The Increase in Partisan Segregation in the U.S. and its causes

Brown [1] Cantoni [2] Enos[3] Pons[4] Sartre [5]

Harvard[1] University of Bologna[2] Harvard[3] Harvard[4] Brown[5].

EEA-ESEM Congress 2022

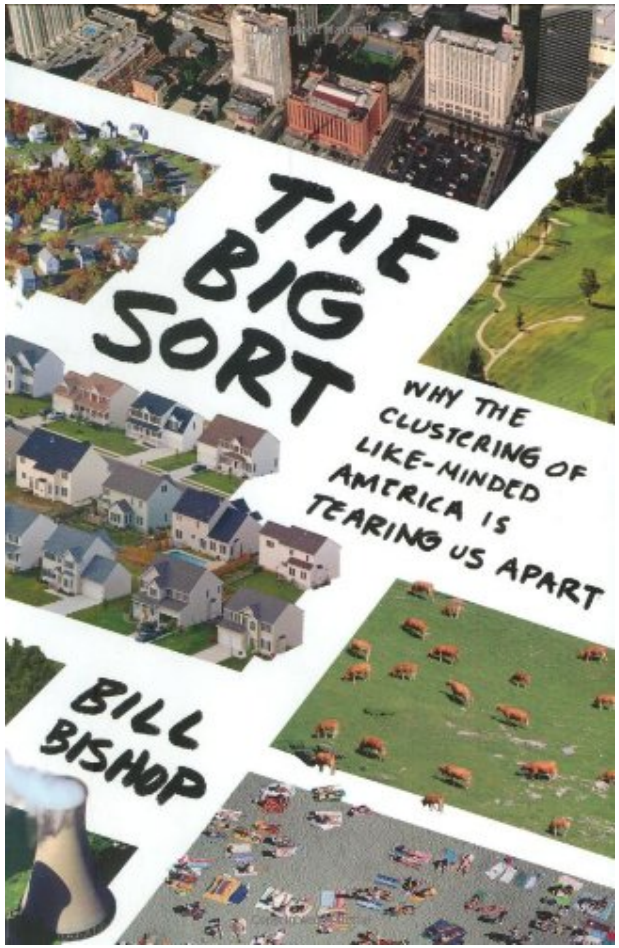
August 22, 2022

Plan

Motivation

2020 U.S. Presidential Election - Two Americas ?

Motivation



The Big Sort, Bishop 2008

"We now live in a giant feedback loop, hearing our own thoughts about what's right and wrong bounced back to us by the television shows we watch, the newspapers and books we read, the blogs we visit online, the sermons we hear, and the neighborhoods we live in"

Motivation

Spatial partisan segregation

- There is growing evidence that the U.S. is spatially segregated along partisan lines. (Nall, 2015 ; Martin and Webster, 2020 ; Brown and Enos, 2021)

Motivation

Spatial partisan segregation

- There is growing evidence that the U.S. is spatially segregated along partisan lines. (Nall, 2015 ; Martin and Webster, 2020 ; Brown and Enos, 2021)
- However, there is still an ongoing debate on the trend.
  - Some find a lack of evidence for increasing spatial partisan segregation (Abrams and Fiorina, 2012 ; Mummolo and Nall, 2016)
  - While others argue that spatial partisan segregation has increased for a long time (Jonston and Manley, 2016 ; Kaplan et al., 2020)

Motivation

Spatial partisan segregation

- There is growing evidence that the U.S. is spatially segregated along partisan lines. (Nall, 2015 ; Martin and Webster, 2020 ; Brown and Enos, 2021)
- However, there is still an ongoing debate on the trend.
  - Some find a lack of evidence for increasing spatial partisan segregation (Abrams and Fiorina, 2012 ; Mummolo and Nall, 2016)
  - While others argue that spatial partisan segregation has increased for a long time (Jonston and Manley, 2016 ; Kaplan et al., 2020)
- All these previous studies rely on aggregate data
  - Modifiable areal unit problem (Openshaw, 1983)
  - Failing to capture divisions below the county level

Research questions

- Has geographic partisan segregation *actually* increased over the last decade ?
- If so, what are the main factors driving this trend ?

Plan

Institutional setting

Partisan registration

- In every state, except North Dakota, individuals who plan to vote must first register ($\approx$ 24% of the voting-age population is unregistered)
- 31 states (+ DC) allow voters to indicate their partisan affiliation and report registration numbers publicly
- Party voters identify and actual vote choice are strongly correlated with the party they are registered with (e.g., Bartels 2000 ; Gerber et al. 2010) .

Elections | Change/Update registration

Data

Partisan registration data Vs. Electoral Data

Catalist Database

- Nationwide voterfiles, covering all the general elections btw. 2008 and 2018 ($\approx$ 1.6 billion obs.)
- Contains around 89% of the U.S. voting-eligible population
- Contains the geocodes of each voter + individual characteristics (like age, race, gender and turnout)

Target Smart Database

- Nationwide voterfiles for each year (2012-2020)
- Contains unique identifiers and exact residential location, as well as latitude and longitude of residential location
- Precise geographic variables : state, CD, county, tract, block group and block

Plan

Rise in Partisan Segregation

Across geographic units

Stable geographic units

1. In each geographic unit, we compute $\frac{D}{D+R}$, where D (resp. R) is the # of voters affiliated with the Democratic (resp. Rep.) party.

2. We plot the distribution of $\frac{D}{D+R}$ across units, observing its standard deviation σ and its kurtosis k, year by year.

$$k = E\left[\left(\frac{X-\mu}{\sigma}\right)^4\right]$$

3. Partisan segregation has increased across geographic units if the variance has increased & the distribution has flattened over time ($\uparrow \sigma$ and $\downarrow k$).

Rise in Partisan Segregation

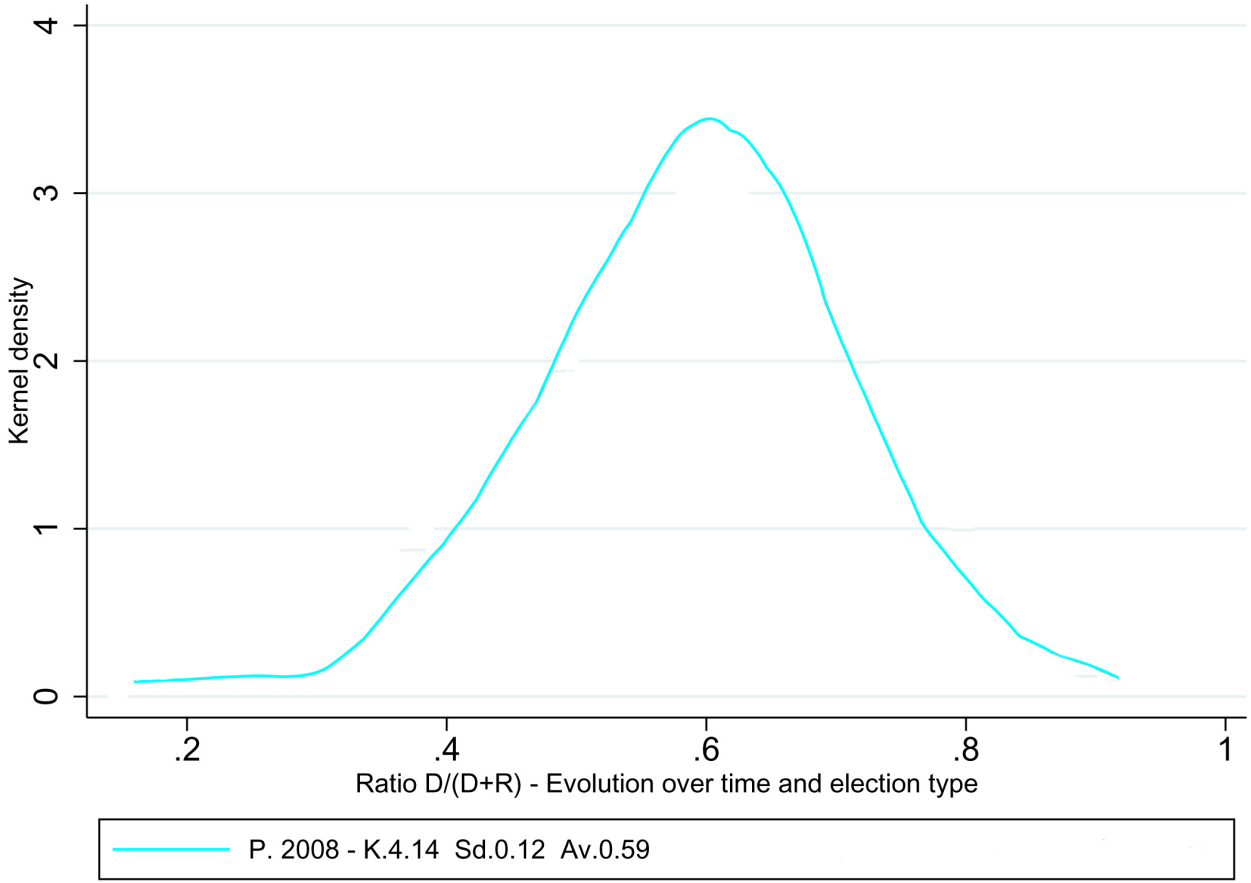


Fig. – Kernel distribution of the ratio D/(D+R) at the pseudo-CD level - Weights : Number of registered voters - *Catalist Data*

Rise in Partisan Segregation

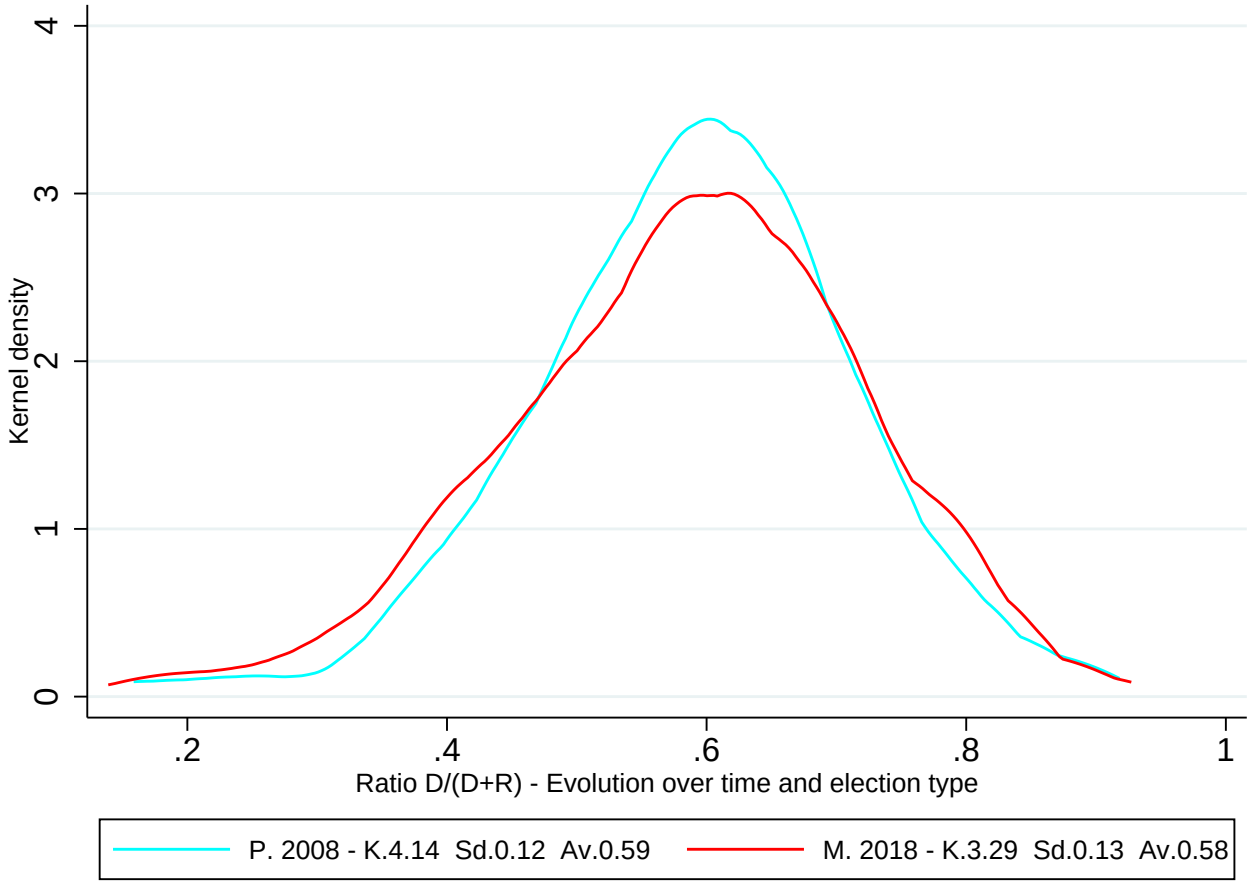


Fig. – Kernel distributions of the ratio D/(D+R) at the pseudo-CD level - Weights : Number of registered voters - *Catalist Data*

Rise in Partisan Segregation

Within geographic units

1. In each unit j, we compute the dissimilarity index :

$$DI_j = \frac{1}{2} \sum_{i=1}^{N} \left| \frac{d_i}{D_j} - \frac{r_i}{R_j} \right|$$

Where :

d_i : nb. of Democrats living in sub-unit i

D_j : nb. of Democrats living in unit j

r_i : nb. of Republicans living in sub-unit i

R_j : nb. of Republicans living in unit j

2. We plot the distribution of DI_j across units j.

3. Partisan segregation has increased within geographic units if the average of the dissimilarity index increases over time.

