421
Population Growth	Senate	4 years	1	2387
Population Growth	Governor	4 years	1	2440
Property Crime Rate	Senate	2 years	1	2481
Property Crime Rate	House	2 years	1	2515
Property Crime Rate	Governor	2 years	1	2636
Property Crime Rate	House	4 years	1	2517
Property Crime Rate	Governor	4 years	1	2538
Property Crime Rate	Senate	4 years	1	2483
Rape Rate	Governor	2 years	1	2636
Rape Rate	Senate	2 years	1	2481
Rape Rate	House	2 years	1	2515
Rape Rate	House	4 years	1	2517
Rape Rate	Senate	4 years	1	2483
Rape Rate	Governor	4 years	1	2538

Table A23: Model Diagnostics for Figure A54 [3]

DV	Chamber	Year	Bandwidth	Effective N
Real Per Capita Personal Income	Senate	2 years	1	2387
Real Per Capita Personal Income	House	2 years	1	2421
Real Per Capita Personal Income	Governor	2 years	1	2440
Real Per Capita Personal Income	Senate	4 years	1	2289
Real Per Capita Personal Income	House	4 years	1	2323
Real Per Capita Personal Income	Governor	4 years	1	2340
Residential Sector Energy Price	Senate	2 years	1	1991
Residential Sector Energy Price	House	2 years	1	2005
Residential Sector Energy Price	Governor	2 years	1	2004
Residential Sector Energy Price	House	4 years	1	2001
Residential Sector Energy Price	Governor	4 years	1	2002
Residential Sector Energy Price	Senate	4 years	1	1987
Robbery Rate	House	2 years	1	2515
Robbery Rate	Governor	2 years	1	2636
Robbery Rate	Senate	2 years	1	2481
Robbery Rate	House	4 years	1	2517
Robbery Rate	Governor	4 years	1	2538
Robbery Rate	Senate	4 years	1	2483
Consumer Price Index	Governor	2 years	1	2290
Consumer Price Index	Senate	2 years	1	2240
Consumer Price Index	House	2 years	1	2274
Consumer Price Index	Senate	4 years	1	2142
Consumer Price Index	House	4 years	1	2176
Consumer Price Index	Governor	4 years	1	2190
Unemployment rate	House	2 years	1	1419
Unemployment rate	Senate	2 years	1	1408
Unemployment rate	Governor	2 years	1	1413
Unemployment rate	Senate	4 years	1	1406
Unemployment rate	House	4 years	1	1419
Unemployment rate	Governor	4 years	1	1410
Value Added by Agricultural Sector	Senate	2 years	1	969
Value Added by Agricultural Sector	House	2 years	1	977
Value Added by Agricultural Sector	Governor	2 years	1	990
Value Added by Agricultural Sector	Senate	4 years	1	969
Value Added by Agricultural Sector	Governor	4 years	1	987
Value Added by Agricultural Sector	House	4 years	1	975
Violent Crime Rate	Governor	2 years	1	2636
Violent Crime Rate	Senate	2 years	1	2481
Violent Crime Rate	House	2 years	1	2515
Violent Crime Rate	House	4 years	1	2517
Violent Crime Rate	Senate	4 years	1	2483
Violent Crime Rate	Governor	4 years	1	2538
Voter Turnout (VEP)	House	2 years	1	832
Voter Turnout (VEP)	Governor	2 years	1	836
Voter Turnout (VEP)	Senate	2 years	1	828
Voter Turnout (VEP)	House	4 years	1	832
Voter Turnout (VEP)	Governor	4 years	1	833
Voter Turnout (VEP)	Senate	4 years	1	827

9.4 RDD Estimates Modeling Change in the Dependent Variables

In Figure A55, we look at effects in changes in the dependent variable (with no state and year fixed effects). Doing so increases our levels of precision substantially. Still, only 3.6% of out tests are significant at the unadjusted 5% level (none of these clears the adjusted level). The effects are, on average, small (median = 0.8% σ) and relatively evenly balanced around 0. Here our 95% confidence intervals are much narrower—in our models without fixed effects we can rule out the default meaningful effect size suggested by Hartman and Hidalgo (2018) in 91.7% of models.[u]

[u] 20% of a standard deviation: 81% can rule out; 10% of a standard deviation: 58.3% can rule out; 5% of a standard deviation: 20.2% can rule out.

Figure A55: RDD with Year to Year Changes in the Dependent Variable (First Year)

