



Measuring Partisan Gerrymandering

Manageable Standard - How much is too much?

Justice Kennedy swing vote on the Supreme Court on Gerrymandering is looking for such a standard

Wisconsin Extreme Partisan Gerrymander

2012 Assembly Election: Democrats win majority of the vote but only took 39 of 99 seats

Supreme Court Bundles all Partisan Gerrymander Cases

While it will hear each case separately, the rulings will not be available until all three cases have been heard: Maryland (favoring Democrats), North Carolina (favoring Republicans), and Wisconsin (favoring Republicans)



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Wisconsin Partisan Gerrymandering Case offers a standard – Efficiency Gap

Efficiency Gap: counts the number of votes each party wastes in an election to determine whether either party enjoyed a systematic advantage in turning votes into seats.

Wasted Votes: Votes casted for a losing candidate, as are all the votes cast for a winning candidate in excess of the number needed to win.

Efficiency Gap = (Total Democratic Wasted Votes – Total Republican Wasted Votes) ÷ Total Votes

- If both parties waste the same amount of votes, the Efficiency Gap is zero.
- In their paper, Stephanopoulos and McGhee propose efficiency gap thresholds above which a district plan would be presumptively unconstitutional.
- For congressional plans, an efficiency gap of two or more seats indicates a constitutional problem.
- For state legislative plans, the threshold is an efficiency gap of 8 percent or greater.



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Hypothetical Scenario

To understand how the efficiency gap works, consider a hypothetical state with 500 residents that is divided into five legislative districts, each with 100 voters. In the most recent election cycle, Democrats won Districts 1 and 2 by wide margins, while Republicans won Districts 3, 4, and 5 in closer races. Overall, Democratic candidates received 55 percent of the statewide vote but won just 40 percent of the legislative seats, while Republican candidates received 45 percent and won 60 percent of the seats. The table below shows the election results for each district.

District	D Votes	R Votes	Result
1	75	25	D wins
2	60	40	D wins
3	43	57	R wins
4	48	52	R wins
5	49	51	R wins
Total	275	225	

https://www.brennancenter.org/sites/default/files/legal-work/How_the_Efficiency_Gap_Standard_Works.pdf



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Calculating Wasted Votes = Losing Votes + Surplus Votes

District	D Votes	R Votes	D Wasted Votes	R Wasted Votes	Net Wasted Votes
1	75	25	24	25	1 R
2	60	40	9	40	31 R
3	43	57	43	6	37 D
4	48	52	48	1	47 D
5	49	51	49	0	49 D
Total	275	225	173	72	101 D

Since the Democratic candidate in District 1 received 75 votes but only needed 51 to win, 24 Democratic votes were wasted ($75 - 51 = 24$). Likewise, all 25 Republican votes in District 1 were wasted since the Republican candidate lost.

(Total Democratic Wasted Votes – Total Republican Wasted Votes) ÷ Total Votes

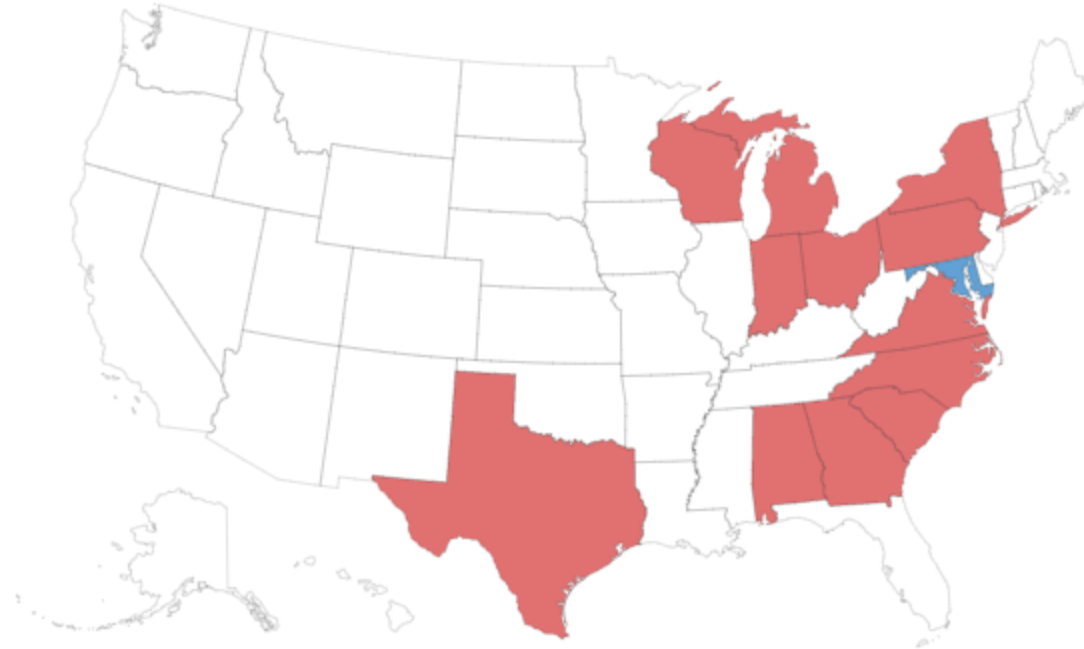
$$(173 - 72) / 500 = .202 \text{ or } 20\%$$

https://www.brennancenter.org/sites/default/files/legal-work/How_the_Efficiency_Gap_Standard_Works.pdf



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Does it work? Well, the results do look about right.



Congressional maps that would violate a 7 percent efficiency gap threshold

(in states with at least five districts)

■ in favor of Republicans ■ in favor of Democrats

<https://www.nytimes.com/interactive/2017/10/03/upshot/how-the-new-math-of-gerrymandering-works-supreme-court.html>



Is there a reasonable measure that the Supreme Court will accept?