Rise in Partisan Segregation

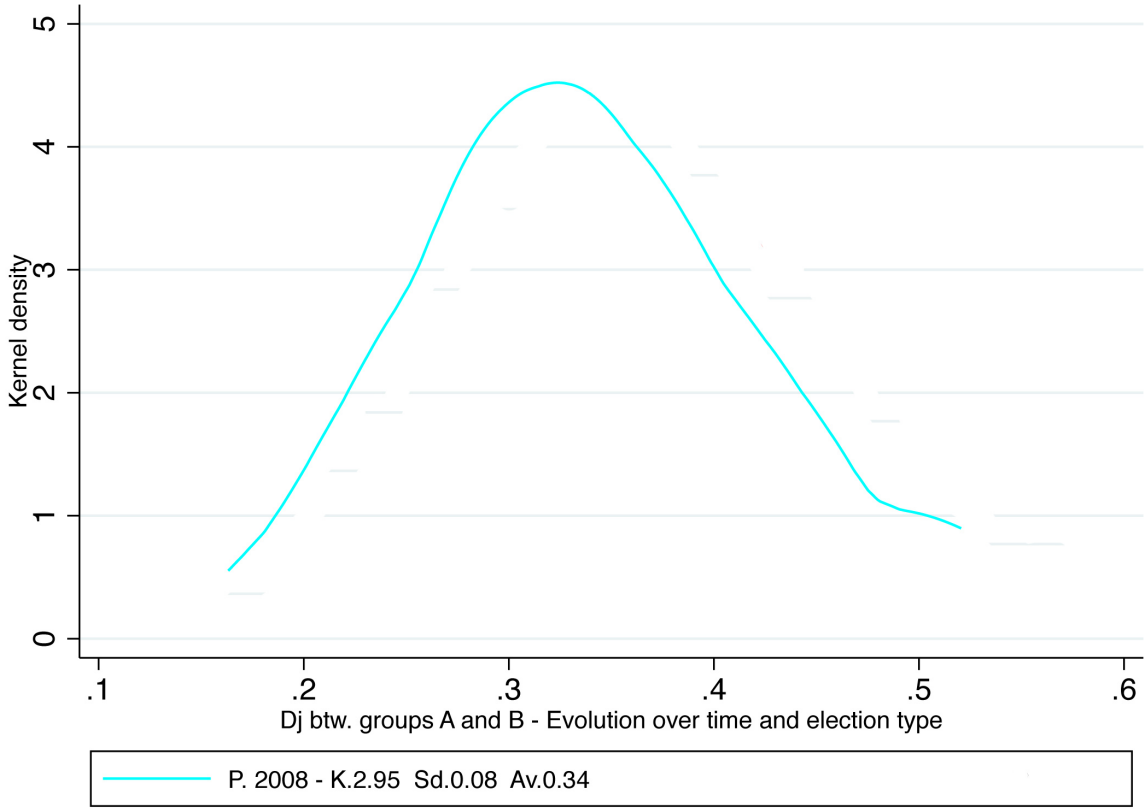


Fig. – Kernel distribution of the dissimilarity index at the pseudo-CD level using tracts as sub-units - Weights : Number of reg. voters - *Catalist Data*

Rise in Partisan Segregation

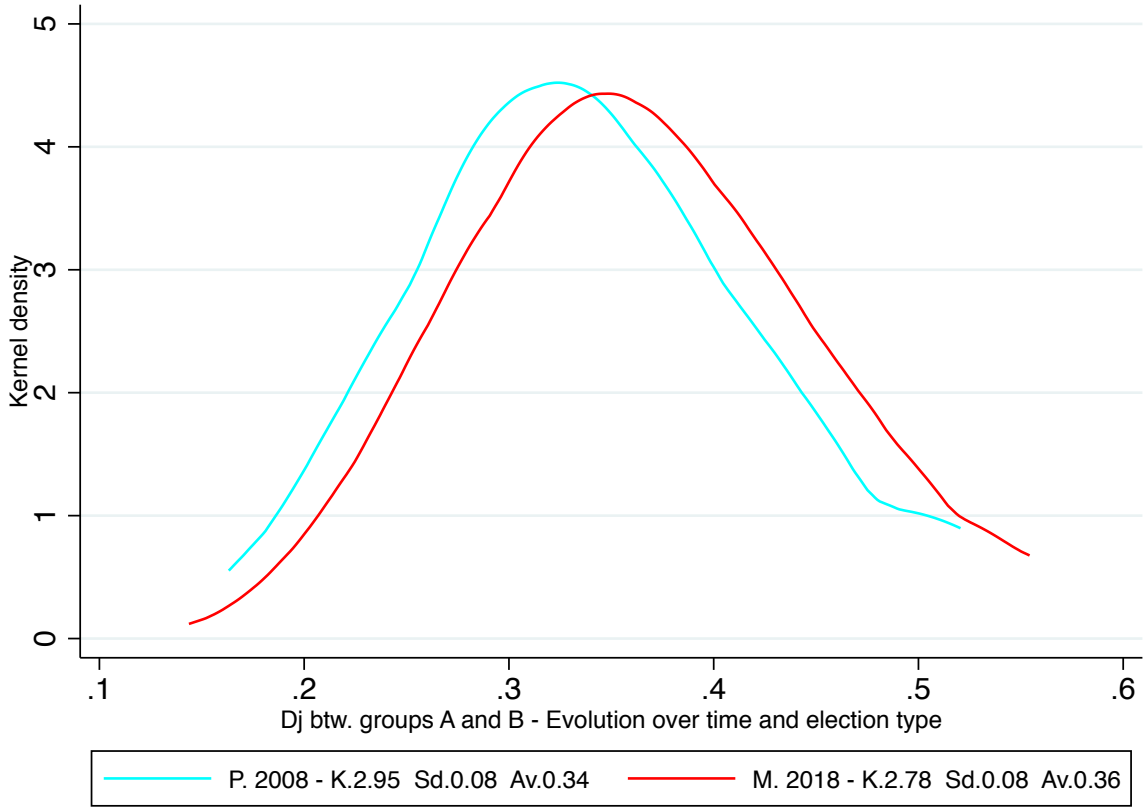


Fig. – Kernel distributions of the dissimilarity index at the pseudo-CD level using tracts as sub-units - Weights : Number of reg. voters - *Catalist Data*

Rise in Partisan Segregation

Even at finer geographic levels

- We observe a similar increase in partisan segregation across :
  - Counties Catalist data
  - Tracts Catalist + Target Smart data
  - Block groups Target Smart data
  - Blocks Target Smart data
- The rise in partisan segregation *within* counties is consistent with the rise in partisan segregation *across* finer units

Rise in Partisan Segregation

Robustness and external validity

- Partisan segregation has been constantly rising over the last decade, independently from electoral years
- We find similar trends using electoral data or aggregate partisan registration data. It confirms that :
  - The rise in partisan segregation is not limited to the 31 states for which partisan affiliation is available
  - Our results are not limited to 2008-2018 and are consistent with the use of aggregate data
- We obtain similar evidence excluding the South of the U.S.

Plan

Where ?

Identify places driving the rise in partisan segregation

- We look at the rise in partisan segregation *across* counties and pseudo-cds
- We identify :

Places driving the ↑ in partisan segregation *across* geographic units

$$\Leftrightarrow$$

$$\begin{cases} \Delta \frac{D}{D+R} > Med.(\Delta \frac{D}{D+R}) & \& \quad (\frac{D}{D+R})_{2008} > Med.(\frac{D}{D+R})_{2008} \\ \Delta \frac{D}{D+R} < Med.(\Delta \frac{D}{D+R}) & \& \quad (\frac{D}{D+R})_{2008} < Med.(\frac{D}{D+R})_{2008} \end{cases}$$

Corr. Charact. Cat. Voters

Where ?

A rural-urban divide ?

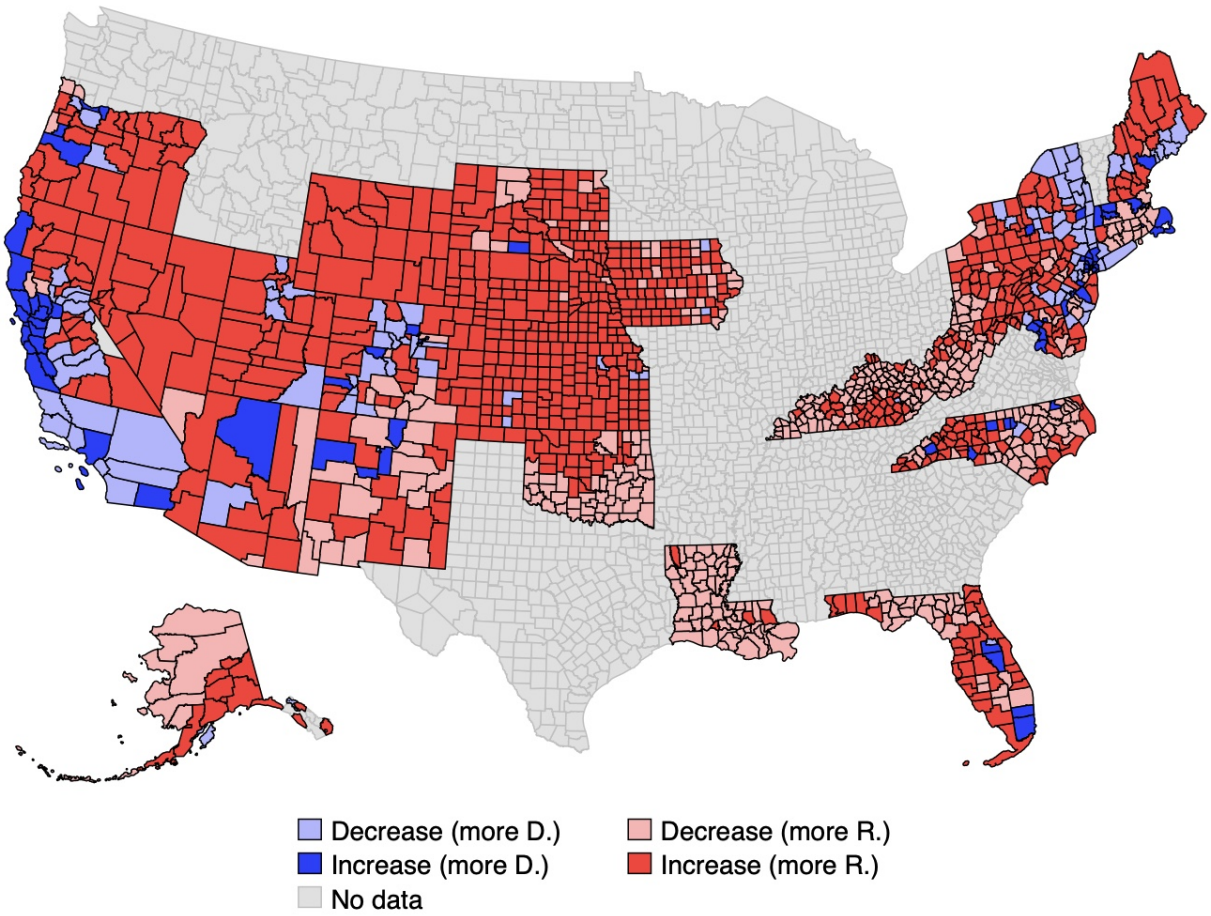


Fig. – Change in partisan homogeneity by U.S. county, using Catalist data

Plan

Which factors explain the change of D/(D+R) ?

1. Change in the composition of the electorate

- Generational change
- U.S. internal migration
- Adult voters "entering" the dataset as reg. (>25 y. old at first appearance)

2. Change in party affiliation

- Switch in partisan affiliation :
  - D $\rightarrow$ R or R $\rightarrow$ D
  - Ind $\rightarrow$ R or Ind $\rightarrow$ D (and vice versa)
- Switch in partisan registration status :
  - Unreg. $\rightarrow$ D or Unreg. $\rightarrow$ R (and vice versa)

Decomposition of the change of D/(D+R)

Using the definition of partial derivatives

$$\Delta \frac{D}{(D+R)} \approx \frac{R}{(D+R)^2}\Delta D - \frac{D}{(D+R)^2}\Delta R$$

$$\approx \sum_f \left(\frac{R_{08}}{(D_{08}+R_{08})^2}\Delta D_f - \frac{D_{08}}{(D_{08}+R_{08})^2}\Delta R_f \right)$$

$$\Leftrightarrow 1 \approx \frac{1}{\Delta \frac{D}{(D+R)}} \times \sum_f \left(\frac{R_{08}}{(D_{08}+R_{08})^2}\Delta D_f - \frac{D_{08}}{(D_{08}+R_{08})^2}\Delta R_f \right)$$

Where $\Delta \frac{D}{(D+R)}$ is the change of D/(D+R) between 2008 and 2018 in geographic unit i, ΔR_f (resp. ΔD_f) is the change in the # of Republicans (resp. Democrats) caused by factor f, and R_{08} (resp. D_{08}) is the # of Republicans (resp. Democrats) in 2008 in unit i.