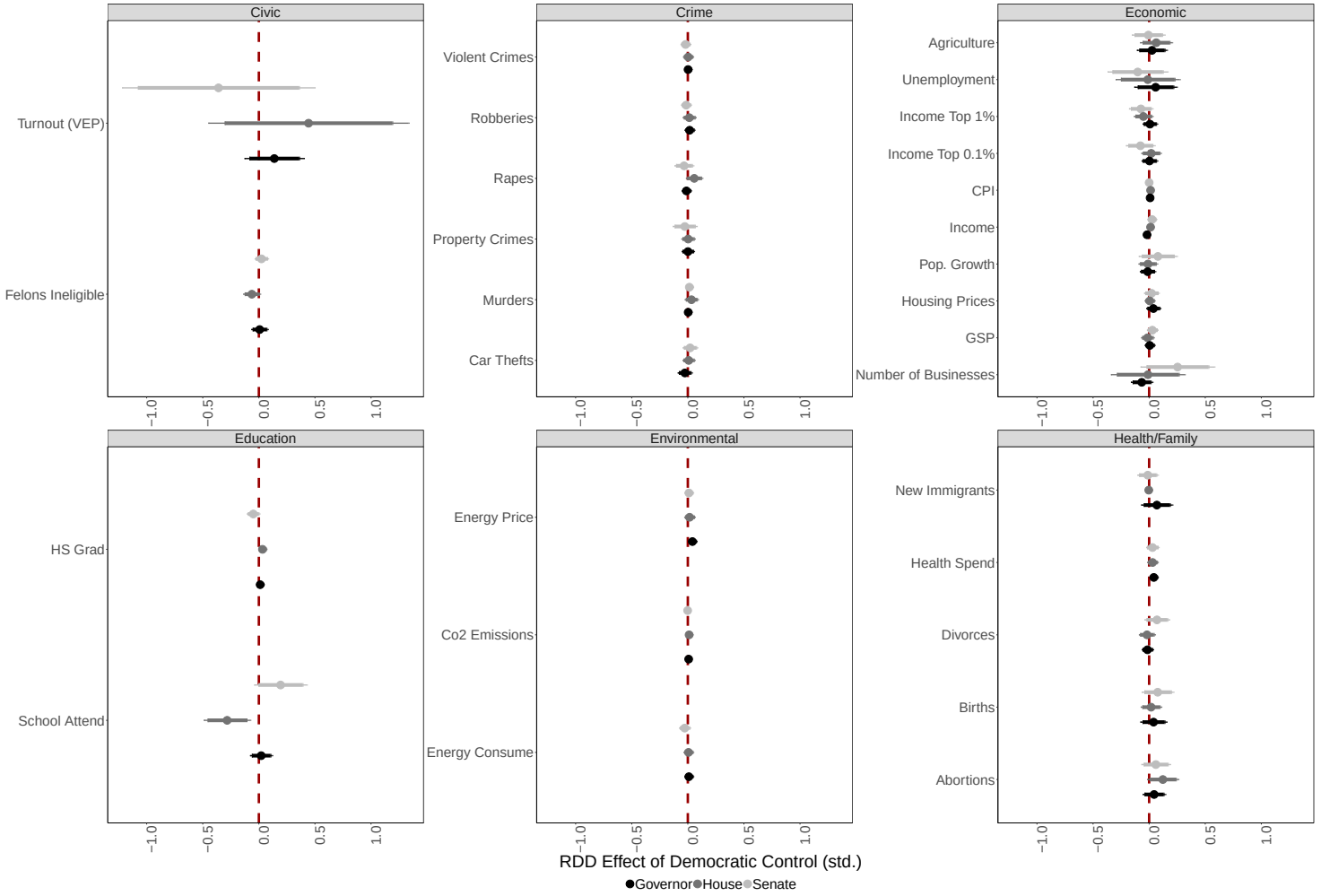


Figure A55 plots coefficient estimates (points) and corresponding 90% (thick) and 95% (thin) confidence intervals for the regression discontinuity estimates for the effects of each individual chamber. Coefficients are faceted by policy area and broken by individual chamber within facets. Following previous work estimating the effect of party control (Caughey, Warshaw and Xu 2017; Hall, Feigenbaum and Fouirnaies 2017), standard errors are clustered at the state level.

Table A24: Model Diagnostics for Figure A55 [1]

DV	Chamber	β	p	CI Lower	CI Upper	Bandwidth	Effective N
Average School Attendance Rate	Governor	0.02	0.68	-0.08	0.12	0.14	606
Average School Attendance Rate	Senate	0.19	0.11	-0.04	0.43	0.19	455
Average School Attendance Rate	House	-0.28	0.01	-0.49	-0.08	0.12	271
% High School Diploma	Governor	0.01	0.50	-0.02	0.05	0.14	1253
% High School Diploma	Senate	-0.05	0.09	-0.11	0.01	0.23	869
% High School Diploma	House	0.03	0.09	0.00	0.07	0.18	697
Murder Rate	Governor	0.00	0.84	-0.03	0.04	0.11	1303
Murder Rate	Senate	0.01	0.45	-0.02	0.05	0.31	1363
Murder Rate	House	0.03	0.28	-0.03	0.09	0.14	675
Car Theft Rate	Governor	-0.03	0.41	-0.09	0.04	0.13	1381
Car Theft Rate	Senate	0.02	0.54	-0.04	0.09	0.26	1193
Car Theft Rate	House	0.01	0.77	-0.05	0.06	0.21	996
Violent Crime Rate	Governor	0.00	0.90	-0.03	0.04	0.17	1709
Violent Crime Rate	Senate	-0.02	0.37	-0.06	0.02	0.18	811
Violent Crime Rate	House	0.00	0.88	-0.04	0.05	0.16	721
Robbery Rate	Governor	0.02	0.48	-0.03	0.06	0.14	1496
Robbery Rate	Senate	-0.01	0.51	-0.06	0.03	0.29	1319
Robbery Rate	House	0.01	0.65	-0.04	0.07	0.15	697
Rape Rate	Governor	-0.01	0.56	-0.06	0.03	0.17	1745
Rape Rate	Senate	-0.03	0.44	-0.12	0.05	0.18	811
Rape Rate	House	0.06	0.13	-0.02	0.13	0.11	507
Property Crime Rate	Governor	0.00	0.97	-0.05	0.06	0.17	1741
Property Crime Rate	Senate	-0.03	0.62	-0.13	0.08	0.17	781
Property Crime Rate	House	0.00	0.92	-0.06	0.06	0.19	868
CO2 emissions	Governor	0.01	0.27	-0.01	0.02	0.14	1155
CO2 emissions	Senate	0.00	0.86	-0.02	0.02	0.23	789
CO2 emissions	House	0.01	0.50	-0.02	0.04	0.17	623
Residential Energy Price	Governor	0.04	0.04	0.00	0.08	0.14	1082
Residential Energy Price	Senate	0.01	0.62	-0.03	0.05	0.22	852
Residential Energy Price	House	0.02	0.52	-0.03	0.06	0.16	601
Commercial Energy	Governor	0.01	0.65	-0.03	0.05	0.09	949
Commercial Energy	Senate	-0.03	0.27	-0.08	0.02	0.11	459
Commercial Energy	House	0.01	0.79	-0.04	0.05	0.14	639
# Felons Ineligible to Vote	Governor	0.01	0.85	-0.07	0.08	0.20	506
# Felons Ineligible to Vote	Senate	0.02	0.45	-0.04	0.08	0.19	281
# Felons Ineligible to Vote	House	-0.06	0.11	-0.14	0.01	0.15	220
Voter Turnout (VEP)	Governor	0.14	0.31	-0.13	0.40	0.15	439
Voter Turnout (VEP)	Senate	-0.36	0.41	-1.22	0.50	0.14	192
Voter Turnout (VEP)	House	0.44	0.33	-0.45	1.34	0.14	207
New Immigrant Green Card Holders	Governor	0.07	0.33	-0.07	0.21	0.27	896
New Immigrant Green Card Holders	Senate	-0.01	0.80	-0.10	0.08	0.16	405
New Immigrant Green Card Holders	House	0.00	0.81	-0.03	0.03	0.18	425

Table A25: Model Diagnostics for Figure A55 [2]

DV	Chamber	β	p	CI Lower	CI Upper	Bandwidth	Effective N
Birth Rate	Governor	0.04	0.51	-0.08	0.16	0.12	414
Birth Rate	Senate	0.08	0.29	-0.07	0.22	0.18	345
Birth Rate	House	0.02	0.71	-0.08	0.11	0.26	466
Divorce Rate	Governor	-0.01	0.57	-0.07	0.04	0.12	649
Divorce Rate	Senate	0.07	0.21	-0.04	0.18	0.15	353
Divorce Rate	House	-0.02	0.61	-0.09	0.05	0.22	554
Abortion Rate	Governor	0.04	0.39	-0.06	0.15	0.21	557
Abortion Rate	Senate	0.06	0.36	-0.07	0.19	0.21	292
Abortion Rate	House	0.12	0.09	-0.02	0.26	0.12	141
Health Spending Per Capita	Governor	0.04	0.03	0.00	0.08	0.10	404
Health Spending Per Capita	Senate	0.03	0.30	-0.03	0.09	0.15	291
Health Spending Per Capita	House	0.03	0.21	-0.02	0.08	0.14	276
Number of Businesses	Governor	-0.07	0.18	-0.16	0.03	0.19	726
Number of Businesses	Senate	0.25	0.13	-0.08	0.58	0.21	517
Number of Businesses	House	-0.01	0.95	-0.34	0.32	0.24	570
Fraction Income top 0.1%	Governor	0.00	0.93	-0.07	0.07	0.16	1705
Fraction Income top 0.1%	Senate	-0.08	0.24	-0.21	0.05	0.18	811
Fraction Income top 0.1%	House	0.02	0.68	-0.07	0.11	0.24	1143
Fraction Income top 1%	Governor	0.01	0.82	-0.06	0.07	0.17	1805
Fraction Income top 1%	Senate	-0.07	0.17	-0.18	0.03	0.18	819
Fraction Income top 1%	House	-0.05	0.23	-0.14	0.03	0.16	738
Unemployment rate	Governor	0.06	0.55	-0.13	0.25	0.18	832
Unemployment rate	Senate	-0.10	0.46	-0.37	0.17	0.18	444
Unemployment rate	House	-0.01	0.93	-0.30	0.27	0.15	351
Value Added by Agricultural Sector	Governor	0.03	0.71	-0.11	0.16	0.13	285
Value Added by Agricultural Sector	Senate	-0.01	0.93	-0.15	0.14	0.17	208
Value Added by Agricultural Sector	House	0.06	0.39	-0.08	0.21	0.21	273
Gross State Product Per Capita	Governor	0.01	0.80	-0.04	0.05	0.16	650
Gross State Product Per Capita	Senate	0.03	0.24	-0.02	0.08	0.17	430
Gross State Product Per Capita	House	-0.01	0.63	-0.07	0.04	0.16	365
Housing Prices	Governor	0.04	0.24	-0.03	0.10	0.15	1000
Housing Prices	Senate	0.02	0.52	-0.04	0.09	0.19	637
Housing Prices	House	0.01	0.81	-0.04	0.05	0.13	420
Consumer Price Index	Governor	0.01	0.21	0.00	0.02	0.17	1518
Consumer Price Index	Senate	0.00	1.00	-0.02	0.02	0.20	773
Consumer Price Index	House	0.01	0.20	-0.01	0.03	0.16	673
Population Growth	Governor	-0.01	0.71	-0.08	0.06	0.12	1333
Population Growth	Senate	0.08	0.37	-0.09	0.25	0.16	771
Population Growth	House	-0.01	0.81	-0.09	0.07	0.16	738
Real Per Capita Personal Income	Governor	-0.02	0.19	-0.05	0.01	0.14	1417
Real Per Capita Personal Income	Senate	0.03	0.21	-0.01	0.07	0.13	567
Real Per Capita Personal Income	House	0.01	0.38	-0.02	0.04	0.23	1091

