Appendix

A Model Derivations

A.1 Constructing Weighted Average Congruence

For any person in district d, there are two general types of people they can be friends with: people who are also in district d, and people who are outside of the district (call them members of $nd \equiv \mathcal{D} \setminus d$).[25] To take a shortcut with notation, say that any person who is in county c and in district d has (on average) a share $\pi^d_{(c,d)}$ of friends in district d, and they have a share $\pi^{nd}_{(c,d)} = 1 - \pi^d_{(c,d)}$ of friends outside of their district, where $\pi^d_{(c,d)} = \sum_{c' \in \mathcal{C}} \pi_{(c,d)(c',d)}$, and $\pi^{nd}_{(c,d)} = \sum_{c' \in \mathcal{C}} \sum_{f \in \mathcal{D} \setminus d} \pi_{(c,d)(c',f)}$.

In order to construct $\pi^d_{(c,d)}$ (the share of type (c,d)'s friends that also live in d), I sum as follows:

$$\begin{aligned}
\pi^d_{(c,d)} &= \sum_{c' \in \mathcal{C}} \pi_{(c,d)(c',d)} \\
&= \sum_{c' \in \mathcal{C}} \sum_{d' \in D(c)} \left(\pi_{(c,d)(c',d')} \times \mathbb{I}\{d' = d\} \right) \\
&= \sum_{c' \in \mathcal{C}} \sum_{d' \in D(c)} \left(\pi_{c,c'} \times q_{(c',d')} \times \mathbb{I}\{d' = d\} \right) \\
&= \sum_{c' \in \mathcal{C}} \left(\pi_{c,c'} \times q_{(c',d)} \right)
\end{aligned}$$

Next, define $\bar{\pi}_c$ as the share of county c's friendships that are between people in the same district. Put differently, $\bar{\pi}_c$ represents the probability that a randomly chosen person from county c interacts with a person from their own district (without conditioning on which district $d \in D(c)$ the county c person is from). We can construct $\bar{\pi}_c$ as follows:

[25] Both people in or outside the district may be in the same or different counties: for example, my county may be split across two districts (such that there are other people in my same county but in a different district), or my district may contain multiple counties (such that there are people in my same district but in a different county).

$$
\begin{aligned}
\bar{\pi}_c &= \sum_{d \in D(c)} \left(\pi^d_{(c,d)} \times q_{(c,d)} \right) \\
&= \sum_{d \in D(c)} \sum_{c' \in \mathcal{C}} \sum_{d' \in D(c')} \left(\pi_{c,c'} \times q_{(c,d)} \times q_{(c',d')} \times \mathbb{I}\{d' = d\} \right) \\
&= \sum_{d \in D(c)} \sum_{c' \in \mathcal{C}} \left(\pi_{c,c'} \times q_{(c,d)} \times q_{(c',d)} \right) \\
&= \sum_{c' \in \mathcal{C}} \left[(QQ^T) \circ \Pi' \right]_{c,c'}
\end{aligned}
$$

where Q represents the matrix of the population shares $q_{(c,d)}$, and observing that $q_{(k,d)} = 0$ whenever $k \cap d = \emptyset$.

$\bar{\pi}_c$ is congruence, or the share of friends that live in the same district. $\pi^d_{(c,d)}$ is an analogous to congruence, but specifically for people living in county c and district d (i.e., for people in county c and district d, the share of their friends that live in district d).

A.1.1 Constructing $\tilde{r}_c$

$\tilde{r}_c$ represents the probability that a randomly chosen friend is informed, conditional on that friend being in the same district as the chosen person from county c (but not conditioning on the person from c being from any particular district within c).

For each county, we know the share of that county that is in general informed about their own district, ρ_c.[26] Accordingly, conditional on a person in county c meeting a person in the same district as them, the probability that that person is informed is:

$$
\tilde{r}_c = \sum_{k \in C} P(\text{in county } k | \text{in same district}) \times \rho_k
$$

Using Bayes' Rule, we know that

$$
P(\text{in county } k | \text{in same district}) = \frac{P(\text{in same district} | \text{in county } k) P(\text{in county } k)}{P(\text{in same district})}
$$

[26] I omit time subscripts for brevity; the same relations apply in the steady state.

which in turn gives

$$P(\text{in county } k|\text{in same district}) = \frac{\sum_{d \in D(c)} \left(q_{(c,d)} \times q_{(k,d)}\right) \times \pi_{c,k}}{\bar{\pi}_c}$$

Accordingly,

$$\begin{aligned}\tilde{r}_c &= \sum_{k \in C} \frac{\sum_{d \in D(c)} \left(q_{(c,d)} \times q_{(k,d)}\right) \times \pi_{c,k}}{\bar{\pi}_c} \times \rho_k \\ &= \frac{1}{\bar{\pi}_c} \sum_{k \in C} \sum_{d \in D(c)} \left(q_{(c,d)} \times q_{(k,d)} \times \pi_{c,k} \times \rho_k\right)\end{aligned}$$

B Data Descriptions

B.1 Variables from CES

B.2 Construction of Vote Count Measures

B.2.1 County-by-congressional district measures

I construct the voting outcomes at the county-by-CD-level by using precinct-level vote count data from the Harvard Election Data Archive (for 2000-2010) and the MIT Election Data and Science Lab (for 2016-2020), combined with county-by-congressional-district vote count data from Dave Leip's Election Atlas (for House elections) and Daily Kos (for President, Senator, and Governor elections).

Variable	Description
Heard of Representative	When shown the name of their current House representative and asked to indicate the party their representative is affiliated with, respondent did not indicate they had "Never Heard of Person" , and they instead chose "Republican", "Democrat", "Other Party/Independent", or "Not Sure". Binary. From pre-survey.
Selected Party	When shown the name of their current House representative and asked to indicate the party their representative is affiliated with, respondent did not indicate they had "Never Heard of Person" or "Not Sure", and they instead chose "Republican", "Democrat", or "Other Party/Independent". Binary. From pre-survey.
Selected Correct Party	When shown the name of their current House representative and asked to indicate the party their representative is affiliated with, respondent chose the correct party. Binary. From pre-survey.
Prefer Incumbent	When asked "In the general election for U.S. House of Representatives in your area, who do you prefer?", respondent chose the name of their current House representative. Binary. From pre-survey. Missing if there is no incumbent running.
Prefer Opponent	When asked "In the general election for U.S. House of Representatives in your area, who do you prefer?", respondent chose the name of someone other than their current House representative. Binary. From pre-survey. Missing if there is no incumbent running.
Prefer Neither	When asked "In the general election for U.S. House of Representatives in your area, who do you prefer?", respondent did not choose the name of any candidate. Binary. From pre-survey. Missing if there is no incumbent running.
Voted for Incumbent	When asked "For whom did you vote for U.S. House?", respondent chose the name of their current House representative. Binary. From post-survey. Missing if there is no incumbent running. Missing if both "Voted in General Election" variables are missing.
Voted for Opponent	When asked "For whom did you vote for U.S. House?", respondent chose the name of someone other than their current House representative. Binary. From post-survey. Missing if there is no incumbent running. Missing if both "Voted in General Election" variables are missing.
Voted for Neither	When asked "For whom did you vote for U.S. House?", respondent did not choose the name of any candidate. Binary. From post-survey. Missing if there is no incumbent running. Missing if both "Voted in General Election" variables are missing.
Voted in General Election (Validated)	Respondent can be linked to state voter rolls, and there is a record of the respondent voting in the general election. Binary. From post-survey.
Voted in Primary Election (Validated)	Respondent can be linked to state voter rolls, and there is a record of the respondent voting in the primary election. Binary. From post-survey.
Voted in General Election (Self-Report)	Respondent answered that they voted in the general election. Binary. From post-survey.

Table 2: Descriptions for CES Outcome Variables

Variable	Observations	Mean (%)	SD (pp)
Heard of Representative	545,185	93.2	25.2
Selected Party	604,254	68.6	46.4
Selected Correct Party	604,254	61.7	48.6
Prefer Incumbent	419,545	40.14	49.0
Prefer Opponent	419,545	26.7	44.3
Prefer Neither	419,545	33.1	47.1
Voted for Incumbent	385,212	41.0	49.2
Voted for Opponent	385,212	29.1	45.4
Voted for Neither	385,212	29.9	45.8
Voted in General Election (Validated)	417,421	57.5	49.4
Voted in Primary Election (Validated)	381,277	31.8	46.6
Voted in General Election (Self-Report)	388,262	87.8	32.8

Table 3: CES Data: Summary Statistics

Variable	Description
House Turnout, Relative to Top-of-Ticket ("Roll-Off")	$\frac{\#\text{ Votes in Top-of-Ticket Race}-\#\text{ Votes in House Race}}{\#\text{ Votes in Top-of-Ticket Race}}$ For main analysis, from Dave Leip's Election Atlas (county-level). For robustness, from Harvard Election Data Archive, Daily Kos, Dave Leip's Election Atlas, and MIT Election Data and Science Lab (for county-by-congressional district-level). Elections where there is no top-of-ticket race are excluded.
Turnout in Top-of-Ticket Election	Turnout in the top-of-ticket election, as a share of the Voting Age Population (VAP), i.e. the population over age 18. Vote counts from Dave Leip's Election Atlas, VAP from Census. Elections where turnout exceeds the VAP are excluded; identical to House turnout when the House election is top-of-ticket.
Turnout in House Election	Turnout in the House election, as a share of the Voting Age Population (VAP). Vote counts from Dave Leip's Election Atlas, VAP from Census. Elections where turnout exceeds the VAP are excluded.

