

How Divisive Primaries Hurt Parties: Evidence from Near-Runoffs in US Legislatures

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In many democracies, parties use primary elections to nominate candidates. Primaries may help select quality candidates, but they can expose flaws and offend losing candidates' supporters. Do divisive primaries help or harm parties in the general election? Existing research is mixed, likely because of issues of selection and omitted variables. We address these issues by studying southern US states with runoff primaries—second-round elections that, when triggered, create more divisive primaries. Using a regression discontinuity design, we estimate that a runoff decreases the party's general-election vote share in the House and Senate by approximately 6 percentage points and decreases the party's win probability by approximately 21 percentage points, on average. Opposing results in southern state legislatures suggest that divisive primaries are damaging when salience is high but beneficial when it is low, a pattern we speculate is driven by the competing effects of information in high- versus low-salience primaries.

Primary elections select nominees for the vast majority of US elections, as well as for elections in an array of democratic settings across the world. As long as there have been primary elections, people have speculated over whether competitive primaries might actually hurt the winning nominee's party. The 2016 presidential election, to choose the most recent and salient example, featured highly competitive, bitter primary elections on both sides. These campaigns have brought the idea of divisive primaries back to the fore. The *Washington Post*, to pick one example, speculated early on that “the prospect of a long and fractious Republican presidential primary, so far dominated by the divisive rhetoric of front-runner Donald Trump, is benefiting only one person, political strategists say: Hillary Clinton” (Riddell 2015). The professional prognosticator Nate Silver, to choose another example, opined that “divisive nominations have consequences” (2016). Others disagree. Writing for the *Upshot*, a *New York Times* data-driven political blog, Brendan Nyhan declared: “Republicans have little to fear from a divisive primary.” He continues, “In reality,

winning a nomination fight elevates the stature of the victor” (Nyhan 2015). Academically, divisive primaries—generally defined as any primary election with a high degree of competition between at least two candidates—are both an object of direct interest and an important tool with which to learn about the effects of campaigns, electoral competition, and information more broadly. Despite this value, and despite the many papers written on divisive primaries, the academic literature on the topic is just as divided as are the pundits, at turns finding that divisive primaries hurt, help, or do not affect parties' general-election performance.¹ What are the actual effects of divisive primaries? And why have we not been able to answer this important question?

Studying the effects of long-fought, competitive primaries is made difficult by a clear issue of selection bias. Times and places where a party experiences such a primary may be the same times and places where the party is already expected to do worse—precisely because of preexisting divisions among the party's electorate. The claim that parties who experience

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Data and supporting materials necessary to reproduce the numerical results in the article are available in the *JOP* Dataverse (<https://dataverse.harvard.edu/dataverse/jop>). An online appendix with supplementary material is available at <https://doi.org/10.1086/705597>.

1. Some scholars find evidence for the damaging effects of divisive primaries (Abramowitz 1988; Bernstein 1977; Born 1981; Haerberle 1993; Kenney and Rice 1984, 1987; Lengle 1980; Lengle, Owen, and Sonner 1995; Makse and Sokhey 2010; Romero 2003; Segura and Nicholson 1995); others find no effect or mixed evidence (Hacker 1965; Johnson, Petersheim, and Wasson 2010; Kenney 1988; Lazarus 2005; Piereson and Smith 1975); finally, some find positive effects (Alvarez, Canon, and Sellers 1995; Carlson 1989; Herrnson 2000; Hogan 2003).

divisive primaries tend to do worse in the general election, even if empirically true, may simply be a reflection of these preexisting issues, rather than evidence that divisive primaries *per se* hurt the party. Yet, since more and higher-quality candidates may be most likely to enter primaries when they expect the general election to favor their party, divisive primaries might also take place precisely when the party's expected fortunes are highest—creating a bias that could instead make divisive primaries look beneficial to parties. Existing attempts to study divisive primaries are unable to address these clear problems of selection, which may help explain why they come to differing and inconsistent conclusions.

In this article, we study divisive primaries in legislative elections, and we address these problems of selection bias directly. To do so, we follow a large recent literature employing the regression discontinuity (RD) design in electoral contexts (e.g., Anagol and Fujiwara 2016; Brollo and Troiano 2015; Broockman 2009; Caughey, Warshaw, and Xu 2016; de Benedictis-Kessner and Warshaw 2016; Ferreira and Gyourko 2014; Folke and Snyder 2012; Fourinaies and Hall 2014).² In particular, we focus on close first-round primary elections for the US Senate and US House that occur in certain southern states where runoff primaries—which by definition create highly competitive extensions of primary elections—are used. A runoff primary, used exclusively by nine southern states, only occurs when the top vote-getting primary candidate's vote share is below a certain threshold (usually, but not always, 50%), allowing us to obtain quasi-random variation in how long and how contested the primary campaign is. When the top vote-getting primary candidate is just below the threshold, the party experiences a longer, more divisive primary; when the top vote-getting candidate is just above the threshold, the primary ends, and the party can begin to prepare for the general armed with a "consensus" nominee. The quasi-random variation that comes from these close runoffs acts as a natural experiment that ensures, under reasonable and testable assumptions, that the resulting estimated effects of divisive primaries are not contaminated by the usual sources of bias. In particular, because in our design parties have either longer or shorter primaries "as if" randomly, the *ex ante* expected performance of the parties in the general election is held constant.

Using this design, we find substantial negative effects of divisive primaries. In House and Senate elections in the South, the as-if random assignment of a runoff primary produces roughly a 21-percentage-point reduction in the probability that the party holding the primary wins the general election, on

average. Although the estimates vary somewhat on the basis of specification and are noisy enough that we are unsure of the exact magnitude of the effect, divisive primaries appear to be extremely damaging to parties overall.

Why do these divisive primaries seem to have such negative effects? To try to understand the underlying mechanisms, we also study the effects of divisive primaries in lower-salience contexts. Specifically, we collected a new data set on state legislative primaries in these same southern states with runoffs. Using these data, we find that runoffs in state legislatures produce either null or, in competitive contexts, maybe even positive effects on parties' general-election fortunes. Because of the obvious differences between state legislative races and federal races, this suggests that divisive primaries may be harmful only in more salient contexts. In support of this hypothesis, we also find tentative evidence that the effects of divisive primaries become systematically more negative as salience increases. Effects are estimated to be most positive (i.e., beneficial to parties in the general election) in state lower houses and senates, the least salient elections in our sample; they are noticeably negative in US House races and massively negative in US Senate races, although in all cases estimates subset in this way are somewhat noisy.

