Revising 'Who Punishes Extremist Nominees? Candidate Ideology and Turning Out the Base in U.S. Elections'

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Hall and Thompson (2018) reports the result of a regression discontinuity design in which the close nomination of a more ideologically extreme US House primary candidate in the years 2006–2014 appears to cause a large decrease in her party's share of both votes and turnout in the general election, on average. A recent correspondence with Adam Bonica alerted us to a very important imbalance in lagged presidential vote share that we failed to uncover in our original paper: in our sample, primary elections resulting in the bare nomination of a more-extreme candidate occurred in districts in which the party's most recent previous presidential vote was approximately 6 to 12 percentage points lower, compared to primary elections resulting in the nomination of a more-moderate candidate. This imbalance is similar in magnitude to the effects we estimate on our main outcome variables, and estimates that attempt to correct for it directly are substantially smaller and not statistically precise.

We draw four main conclusions from this reanalysis:

1. The evidence in our sample from 2006–2014 that more-extreme nominees cause large changes in a party's vote share or share of general-election turnout is far weaker than we previously thought, and should not be relied on.

2. Because our sample of years does not provide a sufficiently large, stable effect on vote share, the design is unsuitable for understanding whether there is an underlying relationship between a potential turnout penalty and a vote share penalty for more-extreme nominees.

3. While we do not find evidence of any similar imbalance in presidential vote for elections prior to 2006, and therefore believe the broader primary RD design is still a sound method, we

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caution that the design is fragile and requires large amounts of data to be reliable; in many cases, leaning more on panel designs that can leverage more data is probably the correct approach.

4. For the question of whether the relationship between candidate ideology and electoral outcomes is changing over time, the primary RD with its need to average over many years of elections is not the right tool, and Hall and Thompson (2018) should not be thought of as offering any evidence that the penalty to more-extreme nominees has remained large in more recent elections.

We thank Bonica for his careful attention to this issue, and we appreciate the opportunity to update our study and support the advance of science.

1   Imbalance on Lagged Presidential Vote

We begin by confirming the presence of a large imbalance in lagged presidential vote. While Hall and Thompson (2018) reports estimates for a number of balance tests, we did not test for an imbalance in lagged presidential vote because the data was harder to collect by congressional district and we thought—erroneously—that looking for an imbalance on lagged House vote would be sufficient. Table 1 shows estimates, using the exact same specifications as in the table, where the party's lagged presidential vote is the outcome variable. As the table shows, there is a very large "effect": cases in which the more-extreme candidate was nominated had, on average, much lower vote share's for that candidate's party's presidential candidate in the previous election.

Table 1 – Differences In Party's Lagged Presidential Vote Share, U.S. House, 2006–2014.

	Lagged Presidential Vote Share			
Extremist Nominee	-0.09	-0.06	-0.08	-0.12
	(0.04)	(0.03)	(0.03)	(0.04)
N	113	234	234	98
Polynomial	1	3	5	CCT
Bandwidth	0.10	–	–	0.09

Robust standard errors clustered by district in parentheses in columns 1-3; standard error in column 4 comes from rdrobust package and is clustered by district. The running variable is the extremist primary candidate's vote share winning margin in the primary.

This imbalance is very large. The simplest explanation for it is that there are only a small number of close primary elections between a more-moderate and a more-extreme candidate within each election year. In several of the years in our sample, waves of more-extreme nominees occurred in places where the party had already performed much worse in the previous election. With infinite data and many close primaries, imbalances like these would smooth out—but in this RD, it turns out, there is nowhere near enough close elections to do this.

This imbalance also matters both for analyses of the effect of nominating an extremist on the party's vote share and the party's turnout share. Since a place with more Democrats will tend to vote more for Democrats for president, vote more for Democrats for Congress, and have a larger

Table 2 – Effect of Extremist Nominee on Party's General-Election Vote Share Adjusting for Past Presidential Vote, U.S. House, 2006–2014.

	Vote Share							
Extremist Nominee	-0.04	-0.01	-0.03	-0.15	-0.02	-0.00	-0.02	-0.03
	(0.02)	(0.02)	(0.02)	(0.04)	(0.02)	(0.02)	(0.02)	(0.02)
N	113	234	234	118	113	234	234	95
Polynomial	1	3	5	CCT	1	3	5	CCT
Bandwidth	0.10	–	–	0.11	0.10	–	–	0.08
Lagged Pres Vote Share	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	No	No	No	No	Yes	Yes	Yes	Yes

Robust standard errors clustered by district in parentheses in columns 1-3 and 4-7; standard errors in columns 4 and 8 come from rdrobust package and are clustered by district. The running variable is the extremist primary candidate's vote share winning margin in the primary. All specifications include lagged presidential vote as a control variable.

share of Democrats among general election voters, the imbalance on presidential vote suggests there will be imbalance on our outcomes of general election vote share and general election partisan turnout share that reflect pre-existing differences rather than causal effects of nominations.

2 Correcting for Imbalance Attenuates Estimates

The presence of such a large imbalance in the RD on such an important pre-treatment variable ipso facto makes the design highly suspect. In the presence of such an imbalance, estimates of effects on vote share and turnout share estimated in this sample are little better than "kitchen sink" regressions and should not be given much credence. Nevertheless, for completeness, we now show that directly controlling for the imbalance in lagged presidential vote attenuates our estimates and makes most of them statistically insignificant. Tables 2 and 3 re-do our main estimates on vote share and on party turnout share, again using the same specifications from the main tables in the paper, but now adding lagged presidential vote as a control variable by itself (first four columns), and additionally adding year fixed effects to account for year-to-year partisan sides (second four columns).