Table 4: Descriptions for Voting Outcome Variables

Variable	Observations	Mean (%)	SD (pp)
Roll-Off	29,133	4.42	12.22
Turnout in Top-of-Ticket Election	30,206	51.34	13.44
Turnout in House Election	30,308	49.07	13.49

Table 5: Voting Outcomes: Summary Statistics

	(1) No FE	(2) DI	(3) DMA	(4) State	(5) Dist	(6) DMA+State	(7) DMA+Dist	(8) DMA+State+DI	(9) DMA+Dist+DI
single_district	0.131***	0.134***	0.097***	0.000	0.000	0.000	0.000	0.000	0.000
	(0.008)	(0.008)	(0.018)	(.)	(.)	(.)	(.)	(.)	(.)
log_population	-0.047***	-0.047***	-0.036***	-0.039***	-0.023***	-0.035***	-0.024***	-0.033***	-0.024**
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
log_pop_den	-0.035***	-0.034***	-0.036***	-0.038***	-0.024***	-0.035***	-0.027***	-0.034***	-0.026**
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Interpolation of poppct_rural on year	0.202***	0.195***	0.129***	0.141***	0.080***	0.125***	0.089***	0.120***	0.086**
	(0.007)	(0.008)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
share_foreign	-1.276***	-1.314***	-0.914***	-0.923***	-0.613***	-0.868***	-0.673***	-0.905***	-0.703**
	(0.056)	(0.055)	(0.064)	(0.059)	(0.069)	(0.064)	(0.079)	(0.065)	(0.081)
share_moved	-0.775***	-0.809***	-0.677***	-0.620***	-0.550***	-0.671***	-0.574***	-0.649***	-0.562**
	(0.051)	(0.050)	(0.046)	(0.046)	(0.045)	(0.046)	(0.047)	(0.046)	(0.047)
(mean) share_white_not_hispanic	0.175***	0.161***	0.134***	0.144***	0.045***	0.135***	0.055***	0.109***	0.030
	(0.014)	(0.015)	(0.019)	(0.017)	(0.017)	(0.018)	(0.019)	(0.019)	(0.020)
(mean) share_ed_nohs	0.755***	0.674***	1.079***	1.111***	0.929***	1.056***	0.965***	1.024***	0.949**
	(0.054)	(0.054)	(0.064)	(0.066)	(0.066)	(0.063)	(0.069)	(0.064)	(0.069)
share_collegep	-1.188***	-1.155***	-0.977***	-1.064***	-0.829***	-0.948***	-0.829***	-0.928***	-0.821**
	(0.033)	(0.033)	(0.033)	(0.034)	(0.038)	(0.034)	(0.040)	(0.034)	(0.040)
(mean) share_below_pov	0.486***	0.504***	0.384***	0.437***	0.299***	0.338***	0.290***	0.429***	0.348**
	(0.039)	(0.038)	(0.043)	(0.044)	(0.045)	(0.044)	(0.046)	(0.044)	(0.047)
log_median_income	-0.260***	-0.251***	-0.216***	-0.242***	-0.149***	-0.206***	-0.150***	-0.211***	-0.156**
	(0.012)	(0.012)	(0.013)	(0.013)	(0.015)	(0.014)	(0.016)	(0.014)	(0.016)
dem_share2008	-0.275***	-0.508***	-0.232***	-0.233***	-0.098***	-0.222***	-0.122***	-0.315***	-0.151**
	(0.019)	(0.040)	(0.021)	(0.021)	(0.022)	(0.021)	(0.023)	(0.034)	(0.041)
Observations	3107	3107	3101	3107	2985	3101	2979	3101	2979

*** p<0.01, **p<0.05, * p<0.1

Notes: Each cell represents a regression of congruence on the variable indicated on the left. Demographics from 2010 Decennial Census and 2010-2014 ACS. "Single District State" is a dummy variable indicating the state has only one congressional district. "Pop. Density" is the population per square mile. "% Foreign Born" is the share of non-citizens and naturalized citizens. "% Moved Last Year" is the share of people who moved within the last year, including those that moved within the same county. "% No HS" is the share of individuals 25 or over who do not hold a high school degree. "% College/Grad" is the share of individuals 25 or older who hold at least a college degree. "Democratic Share 2008" is the share of votes for Obama in the 2008 presidential election. Column "No FE" includes no fixed effects, "DI" includes a control for the county's share of Democratic friends, and "DMA", "State" and "Dist" each represent whether DMA, state, or district fixed effects were included.

Table 6: Correlates of Congruence, 2010

	(1) No FE	(2) DI	(3) DMA	(4) State	(5) Dist	(6) DMA+State	(7) DMA+Dist	(8) DMA+State+DI	(9) DMA+Dist+DI
single_district	0.127***	0.140***	0.094***	0.000	0.000	0.000	0.000	0.000	0.000
	(0.008)	(0.008)	(0.018)	(.)	(.)	(.)	(.)	(.)	(.)
log_population	-0.047***	-0.043***	-0.036***	-0.040***	-0.026***	-0.035***	-0.026***	-0.024***	-0.016**
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
log_pop_den	-0.035***	-0.032***	-0.037***	-0.039***	-0.027***	-0.036***	-0.028***	-0.025***	-0.018**
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Interpolation of poppct_rural on year	0.202***	0.184***	0.135***	0.152***	0.096***	0.132***	0.100***	0.088***	0.067**
	(0.007)	(0.007)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)
share_foreign	-1.283***	-1.206***	-0.892***	-0.949***	-0.632***	-0.849***	-0.668***	-0.721***	-0.584**
	(0.053)	(0.051)	(0.058)	(0.056)	(0.066)	(0.059)	(0.072)	(0.051)	(0.065)
share_moved	-0.826***	-0.776***	-0.693***	-0.628***	-0.569***	-0.677***	-0.592***	-0.450***	-0.426**
	(0.055)	(0.054)	(0.048)	(0.052)	(0.049)	(0.048)	(0.050)	(0.049)	(0.050)
(mean) share_white_not_hispanic	0.223***	0.203***	0.172***	0.188***	0.079***	0.171***	0.093***	0.028	-0.036
	(0.014)	(0.015)	(0.018)	(0.017)	(0.019)	(0.018)	(0.020)	(0.019)	(0.022)
(mean) share_ed_nohs	0.642***	0.428***	0.938***	1.000***	0.771***	0.920***	0.769***	0.560***	0.492**
	(0.065)	(0.064)	(0.073)	(0.081)	(0.077)	(0.073)	(0.078)	(0.069)	(0.075)
share_collegep	-1.097***	-1.019***	-0.915***	-1.018***	-0.777***	-0.890***	-0.767***	-0.675***	-0.587**
	(0.030)	(0.033)	(0.030)	(0.031)	(0.035)	(0.031)	(0.037)	(0.036)	(0.042)
(mean) share_below_pov	0.580***	0.517***	0.446***	0.546***	0.347***	0.404***	0.333***	0.449***	0.388**
	(0.039)	(0.039)	(0.042)	(0.046)	(0.045)	(0.044)	(0.045)	(0.040)	(0.042)
log_median_income	-0.260***	-0.228***	-0.227***	-0.267***	-0.164***	-0.218***	-0.161***	-0.172***	-0.134**
	(0.012)	(0.012)	(0.014)	(0.013)	(0.014)	(0.014)	(0.015)	(0.013)	(0.014)
dem_share2016	-0.383***	-0.342***	-0.314***	-0.326***	-0.193***	-0.306***	-0.219***	-0.064**	0.066**
	(0.018)	(0.020)	(0.019)	(0.019)	(0.022)	(0.019)	(0.023)	(0.028)	(0.033)
dem_share2020	-0.273***	-0.402***	-0.337***	-0.399***	-0.255***	-0.370***	-0.282***	-0.088**	0.054
	(0.015)	(0.039)	(0.020)	(0.020)	(0.024)	(0.021)	(0.025)	(0.037)	(0.045)
Observations	3107	3107	3101	3107	2988	3101	2981	3101	2981

*** p<0.01, **p<0.05, * p<0.1

Notes: Each cell represents a regression of congruence on the variable indicated on the left. Demographics from 2020 Decennial Census and 2015-2019 ACS. "Single District State" is a dummy variable indicating the state has only one congressional district. "Pop. Density" is the population per square mile. "% Foreign Born" is the share of non-citizens and naturalized citizens. "% Moved Last Year" is the share of people who moved within the last year, including those that moved within the same county. "% No HS" is the share of individuals 25 or over who do not hold a high school degree. "% College/Grad" is the share of individuals 25 or older who hold at least a college degree. "Democratic Share 2016" is the share of votes for Clinton in the 2016 presidential election; "Democratic Share 2020" is the share of votes for Biden in the 2020 presidential election. Column "No FE" includes no fixed effects, "DI" includes a control for the county's share of Democratic friends, and "DMA", "State" and "Dist" each represent whether DMA, state, or district fixed effects were included.

Table 7: Correlates of Congruence, 2020

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
single_district	0.112***	0.000	0.000	0.114***	0.000	0.000	0.113***	0.000	
	(0.007)	(.)	(.)	(0.007)	(.)	(.)	(0.007)	(.)	
log_population	-0.021***	-0.004	0.004	-0.021***	-0.004	0.003	-0.019***	-0.004	
	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)	
log_pop_den	-0.002	-0.010***	-0.009***	-0.001	-0.008***	-0.009**	-0.001	-0.008***	
	(0.002)	(0.003)	(0.003)	(0.002)	(0.003)	(0.004)	(0.002)	(0.003)	
Interpolation of poppct_rural on year	-0.060***	-0.042***	-0.030***	-0.059***	-0.040***	-0.029***	-0.057***	-0.041***	
	(0.010)	(0.010)	(0.011)	(0.010)	(0.010)	(0.011)	(0.010)	(0.010)	
share_foreign	-0.619***	-0.436***	-0.525***	-0.623***	-0.471***	-0.547***	-0.712***	-0.475***	
	(0.050)	(0.064)	(0.084)	(0.050)	(0.067)	(0.088)	(0.061)	(0.082)	
share_moved	-0.271***	-0.268***	-0.281***	-0.287***	-0.266***	-0.279***	-0.310***	-0.266***	
	(0.050)	(0.056)	(0.057)	(0.050)	(0.056)	(0.057)	(0.050)	(0.056)	
(mean) share_white_not_hispanic	0.151***	0.131***	0.086***	0.140***	0.097***	0.066**	0.138***	0.096***	
	(0.014)	(0.021)	(0.023)	(0.015)	(0.026)	(0.028)	(0.015)	(0.026)	
(mean) share_ed_nohs	0.470***	0.502***	0.592***	0.436***	0.507***	0.595***	0.416***	0.506***	
	(0.071)	(0.085)	(0.093)	(0.073)	(0.085)	(0.093)	(0.073)	(0.085)	
share_collegep	-0.563***	-0.480***	-0.420***	-0.544***	-0.434***	-0.394***	-0.566***	-0.435***	
	(0.047)	(0.051)	(0.057)	(0.048)	(0.054)	(0.061)	(0.048)	(0.054)	
(mean) share_below_pov	0.234***	0.124**	0.111*	0.244***	0.137**	0.117*	0.223***	0.136**	
	(0.060)	(0.060)	(0.062)	(0.060)	(0.061)	(0.063)	(0.061)	(0.061)	
log_median_income	-0.018	-0.027	-0.017	-0.023	-0.032	-0.021	-0.017	-0.032	
	(0.021)	(0.021)	(0.022)	(0.021)	(0.021)	(0.022)	(0.021)	(0.021)	
dem_share2008				-0.037**	-0.061**	-0.038	0.083**	-0.058	
				(0.016)	(0.025)	(0.029)	(0.036)	(0.040)	
Fixed effects	No	DMA, State	DMA, Dist	No	DMA, State	DMA, Dist	No, DI	DMA+State+DI	DM

*** p<0.01, **p<0.05, * p<0.1

Notes: Joint tests. Demographics from 2010 Decennial Census and 2010-2014 ACS. "Single District State" is a dummy variable indicating the state has only one congressional district. "Pop. Density" is the population per square mile. "% Foreign Born" is the share of non-citizens and naturalized citizens. "% Moved Last Year" is the share of people who moved within the last year, including those that moved within the same county. "% No HS" is the share of individuals 25 or over who do not hold a high school degree. "% College/Grad" is the share of individuals 25 or older who hold at least a college degree. "Democratic Share 2008" is the share of votes for Obama in the 2008 presidential election. Column "No FE" includes no fixed effects, "DI" includes a control for the county's share of Democratic friends, and "DMA", "State" and "Dist" each represent whether DMA, state, or district fixed effects were included.

