

Redistricting & Congressional Elections 2012-2020: A Structural Analysis

REDMAP, the Republican plan to aggressively gerrymander the states where they controlled the 2011 redistricting process, is well documented.¹ As a result, Republicans enjoyed an almost 20-seat advantage toward control of the House relative to Democrats after the new maps were drawn a decade ago. Where the state-by-state vote share suggested Republicans should have only won 216 seats, they won 234. Even though they garnered less than half the total votes, they won more than half the seats and controlled the House—a “wrong winner” anti-majoritarian result.

What is not well understood is that it could have been worse, on the one hand, and that also it got better, on the other. What follows is a structural postmortem of redistricting and congressional elections 2012-2020 independent of individual candidates and campaigns.

Data & Methodology

This analysis uses the concept of unearned seats (UE): the seats a party wins in excess of the number of whole seats closest to proportional representation (PR) based on the two-party vote share for a state. By convention, UE seats favoring Republicans are positive, and UE seats favoring Democrats are negative (hereafter simply R’s and D’s). Because UE seats depend on the two-party vote shares, they decouple this analysis from changing vote shares.

The election data supporting this analysis is the official data from the Clerk of the House with results for uncontested races imputed.²

Table 1 (at the end and attached) shows UE seats for each state over time:

- Columns I–M show the results for the 2012-2020 elections
- Columns D–H show the results for the previous decade for comparison
- Columns N, O, and P show the average UE seats for 2002-10, 2012-16, and 2018-20, respectively, and
- Column Q names the entity that controlled the initial redistricting in the 2010 cycle

The states are sorted by their average UE seats for 2012-16, from most R favoring (+) to most D favoring (–). This highlights four distinct groups:

- The first 14 states – AL, AR, FL, GA, IN, MI, NC, OH, OK, PA, SC, TN, TX, and VA – produced large R-favoring UE seats. Not surprisingly, 13 of the 14 maps were drawn by R-controlled redistricting processes.

¹ See *Ratf**cked: The True Story Behind the Secret Plan to Steal America's Democracy*, Dave Daley (2016).

² The official results, revised results, the code for imputing uncontested races, and a description of it are all in this GitHub repository: <https://github.com/alecramsay/ushouse>.

- The next 16 states – AK, IA, ID, KS, KY, LA, MO, MS, MT, ND, NE, SD, UT, WI, WV, and WY – yielded smaller R-favoring UE seats, but they didn’t subsequently change much in 2018-2020. This becomes important later in the analysis. These maps were drawn by a mix of commissions, courts, split processes, or processes controlled by one party or the other.
- Next, three states yielded proportional state delegations – CO, NM, and NV.
- Finally, the last 17 states – AZ, CA, CT, DE, HI, IL, MA, MD, ME, MN, NH, NJ, NY, OR, RI, VT, and WA – produced large UE seats favoring D’s. Again not surprisingly, these maps tended to be drawn by commissions or D-controlled redistricting processes.

Organizing the data this way makes it easier to see the macro dynamics over time.

It Could Have Been Worse

During the decade before REDMAP, 2002-2010, R’s enjoyed a small average national net UE seat advantage of 3.2 seats compared to what they should have won based on the two-party vote share (Table 2). With REDMAP redistricting, the R advantage in states where they controlled the redistricting process more than doubled from 18.4 seats to 46.33 seats. As a result, R’s enjoyed a new post-redistricting national advantage that averaged 21.67 seats. This is REDMAP, in a nutshell.

	'02-10	'12-16	'18-20
R	18.40	46.33	35.50
N	1.00	0.00	-1.50
D	-16.20	-24.67	-34.50
Net	3.20	21.67	-0.50

Table 2: R/D Seat Advantage 2010-2020

That advantage wasn’t bigger, because D UE seat in other states increased -8.47 seats to -24.67 seats at the same time. I wasn’t aware of this, and I did not expect to discover it.