To try to explain these patterns, we put forward a speculative argument based on the differences in the value of competitive primaries in low- versus high-information settings. In low-information settings, we suspect, divisive primaries help voters select higher-quality candidates by increasing the visibility of the race and uncovering at least some small amount of information about the quality of the candidates. This makes divisive primaries have a positive effect, since they tend to select candidates who are higher quality, on average, than those selected in primaries without runoffs. Moreover, in these environments, the costs of a divisive primary are mitigated by the fact that most people are unaware of whether the primary election was bitter. In higher-information settings, in contrast, elites and voters know more about the quality of candidates, rendering the helpful effects of competitive primaries on candidate selection less useful. At the same time, the costs of the party's failure to coordinate on a candidate early are more damaging in these settings, where news coverage of the divisive primary is, potentially, much more visible.

The remainder of the article is organized as follows. In the next section, we review the literature on divisive primaries, focusing on the possible mechanisms that scholars have theorized might explain why they are helpful or harmful to parties, and we lay out arguments for why the effects of divisive primaries may vary on the basis of the level of electoral salience. Following that, we discuss the empirical strategy and data we employ to separate out the causal effects of divisive primaries,

2. For reviews and methodological discussions related to the use of RD in electoral settings, see Caughey and Sekhon (2011), de la Cuesta and Imai (2016), Eggers et al. (2015), and Skovron and Titiunik (2015).

and we consider the degree to which runoff primaries are a fitting proxy for divisive primaries more generally. Subsequently, we present our main empirical results on federal elections, documenting a substantial penalty to parties in the general election who have quasi-randomly experienced divisive primaries. Next, we show that no such penalty exists in the state legislatures. The remaining sections probe possible mechanisms underlying the penalty, including voter information and the length of time added to the primary campaign. Finally, we conclude with general thoughts on what our findings imply for the divisive primaries literature and the study of campaigns and elections more broadly.

DIVISIVE PRIMARIES: THEORIES AND MECHANISMS

In a wide variety of democracies, parties choose their nominees through primary elections. In the United States, primaries arose as a progressive reform of the early twentieth century and are now used to select nominees for a variety of offices, ranging from the presidency to state legislatures and beyond. Releasing their control over the nomination process brought many difficulties for parties in the United States, not the least of which was the risk that voters would ignore parties' wishes and nominate candidates the parties did not like.

Separate from these fundamental issues about parties and voters, the creation of primary campaigns also brought the risk that the extra election, itself, could damage parties' chances in the general election. Before primaries, parties might be able to quietly select a single candidate, avoiding any appearance of dissent and presenting a unified front to general-election voters. With primaries, candidates in the same party might divert too much effort to bloodying one another in competitive contests for the nomination, exposing weaknesses and preventing the party from preparing for the general. Discussing the full range of primary elections, from legislative and gubernatorial to presidential, Hacker (1965, 105) starts from—and then offers evidence against—“the conventional view that the party whose candidate is obliged to fight a hard primary campaign has an important strike against it upon entering the general election.” We follow Hacker in thinking of divisive primaries as being, first and foremost, any primary in which at least two candidates compete fiercely for the nomination. Specifically, Hacker defines a divisive primary as any primary election in which the winning candidate received no more than 65% of the vote. The candidates in such primaries may or may not differ starkly in terms of ideology, backgrounds, and so on—what defines a primary as divisive is simply the fact that it is closely contested.

The precise mechanisms by which such divisive primaries might hurt party nominees are various. Hacker, for his part, lays out two main and not mutually exclusive explanations for

a possible penalty for divisive primaries. First, a divisive primary can split the party's supporters, deterring some part of them from supporting the nominee. Hacker writes, “The supposition also arises that those who backed the primary loser in the Spring may be less than enthusiastic about aiding his vanquisher in the Fall” (1965, 105). Second, a divisive primary might turn off voters outside the party who would have otherwise considered supporting its nominee in the general election: “there is reason to believe that voters who are committed to neither party may wonder whether the party that needed to go to the polls to resolve its own leadership problems is fit to hold public office” (105).

These potential mechanisms, and many others related to them, implicitly rely on information about the primary campaign reaching voters. As Hogan (2003) points out, if voters are not even aware that a party experienced a divisive primary, they cannot be turned off by it. Thus, these particular mechanisms, which we might call “direct” mechanisms—because they rely on voters directly observing the divisive primary and inferring that the party is not worth supporting—should be a factor only in higher-information settings.

Other mechanisms may be at work across all levels of information. For example, divisive primaries also surely redirect the finite resources of parties—both financial and otherwise—away from the general election. Candidates can raise only so much money, they can convince volunteers to knock on only so many doors, and so forth. Suffering through a more difficult primary may force them to run a leaner general election campaign, a cost that may be present regardless of whether voters have high or low levels of information.

Finally, other potential mechanisms may be more active at lower levels of information only. In high-information places, primary voters face an easier problem in selecting candidates for the general election. Candidates may have longer track records and may be vetted more by interest groups, local elites, and newspapers. In low-information places, however, voters have almost nothing to go by. In such settings, a divisive primary might actually help voters to figure out whom to nominate, both by stimulating a small amount of news coverage and also by forcing the competing candidates to campaign more and thus to provide voters with more information about them. Thus, by improving the expected quality of the nominee, divisive primaries might be beneficial to parties in low-information environments.

Having laid out the theoretical perspectives on divisive primaries, we now turn to the two empirical designs we use to study their effects. Our first goal will be simply to document the overall effects of divisive primaries in US House and Senate elections. In keeping with the theoretical discussion in this section, we will then assess possible variation in the effects of

divisive primaries across electoral settings where voters have more or less information.

EMPIRICAL APPROACH: RUNOFF PRIMARIES

Are parties helped or hurt when they experience more divisive primaries? To answer this question empirically, we must overcome a fundamental problem of causal inference. In particular, parties do not “randomly” experience more or less competitive primaries. In the United States, primaries are often more competitive in times and places where the party is expected to perform better in the general election (e.g., Hall 2015), which could lead to a spurious, positive correlation between how divisive the primary is and how well the party does in the general election. Cutting the other way, primaries may be inherently more divisive when the party itself is weak—leading to a spurious negative correlation between how divisive the primary is and the party’s general-election performance. Problems of omitted variables and reverse causation like this make cross-sectional comparisons of elections where parties do and do not experience divisive primaries unlikely to extract plausible estimates of the actual effect of divisive primaries on election outcomes. We must look for alternative sources of evidence.