Table 8: Correlates of Congruence - Joint Tests, 2010

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
single_district	0.110***	0.000	0.000	0.110***	0.000	0.000	0.111***	0.000	
	(0.007)	(.)	(.)	(0.007)	(.)	(.)	(0.007)	(.)	
log_population	-0.021***	-0.003	0.005	-0.021***	-0.003	0.005	-0.019***	0.000	
	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)	
log_pop_den	0.004**	-0.007**	-0.008**	0.005**	-0.006*	-0.008**	0.002	-0.007**	
	(0.002)	(0.003)	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)	(0.003)	
Interpolation of poppct_rural on year	-0.027**	-0.010	0.002	-0.026**	-0.009	0.002	-0.028***	-0.011	
	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.010)	
share_foreign	-0.496***	-0.325***	-0.357***	-0.501***	-0.354***	-0.368***	-0.498***	-0.525***	
	(0.051)	(0.065)	(0.079)	(0.051)	(0.068)	(0.081)	(0.051)	(0.072)	
share_moved	-0.219***	-0.195***	-0.263***	-0.225***	-0.195***	-0.262***	-0.238***	-0.205***	
	(0.056)	(0.058)	(0.061)	(0.056)	(0.058)	(0.061)	(0.056)	(0.057)	
(mean) share_white_not_hispanic	0.178***	0.142***	0.094***	0.166***	0.095***	0.075**	0.179***	0.079***	
	(0.013)	(0.021)	(0.024)	(0.016)	(0.030)	(0.033)	(0.017)	(0.030)	
(mean) share_ed_nohs	0.214***	0.229**	0.214**	0.201**	0.235**	0.217**	0.188**	0.190*	
	(0.081)	(0.104)	(0.107)	(0.081)	(0.103)	(0.106)	(0.080)	(0.100)	
share_collegep	-0.627***	-0.545***	-0.476***	-0.601***	-0.470***	-0.444***	-0.606***	-0.405***	
	(0.044)	(0.048)	(0.054)	(0.049)	(0.060)	(0.066)	(0.049)	(0.059)	
(mean) share_below_pov	0.381***	0.253***	0.186***	0.388***	0.259***	0.189***	0.388***	0.218***	
	(0.057)	(0.058)	(0.058)	(0.058)	(0.058)	(0.058)	(0.057)	(0.057)	
log_median_income	0.003	-0.003	-0.021	-0.000	-0.013	-0.025	0.002	-0.002	
	(0.018)	(0.018)	(0.019)	(0.018)	(0.019)	(0.020)	(0.018)	(0.019)	
dem_share2016				-0.026	-0.071**	-0.032	0.010	0.099***	
				(0.019)	(0.030)	(0.033)	(0.022)	(0.034)	
Fixed effects	No	DMA, State	DMA, Dist	No	DMA, State	DMA, Dist	No	DMA+State+DI	DM

*** p<0.01, **p<0.05, * p<0.1

Notes: Each cell represents a regression of congruence on the variable indicated on the left. Demographics from 2020 Decennial Census and 2015-2019 ACS. "Single District State" is a dummy variable indicating the state has only one congressional district. "Pop. Density" is the population per square mile. "% Foreign Born" is the share of non-citizens and naturalized citizens. "% Moved Last Year" is the share of people who moved within the last year, including those that moved within the same county. "% No HS" is the share of individuals 25 or over who do not hold a high school degree. "% College/Grad" is the share of individuals 25 or older who hold at least a college degree. "Democratic Share 2016" is the share of votes for Clinton in the 2016 presidential election; "Democratic Share 2020" is the share of votes for Biden in the 2020 presidential election. Column "No FE" includes no fixed effects, "DI" includes a control for the county's share of Democratic friends, and "DMA", "State" and "Dist" each represent whether DMA, state, or district fixed effects were included.

Table 9: Correlates of Congruence - Joint Tests, 2020

	(1) No FE	(2) DI	(3) DMA	(4) State	(5) Dist	(6) DMA+State	(7) DMA+Dist	(8) DMA+State+DI	(9) DMA+Dist+DI
single_district	-0.001	-0.001	-0.001	0.000	0.000	0.000	0.000	0.000	0.000
	(0.001)	(0.001)	(0.005)	(.)	(.)	(.)	(.)	(.)	(.)
log_population	-0.001	-0.002**	-0.001	-0.002***	-0.001	-0.001	-0.001	-0.001	-0.000
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
log_pop_den	-0.000	-0.001	-0.001	-0.002***	-0.001	-0.001	-0.000	-0.001	0.000
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Interpolation of poppct_rural on year	0.009***	0.010***	0.007*	0.013***	0.009**	0.008**	0.006	0.008**	0.004
	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
share_foreign	-0.041**	-0.039**	-0.003	-0.058***	-0.022	-0.015	-0.015	-0.016	-0.023
	(0.016)	(0.016)	(0.025)	(0.021)	(0.031)	(0.025)	(0.033)	(0.025)	(0.033)
share_moved	-0.028	-0.026	-0.027	-0.021	-0.017	-0.025	-0.021	-0.024	-0.015
	(0.023)	(0.023)	(0.026)	(0.025)	(0.026)	(0.026)	(0.027)	(0.026)	(0.027)
(mean) share_white_not_hispanic	0.023***	0.024***	0.009	0.016**	0.022**	0.008	0.022**	0.007	0.014
	(0.006)	(0.006)	(0.008)	(0.007)	(0.009)	(0.008)	(0.010)	(0.009)	(0.011)
(mean) share_ed_nohs	-0.033	-0.027	-0.001	0.040	0.001	0.024	-0.016	0.022	-0.026
	(0.027)	(0.027)	(0.035)	(0.031)	(0.038)	(0.035)	(0.040)	(0.036)	(0.040)
share_collegep	-0.010	-0.017	0.007	-0.034*	-0.007	-0.006	-0.002	-0.004	0.007
	(0.016)	(0.017)	(0.020)	(0.018)	(0.023)	(0.020)	(0.024)	(0.020)	(0.024)
(mean) share_below_pov	-0.036*	-0.037**	-0.053**	0.002	-0.057**	-0.036	-0.075***	-0.035	-0.066**
	(0.018)	(0.018)	(0.022)	(0.021)	(0.024)	(0.023)	(0.025)	(0.023)	(0.025)
log_median_income	0.001	-0.000	0.007	-0.012**	0.004	0.001	0.012	0.001	0.011
	(0.005)	(0.005)	(0.006)	(0.005)	(0.007)	(0.006)	(0.008)	(0.006)	(0.008)
dem_share2008	0.008	-0.011	0.002	-0.012	-0.019	-0.001	-0.024*	0.013	0.000
	(0.007)	(0.014)	(0.010)	(0.010)	(0.013)	(0.011)	(0.014)	(0.016)	(0.022)
Observations	3107	3107	3101	3107	2985	3101	2979	3101	2979

Table 10: Predictors of Changes in Congruence - 2010

	(1) No FE	(2) DI	(3) DMA	(4) State	(5) Dist	(6) DMA+State	(7) DMA+Dist	(8) DMA+State+DI	(9) DMA+Dist+DI
single_district	-0.001	-0.001	-0.001	0.000	0.000	0.000	0.000	0.000	0.000
	(0.001)	(0.001)	(0.005)	(.)	(.)	(.)	(.)	(.)	(.)
log_population	-0.001*	-0.001**	-0.001	-0.002***	-0.001	-0.001	-0.001	-0.001	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
log_pop_den	-0.001	-0.001	-0.001	-0.002***	-0.001	-0.001	-0.001	-0.001	-0.001
	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Interpolation of poppct_rural on year	0.007**	0.009***	0.005	0.011***	0.005	0.006*	0.006	0.005	0.005
	(0.003)	(0.003)	(0.004)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
share_foreign	-0.033**	-0.036**	0.010	-0.047**	0.025	-0.000	0.018	0.004	0.022
	(0.015)	(0.015)	(0.022)	(0.018)	(0.029)	(0.022)	(0.030)	(0.023)	(0.030)
share_moved	-0.032	-0.033	-0.034	-0.028	-0.036	-0.034	-0.044	-0.030	-0.038
	(0.024)	(0.024)	(0.026)	(0.025)	(0.026)	(0.026)	(0.027)	(0.026)	(0.028)
(mean) share_white_not_hispanic	0.024***	0.024***	0.010	0.018**	0.006	0.009	0.008	0.007	0.004
	(0.006)	(0.006)	(0.008)	(0.007)	(0.009)	(0.008)	(0.009)	(0.009)	(0.010)
(mean) share_ed_nohs	-0.050*	-0.050*	-0.027	0.008	-0.012	-0.009	-0.001	-0.022	-0.017
	(0.029)	(0.030)	(0.036)	(0.032)	(0.039)	(0.036)	(0.041)	(0.038)	(0.042)
share_collegep	-0.005	-0.009	0.012	-0.026	0.006	0.001	0.002	0.013	0.019
	(0.015)	(0.016)	(0.018)	(0.016)	(0.022)	(0.019)	(0.023)	(0.021)	(0.025)
(mean) share_below_pov	-0.010	-0.009	-0.012	0.036*	0.003	0.005	-0.003	0.006	-0.001
	(0.017)	(0.017)	(0.022)	(0.020)	(0.023)	(0.022)	(0.023)	(0.022)	(0.023)
log_median_income	-0.001	-0.002	0.004	-0.015***	-0.004	-0.001	0.001	0.000	0.002
	(0.005)	(0.005)	(0.006)	(0.005)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
dem_share2016	-0.012*	-0.019**	-0.005	-0.021**	-0.005	-0.007	-0.009	0.001	0.004
	(0.007)	(0.008)	(0.009)	(0.008)	(0.012)	(0.010)	(0.012)	(0.014)	(0.019)
dem_share2020	0.003	-0.000	0.008	-0.024***	-0.009	-0.006	-0.010	0.007	0.009
	(0.006)	(0.013)	(0.009)	(0.009)	(0.012)	(0.010)	(0.012)	(0.017)	(0.022)
Observations	3107	3107	3101	3107	2988	3101	2981	3101	2981

