

Redistricting Principles and Racial Representation: A Reanalysis

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Abstract

Two alterations in modeling to Barabas and Jerit's (2004) analysis of how redistricting principles influence minority representation in congressional districts are examined here. The size of states and the fact that some states cannot have majority-minority or minority influence districts is taken into account in new analyses. Overall, when these two alterations are made, their findings are replicated. However, two of their most prominently reported findings—that a compactness requirement for redistricting is associated with both fewer majority-minority, and minority influence districts—are not corroborated.

In their *State Politics and Policy Quarterly* article “Redistricting Principles and Racial Representation” Jason Barabas and Jennifer Jerit (2004) examine the pressing issue of the determinants of majority-minority and minority influence districts in the U.S. House of Representatives. Majority-minority districts have more than fifty percent racial or ethnic minorities and minority influence districts are districts with between 35 and 50 percent racial or ethnic minorities. Barabas and Jerit examine the determinants of the number of majority-minority and also the number of minority influence districts in the 43 states with two or more House seats.

Debate over whether it is necessary to represent racial and ethnic minorities with members of corresponding groups in legislatures has been extensive (see Barabas and Jerit 2004 for citations). Whatever the case, one way to elect more minority legislators is to create districts with large portions of minorities. However, the constitutionality of the deliberate drawing of majority-minority districts has been called into question by recent court rulings. In effect, then, Barabas and Jerit’s analysis considers which redistricting standards might provide alternative ways to enhance the creation of minority districts.

Reanalysis

Barabas and Jerit’s Poisson analyses (their table 2) of the number of majority-minority (minority influence) districts are replicated to all reported decimal places in model one of Table 1 (model one of Table 2).¹ Their most prominently discussed finding is that when state law requires U.S. House districts to be drawn as compactly as possible, fewer majority-minority and minority influence districts are created. They also find that enforcement of Section 5 of the Voting Rights Act (VRA) increases majority-minority

districts and that rules protecting political subdivisions in the redistricting process create more minority influence districts.

One alternative modeling strategy, in comparison to Barabas and Jerit, concerns taking the size of a state into account when modeling the presence of majority-minority districts. They consider the number of districts in a state that are majority-minority or minority influence, but do not take into account the varying size of states in their model. Examining the dependent variable as a proportion takes this into account, as Barabas and Jerit say they do in an additional analysis reported in footnote 16 of their article. Barabas and Jerit also do not take into account that it is a certainty that no majority-minority (minority influence) districts will be created if a state has a small enough percent of racial and ethnic minorities, and a small enough number of districts. Accordingly, states that cannot have majority-minority (minority influence) districts are dropped from the analysis. Both of these issues are expanded on at length in an unpublished supplement to this article available on the Web.

While space constraints prevent showing all analyses with each incremental change in modeling decisions, interested readers can examine the unpublished supplement where twenty-two different models are presented. Model two of Table 1 examines the consequence of implementing the two changes in modeling strategy noted above for majority-minority districts. This is also model seven of Table 2 in the unpublished supplement. Overall, the models are fairly similar, although the variable “Compactness” goes from negative and statistically significant (model one of Table 1) to positive, with a t-value of 1.42 (model two of Table 1). “Voting Rights Act § 5” and “Political Subdivisions” perform fairly similarly in comparison to the original models.

Model two of Table 2 displays the results of making these two modeling changes for minority influence districts. This is also model eighteen of Table 4 in the unpublished supplement. Again, the most notable difference is that the variable “Compactness” loses its statistical significance. It goes from having a t-value of -2.66 ($p < .01$) (model one of Table 2) to a t-value of -.82 ($p < .42$) (model two of Table 2). The unpublished supplement explains why not much should be made of the fact that “Voting Rights Act § 5” is statistically significantly related to fewer minority influence districts. The variable “Political Subdivisions” also performs similarly to Barabas and Jerit’s exposition.

Conclusion

Barabas and Jerit provide a valuable service to the discipline by drawing attention to a host of factors that plausibly influence the drawing of majority-minority and minority influence districts. The importance of the subject matter they examine makes a reanalysis of their empirical tests especially worthwhile. Although Barabas and Jerit find evidence that the compactness rule is associated with fewer majority-minority and minority influence districts, convincing evidence is not uncovered here that the compactness rule does this. Like Barabas and Jerit, section V enforcement is consistently related to more majority-minority districts, and laws protecting political subdivisions in the redistricting process are associated with more minority influence districts.

Bibliography

Barabas, Jason, and Jennifer Jerit. 2004. "Redistricting Principles and Racial Representation." *State Politics and Policy Quarterly* 4(Winter):415-35.

Endnotes

¹ Furthermore, they provided the relevant STATA commands which made replication even easier. Without their readiness to share data, this reanalysis would not have been done.

Table 1: The Effects of Redistricting Principles and Demographic Factors on Majority-Minority Districts following the 2000 Census

	Model one (one)	Model two (seven)
Compactness	-.796* (.361) -2.21	.030 (.021) 1.42
Voting Rights Act § 5	1.448* (.460) 3.15	.126* (.036) 3.50
Political Subdivisions	-.436 (.293) -1.49	-.104* (.024) -4.43
Unified Democratic Control	.453 (.356) 1.27	.041 (.032) 1.30
Minority Population	6.413* (1.490) 4.30	.522* (.169) 3.08
Racial Segregation Index	4.410* (1.610) 2.74	.171* (.083) 2.06
Constant	-4.784* (1.297) -3.69	-.150* (.067) -2.25
Log- Likelihood	-44.700	_____
Standard Error of the Estimate	_____	.057
R-Squared	_____	.769
N	43	33

Note: The dependent variable in model one is the number of majority-minority districts. The dependent variable in model two is the proportion of districts that are majority-minority. Poisson regression coefficients are displayed for model one, while regression coefficients are displayed for model two. The second cell entry is the robust standard error, while the third cell entry is the t-value. * = $p < .05$ (two-tailed).

Table 2: The Effects of Redistricting Principles and Demographic Factors on Minority Influence Districts following the 2000 Census

	Model three (12)	Model four (17)
Compactness	-1.508* (.566) -2.66	-.042 (.052) -0.82
Voting Rights Act § 5	.064 (.472) 0.14	-.211* (.101) -2.08
Political Subdivisions	1.270* (.388) 3.27	.198* (.065) 3.02
Unified Democratic Control	.136 (.353) 0.39	-.092 (.075) -1.23
Minority Population	12.539* (1.694) 7.40	1.538* (.536) 2.87
Racial Segregation Index	2.352 (1.515) 1.55	-.031 (.148) -0.21
Constant	-5.630* (1.417) -3.97	-.207 (.134) -1.55
Log- Likelihood	-31.545	_____
Standard Error of the Estimate	_____	.131
R-Squared	_____	.610
N	43	34

Note: The dependent variable in model one is the number of minority influence districts. The dependent variable in model two is the proportion of districts that are minority influence. Poisson regression coefficients are displayed for model one, while regression coefficients are displayed for model two. The second cell entry is the robust standard error, while the third cell entry is the t-value. * = $p < .05$ (two-tailed).