To do so, we take advantage of southern states that use runoff primaries. In runoffs, if no primary candidate receives above a prespecified vote share in the first round (typically but not always 50%), there is a second-round election between the two candidates with the top vote shares from the first round. This runoff election creates a hypercompetitive campaign between the two candidates from the first round. We do not claim that primary elections without runoffs cannot be divisive, only that when candidates are forced into a prolonged in-fight for the party nomination, this potentially raises the degree of divisiveness.

We build on a large recent literature that exploits the quasi-random results of close elections to simulate an electoral experiment. For our case, we focus on close primary elections with three or more candidates that either barely do or do not go to a runoff.³ The resulting quasi-random variation creates a natural experiment that allows us to assess the causal effects of divisive primaries. When a party in a congressional district barely faces a runoff primary to select its nominee, does it do better or worse in the general election than when it barely misses having a runoff primary? This is the key empirical question we will answer.

3. Although most electoral RDs have focused on general elections, using RD for settings like primary elections and runoffs is becoming more common. See, e.g., Anagol and Fujiwara (2016) and Hall (2015).

The RD is attractive because its key identifying assumption is weak and testable; in the appendix (available online), we offer a number of balance tests that suggest the RD design is valid. A drawback to the RD is that it requires a large amount of data—we have to zoom in on a particular set of close first-round primaries that barely do or do not go to a runoff, which leaves us with relatively little statistical power. In addition, the RD estimate is local to the types of places and times that have competitive primary elections close to the runoff threshold. Although we believe this is a relatively broad set of cases—because close primaries occur both in competitive areas but also in areas where the party holding the primary is safe in the general—we would of course like to see how much the effects generalize. To supplement the RD, and make sure our conclusions are not driven by the small sample size, we also carry out a difference-in-differences design in which we compare the change in party vote share in a primary electorate that switches from not having a runoff, in one year, to having a runoff, in the next election year, to the change in the party’s vote share in other districts without runoffs. The difference-in-differences design requires a stronger assumption than the RD. In particular, primary electorates that do not have runoffs must provide a valid counterfactual for how the party’s vote share in runoff districts would have changed, had they not had runoffs. But the key advantage is that we can use much more of the data in this design. In practice, we would worry if the two approaches gave us substantially different results; fortunately, as we show below, both designs lead us to the same conclusion and thus reinforce each other.

Are runoffs an appropriate proxy for “divisive primaries” more generally? This is a key question for thinking about how to interpret the estimates we present below. First and foremost, runoffs clearly do make the primary more divisive. Using the definition of divisive primary from Hacker (1965), namely, any primary in which the winning candidate’s vote share is less than 65%, every runoff is by definition a divisive primary.⁴ But the main issue is that runoff primaries do not only make the primary more divisive, in the sense of increasing and prolonging close competition between candidates, but they also make it last longer. This is slightly different from divisive primaries, which do not technically alter the official end date of the primary election the way runoffs do. However, many divisive primaries, especially for president, do actually extend the length of the de facto campaign. Although the official end date

4. To be clear, it is possible that the winning candidate in the runoff has more than 65% of the vote, but the entire runoff campaign is conducted in the context of a first-round election in which no candidate won more than 50% of the vote (and in some states, less than 40% or even 35%).

of the primary does not change, divisive primaries prolong the period during which the eventual nominee is still unknown. In this way, the runoff's increased length is a good approximation for a divisive primary. Nevertheless, in subsequent sections we attempt to unpack the various mechanisms by which runoffs affect general-election outcomes, and our evidence suggests that it is more the divisiveness, itself, rather than the added length of the campaign that drives the effects.

DATA AND HISTORICAL BACKGROUND

Runoff primaries are an artifact of the US South. The nine states that operate runoff primaries today are all in the South.⁵ For much of their history, these states saw little or no meaningful two-party competition. As Key (1949, 416) explains, "The direct primary method of nomination . . . was an inevitable consequence of the one-party system in the South." The runoff was in part a means to ensure that Democratic primaries, which were in effect the general election, selected the "right" candidates. According to Glaser (2006, 776), for example, the electoral rule was adopted to "require candidates to generate majority support in the nomination process and stimulate competition within the Democratic Party (thus keeping the Republican Party irrelevant)." Today, two-party competition is more common in the South than it used to be, but the institution of the runoff persists.

The idea of the runoff is simple. If the winning primary candidate receives below a certain threshold in vote share, a second round election between the top two candidates from the first round is held some weeks later, with the winner of this two-candidate contest declared the nominee. In almost all cases, this threshold is 50%, meaning that a candidate must get a majority, and not just a plurality, in the first round in order to avoid a runoff. Only one of the nine states in our sample has ever used a cutoff rule other than 50%: North Carolina, which switched the threshold to 40% in 1990.⁶

To study the effects of divisive primaries, we combine two data sets on primary elections, primary election runoffs, and general-election outcomes. The first data set covers all elections for the US House and US Senate from 1896–2012, and was

collected from primary sources for a series of projects by Ansolabehere et al. (2010). The second data set covers primaries, runoffs, and general elections for all US state legislatures that have runoff primaries in place, for the range of years for which it was feasible to collect data. For this latter data set, we collected the information on primary and runoff elections ourselves from primary sources and then merged these data with the Klarner et al. (2013) data on state legislative general elections.

Table 1 presents an overview of the assembled data and years for which we have the data.⁷ The table lays out the nine states that have runoff primaries for legislative elections. By definition, a runoff can only occur in a primary with at least three candidates (otherwise, one of the two candidates must receive above 50% of the vote). Thus, the table reflects the total number of primaries with more than three candidates that we observe in our data set. Finally, the table reveals the proportion of all primary races with three or more candidates that go to a runoff. As the table shows, a substantial fraction go to runoffs at both the federal and state levels.