10 RDD for Unified Control

Figure A56: RDD Estimates of Unified Democratic Control Compared to Unified Republican Control/Divided Gov't

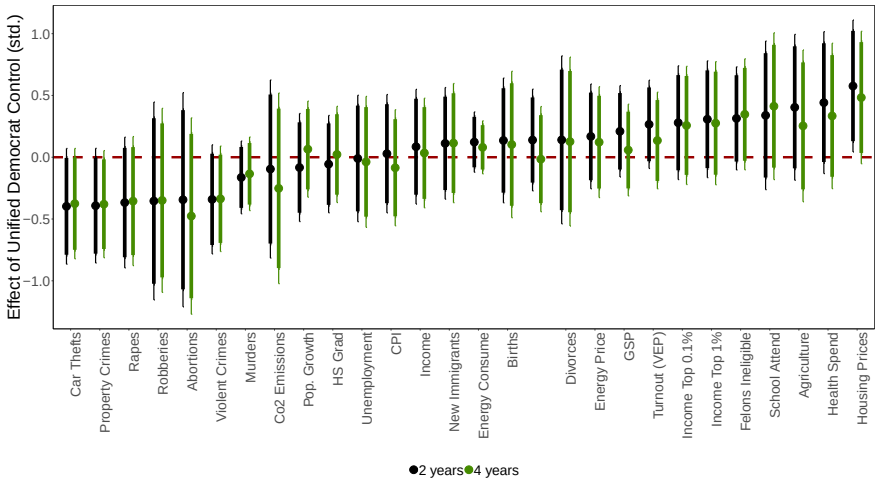


Figure A56 plots coefficient estimates (points) and corresponding 90% (thick) and 95% (thin) confidence intervals for the regression discontinuity estimates for unified democratic control compared to unified Republican control and divided government. Coefficients are sorted from smallest to largest for year 2 effects. Following previous work estimating the effect of party control (Caughey, Warshaw and Xu 2017; Hall, Feigenbaum and Fouirnaies 2017), standard errors are clustered at the state level.

Figure A57: RDD Estimates of Unified Democratic Control Compared to Unified Republican Control/Divided Gov't

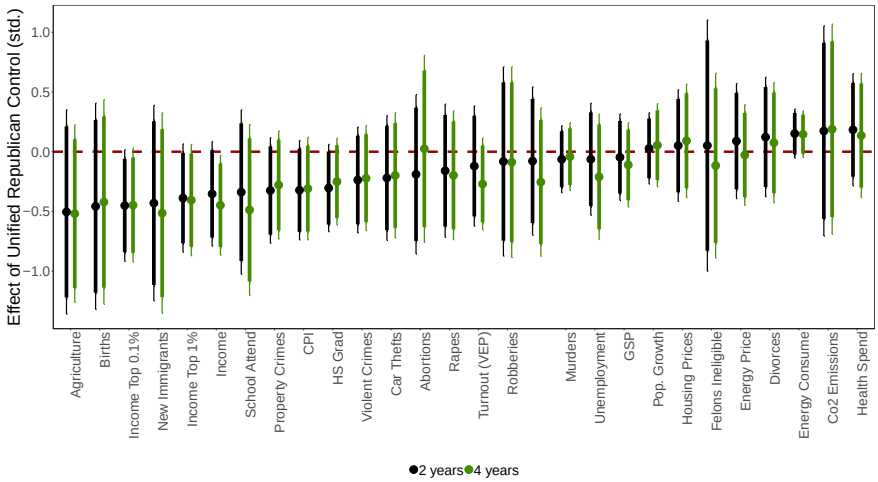


Figure A57 plots coefficient estimates (points) and corresponding 90% (thick) and 95% (thin) confidence intervals for the regression discontinuity estimates for unified Republican control compared to unified Democratic control and divided government. Coefficients are sorted from smallest to largest for year 2 effects. Following previous work estimating the effect of party control (Caughey, Warshaw and Xu 2017; Hall, Feigenbaum and Fouirnaies 2017), standard errors are clustered at the state level.

11 Multi-Cutoff RDD Results

Figure A58: Summary of Multi-Cutoff RDD Estimates Treatment Types, No FE

Distribution β, Years 1-4 Distribution of p, Years 1-4

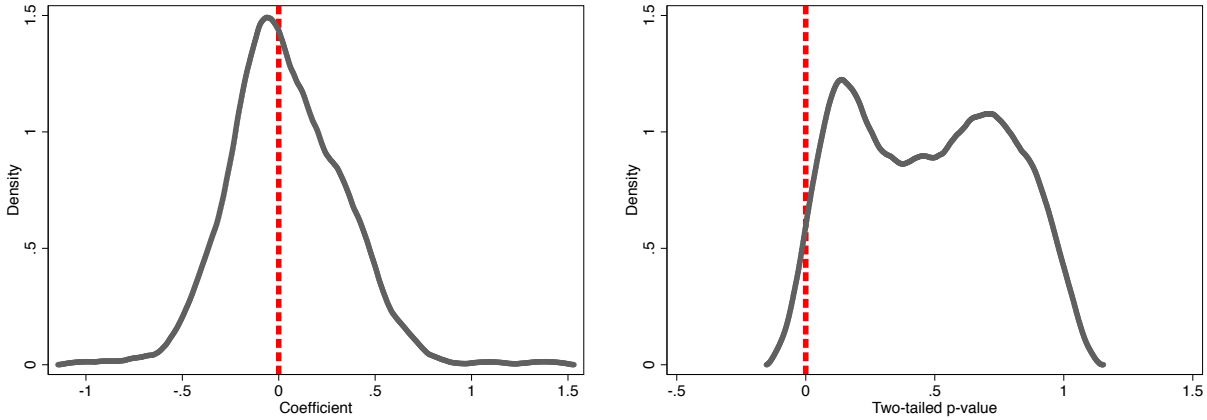


Figure A58 plots the distribution of p-values and coefficients from the multi-cutoff regression discontinuity estimates.