In the presence of a large imbalance in partisanship, we might also attempt to "control" for it by using outcome measures that norm for the prevailing partisanship of the district at the time of the election. For example, instead of the partisan share of turnout, we could look at rates of turnout among partisans. One possible outcome along these lines suggested to us would be the turnout rate of Democrats and Republicans among registered voters. In correspondence with Bonica, we understand that this variable similarly shows null results. We do not pursue this avenue here, since the pattern above is already fairly clear, and since we prefer not to condition on a post-treatment variable (partisan registration) where possible.

Table 3 – Effect of Extremist Nominee on Party's General-Election Turnout Adjusting for Past Presidential Vote Share, U.S. House, 2006–2014.

	Partisan Share of Turnout							
Extremist Nominee	-0.04	-0.03	-0.04	-0.03	-0.01	-0.01	-0.02	-0.01
	(0.03)	(0.02)	(0.03)	(0.03	(0.03)	(0.02)	(0.02)	(0.02)
N	109	228	228	123	109	228	228	129
Polynomial	1	3	5	CCT	1	3	5	CCT
Bandwidth	0.10	–	–	0.11	0.10	–	–	0.12
Lagged Pres Vote Share	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	No	No	No	No	Yes	Yes	Yes	Yes

Robust standard errors clustered by district in parentheses in columns 1-3 and 5-7; standard errors in columns 4 and 8 comes from rdrobust package and is clustered by district. The running variable is the extremist primary candidate's vote share winning margin in the primary. All specifications include lagged presidential vote as a control variable.

3 Implications for the Primary RD More Broadly

In this section, we show that the same imbalance in presidential vote does not manifest in earlier years of election data, but we nevertheless offer several cautions regarding the primary RD design in general.

First we look for a similar imbalance in the broader sample from 1980–2012 used in Hall (2019), which updated the primary RD analysis first presented in Hall (2015). To do this, we employ the same regressions as above, except that for expediency and to maximize power, we use contemporaneous rather than lagged presidential vote. Although this could induce some post-treatment bias (if the nomination of a more-extreme candidate has effects on presidential vote), we do not have access to data that connects post-redistricting districts to their pre-redistricting presidential votes. Results are similar if we used a lagged presidential vote variable that is missing for redistricting years, but the sample size is smaller.

Table 4 – Investigating Imbalance in a Larger Historical Sample

	Presidential Vote Share							
	1980–2012				1980–2004			
Extremist Nominee	-0.00	-0.02	-0.02	-0.02	0.03	-0.00	0.01	-0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)	(0.03)
N	409	915	915	455	296	688	688	244
Polynomial	1	3	5	CCT	1	3	5	CCT
Bandwidth	0.10	–	–	0.12	0.10	–	–	0.08

Robust standard errors clustered by district in parentheses in columns 1-3; standard error in columns 4 and 8 comes from rdrobust package and is clustered by district. The running variable is the extremist primary candidate's vote share winning margin in the primary.

Table 4 shows the results, first for the entire sample, and then separately for the years before 2006, prior to the imbalance documented above. As the table shows, we do not see the same kind of large imbalance. There could be some noisy evidence for a smaller imbalance in the overall sample, but the final four columns suggest that this imbalance reflects the one already documented above; when we look at earlier years, we see no similar negative "effect."

For completeness, we can also examine what the estimated effects on vote share look like in this larger sample if we again seek to correct for presidential vote. Table 5 shows the results. We see a negative and fairly stable point estimate across specifications, getting a bit noisier when we reduce the sample, but remaining the same in magnitude.

Nevertheless, the size of the imabalance in the more recent time period suggests several reasons to approach the primary RD design with caution.

First, it is clear that the primary RD design suffers from a serious lack of statistical power. This makes it *fragile* and prone to imbalances, particularly in smaller samples.

Second, this challenge of low power likely becomes worse in more recent election cycles as congressional races become more partisan and more correlated with presidential vote.

As a result, the primary RD design is particularly ill suited to detect whether the relationship between candidate ideology and electoral outcomes is changing in more recent election cycles, which seems likely. While the primary RD design may still have value as an alternative way to hold fixed unobserved district characteristics in broad-based historical analyses, for more targeted questions like these, researchers are better off using more statistically powered approaches using panel data

Table 5 – Estimates of Effect in a Larger Historical Sample

| | Party's House District Vote Share | | | | | | | |
	1980–2012				1980–2004			
Extremist Nominee	-0.05	-0.04	-0.05	-0.05	-0.04	-0.05	-0.05	-0.04
	(0.02)	(0.01)	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)	(0.03)
N	407	905	905	435	295	681	681	277
Polynomial	1	3	5	CCT	1	3	5	CCT
Bandwidth	0.10	–	–	0.11	0.10	–	–	0.09

Robust standard errors clustered by district in parentheses in columns 1-3; standard error in columns 4 and 8 comes from rdrobust package and is clustered by district. The running variable is the extremist primary candidate's vote share winning margin in the primary.

with more parametric control strategies, as in Bonica and Cox (2018); Bonica, Rhee, and Studen (2025); Canes-Wrone and Kistner (2022); Hall (2019); Handan-Nader, Myers, and Hall (N.d.) and others.

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