It is possible, although not likely, for both parties to have runoff primaries at the same time in the same electoral contest. Of the 4,103 three-or-more-candidate primary elections in our combined data sets, of which 2,211 go to runoffs, counting both federal and state legislative primaries, there are 124 cases in which both parties' primary election goes to a runoff. There are another 98 cases in which both parties have primaries with three or more candidates and one of the two goes to a runoff, and there are 122 cases in which both parties have primaries with three or more candidates and neither goes to a runoff. A much larger set (1,115 cases) features a runoff for one party while the other party fields two or one candidates in its primary: 742 of these cases occur in Democratic primaries, and 373 in Republican primaries. In the analysis section, we consider variation in the effect depending on whether the other party also has a runoff, but as these counts show, our overall estimates mainly reflect the effect of one party holding a runoff while the other does not. Finally, 874 cases feature a runoff for one party while the other party fields no candidate at all. In this final set of cases, we should not expect to see any electoral effects, and in some analyses we exclude them altogether.⁸

5. Technically, South Dakota also employs runoff primaries (and, despite its name, is not located in the South). However, the threshold for a runoff in South Dakota is so low that runoffs rarely, if ever, occur. See n. 6 below.

6. See <http://www.ncsl.org/research/elections-and-campaigns/primary-runoffs.aspx>. South Dakota uses a runoff threshold of 35%; however, because this cutoff is so low, we do not have a single runoff case from South Dakota in our sample. Likewise, Vermont uses runoffs but only in the case of exact ties, which never occur in our sample. Finally, Louisiana also uses a runoff system, but because of its unique electoral setup, in which members of the same party can compete against one another in the general election, we omit it from our sample.

7. We use Florida data up to 2000 only because the state stopped using runoffs after 2000.

8. Generally it is inappropriate to select observations on the basis of posttreatment information; however, the decision for a party to contest a general election almost always occurs before the primary election outcome is observed. The only exception to this is if a party's candidate drops out of the general election, but this is rare. As such, it seems safe to condition on contested general-election races. Nevertheless, we do analyses both ways to be safe.

Table 1. Data Set on US Legislative Primary Elections and Runoffs

State	House and Senate			State Legislature		
	Years	<i>N</i>	Runoff %	Years	<i>N</i>	Runoff %
AL	1914–2014	113	42	1974–2010	317	61
AR	1940–2014	50	52	1970–2014	206	73
FL	1910–2000	129	53	1968–2000	350	69
GA	1962–2014	109	51	1968–2014	519	58
MS	1910–2014	112	33	1975–2011	266	71
NC	1932–2014	158	24	2004–2012	85	20
OK	1930–2014	224	42	1968–2014	422	63
SC	1896–2014	108	47	1996–2014	101	49
TX	1916–2014	340	37	1968–2014	494	53
Total	1896–2014	1,343	41	1968–2014	2,760	60

Note. Number of primary elections with three or more candidates and the percentage of these races that go to runoffs. Florida stopped using runoff primaries after 2000. State legislative data do not go as far back in time because of issues of data availability.

No doubt, many fundamental differences between congressional elections in the South and in the rest of the country remain, and we must be clear that we can only study the effects of runoffs, and thus of divisive primaries, in the South. But the basic dynamics of campaigns and elections are the same across the United States. Southern states may lean Republican, today, but, as we will show in the analyses below, we have a large number of instances of runoffs in areas with marked two-party competition. Although we must always take care in extrapolating effects beyond the sample in which we study them—and although we are well aware of the deep historical differences of the South and other regions of the country—we see no obvious reason why effects documented in the South do not teach us about divisive primaries more generally.

ELECTORAL PENALTIES FROM RUNOFF PRIMARIES IN FEDERAL ELECTIONS

In this section, we apply the RD design and the difference-in-differences design to estimate the effects of runoff primaries on general-election outcomes. First, we consider graphical evidence. Figure 1 presents standard RD graphs for US House and Senate elections on two outcome variables: an indicator variable for whether the party in a given district wins the general election (*left panel*) and the party's vote share in a given district in the general election (*right panel*). The horizontal axis in the plots measures the “running variable” in the RD, that is, the variable that determines whether the party goes to a runoff in a given district. This variable is defined as

$$S_{ipt} = \max_j V_{jpt} - c_{it}, \quad (1)$$

where V_{jpt} is the primary vote share for each candidate j in party p 's primary election in district i at time t , and c_{it} is the cutoff rule used to determine whether there is a runoff in district i 's state at time t . In most, but not all, cases, $c_{it} = 0.5$. As defined here, when $S_{it} > 0$, the top vote-getting candidate is above the cutoff, and there is no runoff. When $S_{it} < 0$, no candidate has received enough votes, and the election goes to a runoff. For convenience, we use the negative of this score, so that being above 0 indicates that the election is going to a runoff (this is more convenient for graphical purposes).

Each point on each plot reflects the average of the outcome variable within a 1-percentage-point bin of the running variable. Lines plotted to each side of the discontinuity are simple ordinary least squares (OLS) fitted to the underlying data. Consider the left panel of figure 1, focusing on the rate at which parties win general elections. The plot shows a pronounced jump down at the discontinuity; when parties go from barely not having a runoff to barely having a runoff, there appears to be a substantial decrease in the probability that they win the general election. A similar pattern is seen in the right panel of figure 1, in terms of vote share.

More formally, we begin by estimating regressions of the form

$$Y_{ipt} = \beta_0 + \beta_1 1\{S_{ipt} > 0\} + f(S_{ipt}) + \varepsilon_{ipt}, \quad (2)$$

where Y_{ipt} is an outcome of district i at time t (typically, it will be either party p 's vote share or an indicator for its victory in the election in district i at time t), S_{ipt} is defined as above, and $f(S_{ipt})$ is a flexible specification of the running variable. We consider