Figure A59: Summary of Multi-Cutoff Estimates Treatment Types, State + Year FE

Distribution β, Years 1-4 Distribution of p, Years 1-4

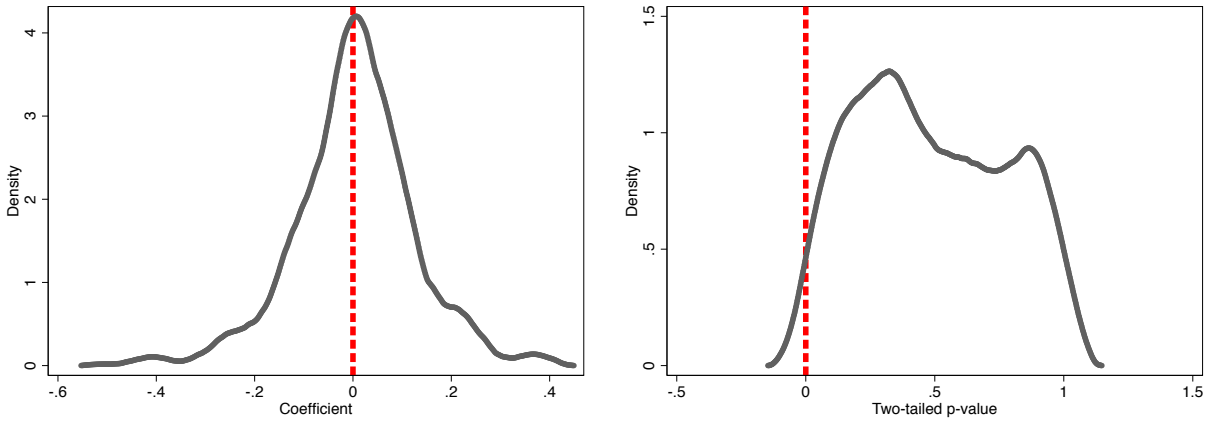


Figure A59 plots the distribution of p-values and coefficients from the multi-treatment regression discontinuity estimates with state and year fixed effects.

12 Alternate Ways to Define the Running Variable

Hall, Feigenbaum and Fouirnaies (2017) propose three alternate ways of creating the running variable for legislative party control, all of which rely on the closeness of individual state legislative races. The first—what they call the "Euclidean Distance" approach—measures the "distance between the vector of running variables and the treatment boundary" Hall, Feigenbaum and Fouirnaies (2017, 13). While having a nice geometrical procedure, Hall, Feigenbaum and Fouirnaies (2017) note that this specification is less interpretable. The second approach—what they call the "Manhattan distance" method—measures the cumulative total of "how many additional percentage points the party would have to be given to flip majority status" Hall, Feigenbaum and Fouirnaies (2017, 13). For example, if a party needed to win three seats in order to secure a majority, the "Manhattan Distance" would be the sum of the three closest seats distance below their individual race cutoffs.[v] The third approach—what they call the "Uniform Swing" method—uses the individual race score for the candidate that would push the legislature over the cutoff. That is, if a state were to be three seats away from the majority, the "Uniform Swing" method would use the third lowest race below the cutoff Hall, Feigenbaum and Fouirnaies (2017). The rationale here is that you are only as close to achieving control as your lowest race. Hall, Feigenbaum and Fouirnaies (2017, 13) note that this measure "assumes perfect correlation across elections."[w]

Figure A60 shows the McCrary density check across these three variables. As can be seen, there is a slight imbalance in the Manhattan distance, but balance across the other two. This combined with the covariate balance reported by Hall, Feigenbaum and Fouirnaies (2017) suggests that this is a valid way for specifying proximity to treatment.

[v] Conversely, if a legislature were in the majority by three seats, they would only be as close to falling into the minority as their three seats above the cutoff

[w] Specifying the cutoff in these ways preserves the balance that we show in Table A14. Consistent with work by Hall, Feigenbaum and Fouirnaies (2017) and Caughey, Warshaw and Xu (2017), there is, perhaps, even more balance with these alternate running variable scores.

Figure A60: McCrary Density Check for Precise Sorting (Alternate RVs)

(a) Euclidean (b) Uniform (c) Manhattan

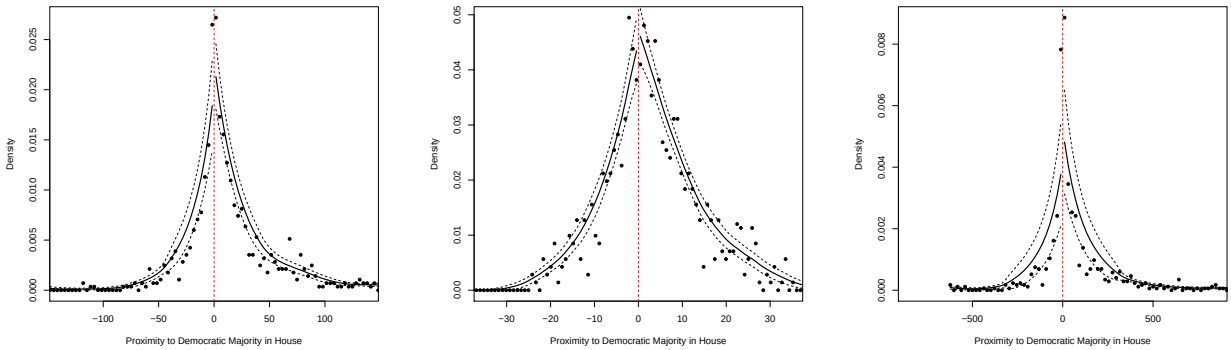


Figure A60 displays the McCrary Density Test for precise sorting (McCrary 2008). The x-axis displays the running variable for these three individual cutoffs. Corresponding p-values for H_0 = continuity at the cutoff: Euclidean = 0.10, Uniform = 0.65, Manhattan = 0.00.

Following the lead of Hall, Feigenbaum and Fouirnaies (2017), we estimate these models for the lower chamber as this is a cleaner comparison given non-overlapping election windows. However, the results do not change if we do our own calculation of their running variable scores for the upper chamber (available upon request). Figure A61 shows our RDD results using these alternate specifications of the running variable.

Figure A62 shows the results with state and year fixed effects. The results are very consistent with those that we have outlined in the paper. There is little evidence of systematic effects on policy outcomes. And when there is divergence, the Hall, Feigenbaum and Fouirnaies (2017) running variables show estimates that are close to zero, with less evidence of significant effects.

These results suggest that our conclusions are not an artifact of the construction of the running variable.