Three factors contributed to this countervailing change:

- First, D’s drew maps to their advantage in two states: IL and MD. Where redistricting control was split the previous decade, IL D’s controlled the 2011 process and drew a map with a solid 2-seat D advantage. Similarly, where the previous MD was drawn by a court, MD D’s controlled the 2011 process and drew map with a solid 7-1 split. This map was later challenged in court.
- Second, even though they were drawn by commissions, the maps in AZ and CA favored D’s more than in the previous decade. In AZ an additional apportioned representative

allowed a 4-5 D-R map instead of the previous typical 3-5 split.³ The CA map was the first drawn by a commission and was nonetheless more advantageous to D's than the previous map – unpacking them somewhat – which yielded another 3-4 D seats.⁴

- Third, two small-state changes favored D's. One seat DE flipped to become a reliable D state, and the typical two-party D vote share in 2-seat NH increased enough that the second seat was reliably won by D's.⁵

Without these offsetting changes, the R advantage due to REDMAP would have been roughly 30 seats instead of 20.

It Got Better

The other dynamic that I wasn't aware of and didn't expect to find was that the early R advantage due to REDMAP disappeared in 2018 and 2020. You can see this numerically in Table 2 and visually in Figure 1. For 2018 and 2020, net UE seats averaged just -0.50, i.e., was almost proportional nationally.

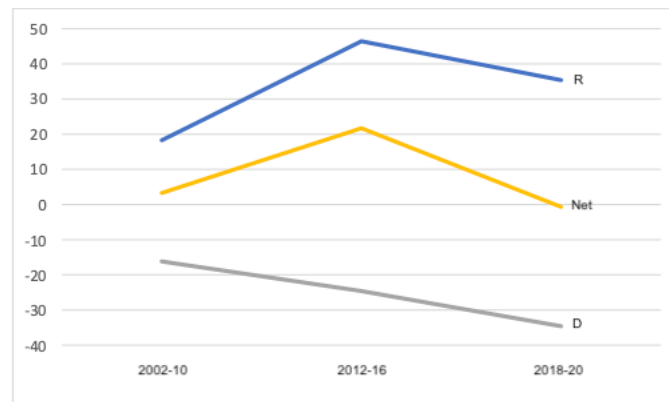


Figure 1: R/D Seat Advantage 2010-2020

The average UE seats for the first R group in Table 1 declined an average of -11.17 seats from the 2012-2016 average to an average of 35.5 seats the 2018-2020, with the bulk of the change (84%) coming from five states. The first three were states in which R gerrymanders were redrawn mid-decade:

- In PA a new map was adopted 02/19/18. This affected the 2018 and 2020 elections. This contributed an average of -2.83 seats favoring D's.

³ AZ got a 9th representative in the apportionment based on the 2010 census.

⁴ Declination 8.16 => -4.52 degrees; average R win 56.02% => 57.20%; average D win 69.90% => 68.90%. Map <http://bit.ly/3W7e9vl> => <http://bit.ly/3lLtwGl>.

⁵ Average two-party D vote share 46.7% => 53.0%.

- In NC the original map was struck down 09/03/19. This affected the 2020 election and the new map netted D's another seat.
- In FL the initial map was redrawn 12/02/15. This affected the 2016, 2018, and 2020 elections. The average change in UE seats was -0.83 favoring D's.

In addition, while the plans didn't change in MI and VA, how they performed did. Five competitive districts in these two R-drawn maps flipped blue:

- MI – 8th and 11th
- VA – 2nd, 7th, and 10th

To eke out extra R wins, both maps had been drawn with significant R/D asymmetries that “packed” D's and created some thin-margin semi-competitive districts that R's would win.⁶ With significantly greater two-party D vote shares in 2018 and 2020, however, D's were able to flip them.⁷

The changes to UE seats in the second R-leaning group, were much smaller, just 0.33 in aggregate.