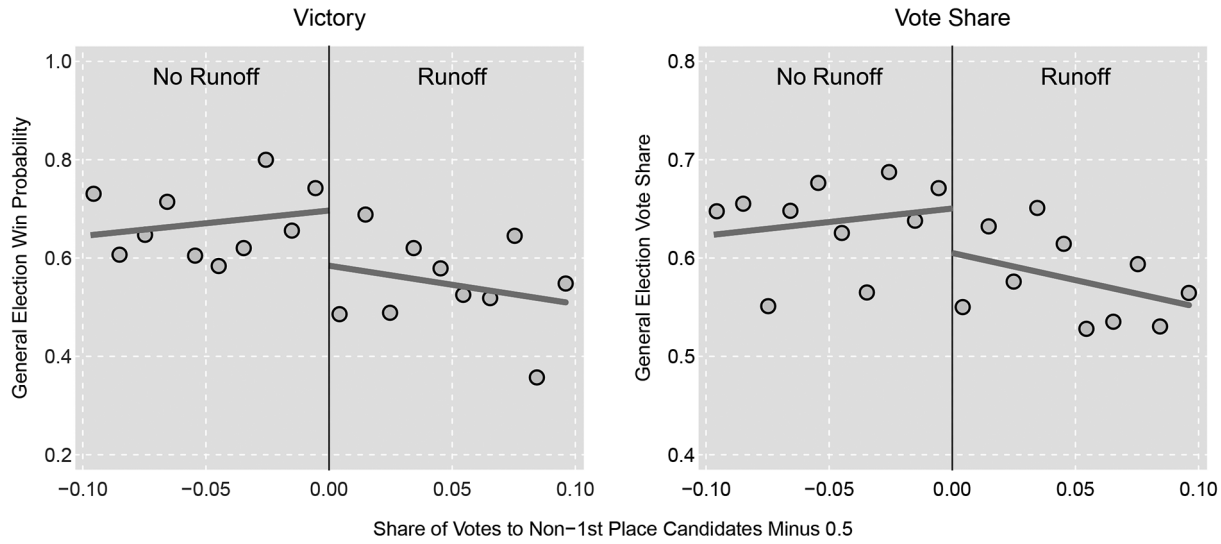


Figure 1. Effect of primary runoffs on vote share, federal elections. Barely going to a runoff primary appears to harm parties’ performance in the general election significantly. Points are averages of the outcome variable in 1-percentage-point bins of the running variable. Lines are ordinary least squares fits estimated separately on each side of the discontinuity.

two main specifications standard in the RD literature: the first is a “local linear” specification in which we use OLS within a small bandwidth around the discontinuity, and we allow the slope of the line to vary on each side of the discontinuity. The second is a kernel-based estimate computed using an algorithmically determined bandwidth (Calonico, Cattaneo, and Titiunik 2014).

For the difference-in-differences design, we estimate regressions of the form

$$Y_{ipt} = \beta_0 + \beta_1 1\{S_{ipt} > 0\} + \gamma_{ip} + \delta_t + \varepsilon_{ipt}, \quad (3)$$

where all variables are defined as before, and γ_{ip} and δ_t stand in for party-by-district and year fixed effects, respectively. These fixed effects are what make the regression a difference in differences.

The electoral performance of one party clearly depends on that of the other, and this may induce bias in the standard errors. To address this concern, all standard errors are clustered at the level of the general election.⁹

Table 2 presents the main results. Columns 1–4 present the RD results. We see evidence for a substantial negative effect on both vote share and win probability. Barely going to a runoff is estimated to decrease the party’s vote share in the general election by 5 or 9 percentage points, across the two RD specifications, and to decrease the probability of winning the general election by 19 or 22 percentage points. Columns 5–8 pres-

ent the difference-in-differences results. We present these two ways, using either regular year fixed effects or party-by-year fixed effects. In both cases, we again see substantial effects on vote share and win probability. In addition, the difference-in-differences estimates are far more precise, as we expected since we are able to use more data for this design. The difference-in-differences estimates of a 5-percentage-point vote-share penalty and a 10- or 13-percentage-point win probability penalty are probably are most reliable estimates for the runoff effect. In both designs, we see evidence that runoffs substantially hurt parties in the general.

So far, we have focused on reduced-form effects, simply comparing primaries where the top vote-getting candidate exceeds the runoff threshold and those where the top vote-getting candidate does not. In reality, however, candidates do not have to participate in the runoff. Most commonly, the second-place candidate may choose not to pursue the runoff. This places the design in a situation of one-sided noncompliance; if the primary is assigned to the treatment “runoff,” it may not actually have a runoff. But, if the primary is assigned to the control condition “no runoff,” it will never have a runoff. The reduced-form estimates above, which are easiest to understand, will likely underestimate the effect if there are many treated observations in which no runoff actually occurs.¹⁰

9. For the kernel-based estimates, we report standard errors calculated using the `rdrobust` package (Calonico et al. 2014). In the appendix, we block bootstrap these estimates from table 2, finding similar results (in fact, the confidence interval for the effect on win probability becomes slightly narrower).

10. Of course, the very fact of having a possible runoff may exert its own effects on electoral outcomes separate from whether the candidates go to the runoff. Perhaps, for example, just knowing that the winning candidate did not do well enough to beat the runoff threshold could influence voters’ opinions. We think this is relatively unlikely, but it is important to acknowledge.

Table 2. Effect of Runoff on General Election Performance in Federal Elections

	Regression Discontinuity				Difference in Differences			
	Vote _t		Win _t		Vote _t		Win _t	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Runoff threshold	-.09 (.05)	-.05 (.04)	-.22 (.10)	-.19 (.10)	-.05 (.01)	-.05 (.01)	-.13 (.03)	-.10 (.02)
N	341	754	341	479	1,343	1,343	1,343	1,343
Bandwidth	.05	.13	.05	.07	...	...	...	...
Specification	OLS	CCT	OLS	CCT	OLS	OLS	OLS	OLS
District-party FE	No	No	No	No	Yes	Yes	Yes	Yes
Year FE	No	No	No	No	Yes	No	Yes	No
Party-year FE	No	No	No	No	No	Yes	No	Yes

Note. In federal elections, candidates perform worse in the general election when forced to run in a primary runoff. Regression-discontinuity OLS (ordinary least squares) data estimated with linear specification of running variable and running variable interacted with treatment. OLS specifications report robust standard errors clustered by election. CCT data report optimal bandwidth bias-corrected estimates calculated using Calonico, Cattaneo, and Titiunik’s (2014) rdrobust package in Stata. Standard errors in parentheses. FE = fixed effects.

Accordingly, we next turn to instrumental variables estimates in which passing the runoff threshold is used as an instrument for actually having a runoff election. We use the same specifications from table 2. Table 3 presents the results. Again, we find extremely large and negative effects of runoff primaries on general-election outcomes. Columns 7–9 show the first-stage effect of crossing the runoff threshold on the probability of having a runoff. To fit everything in, we omit the alternative difference-in-differences estimates where we use vanilla time

fixed effects, but results are very similar in that specification, too. Not surprisingly, we find very strong first-stage effects; passing the runoff threshold increases the probability of having a runoff by 78 or 81 percentage points.