Decomposition of the change of D/(D+R)

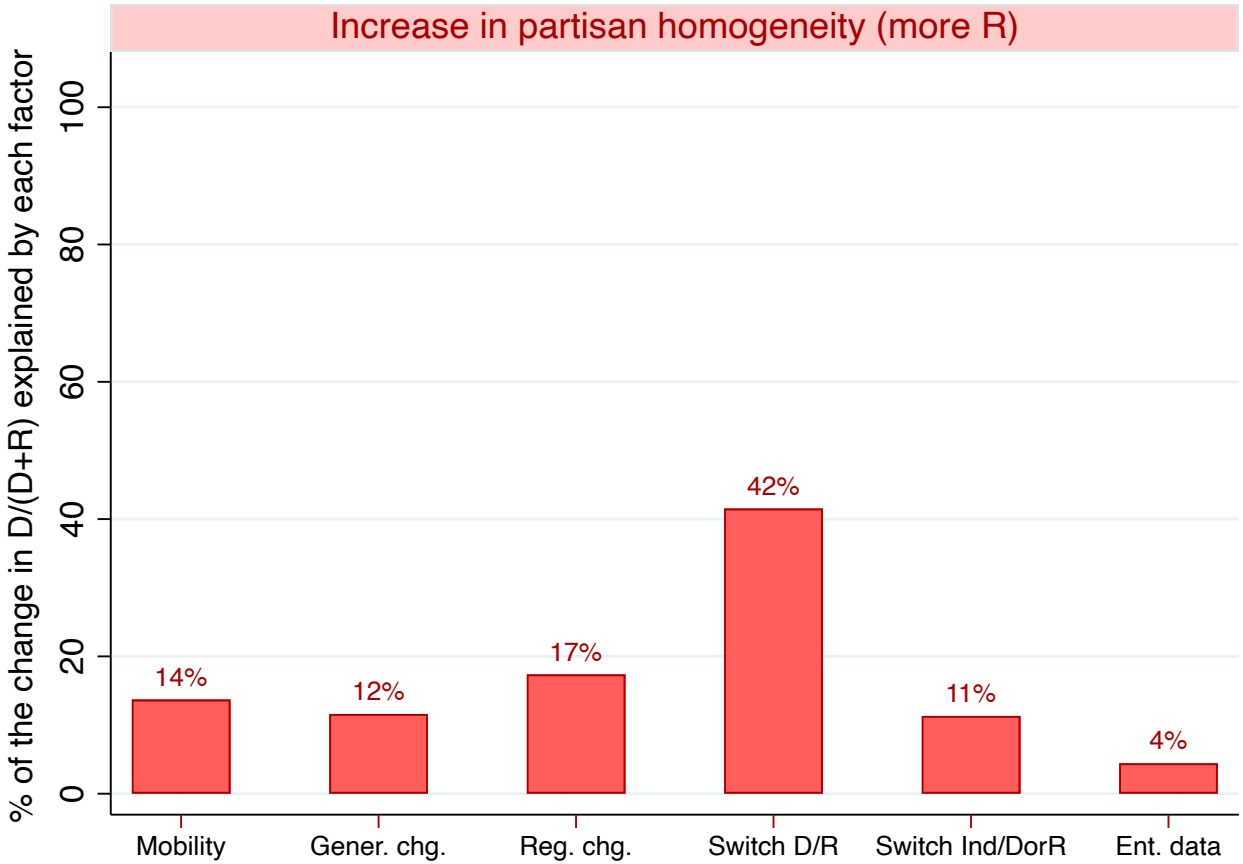


Fig. – % of Δ D/(D+R) explained by each factor in counties where partisan homogeneity has increased - Using *Catalist* data

Decomposition of the change of D/(D+R)

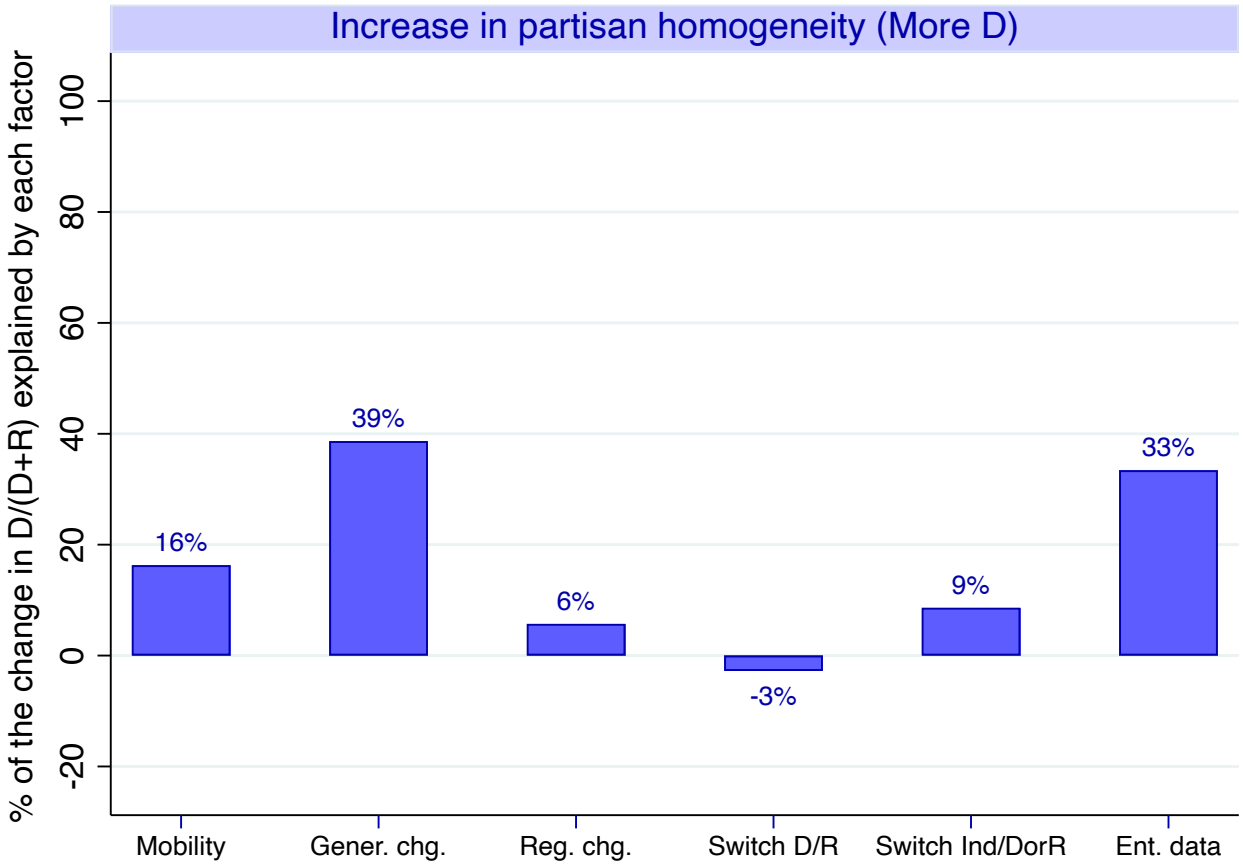


Fig. – % of Δ D/(D+R) explained by each factor in counties where partisan homogeneity has increased - Using *Catalist* data Dec. CD X-↑ or X-↓ Qu. and Sh.

Plan

Conclusion

1. Over the last decade, spatial partisan segregation has increased over time, both across and within geographic units.
2. Overall, the rise in partisan segregation benefits the Republican Party.
3. We still find evidence of a rural/urban divide
4. The rise in partisan segregation can be decomposed into change in the composition of the electorate and change in preferences.

   - Generational change is the main factor driving the rise in partisan segregation in Democratic-leaning places
   - Switch in partisan affiliation is the main factor driving the rise in partisan segregation in Republican-leaning places

THANK YOU !

Institutional setting

Federal elections

- **Presidential elections**

  Elections of the President and of the Vice-President of the U.S.

  Held every 4 years

- **Congress elections**

  Elections of the Senate and of the House of Representatives

  Held every 2 years

  - 1/3 of the 100 Senators are renewed through direct elections
  - Representatives are directly elected to a two-year mandate
  - Congressional districts : 435 constituencies from which representatives are elected to the House of Representatives

Back

Partisan registration

Citizens should change/update their registration when they :

- Change their location
- Change their name
- Want to change their political party affiliation

Back

Data

Advantages and Drawbacks

1. Partisan registration data have some benefits (Abrams and Fiorina, 2012 ; Fiorina, 2016). They do not rely on :
   - ◇ Aggregates
   - ◇ The supply of candidates
   - ◇ The competition among them
   - ◇ Shifting political climates
2. **Yet**, party affiliation is available in a fraction of states only and does not necessarily reflect partisan preferences.
3. We supplement the analysis with the vote shares delivered by the Dave Leip's U.S. Election Atlas.

   The electoral results are given :
   - ◇ By county and CD cells for Congress elections
   - ◇ By county cells uniquely for Presidential elections

Back

Rise in Partisan Segregation

Stable geographic units

To study change in partisan segregation over time, we need stable geographic units.

- County boundaries have remained relatively stable over the last two decades
- Congressional District boundaries have changed substantially after the 2010 redistricting
  - Following the completion of the U.S. Census, legislative districts are re-drawn every ten years (sometimes with substantial *gerrymandering*)
- We build pseudo-CDs with stable boundaries. Each is based on a fix set of counties Back

Increase in partisan segregation across counties

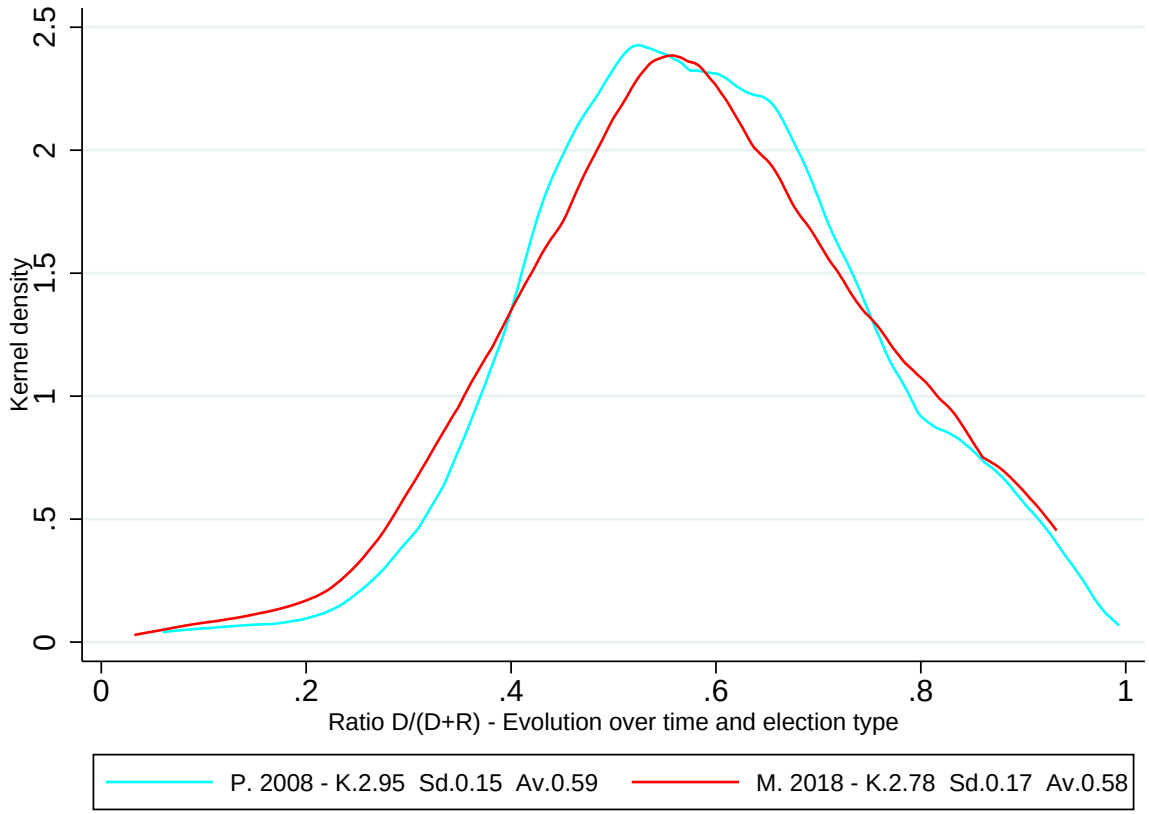


Fig. – Kernel distributions of the ratio D/(D+R) at the county level - Weights : Number of reg. voters - *Catalist Data* Back

Increase in partisan segregation across tracts

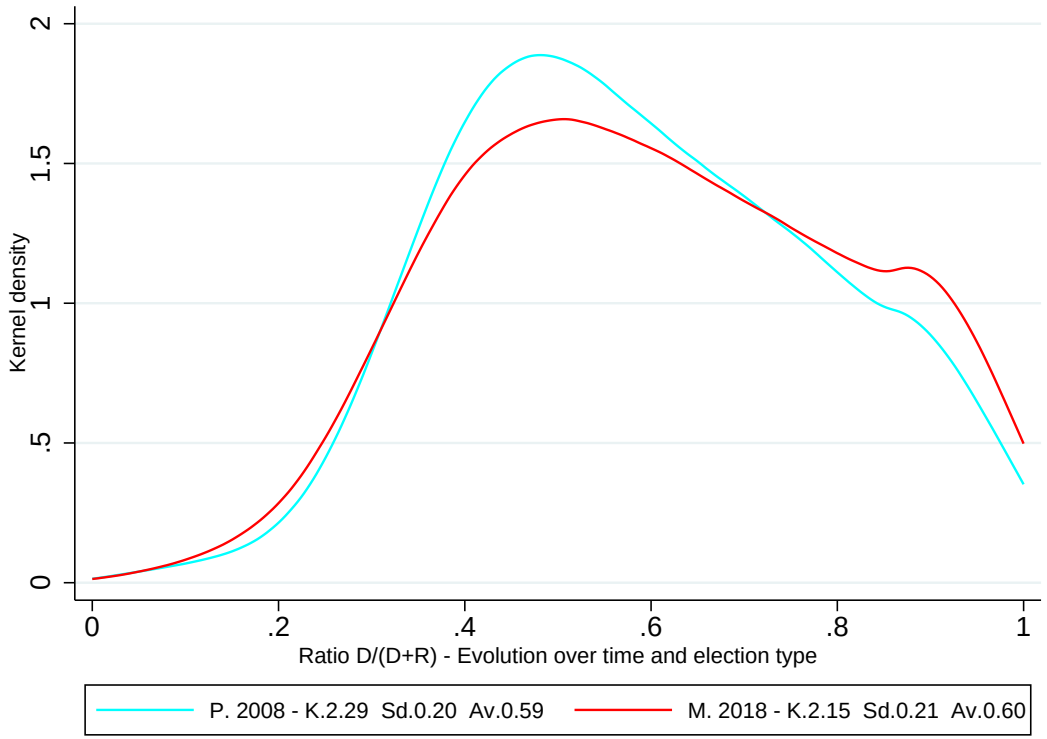


Fig. – Kernel distributions of the ratio D/(D+R) at the tract level - *Catalist Data*