Figure A61: RDD Effect of Democratic Control: Alternate Running Variables (House; All Variables)

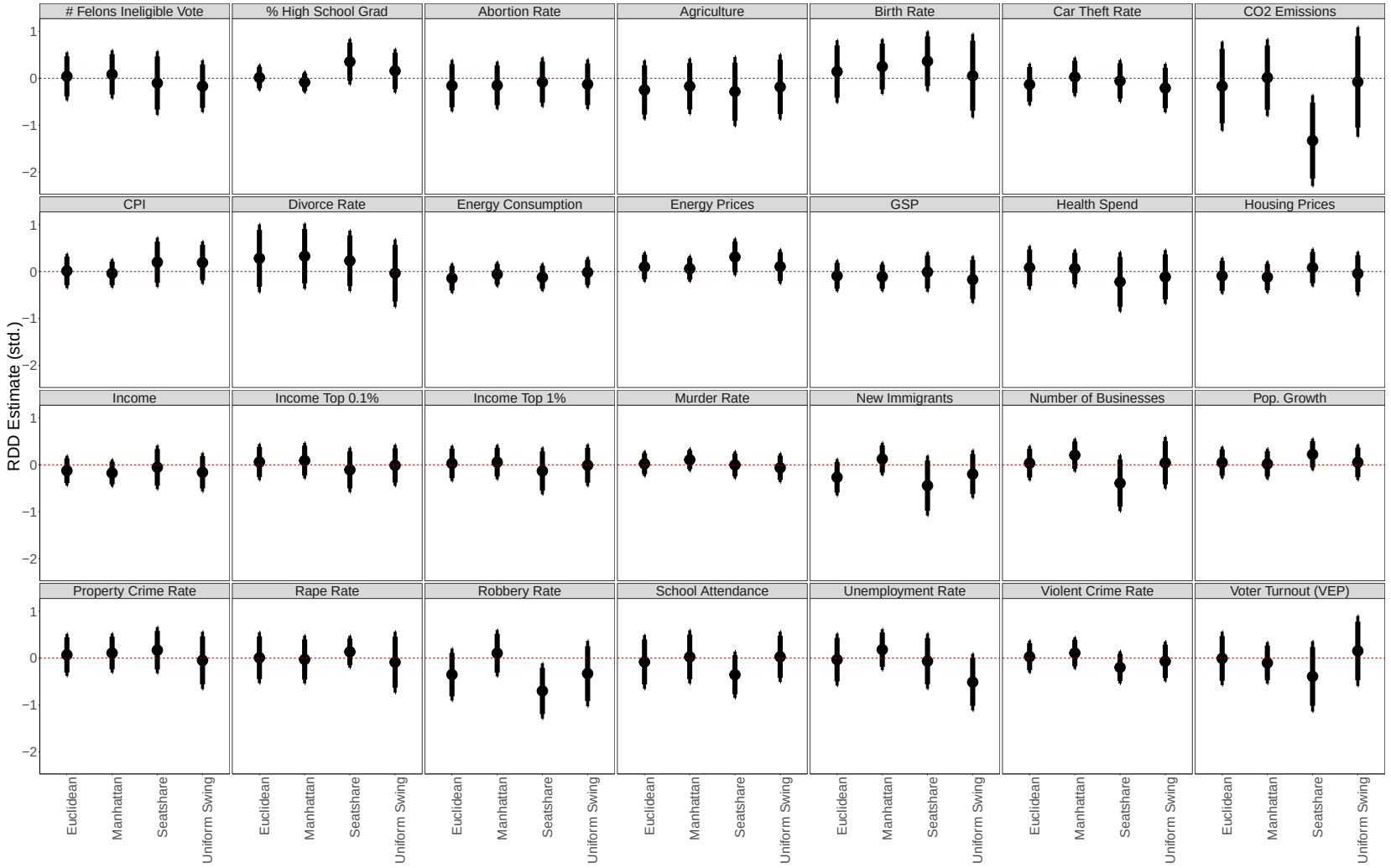


Figure A61 plots coefficient estimates (points) and corresponding 90% (thick) and 95% (thin) confidence intervals for the regression discontinuity estimates. Following previous work estimating the effect of party control (Caughey, Warshaw and Xu 2017; Hall, Feigenbaum and Fouirnaies 2017), standard errors are clustered at the state level. Following Hall, Feigenbaum and Fouirnaies (2017) we focus our attention on the lower chamber. The estimates use the optimal bandwidth as specified by the `rdrobust` command in `STATA` created by Calonico, Cattaneo and Titiunik (2014).

Table A26: Model Diagnostics for Figure A61 [1]

DV	RV	β	p	CI Lower	CI Upper	Bandwidth	Effective N
School Attendance	Seatshare	-0.35	0.16	-0.85	0.14	0.17	385
% High School Grad	Seatshare	0.35	0.16	-0.13	0.84	0.26	1110
Murder Rate	Seatshare	0.00	0.99	-0.29	0.29	0.24	1167
Car Theft Rate	Seatshare	-0.06	0.80	-0.51	0.39	0.23	1091
Violent Crime Rate	Seatshare	-0.20	0.26	-0.54	0.15	0.21	1017
Robbery Rate	Seatshare	-0.70	0.02	-1.29	-0.11	0.16	750
Rape Rate	Seatshare	0.13	0.44	-0.20	0.47	0.19	914
Property Crime Rate	Seatshare	0.17	0.50	-0.32	0.66	0.16	757
CO2 Emissions	Seatshare	-1.33	0.01	-2.30	-0.36	0.13	452
Energy Prices	Seatshare	0.31	0.12	-0.08	0.70	0.22	858
Energy Consumption	Seatshare	-0.12	0.41	-0.41	0.17	0.23	939
# Felons Ineligible Vote	Seatshare	-0.10	0.77	-0.78	0.57	0.20	301
Voter Turnout (VEP)	Seatshare	-0.39	0.31	-1.14	0.36	0.22	381
New Immigrants	Seatshare	-0.44	0.17	-1.08	0.19	0.13	304
Birth Rate	Seatshare	0.36	0.26	-0.27	1.00	0.24	454
Divorce Rate	Seatshare	0.23	0.49	-0.41	0.87	0.20	544
Abortion Rate	Seatshare	-0.08	0.76	-0.61	0.44	0.21	348
Health Spend	Seatshare	-0.22	0.50	-0.85	0.41	0.17	331
Number of Businesses	Seatshare	-0.39	0.20	-0.99	0.21	0.16	442
Income Top 0.1%	Seatshare	-0.11	0.66	-0.58	0.36	0.15	721
Income Top 1%	Seatshare	-0.13	0.61	-0.63	0.37	0.15	714
Unemployment Rate	Seatshare	-0.07	0.83	-0.65	0.52	0.26	706
Agriculture	Seatshare	-0.28	0.45	-1.02	0.45	0.21	433
GSP	Seatshare	-0.01	0.96	-0.43	0.41	0.18	431
Housing Prices	Seatshare	0.08	0.68	-0.31	0.48	0.22	810
CPI	Seatshare	0.20	0.46	-0.33	0.72	0.24	969
Pop. Growth	Seatshare	0.22	0.19	-0.11	0.56	0.16	730
Income	Seatshare	-0.05	0.82	-0.52	0.41	0.18	780
School Attendance	Uniform Swing	0.03	0.92	-0.51	0.56	8.12	510
School Attendance	Euclidean	-0.08	0.78	-0.65	0.49	23.66	569
School Attendance	Manhattan	0.03	0.93	-0.54	0.59	95.58	607
% High School Grad	Uniform Swing	0.16	0.51	-0.31	0.62	5.99	687
% High School Grad	Euclidean	0.01	0.92	-0.26	0.29	24.71	973
% High School Grad	Manhattan	-0.08	0.46	-0.31	0.14	99.41	1035
Murder Rate	Uniform Swing	-0.06	0.69	-0.37	0.24	6.91	736
Murder Rate	Euclidean	0.02	0.86	-0.24	0.29	25.34	960
Murder Rate	Manhattan	0.11	0.38	-0.13	0.35	125.47	1074
Car Theft Rate	Uniform Swing	-0.21	0.43	-0.73	0.31	8.09	838
Car Theft Rate	Euclidean	-0.13	0.56	-0.57	0.31	25.93	972
Car Theft Rate	Manhattan	0.03	0.89	-0.38	0.44	114.52	1042
Violent Crime Rate	Uniform Swing	-0.07	0.75	-0.49	0.36	7.60	792
Violent Crime Rate	Euclidean	0.03	0.86	-0.31	0.37	27.33	990
Violent Crime Rate	Manhattan	0.11	0.53	-0.23	0.44	114.60	1042
Robbery Rate	Uniform Swing	-0.33	0.35	-1.03	0.37	6.40	712
Robbery Rate	Euclidean	-0.35	0.21	-0.90	0.20	16.77	792
Robbery Rate	Manhattan	0.10	0.68	-0.39	0.60	99.09	1004
Rape Rate	Uniform Swing	-0.09	0.79	-0.74	0.56	8.56	864
Rape Rate	Euclidean	0.01	0.98	-0.54	0.55	25.11	958
Rape Rate	Manhattan	-0.03	0.91	-0.54	0.48	105.89	1016
Property Crime Rate	Uniform Swing	-0.05	0.88	-0.66	0.56	9.19	908
Property Crime Rate	Euclidean	0.07	0.76	-0.38	0.52	47.34	1188
Property Crime Rate	Manhattan	0.11	0.61	-0.31	0.52	173.00	1170
CO2 Emissions	Uniform Swing	-0.08	0.90	-1.24	1.09	8.40	577
CO2 Emissions	Euclidean	-0.17	0.73	-1.12	0.78	23.18	606
CO2 Emissions	Manhattan	0.01	0.97	-0.80	0.83	99.88	641