In sum, we have documented substantial penalties related to runoff primaries in federal elections. If we were to flip a coin to force a party to extend a close primary election with three or more candidates into a runoff—which lasts as long as nine weeks and features fierce competition between the two

Table 3. Effect of Runoff on General Election Performance in Federal Elections: Fuzzy Regression Discontinuity and Instrumental Variables

	Subsequent Electoral Outcome						First-Stage Runoff		
	Vote _t			Win _t					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Runoff	-.12 (.07)	-.06 (.05)	-.06 (.01)	-.28 (.13)	-.24 (.13)	-.12 (.03)			
Runoff threshold							.78 (.05)	.81 (.05)	.81 (.02)
N	341	754	1,343	341	479	1,343	341	1,343	1,343
Bandwidth	.05	.13	...	.05	.07	...	.05	.10	...
Specification	2SLS	CCT	2SLS	2SLS	CCT	2SLS	2SLS	CCT	2SLS
District-party FE	No	No	Yes	No	No	Yes	No	No	Yes
Party-year FE	No	No	Yes	No	No	Yes	No	No	Yes

Note. Two-stage least squares (2SLS) or ordinary least squares (OLS) data estimated with linear specification of running variable and running variable interacted with treatment. 2SLS specifications report robust standard errors clustered by election. CCT data report optimal bandwidth bias-corrected estimates calculated using Calonico, Cattaneo, and Titiunik’s (2014) rdrobust package in Stata. Standard errors in parentheses. FE = fixed effects.

remaining candidates—our estimates suggest that the party should expect its chance to win the general election to decrease by 26–27 percentage points.

NO PENALTY FOR DIVISIVE PRIMARIES IN STATE LEGISLATURES

To better understand why runoff primaries hurt parties in the general elections at the federal level, we now investigate the effect of runoff primaries in another legislative context: the US state legislatures. If runoff primaries systematically hurt parties—if, for example, they systematically advantage less electable candidates—then we should observe the same types of negative effects in the state legislatures. But, if the reason runoffs hurt parties has to do with an increase in the negative attention paid to divisive primary campaigns, then we might expect dampened effects in state legislatures where even the most salient elections are barely noticed.

To perform this test, we collected data on the candidates, vote shares, and outcomes of primary elections in state legislatures with runoff primaries from 1968 to 2014. To our knowledge, this is the first time these data have been systematically collected and digitized. Armed with these data, we can reestimate our two designs, using the same specifications as before.¹¹

First, in figure 2 we plot the discontinuities. Unlike at the federal level, no obvious, major discontinuities are seen in the state legislative data. If anything, we see a slight increase in the probability a party wins the general election when its primary barely goes to a runoff (*left panel*), but this jump is much more modest than at the federal level. No obvious discontinuity in vote share is present. One thing apparent in the figure is that the average vote share and win frequency of the parties holding primaries in the state legislative sample is substantially higher than in the federal case. This is the result of the one-party dominance of the Democratic party in southern state legislatures in the middle of the twentieth century, an issue we return to in detail below.

Tables 4 and 5 present the formal results, mirroring the presentation of the federal data. First, in table 4 we examine the reduced-form results. On average, considering the whole time period and all contexts, there do not appear to be meaningful effects of runoff primaries on parties' vote shares or probability of victory in the general election. In the RD, we find only

substantively small and statistically insignificant estimates; the difference-in-differences estimates do show a somewhat more sizable 4-percentage-point penalty on vote share but no meaningful effect on win probability. Table 5 echoes these findings when we look instead at the fuzzy RD results that take into account the fact that not all elections where the runoff threshold is not met go to a runoff.

How different are these results from those at the federal level? In the appendix, we carry out a formal test of the equality of the effects across federal and state elections. Using both the RD and the difference in differences, we reject the null hypothesis of equal effects on win probability for all specifications. We only reject the null of equal effects on vote share for one specification, but in all cases effects are estimated to be more negative at the federal level. These null results at the state level, in conjunction with these tests, suggest, at first glance, that whatever factors drive the large penalty at the federal level must be relatively absent at the state legislative level. It is tempting to conclude, therefore, that the penalty to divisive primaries depends on the salience of the elections. However, we must first consider an alternative explanation concerning the state legislative data.

Historically, the southern US states were dominated by the Democratic Party. This was true at both the state and federal level, but it was especially true in the state legislatures. While 57% of our observations at the federal level are primaries for seats that are safe for the party holding the primary—where safe is defined as a normal vote over the past decade that is at or above 60% for the party—a whopping 83% of observations are for safe seats at the state level. It is possible that the null results we observe merely reflect the one-party dominance of much of our sample. If the Democratic Party simply always wins elections, then there is no way to observe any potential penalty of a runoff. Hacker (1965, 105) discusses this very issue, writing: “If a single party dominates the election for state offices then the occurrence of a divisive primary within the already weak second party will hardly be the efficient cause of its going down to defeat in the November election. In such states the opposition party has little or no chance of winning either the governorship or a Senate seat anyway, so a primary fight within its own meager ranks makes little difference.”

To address this issue, we take two steps to attempt to make an apples-to-apples comparison between state and federal elections. First, we zoom in on 1980–2014.¹² This removes the

11. In comparing estimates across the two contexts, we should keep in mind that the time frames are not the same. To make sure the comparisons below are not driven by the differences in years, we have also reestimated the federal RD using only 1968–2014. Results are similar—if anything, we find even larger electoral penalties at the federal level using this year range.

12. This choice is not necessary to produce the results below. When we estimate the RD for the state legislatures for the full time period, focusing on competitive races, we see potentially large effects on vote share and win probability. Like the results below, they are relatively statistically imprecise.