Increase in partisan segregation across tracts

Year	Mean	Kurtosis	Dem. Mean	Rep. Mean	Dem. Skew	Rep. Skew
2012	0.579	-0.775	0.650	0.487	-0.074	0.439
2013	0.582	-0.730	0.657	0.484	-0.137	0.301
2014	0.578	-0.718	0.653	0.479	-0.137	0.285
2015	0.577	-0.738	0.655	0.476	-0.142	0.302
2016	0.578	-0.755	0.654	0.475	-0.156	0.300
2017	0.578	-0.786	0.657	0.473	-0.175	0.318
2018	0.578	-0.786	0.656	0.472	-0.181	0.307
2019	0.582	-0.821	0.660	0.473	-0.211	0.320
2020	0.584	-0.824	0.661	0.474	-0.225	0.304

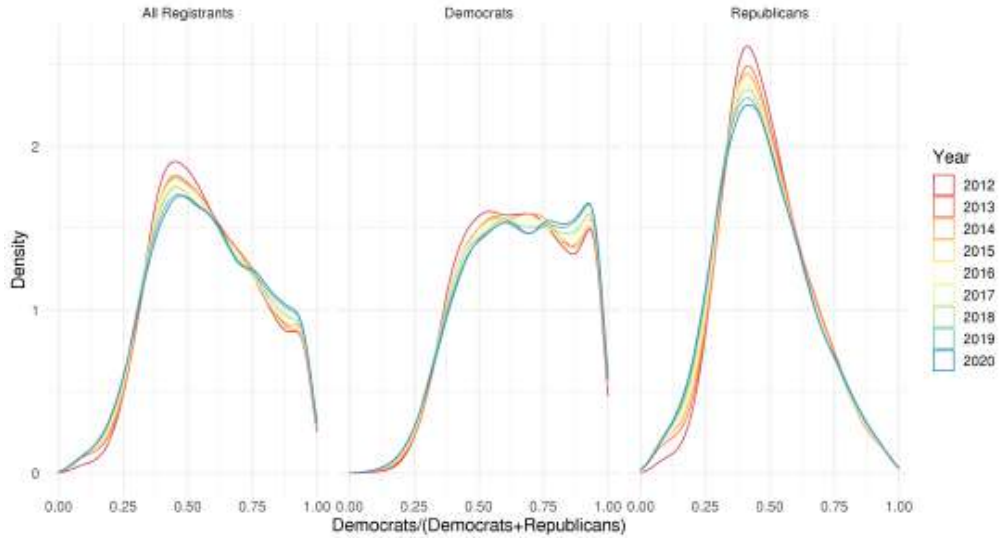


Fig. – Kernel distributions of the ratio D/(D+R) at the tract level - *Target Smart Data*

Back

Increase in partisan segregation across block groups

Year	Mean	Kurtosis	Dem. Mean	Rep. Mean	Dem. Skew	Rep. Skew
2012	0.579	-0.771	0.653	0.483	-0.103	0.423
2013	0.582	-0.760	0.660	0.479	-0.166	0.304
2014	0.578	-0.749	0.657	0.474	-0.165	0.291
2015	0.578	-0.770	0.658	0.472	-0.170	0.308
2016	0.578	-0.787	0.657	0.470	-0.184	0.308
2017	0.578	-0.817	0.660	0.468	-0.204	0.326
2018	0.579	-0.817	0.659	0.467	-0.210	0.315
2019	0.582	-0.849	0.664	0.468	-0.240	0.327
2020	0.584	-0.851	0.665	0.469	-0.254	0.312

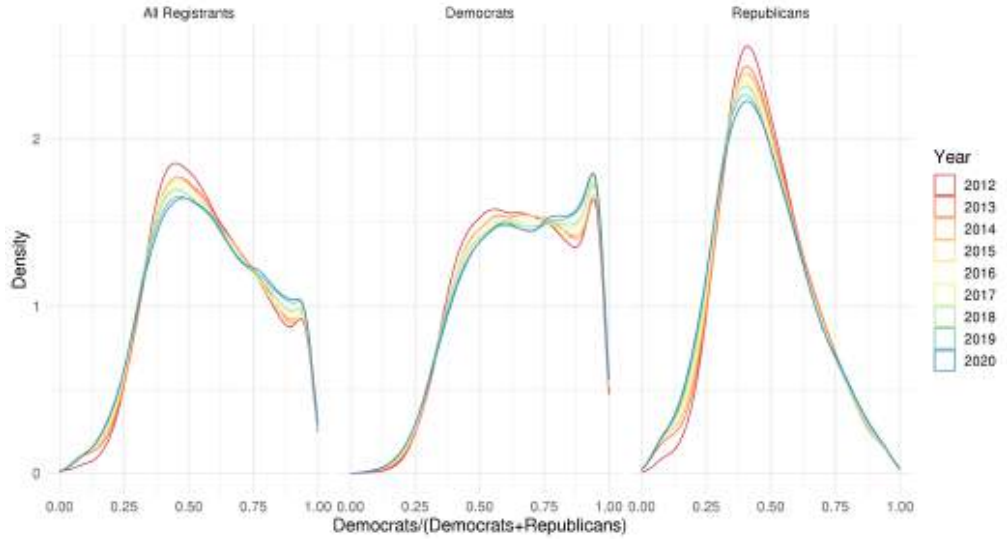


Fig. – Kernel distributions of the ratio D/(D+R) at the block group level - *Target Smart Data*

Back

Increase in partisan segregation across blocks

Year	Mean	Kurtosis	Dem. Mean	Rep. Mean	Dem. Skew	Rep. Skew
2012	0.581	-0.674	0.681	0.444	-0.293	0.065
2013	0.583	-0.700	0.686	0.443	-0.341	0.066
2014	0.579	-0.706	0.683	0.438	-0.334	0.076
2015	0.578	-0.726	0.684	0.436	-0.342	0.091
2016	0.579	-0.732	0.683	0.435	-0.352	0.096
2017	0.579	-0.754	0.686	0.433	-0.371	0.111
2018	0.580	-0.746	0.685	0.432	-0.374	0.106
2019	0.583	-0.756	0.689	0.433	-0.402	0.109
2020	0.585	-0.745	0.689	0.435	-0.411	0.097

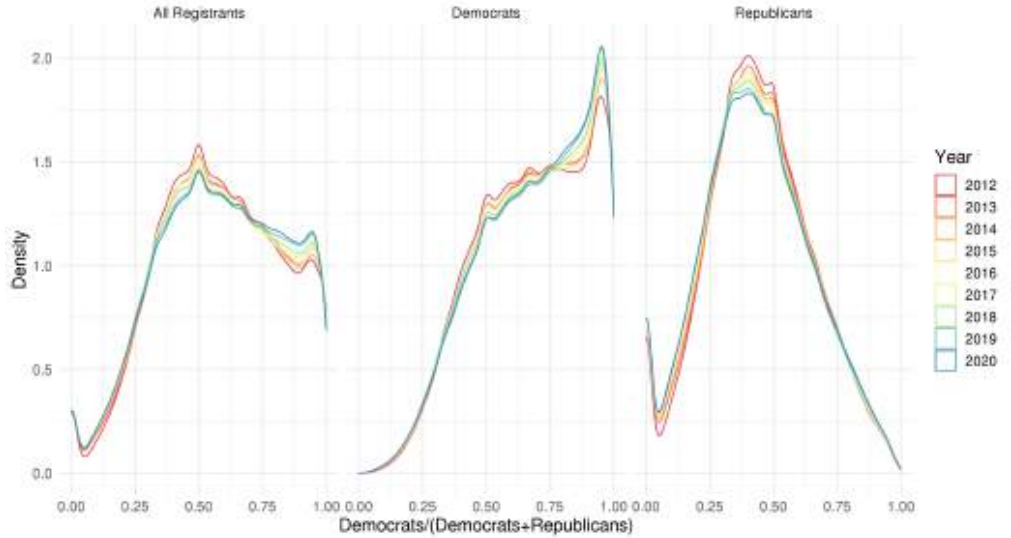


Fig. – Kernel distributions of the ratio D/(D+R) at the block level - *Target Smart Data*

Back

Constant Rise in Partisan Segregation - Ratio D/(D+R)

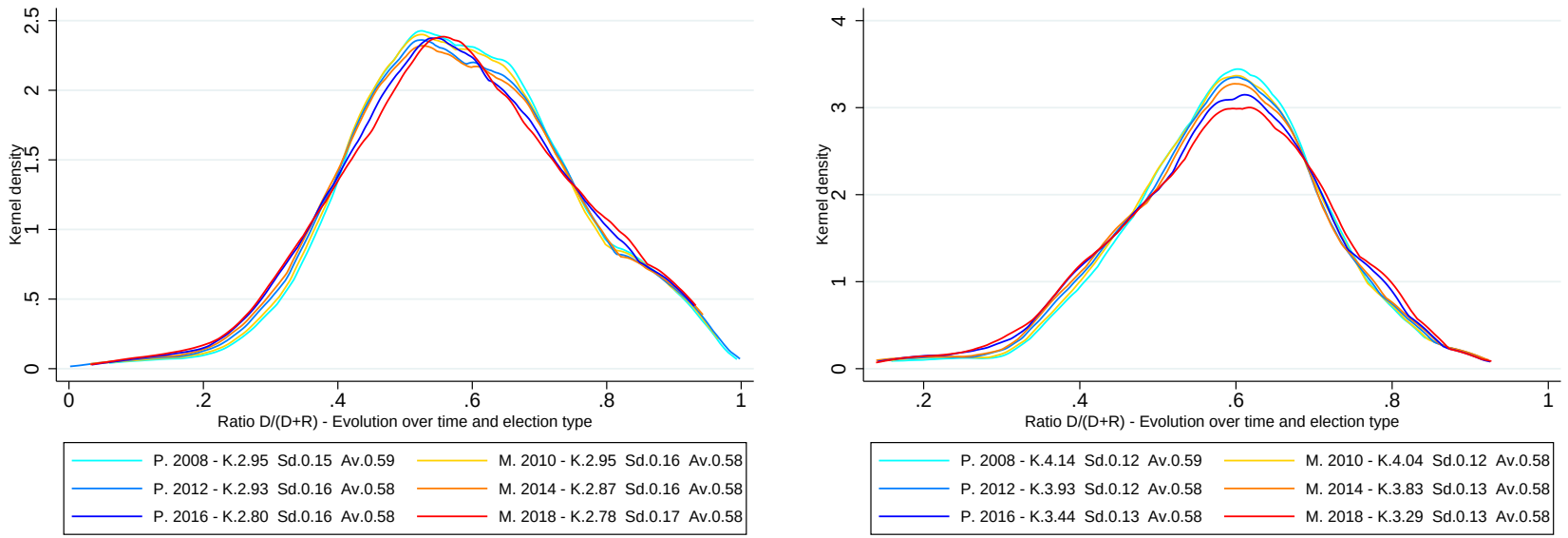
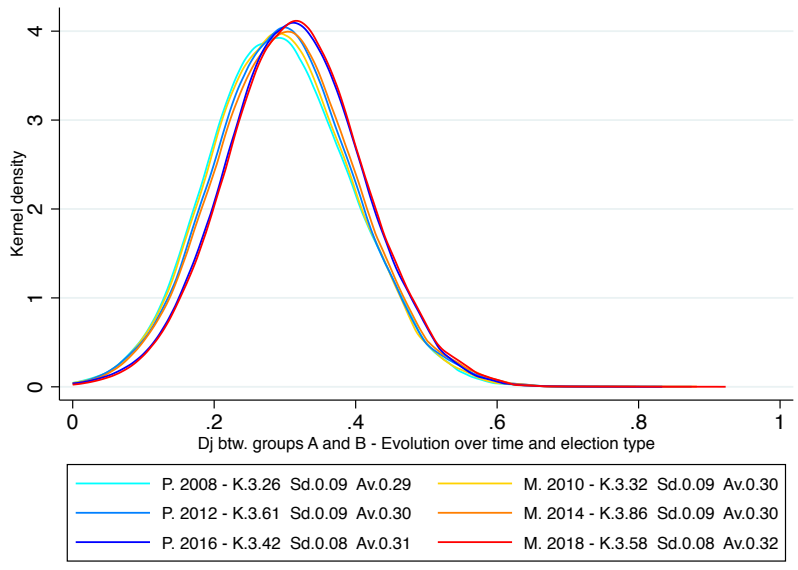


Fig. – Kernel distributions of the ratio D/(D+R) at the county level (on the left) and at the pseudo-CD level (on the right) - Weights : Number of voters - *Catalist Data*

Constant Rise in Partisan Segregation - DI



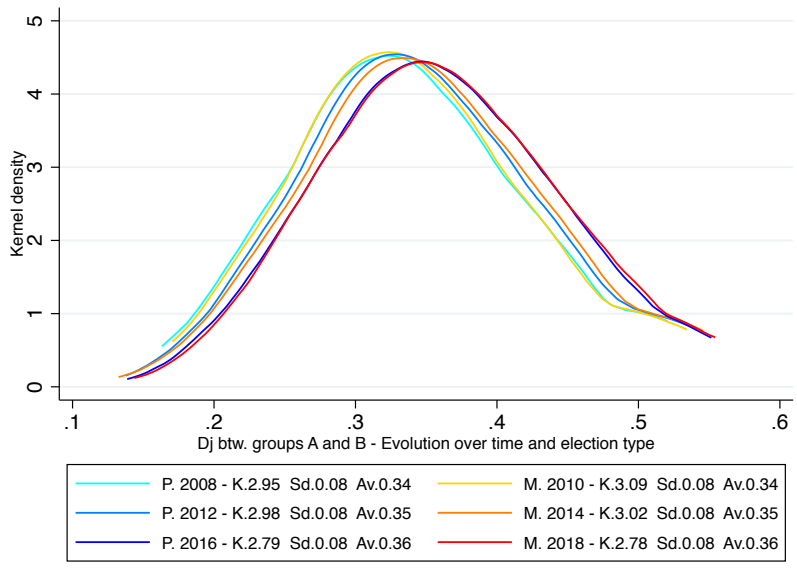


Fig. – Kernel distributions of the dissimilarity index at the county level (on the left) and at the pseudo-CD level (on the right) - Weights : Number of voters - *Catalist Data*