Table 11: Predictors of Changes in Congruence - 2020

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
single_district	-0.001	0.000	0.000	-0.004*	0.000	0.000	-0.004*	0.000	0.0
	(0.002)	(.)	(.)	(0.002)	(.)	(.)	(0.002)	(.)	(
log_population	-0.000	0.001	-0.002	-0.000	0.001	-0.002	-0.000	0.001	-0.
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.0
log_pop_den	0.002	0.000	0.004*	0.000	-0.000	0.004*	0.000	-0.000	0.0
	(0.001)	(0.002)	(0.002)	(0.001)	(0.002)	(0.002)	(0.001)	(0.002)	(0.0
Interpolation of poppct_rural on year	0.011	0.012	0.012	0.010	0.011	0.012	0.010	0.011	0.0
	(0.007)	(0.007)	(0.008)	(0.007)	(0.007)	(0.008)	(0.007)	(0.007)	(0.0
share_foreign	0.025	-0.008	0.018	0.029	0.004	0.017	0.023	-0.025	-0.
	(0.029)	(0.042)	(0.050)	(0.029)	(0.042)	(0.050)	(0.036)	(0.049)	(0.0
share_moved	-0.000	0.012	0.008	0.014	0.011	0.008	0.013	0.008	0.0
	(0.029)	(0.035)	(0.036)	(0.030)	(0.035)	(0.036)	(0.030)	(0.035)	(0.0
(mean) share_white_not_hispanic	0.016*	-0.008	0.006	0.026***	0.004	0.006	0.026***	0.001	0.0
	(0.009)	(0.013)	(0.015)	(0.010)	(0.016)	(0.017)	(0.010)	(0.016)	(0.0
(mean) share_ed_nohs	-0.041	0.046	-0.004	-0.010	0.044	-0.004	-0.011	0.038	-0.
	(0.044)	(0.060)	(0.068)	(0.045)	(0.061)	(0.068)	(0.044)	(0.060)	(0.0
share_collegep	-0.018	0.022	-0.034	-0.036	0.006	-0.033	-0.038	0.004	-0.
	(0.026)	(0.032)	(0.037)	(0.027)	(0.035)	(0.040)	(0.027)	(0.035)	(0.0
(mean) share_below_pov	-0.044	-0.073*	-0.088**	-0.053	-0.077*	-0.088**	-0.054	-0.080*	-0.0
	(0.039)	(0.042)	(0.042)	(0.039)	(0.042)	(0.042)	(0.040)	(0.042)	(0.0
log_median_income	-0.014	-0.008	-0.004	-0.010	-0.006	-0.004	-0.009	-0.004	-0.
	(0.011)	(0.012)	(0.013)	(0.011)	(0.012)	(0.013)	(0.011)	(0.013)	(0.0
dem_share2008				0.033***	0.021	-0.001	0.043*	0.048*	0.0
				(0.010)	(0.018)	(0.020)	(0.022)	(0.026)	(0.0
Fixed effects	No	DMA, State	DMA, Dist	No	DMA, State	DMA, Dist	No, DI	DMA+State+DI	DMA+

Table 12: Predictors of Changes in Congruence - 2010 - Joint Tests

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
single_district	-0.003	0.000	0.000	-0.003	0.000	0.000	-0.003	0.000	0
	(0.002)	(.)	(.)	(0.002)	(.)	(.)	(0.002)	(.)	
log_population	-0.001	0.000	0.001	-0.001	0.000	0.001	-0.001	0.001	0
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0
log_pop_den	0.001	-0.001	-0.002	0.001	-0.001	-0.002	0.001	-0.001	-0
	(0.001)	(0.002)	(0.002)	(0.001)	(0.002)	(0.002)	(0.001)	(0.002)	(0
Interpolation of poppct_rural on year	0.008	0.005	0.005	0.008	0.005	0.005	0.008	0.005	0
	(0.006)	(0.007)	(0.008)	(0.006)	(0.007)	(0.008)	(0.006)	(0.007)	(0
share_foreign	0.071***	0.058	0.078*	0.073***	0.061*	0.079*	0.073***	0.055	0
	(0.027)	(0.036)	(0.045)	(0.027)	(0.035)	(0.044)	(0.027)	(0.038)	(0
share_moved	-0.021	-0.025	-0.045	-0.018	-0.025	-0.045	-0.016	-0.025	-0
	(0.029)	(0.033)	(0.034)	(0.029)	(0.033)	(0.034)	(0.030)	(0.033)	(0
(mean) share_white_not_hispanic	0.029***	0.012	0.010	0.035***	0.016	0.011	0.033***	0.016	0
	(0.009)	(0.012)	(0.014)	(0.010)	(0.017)	(0.018)	(0.011)	(0.017)	(0
(mean) share_ed_nohs	-0.108**	-0.059	-0.056	-0.100**	-0.060	-0.056	-0.098**	-0.061	-0
	(0.048)	(0.058)	(0.065)	(0.048)	(0.058)	(0.065)	(0.048)	(0.058)	(0
share_collegep	-0.019	0.009	0.012	-0.033	0.002	0.011	-0.032	0.004	0
	(0.025)	(0.030)	(0.034)	(0.028)	(0.037)	(0.041)	(0.028)	(0.037)	(0
(mean) share_below_pov	0.045	0.034	0.015	0.041	0.034	0.014	0.041	0.033	0
	(0.038)	(0.039)	(0.042)	(0.038)	(0.039)	(0.042)	(0.038)	(0.040)	(0
log_median_income	-0.007	-0.000	-0.005	-0.005	0.001	-0.005	-0.006	0.001	-0
	(0.012)	(0.013)	(0.013)	(0.012)	(0.013)	(0.014)	(0.012)	(0.013)	(0
dem_share2016				0.014	0.007	0.001	0.008	0.012	0
				(0.012)	(0.020)	(0.023)	(0.015)	(0.024)	(0
Fixed effects	No	DMA, State	DMA, Dist	No	DMA, State	DMA, Dist	No	DMA+State+DI	DMA-

Table 13: Predictors of Changes in Congruence - 2020 - Joint Tests

B.2.2 Variable Descriptions

C Additional Empirical Results

C.1 Congruence Descriptive Statistics

C.1.1 Correlates of Congruence

Tables 6 and 7 summarize how congruence varies with predictors of district boundaries and social networks. Every cell of the table represents a separate regression. These tables also show how congruence is associated with socioeconomic, demographic, and political characteristics of counties' populations, as these characteristics are likely to be correlated with the outcomes of interest. County population, population density, and the share of the population that is rural comes from the 2010 or 2020 Decennial Census, accordingly. Democratic presidential vote shares are from MIT Election Data and Science Lab 2021. The remaining demographics come from the 2010-2014 ACS for 2010 and the 2015-2019 5-Year ACS for 2020.[27] The determinants of district boundaries – whether the state has a single district, and the county's population – significantly predict congruence. In particular, as expected, counties in single district states are more congruent. Population is negatively correlated with congruence. Congruence is increasing in the share of the county that is rural. Congruence is decreasing in population density. Congruence is negatively correlated with the share of the population that was born outside of the U.S. and the share that moved within the last year: these are both indicators of more mobile populations, which intuitively are more likely to have more geographically dispersed networks. Congruence is positively correlated with the share of the population that is white as well as the share of the population without a high school degree and the share of the population below the poverty line. Analogously, the share of the population with at least a college degree is negatively associated with congruence. Concordantly, congruence is negatively correlated with the Democratic presidential vote share. Tables 8 and 9 show the analogous joint tests. **C.1.2 Changes in Congruence**

C.2 Voters' Knowledge

C.2.1 Placebo Tests for Voter Information

Table 14 provides summary statistics for the nine outcome variables used for placebo tests. These distributions are generally similar to those for House representatives (Table 3), though respondents are generally more likely to recognize and select the correct party for their Senators and Governor. The following nine figures show the results of the placebo tests. In general, congruence does not significantly predict the placebo outcomes. **C.2.2 Commuting Congruence**

Table 15 shows results from specifications that construct congruence using commuting flows. *[Table results are out of date, to be updated (use event studies instead.]* **C.2.3 Border Pairs**

Variable	Observations	Mean (%)	SD (pp)
Heard of Governor	549,740	96.3	18.8
Selected Governor Party	608,985	81.3	39.0
Selected Correct Gov. Party	608,985	74.7	43.5
Heard of Senator 1	549,244	94.9	22.0
Selected Senator 1 Party	608,414	75.0	43.3
Selected Correct Sen. 1 Party	608,414	67.7	46.7
Heard of Senator 2	549,246	94.9	22.0
Selected Senator 2 Party	608,402	74.3	43.7
Selected Correct Sen. 2 Party	608,402	66.9	47.0

Table 14: CES Data: Summary Statistics for Placebo Outcomes

	(1) County & Year FEs Only	(2) Add District x Year FEs	(3) Add Individual Demographic Controls	(4) Add County-Year Controls
	Heard of Incumbent			
Commuting Congruence	0.050**	0.048*	0.049**	0.065***
	(0.023)	(0.025)	(0.024)	(0.025)
	[0.032]	[0.050]	[0.042]	[0.008]
Obs	544,910	544,910	544,910	401,874
R^2	0.032	0.078	0.130	0.134
	Selected Party			
Commuting Congruence	0.149***	0.112***	0.132***	0.131***
	(0.039)	(0.037)	(0.033)	(0.036)
	[0.000]	[0.002]	[0.000]	[0.000]
Obs	603,967	603,966	603,966	460,937
R^2	0.042	0.098	0.224	0.225
	Selected Correct Party			
Commuting Congruence	0.135***	0.117***	0.139***	0.150***
	(0.041)	(0.039)	(0.035)	(0.037)
	[0.001]	[0.003]	[0.000]	[0.000]
Obs	603,967	603,966	603,966	460,937
R^2	0.044	0.108	0.251	0.251
Ind. Controls			X	X
County x Year Controls				X
FEs	County, Year	County, District x Year	County, District x Year	County, District x Year

*** p<0.01, **p<0.05, * p<0.1
Standard errors clustered at the county level in parentheses. P-values in square brackets.
"Heard of Incumbent" not available in 2006, 2007, or 2009. Individual controls include gender, race, education, age categories, and whether the respondent is affiliated with the same party as their representative. County-by-year controls include population and shares by race, age categories, gender, and county urban population share.