At the same time, the aggregate UE seats for the D group increased an average of -9.83 seats in 2018 and 2020—the blue-leaning states got bluer. Much of that change (-6.67 seats, 68%) came from competitive districts flipping blue in the face of increased two-party D vote share in two states:

- NJ – 2nd, 3rd, 7th, and 11th
- CA – 10th, 21st, 45th, and 49th

While both plans were drawn by commissions – NJ's political, CA's independent – both also included semi-competitive seats with relatively thin R margins.⁸ In the face of increased D two-party vote shares in 2018 and 2020, these districts elected D's.

Conclusion

REDMAP could not have happened to begin with if redistricting maps had been drawn by independent commissions. It was partially redressed by courts overturning a few egregious partisan gerrymanders. More importantly though, a dozen competitive districts in five states

⁶ MI declination: 22.01 degrees; average R win: 55.84%; average D win: 68.75% (map: <http://bit.ly/3vZqmHR>). VA declination: 10.33 degrees; average R win: 57.70%; average D win: 64.20% (map: <http://bit.ly/3CLW7YV>).

⁷ These districts are in the competitive region of the rank-votes graphs, <http://bit.ly/3XpYHeP> and <http://bit.ly/3X5y4vT>, respectively.

⁸ NJ (map: <http://bit.ly/3XrN86T>), CA (map: <https://davesredistricting.org/join/09a02b57-93e8-4d59-8a04-bd7d65edf820>).

acted as feedback mechanisms that enabled the system to autocorrect to near national proportionality.

Table 1: US House UE Seats (2002-2020)