Back

Using electoral data

Flattening of the distribution of D/(D+R) at Congress elections

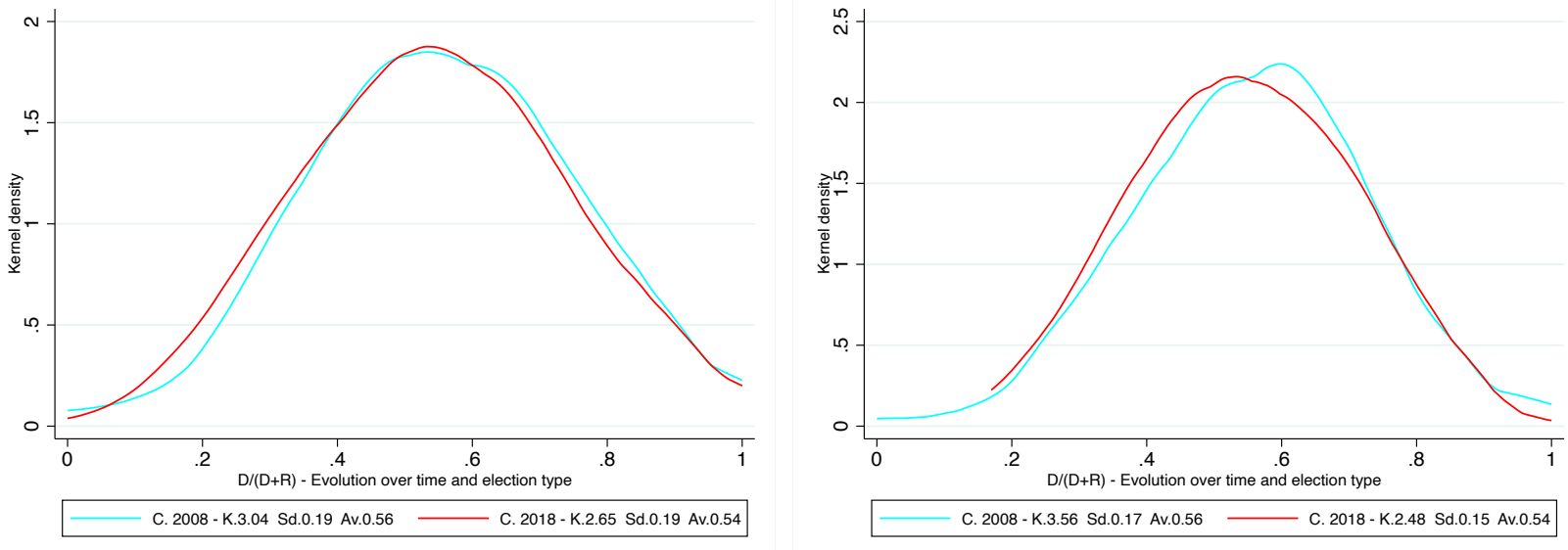
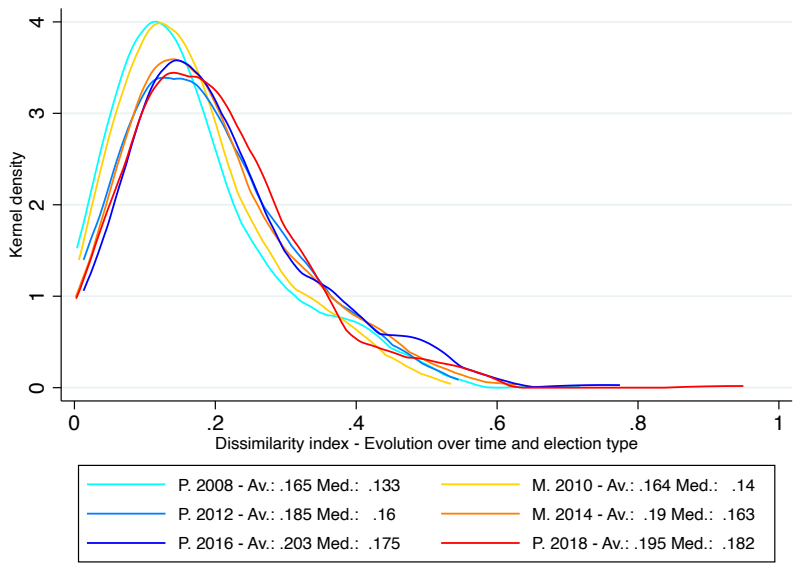


Fig. – Weighted kernel distributions of the ratio D/(D+R) using Congress elections - At the county level (on the left) and at the pseudo-CD level (on the right) - *Dave Leip's Atlas*

Using electoral data

Distribution of the dissimilarity index - Congress and Presidential elections



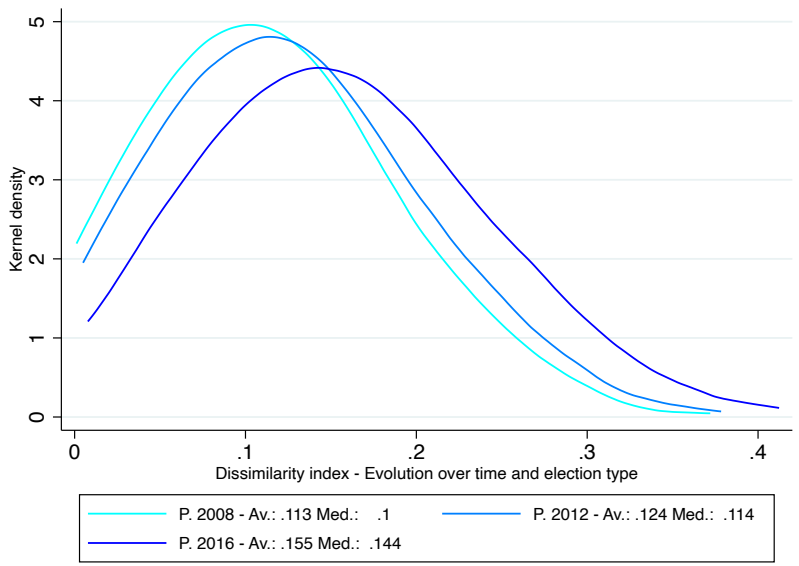


Fig. – Kernel distribution of the dissimilarity index at the pseudo-CD level - Congress elections (on the left) and Presidential elections (on the right) - *Dave Leip's Atlas*

Back

Rise in Partisan Segregation

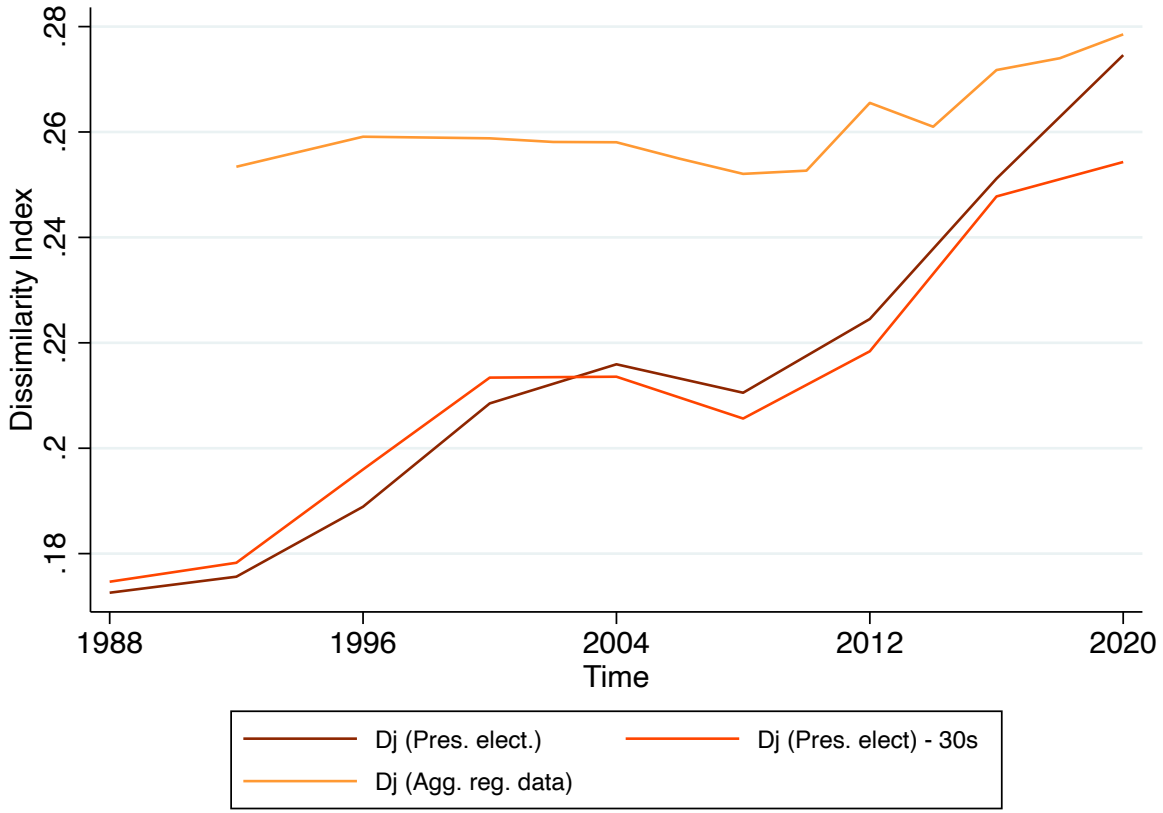


Fig. – Increase in the dissimilarity index between 1988 and 2020 using various data sources

Rise in Partisan Segregation

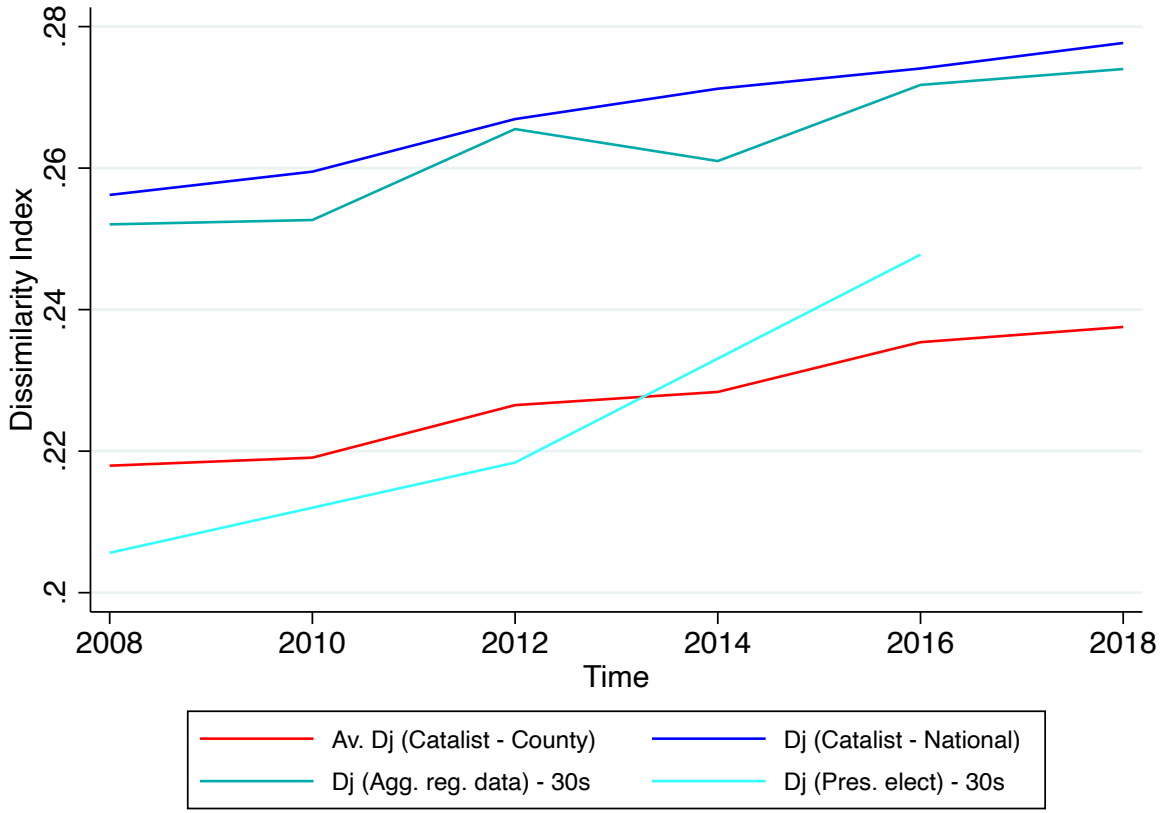


Fig. – Increase in the dissimilarity index between 2008 and 2018 using various data sources Back

Rise in Partisan Segregation

Excluding the South

- Confederate States may follow different time trends regarding partisan segregation.
- We check whether our results are robust to the exclusion of Southern states following two definitions :
  - The Census Definition of the South of the U.S. (Region 3) - Def. 1
  - Cascio and Wasghington (2014)'s definition targeting Confederate States - Def. 2