Note that the seat share running variable is in proportions, whereas the others are in votes cast.

Table A27: Model Diagnostics for Figure A61 [2]

DV	RV	β	p	CI Lower	CI Upper	Bandwidth	Effective N
Energy Prices	Uniform Swing	0.11	0.57	-0.26	0.47	6.33	643
Energy Prices	Euclidean	0.10	0.53	-0.21	0.41	24.06	839
Energy Prices	Manhattan	0.06	0.67	-0.22	0.34	84.48	864
Energy Consumption	Uniform Swing	-0.02	0.92	-0.34	0.30	7.26	652
Energy Consumption	Euclidean	-0.14	0.37	-0.45	0.17	18.64	698
Energy Consumption	Manhattan	-0.06	0.67	-0.32	0.20	81.39	809
# Felons Ineligible Vote	Uniform Swing	-0.17	0.55	-0.72	0.38	5.66	248
# Felons Ineligible Vote	Euclidean	0.04	0.88	-0.47	0.55	28.21	389
# Felons Ineligible Vote	Manhattan	0.08	0.75	-0.43	0.60	98.21	387
Voter Turnout (VEP)	Uniform Swing	0.15	0.69	-0.59	0.90	6.89	296
Voter Turnout (VEP)	Euclidean	-0.01	0.98	-0.58	0.56	25.87	399
Voter Turnout (VEP)	Manhattan	-0.10	0.65	-0.54	0.34	130.41	448
New Immigrants	Uniform Swing	-0.20	0.45	-0.70	0.31	5.06	356
New Immigrants	Euclidean	-0.27	0.18	-0.65	0.12	13.60	424
New Immigrants	Manhattan	0.12	0.48	-0.22	0.47	73.02	566
Birth Rate	Uniform Swing	0.05	0.91	-0.84	0.94	9.72	443
Birth Rate	Euclidean	0.14	0.67	-0.52	0.81	27.29	470
Birth Rate	Manhattan	0.25	0.40	-0.33	0.83	110.28	496
Divorce Rate	Uniform Swing	-0.03	0.92	-0.75	0.68	8.97	556
Divorce Rate	Euclidean	0.28	0.45	-0.44	1.00	40.11	703
Divorce Rate	Manhattan	0.33	0.35	-0.37	1.02	170.08	721
Abortion Rate	Uniform Swing	-0.13	0.64	-0.66	0.40	5.91	252
Abortion Rate	Euclidean	-0.16	0.57	-0.71	0.39	20.55	325
Abortion Rate	Manhattan	-0.15	0.56	-0.66	0.35	87.66	363
Health Spend	Uniform Swing	-0.11	0.69	-0.69	0.46	9.06	455
Health Spend	Euclidean	0.08	0.73	-0.38	0.54	23.04	462
Health Spend	Manhattan	0.06	0.75	-0.34	0.47	64.55	439
Number of Businesses	Uniform Swing	0.04	0.88	-0.51	0.59	6.25	473
Number of Businesses	Euclidean	0.04	0.85	-0.33	0.40	21.67	615
Number of Businesses	Manhattan	0.21	0.25	-0.14	0.56	88.91	672
Income Top 0.1%	Uniform Swing	-0.01	0.96	-0.45	0.43	6.56	738
Income Top 0.1%	Euclidean	0.06	0.76	-0.32	0.44	21.93	923
Income Top 0.1%	Manhattan	0.09	0.64	-0.29	0.47	89.87	1002
Income Top 1%	Uniform Swing	-0.01	0.97	-0.45	0.43	6.68	743
Income Top 1%	Euclidean	0.03	0.88	-0.35	0.41	22.87	939
Income Top 1%	Manhattan	0.06	0.76	-0.31	0.42	97.62	1023
Unemployment Rate	Uniform Swing	-0.51	0.10	-1.12	0.09	5.17	396
Unemployment Rate	Euclidean	-0.03	0.91	-0.59	0.52	19.16	539
Unemployment Rate	Manhattan	0.18	0.42	-0.25	0.62	109.09	661
Agriculture	Uniform Swing	-0.18	0.60	-0.88	0.51	7.46	352
Agriculture	Euclidean	-0.25	0.44	-0.88	0.38	30.37	484
Agriculture	Manhattan	-0.17	0.57	-0.76	0.42	92.86	461
GSP	Uniform Swing	-0.17	0.50	-0.67	0.33	7.26	467
GSP	Euclidean	-0.09	0.59	-0.42	0.24	22.39	559
GSP	Manhattan	-0.11	0.48	-0.42	0.20	66.16	545
Housing Prices	Uniform Swing	-0.04	0.85	-0.51	0.42	6.67	616
Housing Prices	Euclidean	-0.09	0.64	-0.47	0.29	23.74	799
Housing Prices	Manhattan	-0.12	0.49	-0.45	0.22	77.63	813
CPI	Uniform Swing	0.19	0.41	-0.26	0.64	6.42	593
CPI	Euclidean	0.01	0.95	-0.35	0.38	28.43	823
CPI	Manhattan	-0.04	0.80	-0.34	0.26	138.45	883
Pop. Growth	Uniform Swing	0.05	0.78	-0.32	0.43	6.27	665
Pop. Growth	Euclidean	0.05	0.78	-0.29	0.38	23.87	883
Pop. Growth	Manhattan	0.02	0.91	-0.31	0.35	122.38	1012
Income	Uniform Swing	-0.16	0.44	-0.57	0.25	7.43	709
Income	Euclidean	-0.12	0.44	-0.44	0.19	22.53	823
Income	Manhattan	-0.17	0.23	-0.46	0.11	103.81	906

Note that the seat share running variable is in proportions, whereas the others are in votes cast.