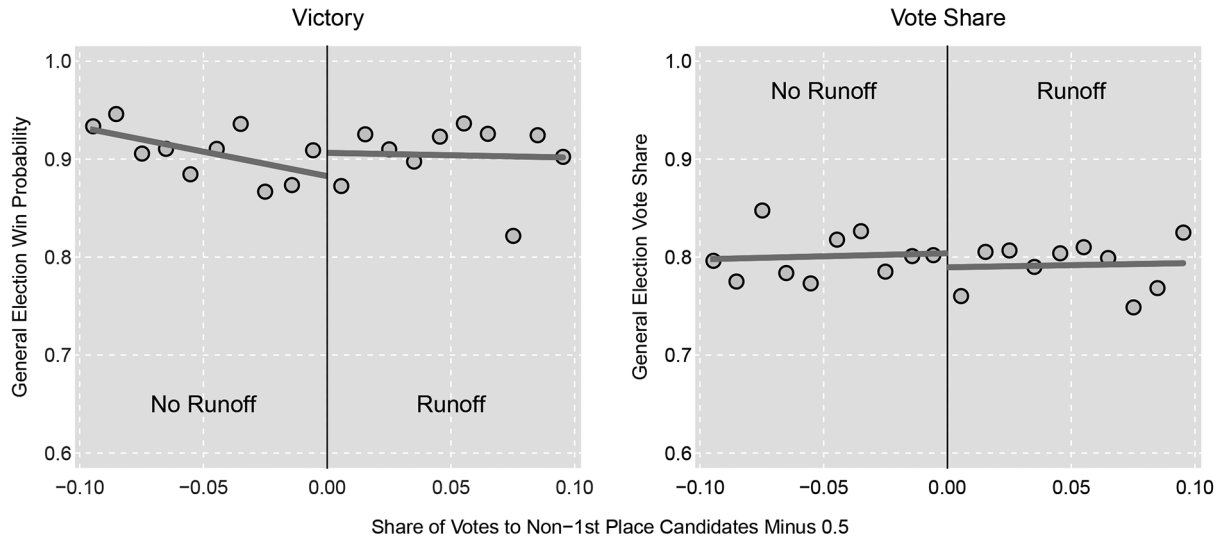


Figure 2. Effect of primary runoffs on vote share, state legislative elections. Points are averages of the outcome variable in 1-percentage-point bins of the running variable. Lines are ordinary least squares fits estimated separately on each side of the discontinuity.

most Democratic-dominated years from the state legislatures. Second, we estimate RD effects in both data sets for districts that appear to be, generally speaking, competitive for both parties. Specifically, for every district in our sample, we compute a Democratic normal vote as the average Democratic vote share in the past decade. Primaries held in districts where the Democratic normal vote is in between 40% and 60% are coded as competitive. Figure 3 plots the resulting RD estimate for the effect of going to a runoff on vote share, computed using the CCT procedure, for each data set. As the plot shows, we find a large, positive estimate for the state legislatures and a very small

negative estimate for federal legislatures. Runoffs seem to benefit parties in state legislatures but not in federal legislatures.

Why are the results so small in magnitude for the federal races? This is not due to subsetting the data to 1980 onward—in fact, the runoff penalty in the federal legislatures is relatively similar before and after 1980 (see the appendix). We suspect it is largely a statistical artifact of focusing on a small set of data. When we estimate the House and Senate effect for 1980 onward on all races, we find a large, negative estimate (−0.15).

It may seem surprising that the effect is estimated to be larger in districts (or states, in the case of the Senate) we classify

Table 4. Effect of Runoff on General Election Performance in State Elections

	Regression Discontinuity				Difference in Differences			
	Vote _t		Win _t		Vote _t		Win _t	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Runoff threshold	−.02 (.03)	−.03 (.03)	−.00 (.04)	−.01 (.05)	−.04 (.01)	−.04 (.01)	−.02 (.02)	−.01 (.02)
N	847	1,192	847	971	2,760	2,760	2,760	2,760
Bandwidth	.05	.07	.05	.06	...	...	...	...
Specification	OLS	CCT	OLS	CCT	OLS	OLS	OLS	OLS
District-party FE	No	No	No	No	Yes	Yes	Yes	Yes
Year FE	No	No	No	No	Yes	No	Yes	No
Party-year FE	No	No	No	No	No	Yes	No	Yes

Note. In state elections, candidates participating in primary runoffs are not noticeably affected in the general election. Regression-discontinuity OLS (ordinary least squares) data estimated with linear specification of running variable and running variable interacted with treatment. OLS specifications report robust standard errors clustered by election. CCT data report optimal bandwidth bias-corrected estimates calculated using Calonico, Cattaneo, and Titiunik's (2014) rdrobust package in Stata. Standard errors in parentheses. FE = fixed effects.

Table 5. Effect of Runoff on General Election Performance in State Elections: Fuzzy Regression Discontinuity and Instrumental Variables

	Subsequent Electoral Outcome						First-Stage Runoff		
	Vote _t			Win _t					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Runoff	-.03 (.03)	-.03 (.04)	-.04 (.00)	-.00 (.05)	-.01 (.06)	-.01 (.00)			
Runoff threshold							.88 (.03)	.88 (.03)	.92 (.01)
N	847	1,192	2,760	847	971	2,760	847	1,467	2,760
Bandwidth	.05	.07	...	.05	.06	...	.05	.09	...
Specification	2SLS	CCT	2SLS	2SLS	CCT	2SLS	2SLS	CCT	2SLS
District-party FE	No	No	Yes	No	No	Yes	No	No	Yes
Party-year FE	No	No	Yes	No	No	Yes	No	No	Yes

Note. Two-stage least squares (2SLS) or ordinary least squares (OLS) data estimated with linear specification of running variable and running variable interacted with treatment. 2SLS specifications report robust standard errors clustered by election. CCT data report optimal bandwidth bias-corrected estimates calculated using Calonico, Cattaneo, and Titiunik's (2014) rdrobust package in Stata. Standard errors in parentheses. FE = fixed effects.

as less competitive. However, further inspection reveals that, in the House and Senate in this time period, races in districts (or states) with relatively uncompetitive normal votes—recall this is measured for the whole decade—are actually often quite competitive in the particular year in which they enter the sample because they are holding a competitive primary. This is probably in part because competitive primaries occur more often in times and places where one or both parties expect to do well in the general election (Hall 2015). Moreover, the difference between competitive and uncompetitive districts in the House and Senate is not so large as in the state legislatures, because more vote shares are more evenly disbursed through the middle of the distribution at the federal level (one way to see this is that the kurtosis of vote share is larger, 3.2, for federal races than for state legislative races, 2.7), making the average noncompetitive race closer to competitive at the federal level. In the state legislative races in our sample in the post-1980 period, the average observed general-election vote share for uncompetitive races is 82%; in the federal races, it is only 54%. This is why it is much more important to zoom in on competitive races in the state legislatures, to estimate a plausible effect, than it is in the House and Senate.

Not surprisingly, there remains considerable uncertainty in these estimates. There are only 315 state legislative cases and 309 federal cases in competitive districts in our data sets, so we lose a lot of precision when we subset the data in this way. When we use OLS to estimate interactive versions of the RD, to test for differences across federal and state effects among these

competitive races, we cannot reject the null of no difference. That being said, the magnitude of the estimated difference is large. We take this analysis as offering preliminary evidence that something is going on—that runoffs seem to have different effects at the state versus federal level. In the next section, we dig into this possibility in a bit more detail.