Rise in Partisan Segregation

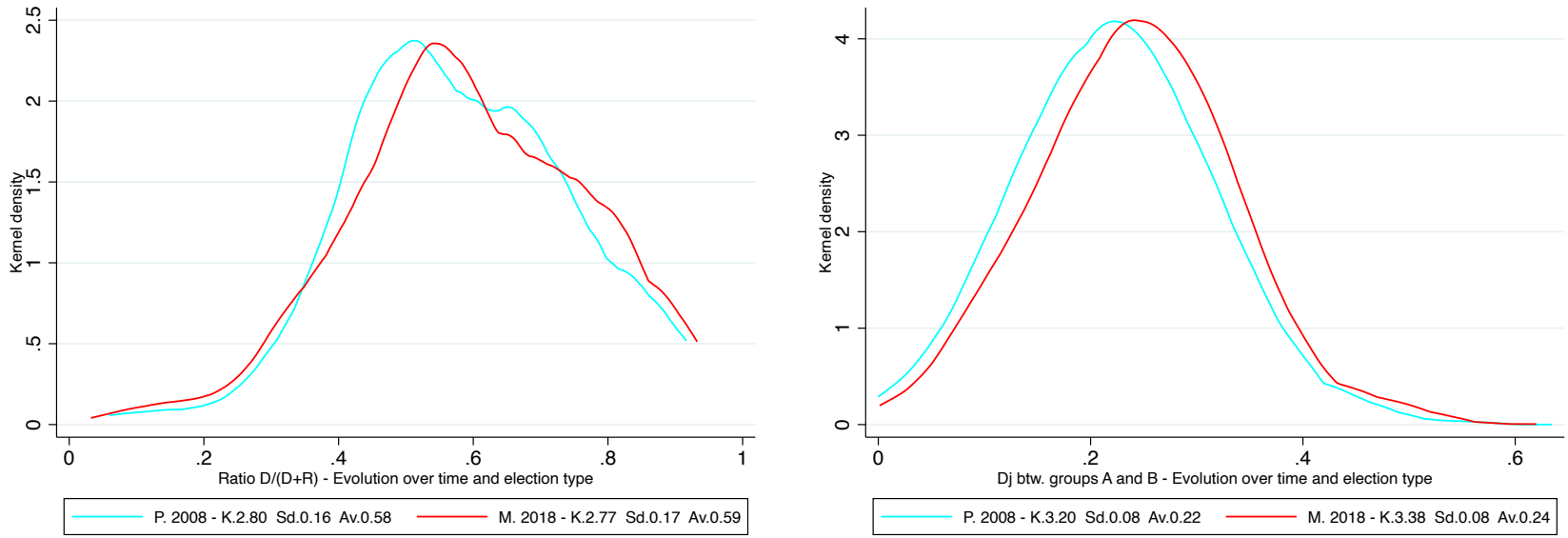


Fig. – Exclusion of the South (Def 1) : Increase in partisan segregation at the county level using the ratio D/(D+R) (left) and the Dj (right)

Rise in Partisan Segregation

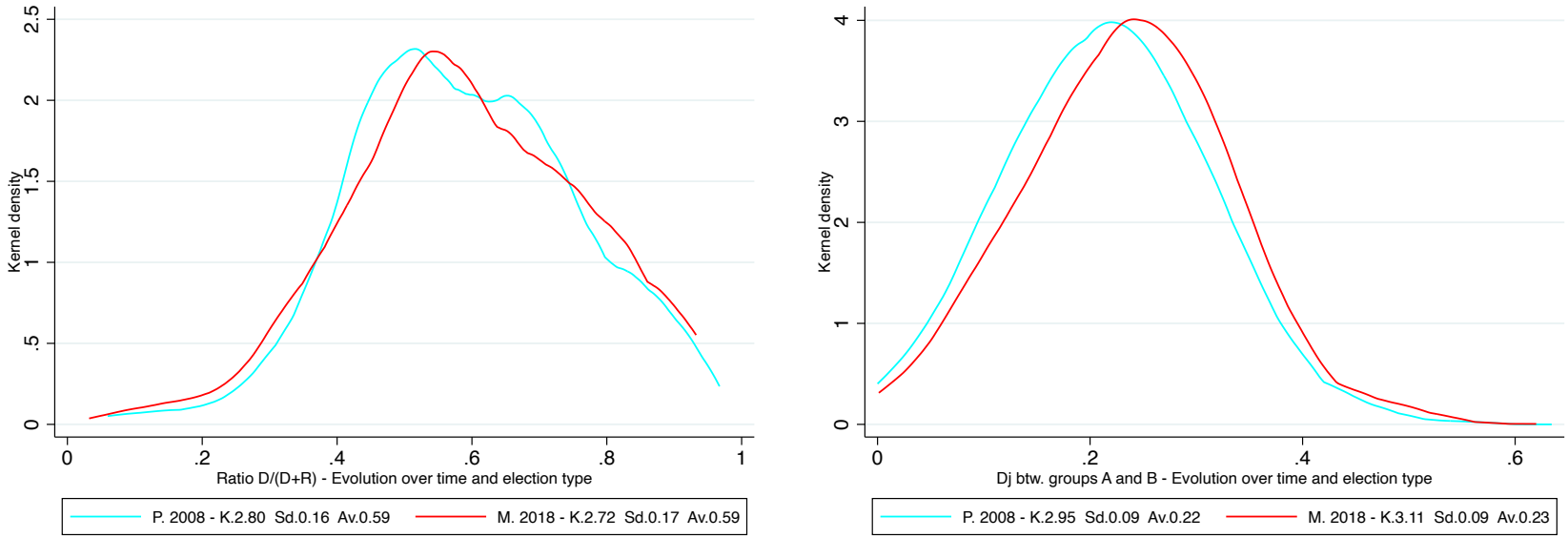


Fig. – Exclusion of the South (Def 2) : Increase in partisan segregation at the county level using the ratio D/(D+R) (left) and the Dj (right) Back

Where ?

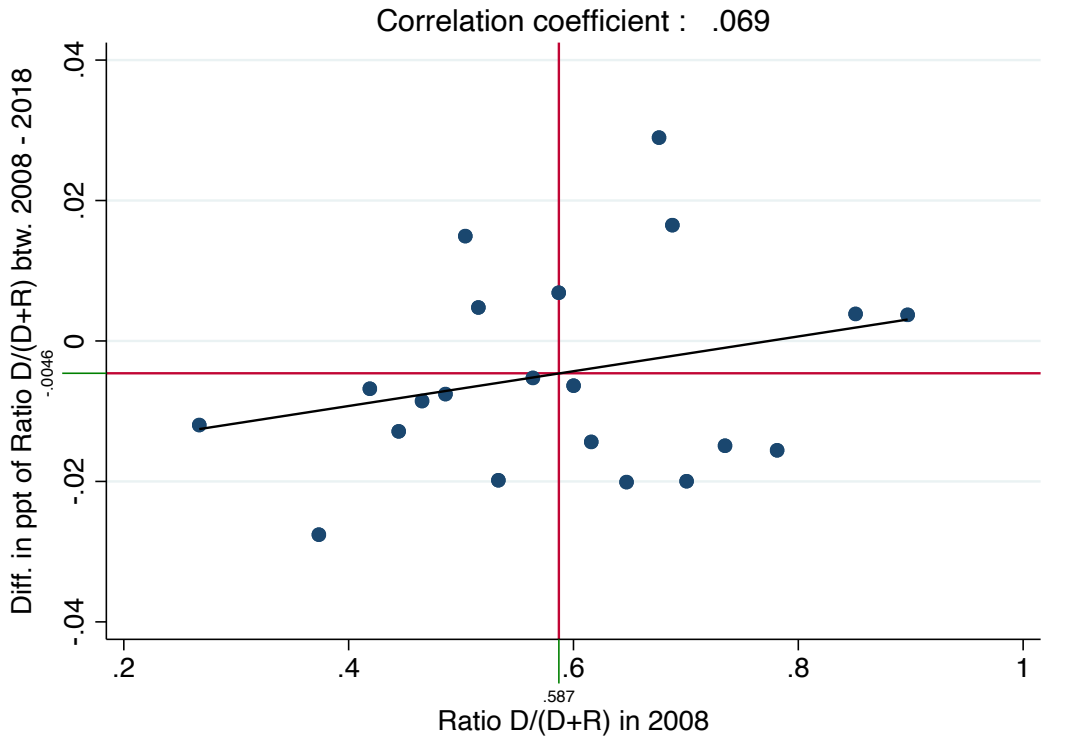


Fig. – Change in D/(D+R) vs D/(D+R) in 2008 at the county level - Weights : Number of registered voters in 2008 - Quantile-based bins - *Catalist Data*

Pseudo-CD level Back

Change in D/(D+R) vs D/(D+R) in 2008

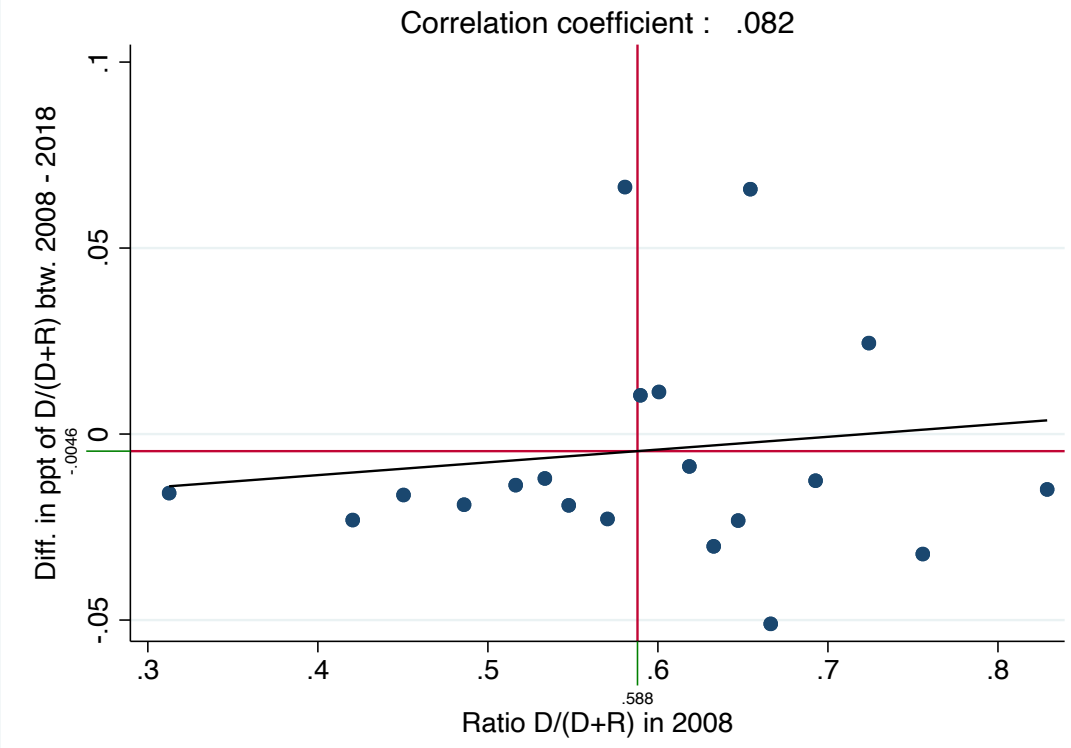


Fig. – Change in D/(D+R) vs D/(D+R) in 2008 at the pseudo-CD level - Weights : Number of registered voters in 2008- Quantile-based bins - *Catalist Data*

Back

Where ?

Variable	Obs	Mean (%)
Increase in partisan homogeneity	***1,375***	***61***
In favor of Republicans	1,375	56
In favor of Democrats	1,375	5
Decrease in partisan homogeneity	***1,375***	***39***
In favor of Republicans	1,375	31
In favor of Democrats	1,375	8

Table – Share of counties experiencing an increase vs. decrease in partisan homogeneity between 2008 and 2018 - Using *Catalist* data

Where ?

Table – T-test table - Increase vs Decrease in partisan homogeneity (counties) - Census data

	(1) ↑ in part. homogeneity			(2) ↓ in part. homogeneity	
	Diff	Mean	Nb. Obs	Mean	Nb. Obs
Census					
Total population	-24,859	120,660	843	145,519	532
Median age	1.706***	41.708	843	40.002	532
Sh. Female pop.	-0.001	0.498	843	0.499	532
HHI Ethnic heterogeneity	0.092***	0.736	843	0.644	532
Sh. Foreign-born pop.	0.422	5.395	843	4.973	532
Sh. Non-white pop.	-0.101***	0.177	843	0.278	532
People/Sq Mile	178	430	843	252	532
Sh. Urban pop.	-0.027	0.423	843	0.450	532
Median income	3,544***	49,749	843	46,204	532
Gini index	-0.015***	0.436	843	0.451	532
High-school dipl. or above	0.040***	0.881	843	0.841	532
Sh. Homeowners	0.014***	0.723	843	0.708	532

Where ?

Table – T-test table - Increase vs Decrease in partisan homogeneity (counties) - Among the registered population

	(1) ↑ in part. homogeneity			(2) ↓ in part. homogeneity	
	Diff	Mean	Nb. Obs	Mean	Nb. Obs
Among the registered population					
Sh. Registered voters	0.020***	0.758	843	0.738	532
Democrats	-0.228***	0.315	843	0.543	532
Independents	0.027***	0.226	843	0.199	532
Republicans	0.201***	0.459	843	0.259	532
Aged btw. 17-27	-0.012***	0.145	843	0.157	532
Aged btw. 28-42	-0.021***	0.219	843	0.240	532
Aged btw. 43-57	0.002	0.296	843	0.293	532
Aged over 58	0.031***	0.340	843	0.309	532
Black	-0.065***	0.026	843	0.091	532
Caucasian	0.089***	0.924	843	0.836	532
Hispanic	-0.010**	0.031	843	0.041	532

Back

Change in partisan segregation

Variable	Obs	Mean (%)
Increase in partisan homogeneity	***135***	***54***
In favor of Republicans	135	41
In favor of Democrats	135	13
Decrease in partisan homogeneity	***135***	***46***
In favor of Republicans	135	26
In favor of Democrats	135	2

Table – Share of pseudo-CDs experiencing an increase vs. decrease in partisan homogeneity between 2008 and 2018 - Using *Catalist* data

Back

Where ?