Table 15: Effect of Commuting Congruence on Voter Familiarity with Representative

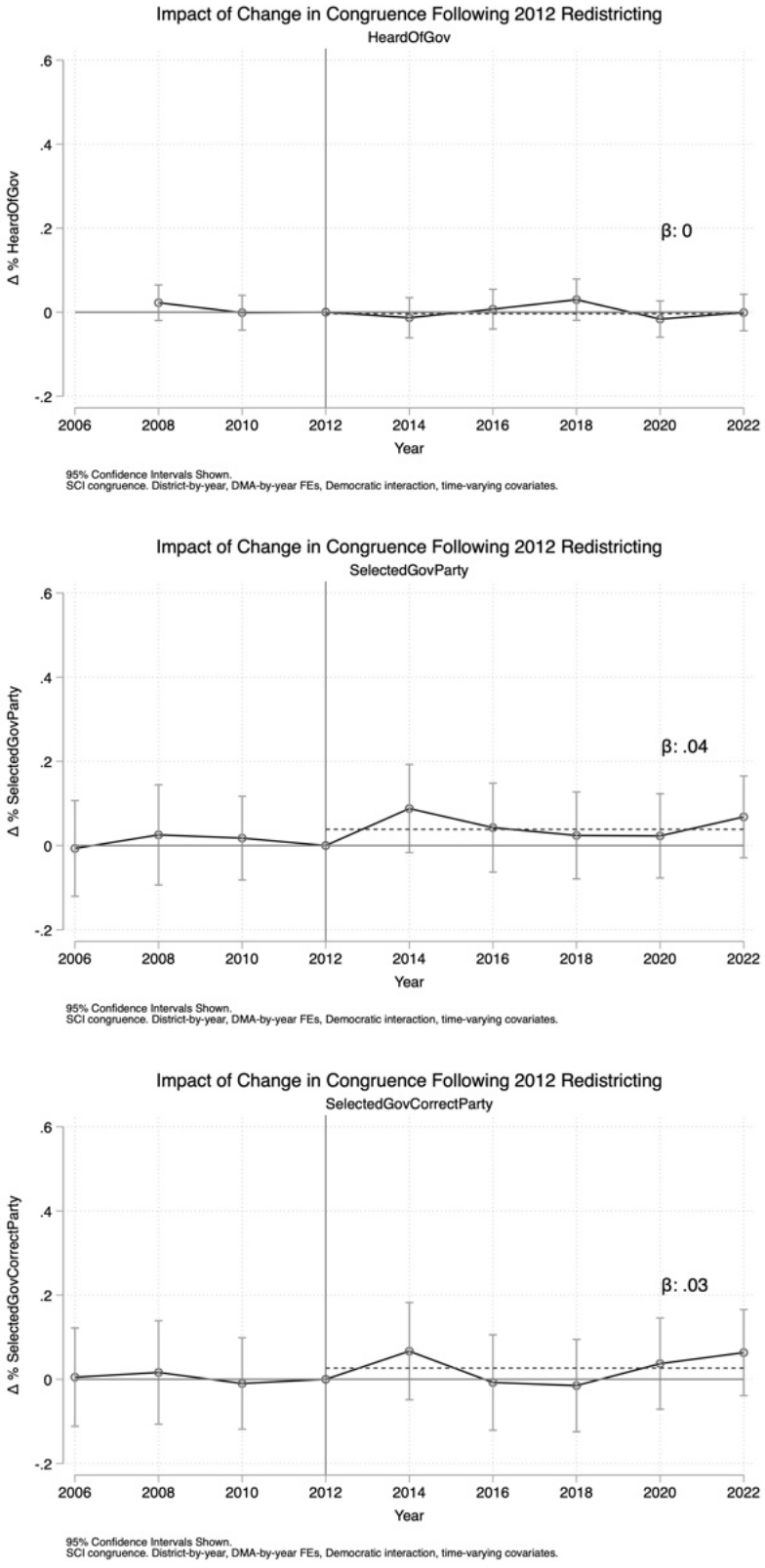
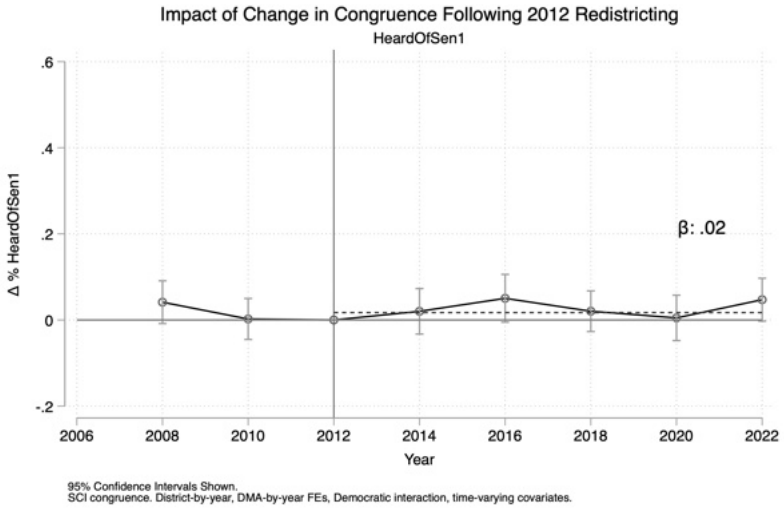
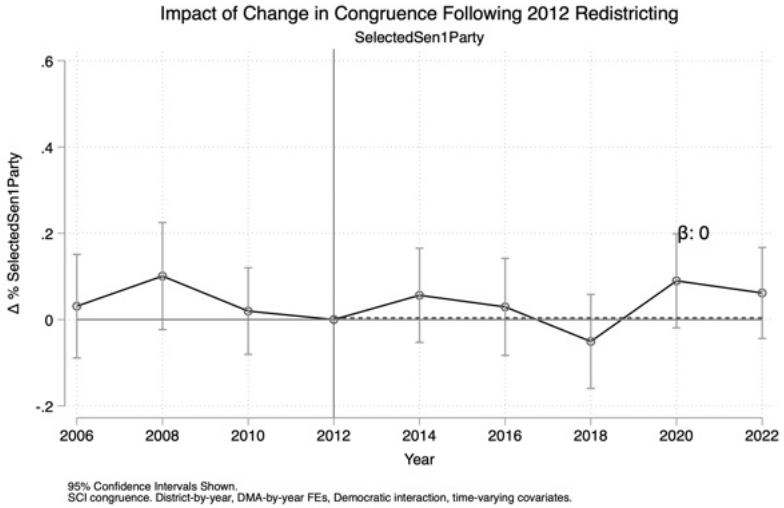