Figure A62: RDD + Diff-in-Diff Effect of Democratic Control: Alternate Running Variables (House; All Variables)

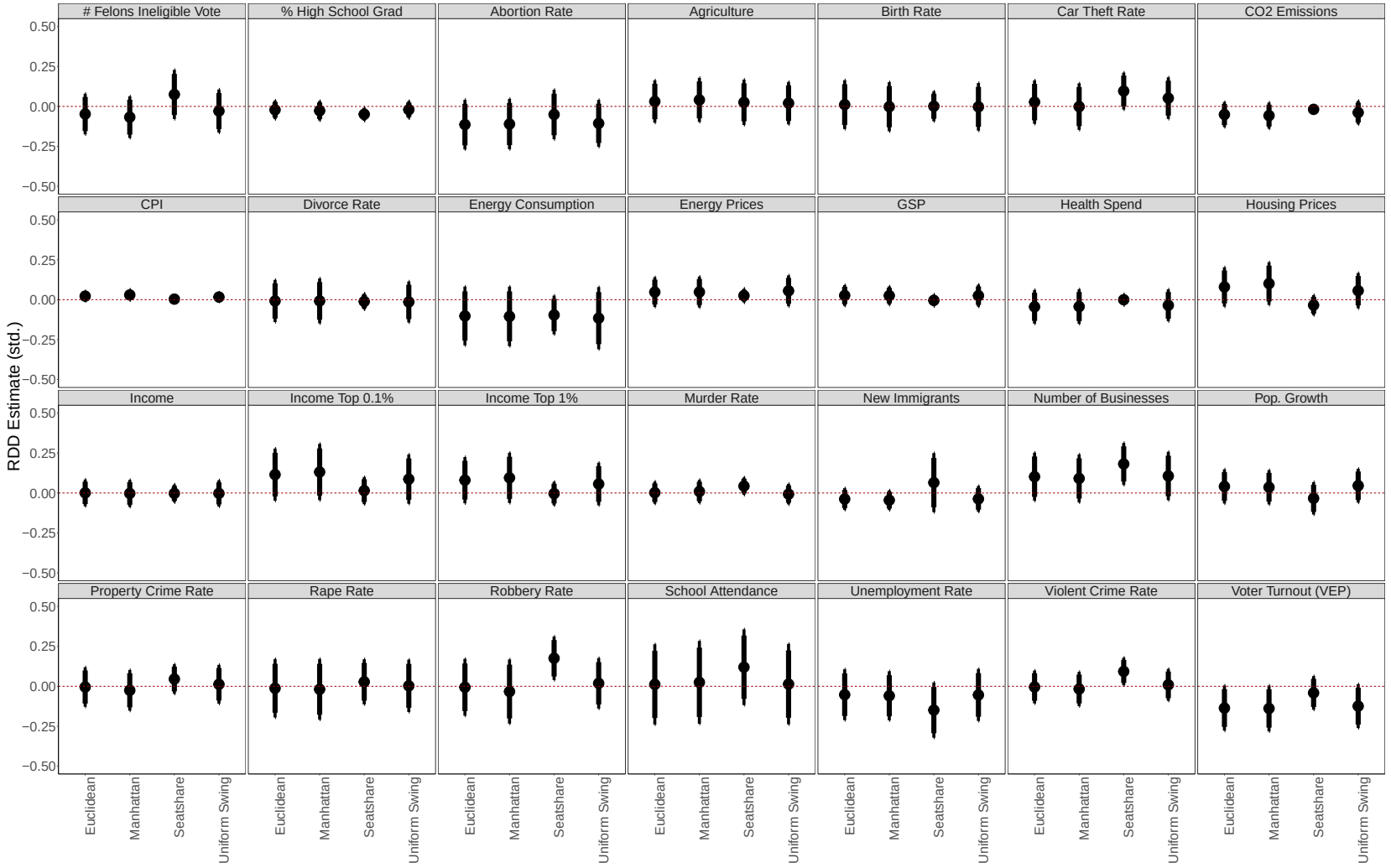


Figure A62 plots coefficient estimates (points) and corresponding 90% (thick) and 95% (thin) confidence intervals for the regression discontinuity + state and year fixed effect estimates. Following previous work estimating the effect of party control (Caughey, Warshaw and Xu 2017; Hall, Feigenbaum and Fouirnaies 2017), standard errors are clustered at the state level. Following Hall, Feigenbaum and Fouirnaies (2017) we focus our attention on the lower chamber. Results correspond to a full bandwidth.

Table A28: Model Diagnostics for Figure A62 [1]