XX	'02	'04	'06	'08	'10	'12	'14	'16	'18	'20	'02-10	'12-16	'18-20	Control
TX	-2	3	3	2	3	3	4	5	4	3	1.80	4.00	3.50	Republican
OH	2	2	2	-1	3	4	3	3	4	3	1.60	3.33	3.50	Republican
PA	2	2	-1	-2	2	4	3	3	1	0	0.60	3.33	0.50	Republican
NC	0	0	0	-1	-1	3	3	3	3	1	-0.40	3.00	2.00	Republican
FL	4	4	3	2	4	3	2	2	1	2	3.40	2.33	1.50	Republican
AL	1	1	1	1	2	2	2	2	2	1	1.20	2.00	1.50	Republican
IN	1	2	-1	0	1	2	2	2	2	2	0.60	2.00	2.00	Republican
MI	1	1	2	0	1	2	2	2	0	0	1.00	2.00	0.00	Republican
SC	1	0	1	1	1	2	2	2	1	2	0.80	2.00	1.50	Republican
AR	-1	-1	-1	-1	1	2	2	1	1	1	-0.60	1.67	1.00	Democratic
GA	0	0	0	0	1	1	2	2	2	1	0.20	1.67	1.50	Republican
VA	1	2	2	0	2	2	2	1	-1	-1	1.40	1.67	-1.00	Republican
OK	1	1	1	1	1	2	1	1	1	2	1.00	1.33	1.50	Republican
TN	-1	-1	0	-1	1	2	1	1	2	1	-0.40	1.33	1.50	Republican
AK	1	1	1	1	1	1	1	1	1	1	1.00	1.00	1.00	N/A
ID	1	1	1	1	0	1	1	1	1	1	0.80	1.00	1.00	Independent commission
KS	1	1	0	1	1	1	1	1	1	1	0.80	1.00	1.00	Federal court
KY	0	1	1	1	0	1	1	1	1	1	0.60	1.00	1.00	Split
LA	1	1	0	2	1	1	1	1	1	1	1.00	1.00	1.00	Republican
MS	0	0	0	-1	1	1	1	1	1	1	0.00	1.00	1.00	Federal court
MO	0	0	0	0	1	1	1	1	1	1	0.20	1.00	1.00	Split
MT	1	1	1	1	1	1	1	1	1	1	1.00	1.00	1.00	N/A
ND	-1	-1	-1	-1	1	1	1	1	1	1	-0.60	1.00	1.00	N/A
SD	1	-1	-1	-1	1	1	1	1	1	1	-0.20	1.00	1.00	N/A
WI	0	0	-1	-1	1	1	1	1	1	1	-0.20	1.00	1.00	Republican
WY	1	1	1	1	1	1	1	1	1	1	1.00	1.00	1.00	N/A
IA	1	1	-1	0	-1	0	1	1	-1	1	0.00	0.67	0.00	Split
NE	1	1	1	1	1	1	0	1	1	1	1.00	0.67	1.00	Nonpartisan
UT	0	0	0	-1	0	0	1	1	1	1	-0.20	0.67	1.00	Republican
WV	0	0	0	0	0	0	1	1	1	1	0.00	0.67	1.00	Democratic
CO	1	1	0	-1	0	0	0	0	0	0	0.20	0.00	0.00	State court
NM	1	1	1	-1	0	0	0	0	-1	0	0.40	0.00	-0.50	State court
NV	0	0	2	0	0	0	1	-1	-1	-1	0.40	0.00	-1.00	Democratic
NJ	0	1	0	-1	-1	1	0	-1	-4	-3	-0.20	0.00	-3.50	Political commission
AZ	1	1	0	-1	1	-1	0	0	0	-1	0.40	-0.33	-0.50	Independent commission
ME	-1	-1	-1	-1	-1	-1	0	0	-1	-1	-1.00	-0.33	-1.00	Split
MN	0	0	-1	0	0	0	-1	0	-1	0	-0.20	-0.33	-0.50	State court
HI	-1	-1	-1	0	-1	-1	-1	0	0	-1	-0.80	-0.67	-0.50	Political commission
NH	1	1	-1	-1	1	-1	0	-1	-1	-1	0.20	-0.67	-1.00	Republican
DE	1	1	1	1	-1	-1	-1	-1	-1	-1	0.60	-1.00	-1.00	N/A
OR	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1.00	-1.00	-1.00	Split
RI	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1.00	-1.00	-1.00	Democratic
VT	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-0.60	-1.00	-1.00	N/A
WA	-1	-1	-1	-1	0	-1	-1	-1	-1	-1	-0.80	-1.00	-1.00	Independent commission
IL	1	0	0	0	2	-2	-1	-1	-2	-3	0.60	-1.33	-2.50	Democratic
NY	-3	-2	-4	-6	-3	-2	-2	-1	-3	-2	-3.60	-1.67	-2.50	Federal court
CT	1	1	-1	-2	-2	-2	-2	-2	-2	-2	-0.60	-2.00	-2.00	State court
MD	-2	-1	-1	-2	-1	-2	-2	-2	-2	-2	-1.40	-2.00	-2.00	Democratic
MA	-3	-3	-3	-3	-4	-3	-3	-3	-3	-3	-3.20	-3.00	-3.00	Democratic
CA	-5	-4	-3	-2	-4	-7	-9	-6	-12	-9	-3.60	-7.33	-10.50	Independent commission
Expected	'02	'04	'06	'08	'10	'12	'14	'16	'18	'20				
REP	226	220	205	199	229	216	229	221	203	216				
Slack	8	2	-12	-18	11	-1	11	3	-14	-1				
Actual	'02	'04	'06	'08	'10	'12	'14	'16	'18	'20				
REP	229	233	202	178	242	234	247	241	199	213				
DEM	205	201	233	257	193	201	188	194	235	222				
Margin	11	15	-15	-39	24	16	29	23	-17	-4				
Unearned	'02	'04	'06	'08	'10	'12	'14	'16	'18	'20				
REP	25	30	21	12	34	43	42	41	34	30				
DEM	-22	-17	-24	-33	-21	-25	-24	-21	-38	-33				
Net	3	13	-3	-21	13	18	18	20	-4	-3				

[end]