Figure 11: Effect of Increase in Congruence on Knowledge of Governor





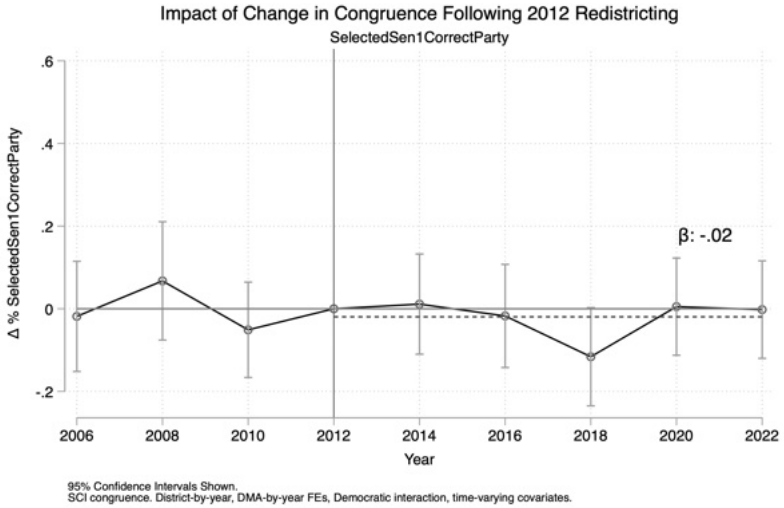


Figure 12: Effect of Increase in Congruence on Knowledge of Senator 1

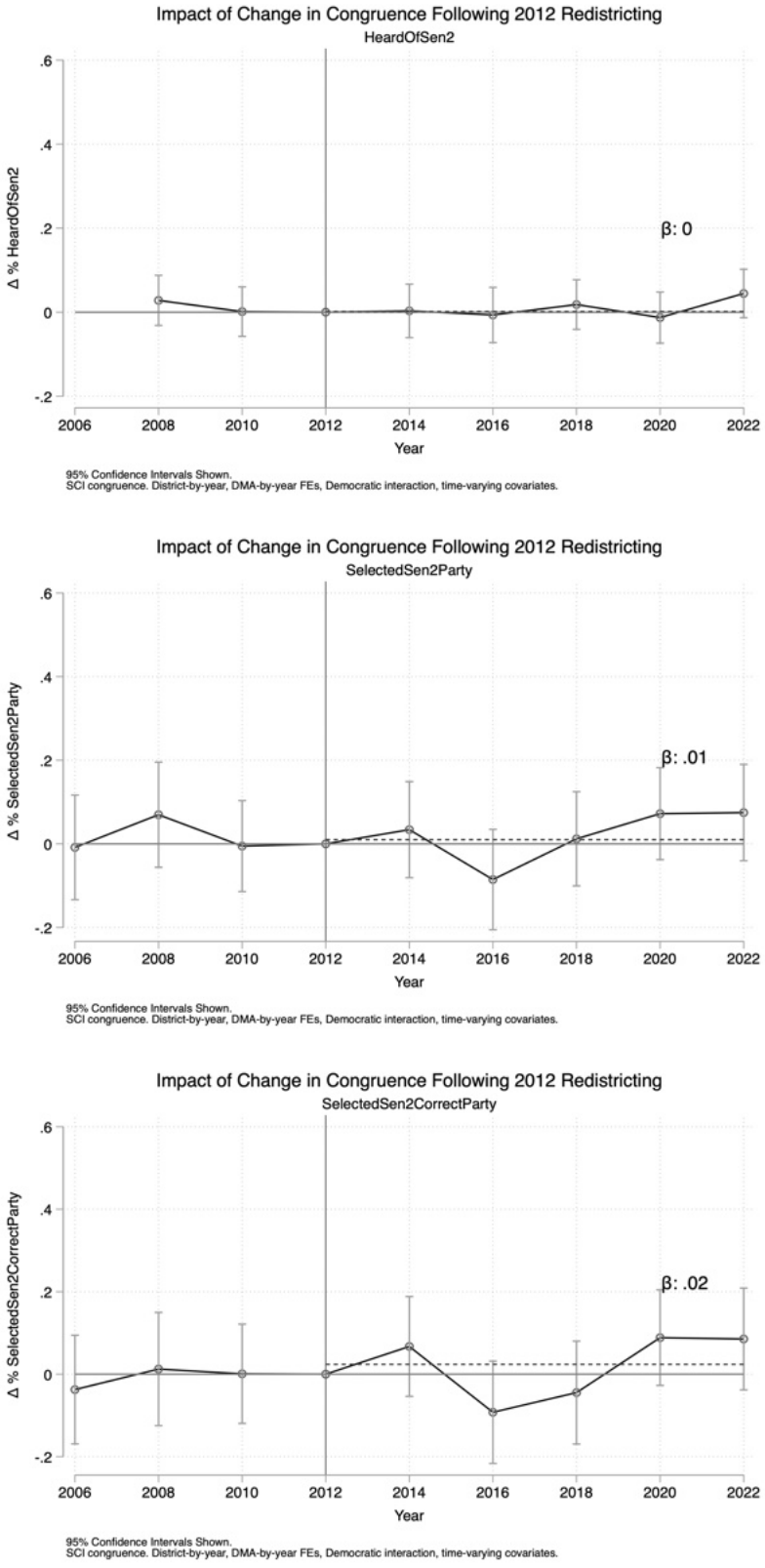


Figure 13: Effect of Increase in Congruence on Knowledge of Senator 1

	(1) County & Pair x Year FEs Only	(2) Add State x Year FEs	(3) Add DMA x Year FEs	(4) Add Dem. Exposure	(5) Add Individual Demographic Controls	(6) Add County-Year Controls
	Heard of Incumbent					
Congruence	0.254***	0.254***	0.296***	0.294***	0.253***	0.256***
	(0.080)	(0.080)	(0.091)	(0.091)	(0.093)	(0.091)
	[0.002]	[0.002]	[0.001]	[0.001]	[0.007]	[0.005]
Obs	22,094	22,094	21,508	21,508	21,508	21,508
R^2	0.606	0.606	0.699	0.699	0.718	0.720
	Selected Party					
Congruence	0.368***	0.368***	0.214	0.217	0.162	0.136
	(0.141)	(0.141)	(0.155)	(0.156)	(0.151)	(0.151)
	[0.009]	[0.009]	[0.168]	[0.165]	[0.284]	[0.367]
Obs	25,798	25,798	25,126	25,126	25,126	25,126
R^2	0.620	0.620	0.709	0.709	0.740	0.742
	Selected Correct Party					
Congruence	0.608***	0.608***	0.399**	0.406**	0.346**	0.343**
	(0.161)	(0.161)	(0.176)	(0.176)	(0.165)	(0.160)
	[0.000]	[0.000]	[0.023]	[0.022]	[0.036]	[0.032]
Obs	25,798	25,798	25,126	25,126	25,126	25,126
R^2	0.631	0.631	0.716	0.717	0.749	0.752
Dem. Exposure				X	X	X
Ind. Controls					X	X
County x Year Controls						X
FEs	County, Pair x Year	County, Pair x Year, District x Year	County, Pair x Year, District x Year, DMA x Year	County, Pair x Year, District x Year, DMA x Year	County, Pair x Year, District x Year, DMA x Year	County, Pair x Year, District x Year, DMA x Year

*** p<0.01, **p<0.05, * p<0.1

Standard errors clustered at the county level in parentheses. P-values in square brackets.

"Heard of Incumbent" not available in 2006, 2007, or 2009. Individual controls include gender, race, education, age categories, and whether the respondent is affiliated with the same party as their representative. County-by-year controls include population and shares by race, age categories, gender, and county urban population share.

Table 16: Effect of Congruence on Voter Familiarity with Representative, within Border Pairs

explored in prior literature (Snyder and Strömberg 2010, Prat and Strömberg 2005, Enikolopov, Petrova, et al. 2011, Angelucci et al. 2020, Eisensee and Strömberg 2007, Strömberg 2004). In the main results, I use Nielsen Designated Market Area (DMA) regions, which reflect TV and radio markets, in order to include DMA-by-year fixed effects: advertisements are purchased at the DMA level, so all counties DMA-wide receive the same advertisements. Consequently, DMA-by-year fixed effects allow me to capture the impact of congruence *holding fixed* TV and radio news and advertisements. An alternative approach, that could address concerns about social networks driving a county's influence on the purchase of advertising in the media market, is to construct a measure of "DMA congruence." Such a concern might be based on the logic in Snyder and Strömberg 2010 that a media market that is better aligned with a congressional district will produce more content about the district's representative, thereby making voters in that district more informed about their representative.[28] Conveniently, DMAs contain many counties, but DMA borders follow county borders, so no county is in multiple DMAs. Accordingly, for county i in district J, which contains counties j, and in DMA M, which contains counties m, DMA congruence is defined as

$$\text{DMA Congruence}_i = \frac{\sum_{j \in (J \cap M)} \text{Population}_j}{\sum_{m \in M} \text{Population}_m}$$

	(1) County & Year FEs Only	(2) Add District x Year FEs	(3) Add Individual Demographic Controls	(4) Add County-Year Controls
	Heard of Incumbent			
Congruence	0.067	0.118***	0.133***	0.145***
	(0.041)	(0.046)	(0.045)	(0.047)
	[0.100]	[0.010]	[0.003]	[0.002]
DMA Congruence	0.054***	0.030*	0.028	0.035*
	(0.016)	(0.018)	(0.017)	(0.018)
	[0.001]	[0.096]	[0.102]	[0.054]
Obs	460,951	460,951	460,951	402,066
R^2	0.035	0.083	0.132	0.133
	Selected Party			
Congruence	0.191**	0.214***	0.269***	0.278***
	(0.086)	(0.078)	(0.074)	(0.077)
	[0.027]	[0.006]	[0.000]	[0.000]
DMA Congruence	0.122***	0.093***	0.088***	0.098***
	(0.035)	(0.032)	(0.030)	(0.032)
	[0.000]	[0.003]	[0.004]	[0.002]
Obs	520,034	520,033	520,033	461,154
R^2	0.046	0.103	0.211	0.210
	Selected Correct Party			
Congruence	0.123	0.194**	0.253***	0.280***
	(0.093)	(0.082)	(0.077)	(0.079)
	[0.189]	[0.019]	[0.001]	[0.000]
DMA Congruence	0.131***	0.115***	0.108***	0.121***
	(0.038)	(0.032)	(0.030)	(0.032)
	[0.001]	[0.000]	[0.000]	[0.000]
Obs	520,034	520,033	520,033	461,154
R^2	0.047	0.113	0.236	0.235
Ind. Controls			X	X
County x Year Controls				X
FEs	County, Year	County, District x Year	County, District x Year	County, District x Year

*** p<0.01, **p<0.05, * p<0.1
Standard errors clustered at the county level in parentheses. P-values in square brackets.
"Heard of Incumbent" not available in 2006, 2007, or 2009. Individual controls include gender, race, education, age categories, and whether the respondent is affiliated with the same party as their representative. County-by-year controls include population and shares by race, age categories, gender, and county urban population share.

Table 17: Effect of Congruence and DMA Congruence on Voter Familiarity with Representative

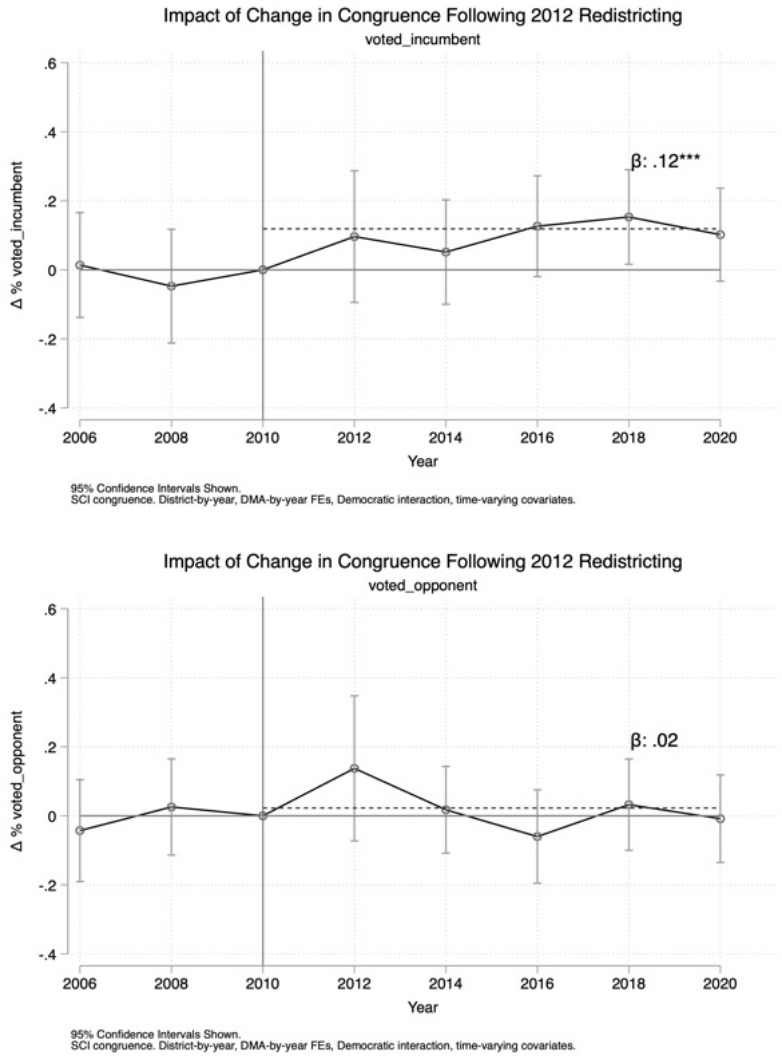


Figure 14: Dynamic Effects of Change in Congruence on Voter Choices Reported in CES - Incumbent vs Challenger

I can then conduct a horse race and test whether I estimate a significant effect of my original congruence measure after controlling for DMA congruence.[29] Results are shown in Appendix Table 17. *[Table results are out-of-date, to be updated/use event studies instead.]* In general, results are similar to the original specification. **C.3 Voters' Choices**