DV	RV	β	p	CI Lower	CI Upper	N
School Attendance	Uniform Swing	0.01	0.92	-0.25	0.27	897
School Attendance	Euclidean	0.01	0.93	-0.25	0.27	917
School Attendance	Manhattan	0.02	0.85	-0.24	0.29	917
% High School Grad	Uniform Swing	-0.02	0.46	-0.08	0.04	1428
% High School Grad	Euclidean	-0.02	0.48	-0.08	0.04	1458
% High School Grad	Manhattan	-0.03	0.39	-0.09	0.04	1458
Murder Rate	Uniform Swing	-0.01	0.83	-0.07	0.06	1517
Murder Rate	Euclidean	0.00	0.95	-0.07	0.07	1553
Murder Rate	Manhattan	0.01	0.80	-0.07	0.08	1553
Car Theft Rate	Uniform Swing	0.05	0.44	-0.08	0.19	1517
Car Theft Rate	Euclidean	0.03	0.70	-0.11	0.17	1553
Car Theft Rate	Manhattan	0.00	0.99	-0.15	0.15	1553
Violent Crime Rate	Uniform Swing	0.01	0.86	-0.09	0.11	1517
Violent Crime Rate	Euclidean	0.00	0.93	-0.11	0.10	1553
Violent Crime Rate	Manhattan	-0.02	0.76	-0.13	0.09	1553
Robbery Rate	Uniform Swing	0.02	0.82	-0.15	0.18	1517
Robbery Rate	Euclidean	-0.01	0.95	-0.19	0.18	1553
Robbery Rate	Manhattan	-0.03	0.75	-0.24	0.17	1553
Rape Rate	Uniform Swing	0.00	0.97	-0.17	0.17	1517
Rape Rate	Euclidean	-0.01	0.89	-0.20	0.18	1553
Rape Rate	Manhattan	-0.02	0.85	-0.22	0.18	1553
Property Crime Rate	Uniform Swing	0.01	0.84	-0.11	0.14	1517
Property Crime Rate	Euclidean	0.00	0.94	-0.13	0.12	1553
Property Crime Rate	Manhattan	-0.03	0.70	-0.16	0.11	1553
CO2 Emissions	Uniform Swing	-0.04	0.31	-0.11	0.04	1006
CO2 Emissions	Euclidean	-0.05	0.21	-0.13	0.03	1038
CO2 Emissions	Manhattan	-0.06	0.18	-0.14	0.03	1038
Energy Prices	Uniform Swing	0.06	0.27	-0.04	0.16	1359
Energy Prices	Euclidean	0.05	0.32	-0.05	0.14	1395
Energy Prices	Manhattan	0.05	0.34	-0.05	0.15	1395
Energy Consumption	Uniform Swing	-0.12	0.25	-0.32	0.09	1279
Energy Consumption	Euclidean	-0.10	0.28	-0.29	0.09	1315
Energy Consumption	Manhattan	-0.10	0.28	-0.30	0.09	1315
# Felons Ineligible Vote	Uniform Swing	-0.03	0.67	-0.17	0.11	581
# Felons Ineligible Vote	Euclidean	-0.05	0.47	-0.18	0.08	595
# Felons Ineligible Vote	Manhattan	-0.07	0.32	-0.20	0.07	595
Voter Turnout (VEP)	Uniform Swing	-0.12	0.08	-0.27	0.02	621
Voter Turnout (VEP)	Euclidean	-0.14	0.07	-0.28	0.01	635
Voter Turnout (VEP)	Manhattan	-0.14	0.06	-0.29	0.01	635
New Immigrants	Uniform Swing	-0.04	0.38	-0.12	0.05	906
New Immigrants	Euclidean	-0.04	0.28	-0.11	0.03	923
New Immigrants	Manhattan	-0.05	0.16	-0.11	0.02	923
Birth Rate	Uniform Swing	0.00	0.97	-0.16	0.15	678
Birth Rate	Euclidean	0.01	0.89	-0.15	0.17	692
Birth Rate	Manhattan	0.00	0.98	-0.16	0.16	692
Divorce Rate	Uniform Swing	-0.01	0.83	-0.15	0.12	971
Divorce Rate	Euclidean	-0.01	0.91	-0.14	0.13	998
Divorce Rate	Manhattan	-0.01	0.92	-0.15	0.14	998
Abortion Rate	Uniform Swing	-0.11	0.17	-0.26	0.05	619
Abortion Rate	Euclidean	-0.11	0.16	-0.27	0.05	640
Abortion Rate	Manhattan	-0.11	0.18	-0.27	0.05	640
Health Spend	Uniform Swing	-0.04	0.49	-0.14	0.07	718
Health Spend	Euclidean	-0.04	0.41	-0.15	0.06	732
Health Spend	Manhattan	-0.04	0.44	-0.16	0.07	732
Number of Businesses	Uniform Swing	0.11	0.18	-0.05	0.26	1000
Number of Businesses	Euclidean	0.10	0.19	-0.05	0.26	1022
Number of Businesses	Manhattan	0.09	0.24	-0.06	0.25	1022
Income Top 0.1%	Uniform Swing	0.09	0.28	-0.07	0.25	1517
Income Top 0.1%	Euclidean	0.12	0.18	-0.05	0.28	1553
Income Top 0.1%	Manhattan	0.13	0.15	-0.05	0.31	1553
Income Top 1%	Uniform Swing	0.06	0.41	-0.08	0.19	1517
Income Top 1%	Euclidean	0.08	0.28	-0.07	0.23	1553
Income Top 1%	Manhattan	0.09	0.24	-0.07	0.26	1553

Table A29: Model Diagnostics for Figure A62 [1]

DV	RV	β	p	CI Lower	CI Upper	N
Unemployment Rate	Uniform Swing	-0.05	0.52	-0.22	0.11	997
Unemployment Rate	Euclidean	-0.05	0.52	-0.22	0.11	1024
Unemployment Rate	Manhattan	-0.06	0.45	-0.22	0.10	1024
Agriculture	Uniform Swing	0.02	0.77	-0.12	0.16	673
Agriculture	Euclidean	0.03	0.65	-0.11	0.17	685
Agriculture	Manhattan	0.04	0.57	-0.10	0.18	685
GSP	Uniform Swing	0.03	0.48	-0.05	0.10	902
GSP	Euclidean	0.03	0.43	-0.04	0.09	920
GSP	Manhattan	0.03	0.39	-0.03	0.09	920
Housing Prices	Uniform Swing	0.06	0.32	-0.06	0.17	1311
Housing Prices	Euclidean	0.08	0.21	-0.05	0.21	1343
Housing Prices	Manhattan	0.10	0.15	-0.04	0.24	1343
CPI	Uniform Swing	0.02	0.23	-0.01	0.04	1240
CPI	Euclidean	0.02	0.14	-0.01	0.05	1275
CPI	Manhattan	0.03	0.07	0.00	0.06	1275
Pop. Growth	Uniform Swing	0.05	0.40	-0.06	0.16	1439
Pop. Growth	Euclidean	0.04	0.46	-0.07	0.15	1475
Pop. Growth	Manhattan	0.04	0.52	-0.07	0.15	1475
Income	Uniform Swing	0.00	0.95	-0.09	0.08	1359
Income	Euclidean	0.00	0.98	-0.09	0.09	1395
Income	Manhattan	0.00	0.95	-0.09	0.08	1395
School Attendance	Seatshare	0.12	0.33	-0.12	0.36	1176
% High School Grad	Seatshare	-0.05	0.02	-0.09	-0.01	2196
Murder Rate	Seatshare	0.04	0.13	-0.01	0.10	2546
Car Theft Rate	Seatshare	0.10	0.11	-0.02	0.21	2548
Violent Crime Rate	Seatshare	0.09	0.04	0.00	0.18	2546
Robbery Rate	Seatshare	0.18	0.01	0.04	0.32	2546
Rape Rate	Seatshare	0.03	0.70	-0.12	0.17	2546
Property Crime Rate	Seatshare	0.05	0.34	-0.05	0.14	2546
CO2 Emissions	Seatshare	-0.02	0.10	-0.04	0.00	1911
Energy Prices	Seatshare	0.03	0.25	-0.02	0.07	2009
Energy Consumption	Seatshare	-0.10	0.13	-0.22	0.03	2254
# Felons Ineligible Vote	Seatshare	0.07	0.35	-0.08	0.23	784
Voter Turnout (VEP)	Seatshare	-0.04	0.44	-0.15	0.07	832
New Immigrants	Seatshare	0.06	0.49	-0.12	0.25	1176
Birth Rate	Seatshare	0.00	0.98	-0.10	0.10	882
Divorce Rate	Seatshare	-0.01	0.67	-0.06	0.04	1389
Abortion Rate	Seatshare	-0.05	0.53	-0.21	0.11	913
Health Spend	Seatshare	0.00	0.99	-0.03	0.03	931
Number of Businesses	Seatshare	0.18	0.01	0.05	0.32	1413
Income Top 0.1%	Seatshare	0.01	0.74	-0.07	0.10	2548
Income Top 1%	Seatshare	0.00	0.92	-0.08	0.07	2548
Unemployment Rate	Seatshare	-0.15	0.10	-0.33	0.03	1421
Agriculture	Seatshare	0.03	0.72	-0.12	0.17	980
GSP	Seatshare	0.00	0.81	-0.04	0.03	1176
Housing Prices	Seatshare	-0.03	0.29	-0.10	0.03	1813
CPI	Seatshare	0.00	0.56	-0.01	0.02	2205
Pop. Growth	Seatshare	-0.03	0.52	-0.14	0.07	2450
Income	Seatshare	0.00	0.93	-0.06	0.05	2352