Trend in partisan segregation across groups of voters

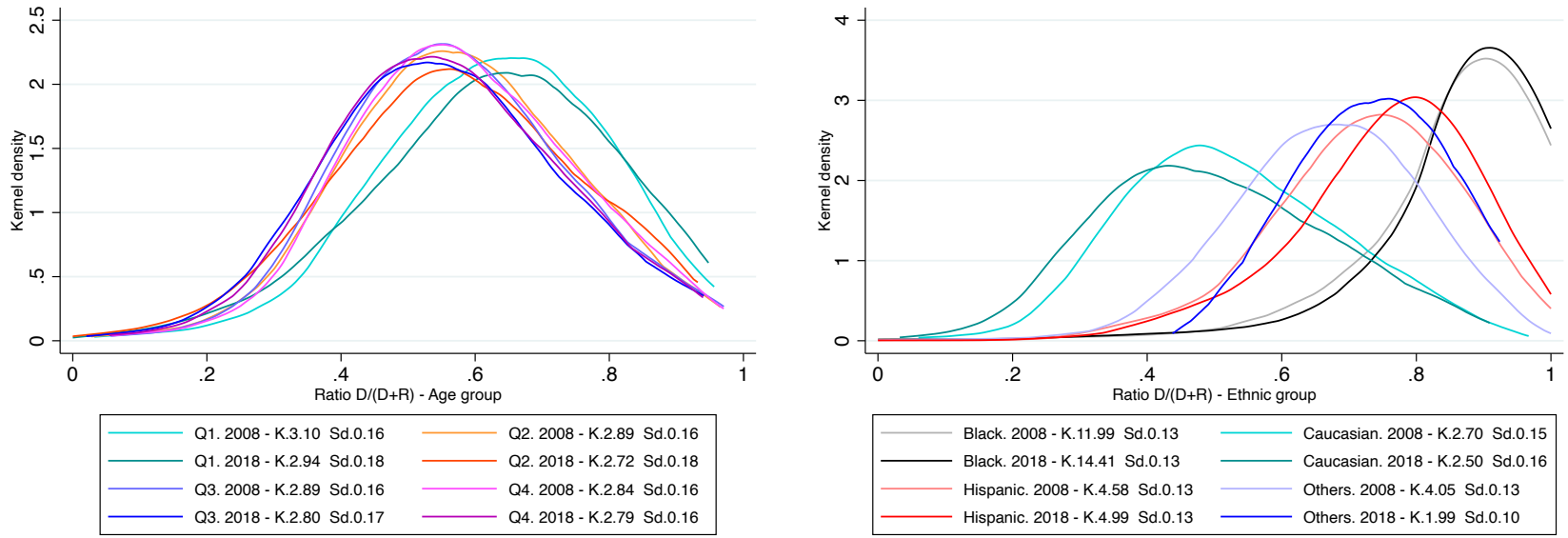


Fig. – Weighted kernel distributions of the ratio D/(D+R) at the county level - Per age and ethnic groups using *Catalist* data

Back

Decomposition of the change of D/(D+R)

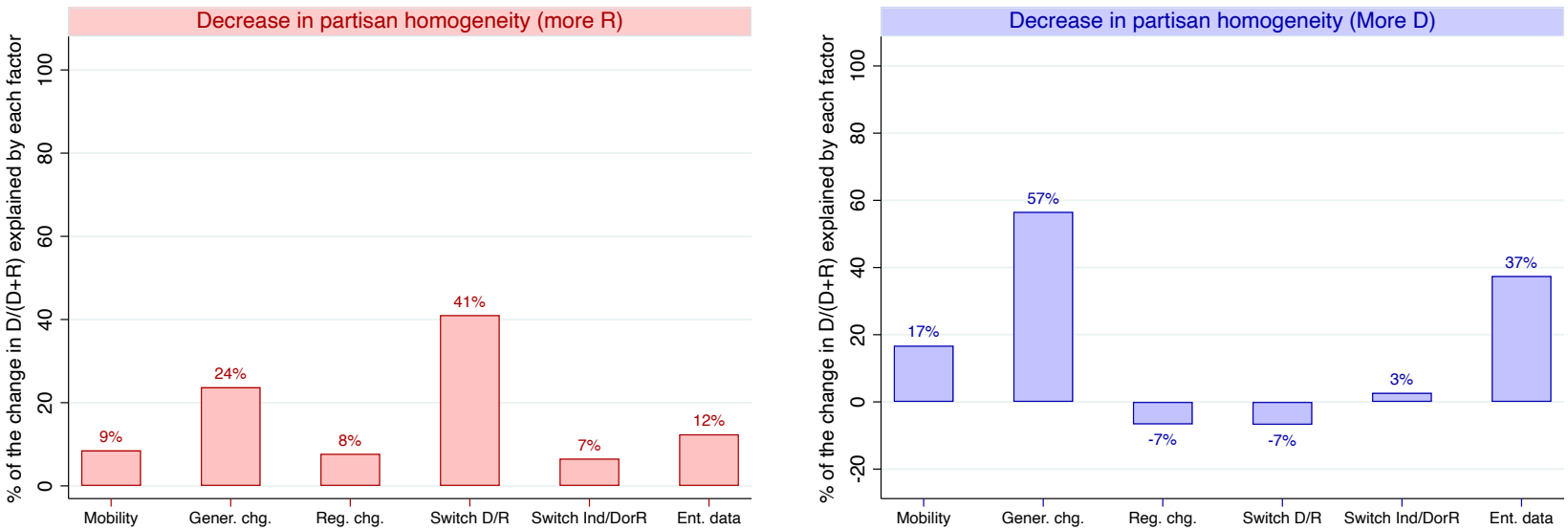


Fig. – % of Δ D/(D+R) explained by each factor in counties where partisan homogeneity has decreased - Using *Catalist* data

Back

Decomposition of the change of D/(D+R)

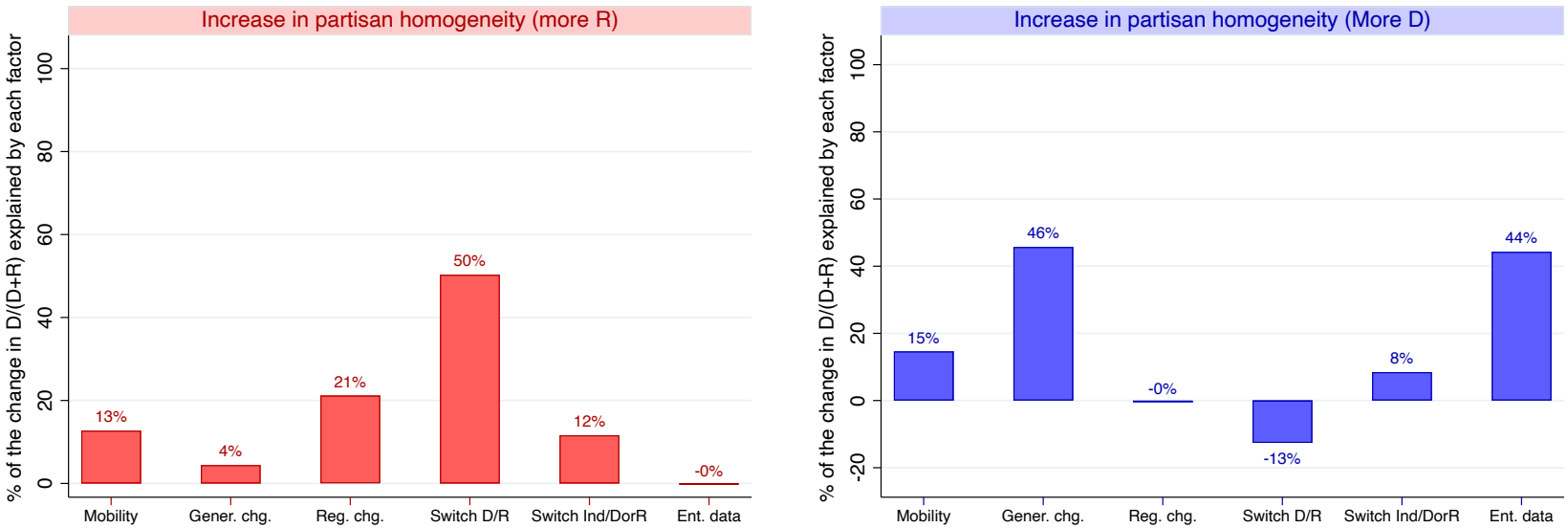


Fig. – % of Δ D/(D+R) explained by each factor in pseudo-CD where partisan homogeneity has increased - Using *Catalist* data

Decomposition of the change of D/(D+R)

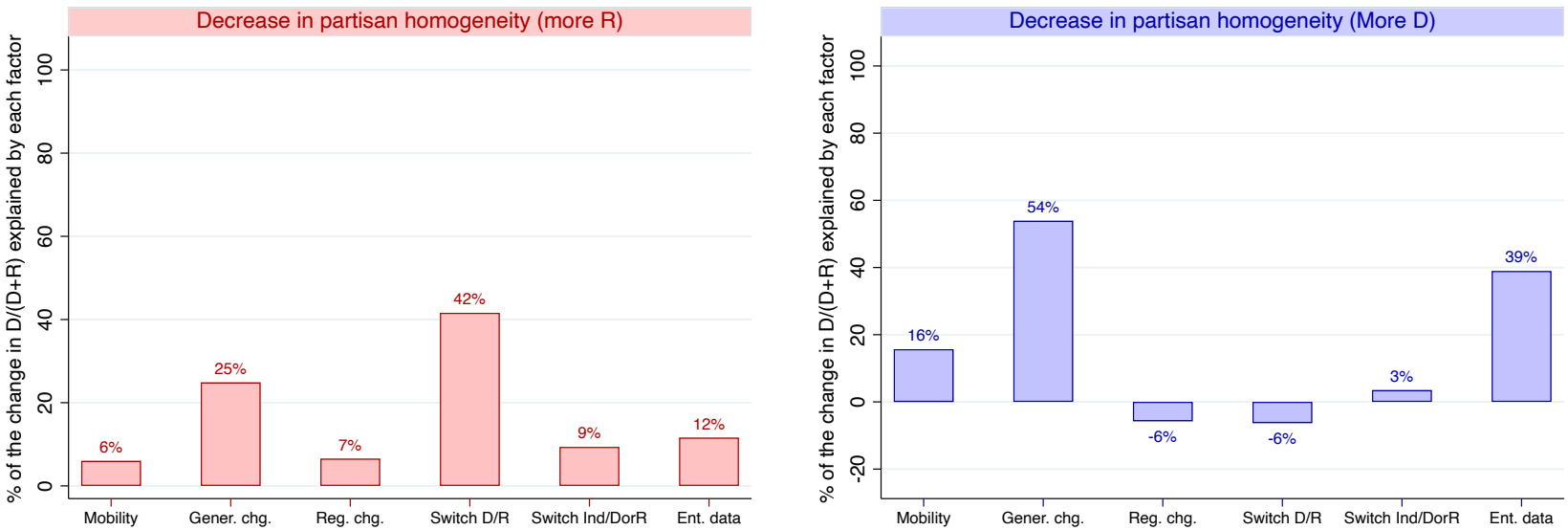


Fig. – % of Δ D/(D+R) explained by each factor in pseudo-CD where partisan homogeneity has decreased - Using *Catalist* data

Back

Decomposition of the change of D/(D+R)

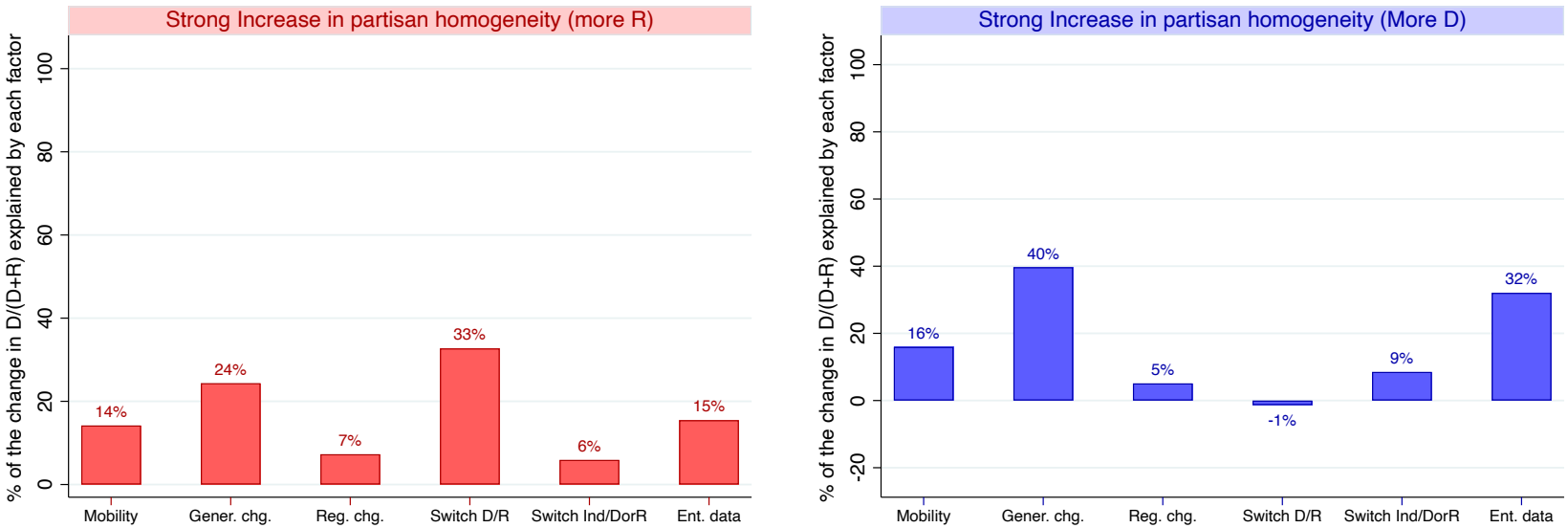


Fig. – % of Δ D/(D+R) explained by each factor in counties experiencing the largest increase in partisan homogeneity - Using *Catalist* data