C.3.1 CES Survey Responses

In the post-survey, respondents are asked who they voted for. Based on these self-reports, I find that congruence increases the share of general election voters reporting voting for the incumbent, without affecting the share who vote for the challenger. Instead, as described in the main text, the share of general election voters who report skipping the House election decreases. **C.3.2 Vote Count Data**

Using county-level vote count data, I look at the impact of a change in congruence on actual turnout in the top-of-ticket (i.e., President, Senate, or Governor) election and turnout in the House election. I measure this as total votes in the respective election divided by the share of the county's population that is age 18 or older (i.e., the voting age population). While the voting age population does not account for those who are ineligible to vote (e.g., non-citizens or people with a felony record in some states), I do control for the share of the population that are non-citizens in the set of county-by-year covariates. The sample includes only counties that have at least 50% of population in one district, and district-by-year fixed effects reflect that district. (Results are qualitatively similar when restricting to counties 100% in a single district.) Here we find no impacts of congruence on turnout in the top-of-ticket race and in the House race. However, this does not necessarily contradict the finding of congruence decreasing roll-off: When I construct roll-off as $\frac{\text{Votes in Top-of-Ticket Election} - \text{Votes in House Election}}{\text{Voting Age Population}}$, I find a significant 2pp decrease in roll-off. *[The spike in 2004 I am investigating.]* This is because the estimates of House turnout are too imprecise to detect an impact of this scale, and also have a slight negative pre-trend; in the roll-off estimates, controlling for the top-of-ticket election both reduces the noise in the estimates and eliminates much of the pre-trend. **C.3.3 Campaign Contributions**

Congruence has no impact on total contributions to House candidates; instead, it increases contributions to in-district candidates at the cost of contributions to out-of-district candidates. I also find similar results

[28] Of course, Snyder and Strömberg 2010 actually find no effect of TV and radio market congruence in their paper (though it is constructed somewhat differently), and instead find effects of newspaper market congruence, which I have not yet included

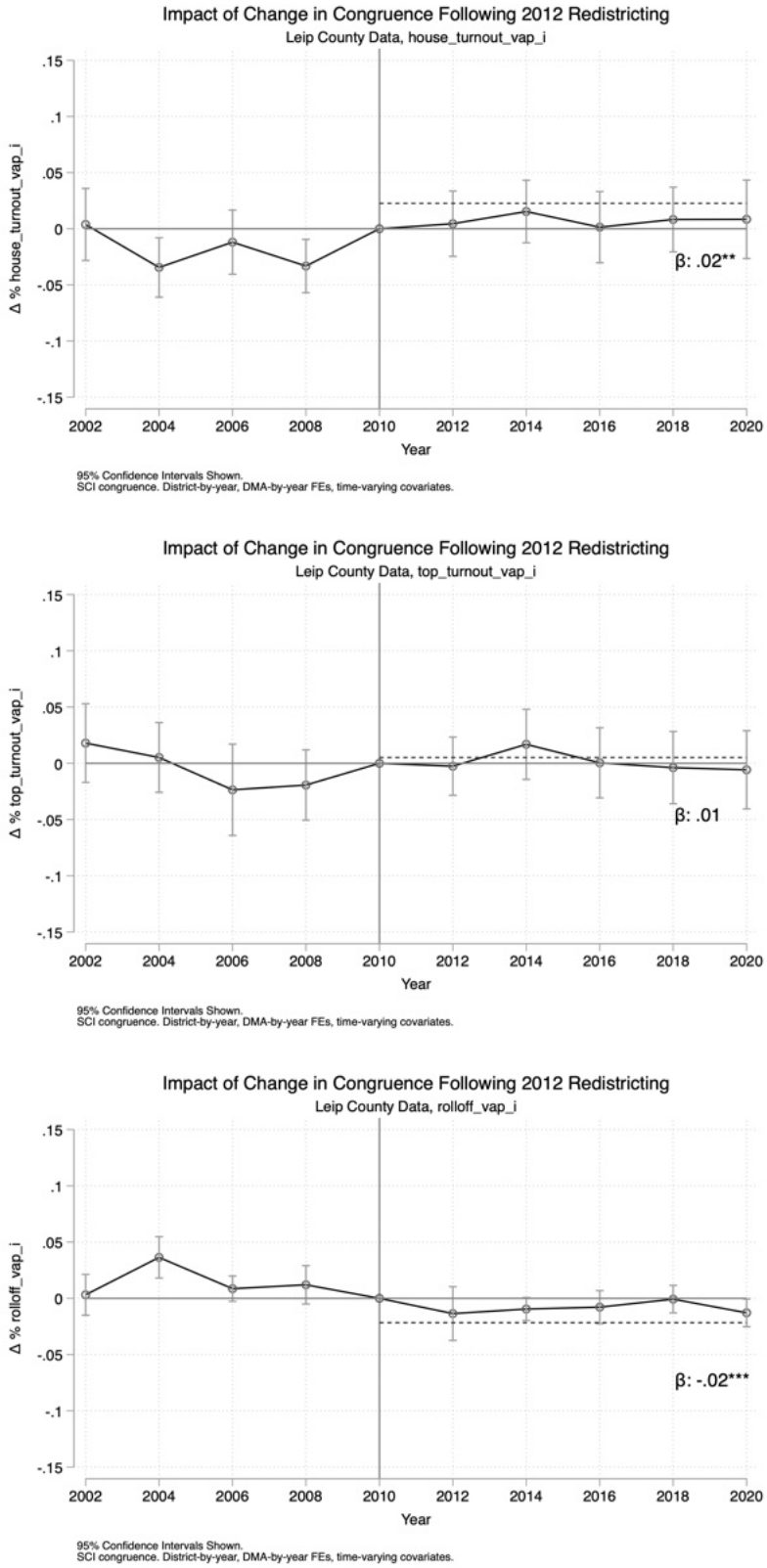
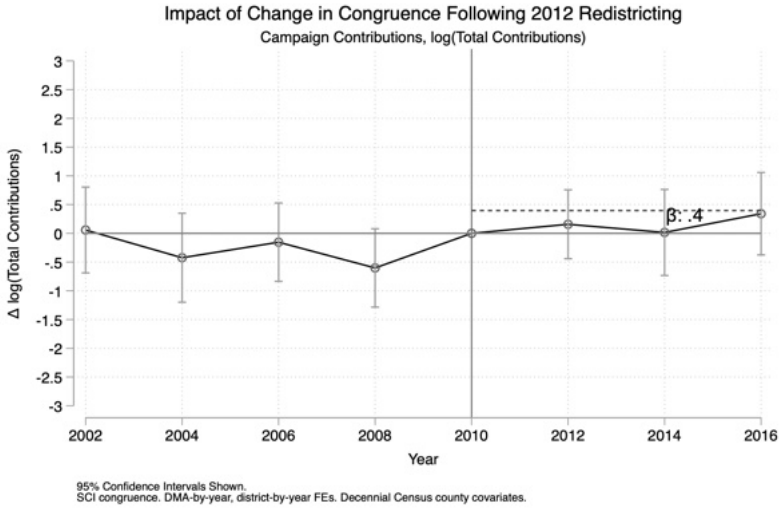
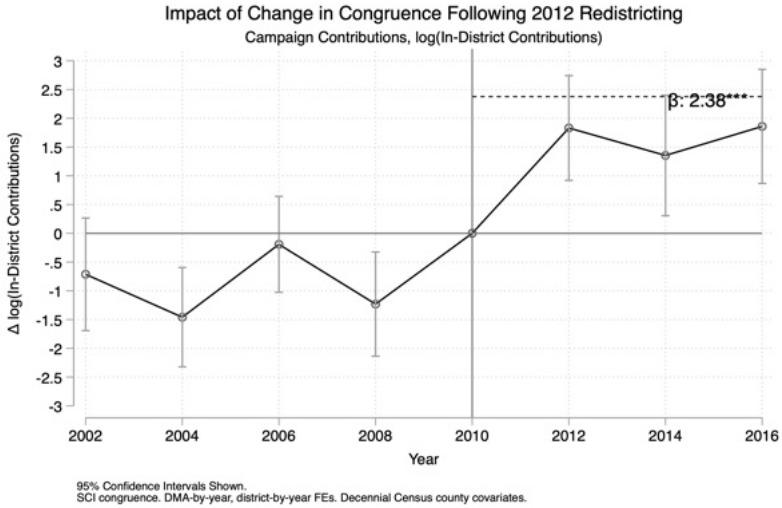


Figure 15: Effects of Increase in Congruence on Turnout





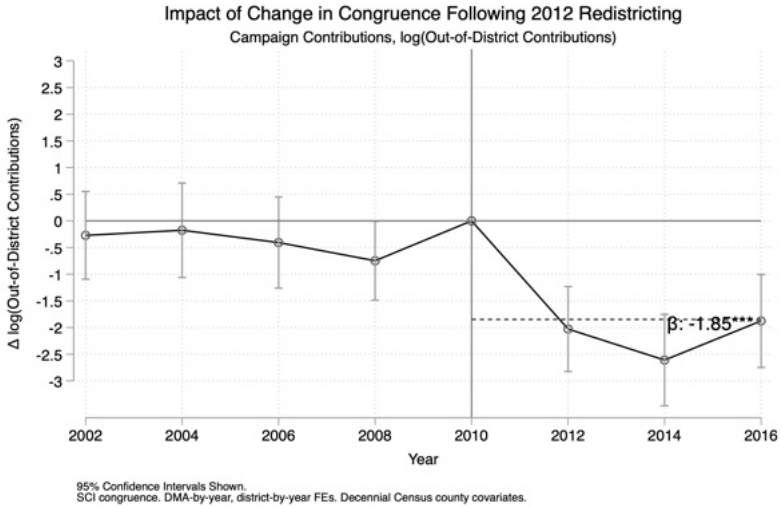


Figure 16: Effects of Increase in Congruence on Log of Campaign Contributions

when restricting to only primary elections; only general elections; or excluding large donations (i.e., excluding Census tracts where the average donation per contributor exceeds $1,000).