Decomposition of the change of D/(D+R)

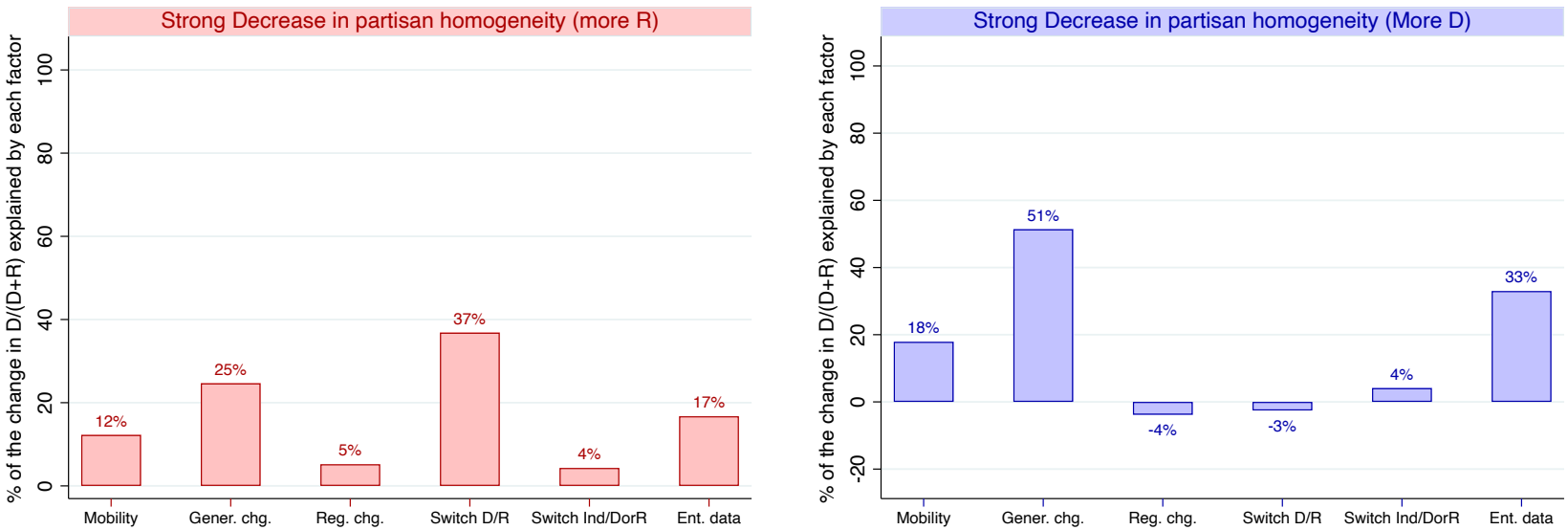


Fig. – % of Δ D/(D+R) explained by each factor in counties experiencing the largest decrease in partisan homogeneity - Using *Catalist* data

Back

Decomposition of the change of D/(D+R)

A factor may account for a large share of the change of D/(D+R) if :

- A large number of voters is accounted for by this factor
- Changes are tilted towards the Republicans or the Democrats

In further decomposition, we confirm that :

- Generational change is the main driver in Democratic-leaning counties via a large # of young voters coming of age + a large share of Democrats among them
- Switch in partisan affiliation is the main driving force in Republican-leaning places, with Democrats disproportionately "becoming" Republicans

Back

Decomposition - Inflow and Outflow

ΔD_f and ΔR_f

$$\Delta \frac{D}{(D+R)} \approx \sum_f [N_{I,f} \times (\frac{R_{08}}{(D_{08}+R_{08})^2} s^D_{I,f} - \frac{D_{08}}{(D_{08}+R_{08})^2} s^R_{I,f}) - N_{O,f} \times (\frac{R_{08}}{(D_{08}+R_{08})^2} s^D_{O,f} - \frac{D_{08}}{(D_{08}+R_{08})^2} s^R_{O,f})]$$

- $N_{I,f}$ (resp. $N_{O,f}$) is the number of voters who were Democrats or Republicans in unit i in 2018 (resp. 2008) but not in 2008 (resp. 2018) due to factor f
- $s^P_{I,f}$ (resp. $s^P_{O,f}$) is the share of those voters who were (resp. who were not anymore) registered as P in 2018 due to factor f

$\Rightarrow$ Explore the correlation between the change of D/(D+R) and the deviation from the equilibrium $\frac{s^D_{h,f}}{s^D_{h,f}+s^R_{h,f}} - \frac{D_{08}}{D_{08}+R_{08}}$

Decomposition - Switches btw. D and R

$$\Delta D_f = -\Delta R_f$$

$$\Delta \frac{D_f}{D_f + R_f} = \frac{\beta R_{08} - \alpha D_{08}}{R_{08} + D_{08}}$$

- β, the share of Republicans who become Democrats, using the initial number of Republicans as denominator
- α the share of Democrats who become Republicans, using the initial number of Democrats as denominator

$\Rightarrow$ Explore the correlation between the change of D/(D+R) and the deviation from the equilibrium $\frac{\beta}{\alpha+\beta} - \frac{D_{08}}{D_{08}+R_{08}}$

Decomposition - Inflow and Outflow

Table – Correlation coefficient between the change in D/(D+R) and $\frac{s_f^D}{s_f^R+s_f^D} - \frac{D_{08}}{D_{08}+R_{08}}$ - At the county level

	All counties		**↑ in Homog.**		**↑ in Homog. (R)**		**↑ in Homog. (D)**	
	Infl.	Outfl.	Infl.	Outfl.	Infl.	Outfl.	Infl.	Outfl.
Generational change	.932***	-.693***	.904***	-.759***	.879***	-.564***	.829***	-.367***
U.S. Internal migration	.881***	.474***	.868***	.176***	.759***	.311***	.705***	-.105***
Change in partisan affil. btw. Ind & D/R	.905***	-.350***	.893***	-.668***	.838***	-.385***	.706***	.082***
Change in partisan reg. status	.902***	-.067***	.881***	-.511***	.789***	.084***	.778***	-.083***
Voters "entering" the dataset as reg.	.925***	-	.901***	-	.883***	-	.814***	-
Change in partisan affil. btw. D & R	.907***		.887***		.793***		.492***	
	N = 1,375		**N = 843**		**N = 769**		**N = 74**	

Decomposition - Inflow and Outflow

Table – Average number of voters registered as Democrats or Republicans per factor - At the county level

	All counties		**↑ in Homog.**		**↑ in Homog. (R)**		**↑ in Homog. (D)**	
	Infl.	Outfl.	Infl.	Outfl.	Infl.	Outfl.	Infl.	Outfl.
Generational change	6,913	5,495	6,353	5,022	3,101	2,891	40,150	27,172
	(21,780)	(13,707)	(23,308)	(13,851)	(6,708)	(5,250)	(67,257)	(37,120)
U.S. Internal migration	6,265	6,437	6,179	6,297	4,054	3,472	28,253	35,652
	(14,031)	(15,780)	(13,849)	(16,748)	(8,959)	(7,062)	(28,745)	(41,871)
Change in partisan affil. btw. Ind & D/R	2317	2053	2077	1793	1117	881	12045	11274
	(6,863)	(7,545)	(6,595)	(7,814)	(2,748)	(1,848)	(17,658)	(23,842)
Change in partisan reg. status	1,678	9,365	1,557	8,698	831	4,855	9,097	48,642
	(5,353)	(29,084)	(5,712)	(28,653)	(1,712)	(10,320)	(16,804)	(81,092)
Voters "entering" the dataset as reg.	6,825	-	6,697	-	3,211	-	42,917	-
	(23,786)	-	(25,442)	-	(7,131)	-	(73,982)	-
Change in partisan affil. btw. D & R	4,025		3,567		2,148		18,307	
	(10,752)		(10,444)		(4,457)		(28,421)	
	N = 1375		**N = 843**		**N = 769**		**N = 74**	

Decomposition - Inflow and Outflow

Table – Correlation coefficient between the change in D/(D+R) and $\frac{s_f^D}{s_f^R+s_f^D} - \frac{D_{08}}{D_{08}+R_{08}}$ - At the pseudo-CD level

	All counties		**↑ in Homog.**		**↑ in Homog. (R)**		**↑ in Homog. (D)**	
	Infl.	Outfl.	Infl.	Outfl.	Infl.	Outfl.	Infl.	Outfl.
Generational change	.940***	-.750***	.900***	-.779***	.906***	-.722***	.846***	-.380***
U.S. Internal migration	.887***	.503***	.816***	.123***	.673***	.306***	.509***	-.346***
Change in partisan affil. btw. Ind & D/R	.916***	-.287***	.903***	-.551***	.885***	-.153***	.784***	.441***
Change in partisan reg. status	.904***	-.130***	.863***	-.451***	.726***	-.013***	.794***	-.486***
Voters "entering" the dataset as reg.	.936***	-	.915***	-	.868***	-	.723***	-
Change in partisan affil. btw. D & R	.936***		.915***		.868***		.723***	
	N = 135		**N = 73**		**N = 55**		**N = 18**	

Decomposition - Inflow and Outflow

Table – Average number of voters registered as Democrats or Republicans per factor - At the pseudo-CD level

	All counties		**↑ in Homog.**		**↑ in Homog. (R)**		**↑ in Homog. (D)**	
	Infl.	Outfl.	Infl.	Outfl.	Infl.	Outfl.	Infl.	Outfl.
Generational change	70353.015	55890.252	73441.589	57411.342	47407.782	40220.218	152989.333	109939.778
	(92440.858)	(61773.835)	(100938.542)	(69984.037)	(43531.627)	(25797.868)	(168045.923)	(121456.8)
U.S. Internal migration	48291.667	49858.837	54480.507	53839.438	45017.073	37119.836	83396.556	104927.111
	(47496.874)	(56714.837)	(50348.549)	(58038.581)	(43888.744)	(28394.462)	(58674.692)	(89652.597)
Change in partisan affil. btw. Ind & D/R	25813.615	23326.519	24143.849	21816.219	17064.364	14870.582	45775.611	43039
	(33994.282)	(35179.318)	(30936.947)	(33070.359)	(17239.432)	(14468.253)	(49516.946)	(57740.925)
Change in partisan reg. status	17026.719	95104.178	17931.932	100859.274	12141.491	74509.8	35624.944	181371.556
	(22422.029)	(136203.13)	(24640.69)	(127938.304)	(11612.331)	(66751.504)	(41270.42)	(214617.795)
Voters "entering" the dataset as reg.	69229.911	-	77865.233	-	50446.4	-	161645	-
	(100930.355)	-	(112620.238)	-	(59426.896)	-	(180652.966)	-
Change in partisan affil. btw. D & R	44726.044		44614.534		33312.945		79147.167	
	(49748.737)		(49638.806)		(25517.948)		(81801.724)	
	N = 135		**N = 73**		**N = 55**		**N = 18**	

Back

Decomposition - Inflow and Outflow

Table – Correlation coefficient between the change in D/(D+R) and $\frac{s_f^D}{s_f^R+s_f^D} - \frac{D_{08}}{D_{08}+R_{08}}$ - At the county level

	↓ in Homog.		↓ in Homog. (R)		↓ in Homog. (D)	
	Infl.	Outfl.	Infl.	Outfl.	Infl.	Outfl.
Generational change	.960***	-.631***	.935***	-.572***	.792***	-.194***
U.S. Internal migration	.907***	.692***	.856***	.544***	.638***	.045***
Change in partisan affil. btw. Ind & D/R	.924***	.160***	.892***	-.119***	.479***	-.126***
Change in partisan reg. status	.921***	.375***	.857***	.249***	.768***	-.254***
Voters "entering" the dataset as reg.	.957***	-	.937***	-	.691***	-
Change in partisan affil. btw. D & R	.932***		.874***		.752***	
	N = 532		**N = 426**		**N = 106**	

Decomposition - Inflow and Outflow

Table – Number of voters registered as Democrats or Republicans per factor - At the county level

	↓ in Homog.		↓ in Homog. (R).		↓ in Homog. (D)	
	Infl.	Outfl.	Infl.	Outfl.	Infl.	Outfl.
Generational change	7802.047	6243.602	4847.467	4513.739	19676.113	13195.689
	(19098.407)	(13455.002)	(11018.706)	(10168.279)	(34284.197)	(20882.977)
U.S. Internal migration	6401.295	6657.878	3685.423	3937.291	17316.028	17591.557
	(14329.063)	(14122.529)	(8670.837)	(8635.894)	(24162.735)	(23580.646)
Change in partisan affil. btw. Ind & D/R	2697.923	2464.487	1504.284	1375.514	7495	6840.925
	(7257.693)	(7086.662)	(4199.587)	(3777.7)	(12883.435)	(13117.285)
Change in partisan reg. status	1870.397	10421.867	1187.427	6245.556	4615.16	27205.906
	(4726.462)	(29751.262)	(2976.198)	(13605.447)	(8223.322)	(58067.806)
Voters "entering" the dataset as reg.	7027.677	-	4239.493	-	18233.019	-
	(20917.67)	-	(11908.38)	-	(38476.759)	-
Change in partisan affil. btw. D & R	4751.566		2966.932		11923.774	
	(11195.638)		(6555.467)		(19876.59)	
	N = 532		**N = 426**		**N = 106**	