D Simulations

D.1 Additional Background on Ohio

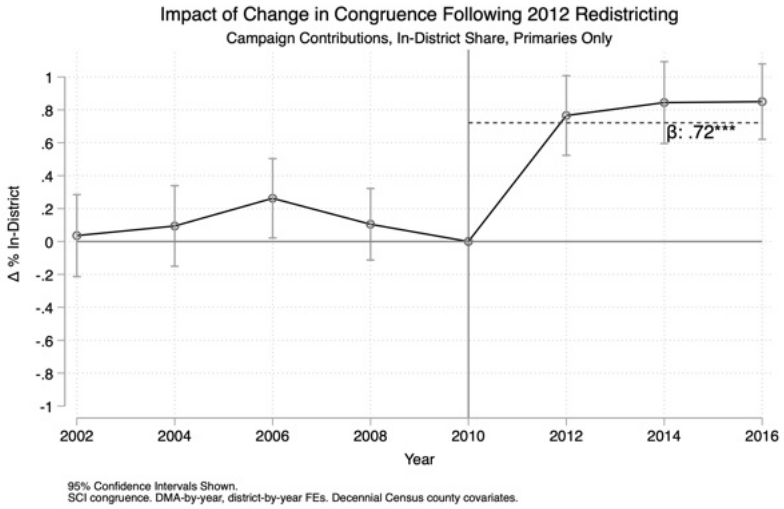
D.2 Simulated Ohio Maps

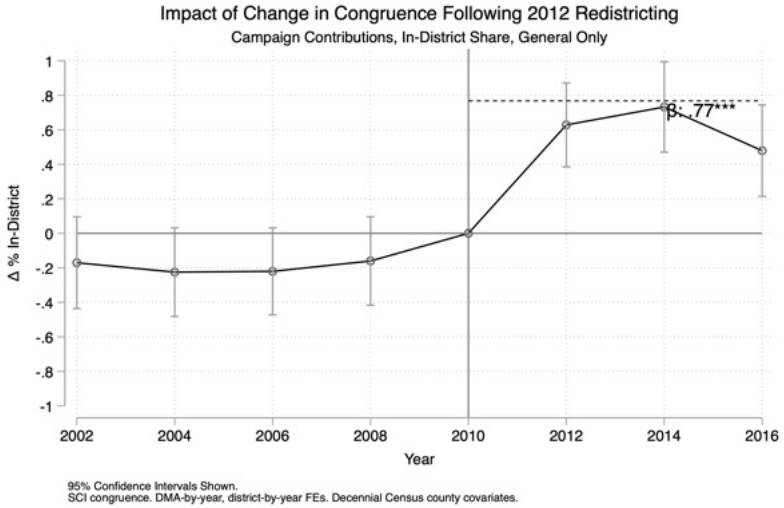
[Add maps and table for Democrat map vs Republican map]

D.3 Simulated Texas Maps

here.

[29] DMA congruence and the originally defined county congruence are about 25% correlated.





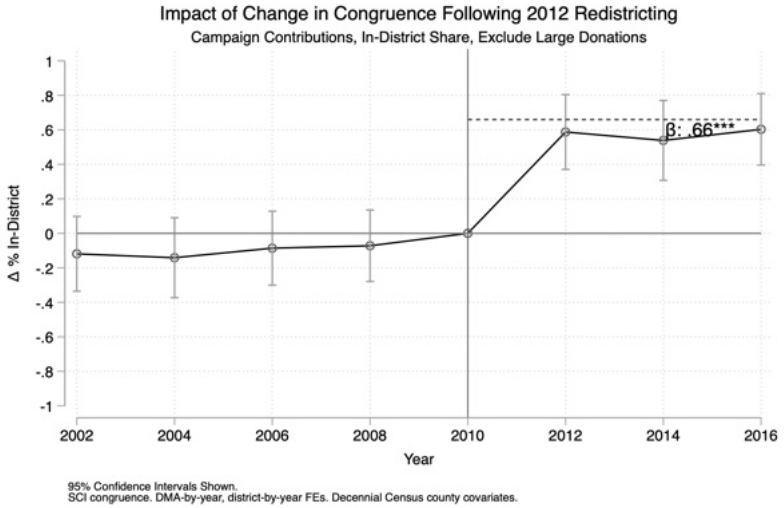


Figure 17: Effects of Increase in Congruence on Share of Campaign Contributions to In-District Candidates

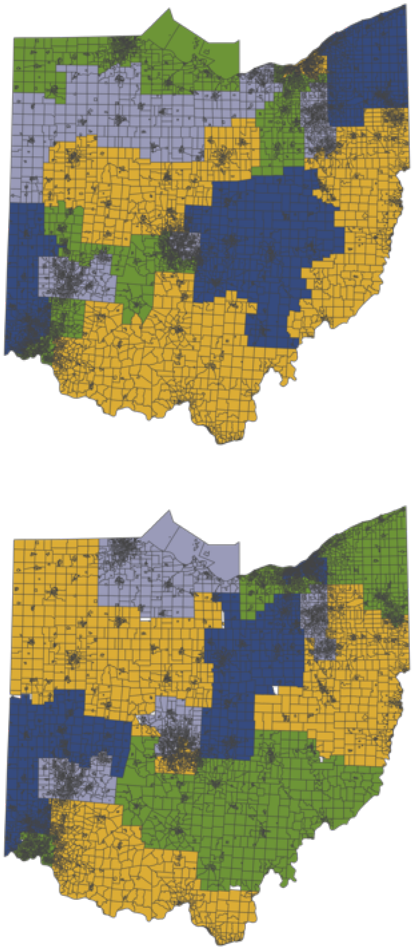


Figure 18: Left: Current Enacted Map in Ohio; Right: OCRC Map

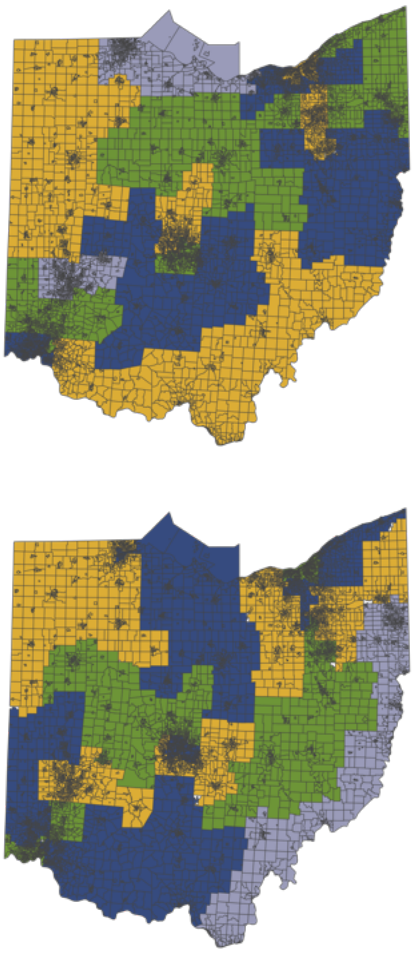


Figure 19: Partisan Maps Proposed in State Legislature Commissions. Left: Democrats' Map; Right: Republicans' Map

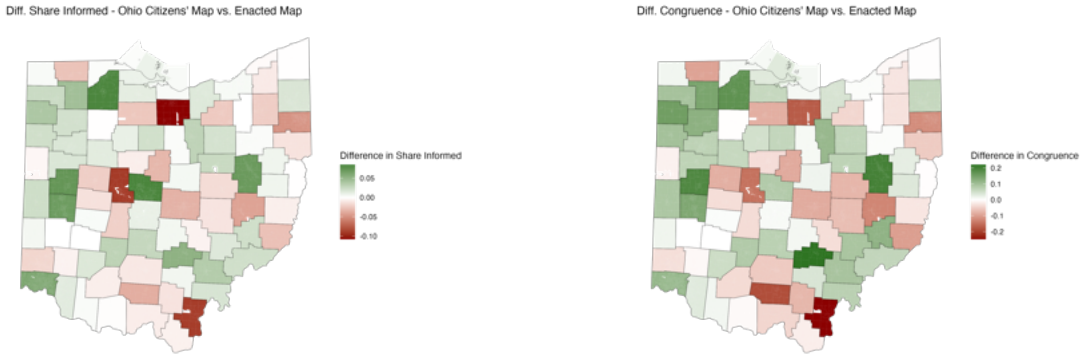


Figure 20: OCRC map vs. Enacted Map. Left: Difference in Congruence; Right: Difference in Share Informed.

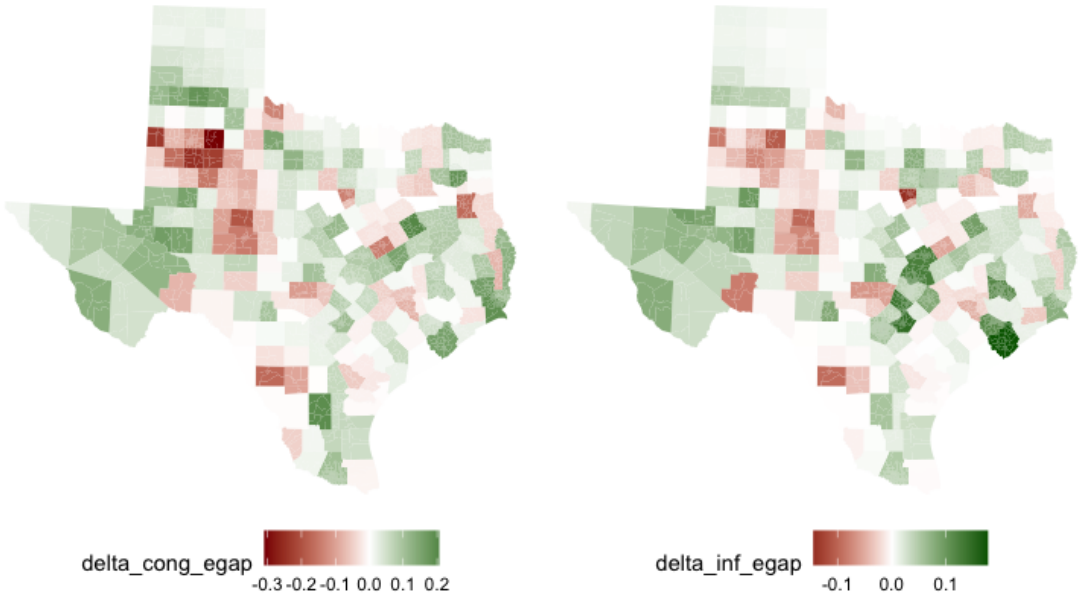


Figure 21: Change in (left) congruence, (right) share informed, from current map to efficiency gap minimizing map

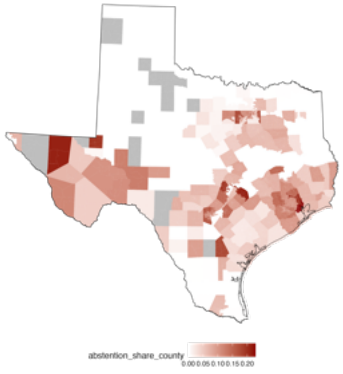


Figure 22: Simulated County Abstention Rates in Texas Under Current Map