INFORMATIONAL MECHANISMS FOR THE EFFECTS OF DIVISIVE PRIMARIES

How do we explain the difference in the effects of divisive primaries across federal and state elections? In races for the US House and Senate, we have seen evidence for a substantial general-election penalty due to runoff primaries, which drag out the primary campaign and make it more divisive. But

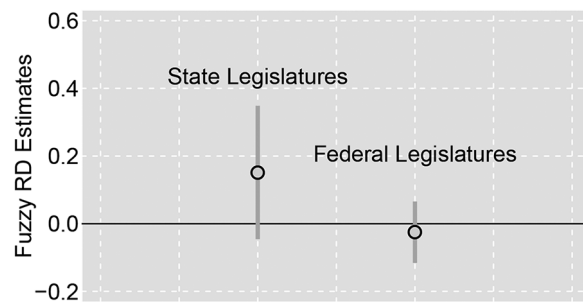


Figure 3. Comparing regression-discontinuity effects for competitive elections in state versus federal elections, 1980–2012. In state legislatures, unlike federal legislatures, runoff primaries in competitive places may actually boost party nominees in the general elections.

in state legislatures we have mainly seen on-average null effects, with some evidence for even a positive effect in modern, competitive races.

Many things differ between our federal and state legislatures, so we cannot claim to isolate any one key factor that explains the varying effects. However, we suspect that the interaction of information and news coverage with the candidate selection process is crucial. State legislative primary elections are extremely low-salience affairs. Voters have very little information about candidates, and, as a result, many votes are “wasted” on candidates who finish outside of the top two. Hall and Snyder (2015) find that, on average, roughly 80% of votes in state-level primary elections with three or more candidates flow to the top two—meaning that 20% on average flow to lesser candidates. Moreover, the article finds that this degree of vote wasting is far lower in federal races and, in general, is lower in settings where media-provided information is higher.

In low-information settings, like state legislative primaries, runoffs can make a big difference when there are three or more candidates. Because the degree of vote wasting is so high, primaries without runoffs are more likely than usual to make “mistakes”—that is, to nominate plurality- but not majority-winning candidates who would not win a runoff and are likely to be lower-quality general-election candidates. Runoffs can help fend off these issues, allowing voters in low-information settings to vote again once the field has been cleared to the top two contenders. As a result, runoffs in state legislatures may boost parties’ general-election fortunes by helping to nominate better-qualified candidates.

This relationship is different in federal elections, where information levels—although by no means high—are markedly higher than in state legislatures. Indeed, Hall and Snyder (2015) find that more than 90% of votes in US Senate primaries with three or more candidates go to the top two candidates. When vote wasting is already low, runoffs no longer serve as important a purpose for selecting qualified candidates. Instead, they may serve only to emphasize the differences between parties’ remaining candidates.

A more fine-grained investigation of the effects across legislatures is consistent with this hypothesis, although we stress that this is only a preliminary test given the limitations of the data. Figure 4 plots the estimated fuzzy RD estimate on win probability (again using `rdrobust`) for each of four subsamples of the data: state house and state senate primaries in competitive contexts, as above, and US House and US Senate primaries (results on vote share, which follow the same pattern, are omitted for simplicity). Undoubtedly, the point estimates are noisier when we cut the data this finely, so we should interpret the patterns cautiously. Nonetheless, the pattern of effects is suggestive. As the plot shows, the effect of a runoff is positive in

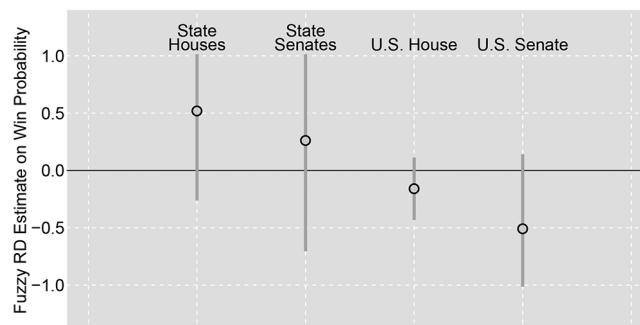


Figure 4. Effect of primary runoffs on elections across chambers. Effects of runoffs vary systematically across more and less salient contexts; runoffs exert a large penalty in more salient places but may be beneficial in the least salient settings.

state houses and state senates—that is, it benefits parties’ general-election outcomes. These are much lower salience settings. Moving to the US House, a more salient setting, the effect becomes negative. Finally, in primaries for the US Senate, by far the most salient of all legislative elections, the effect is extremely large and negative. Although we stress caution given the smaller sample sizes, the results suggest that the runoff effect is positive in very low salience settings but increasingly negative as the salience of the office increases. Although we cannot say that this analysis is dispositive, it is consistent with our idea that runoffs provide informational benefits in low-salience settings but produce penalties in high-salience settings.

CONCLUSION

The divisive primaries literature is among the longest-running topics in American politics. Primaries play a crucial role in determining the identities of those who represent voters in government, and competitive primary elections, in particular, are thought to convey a variety of benefits to citizens and their parties. These benefits include the enhanced legitimacy that an open and competitive election confers on the party, which no longer selects its candidates in the proverbial smoke-filled room, as well as the free and open exchange of ideas that the additional campaign can offer. At the same time, the level of competition within a primary election can exert surprising effects on the manner in which the general election proceeds. As we have shown in this article, in high-salience settings, in particular in the US House and US Senate, divisive primaries exert a substantial penalty on parties in the general election. The direct normative implications of this finding for voters are far from clear, but the implications for parties as strategic actors are. Parties in high-salience contexts have a strong incentive to avoid publicly visible conflict among potential nominees.

The findings may also provide insight into matters beyond divisive primaries themselves. The variation in the

effects across salience suggests there could be an important trade-off between, on the one hand, solving the coordination problem of picking a nominee quickly, so as to avoid damaging conflict, and, on the other hand, having a free and open primary that ensures the selection of a higher-quality candidate. As we have speculated, in high-information contexts, where finding the better candidate may already be easier, this trade-off could be such that open competition harms the party in the general. In lower-information contexts, where figuring out the best candidate may be much more difficult, the trade-off may go the other way; parties do better when given the chance to observe more competition and thereby, perhaps, select the best candidate, and they avoid the penalty of visible conflict since the degree of media coverage and voter attention is quite low. Investigating the interesting interactions between information and intraparty conflict will be a promising avenue for future research based on this pattern of tentative results.

ACKNOWLEDGMENTS

The authors thank Shigeo Hirano and Jim Snyder for generously sharing their data on US House and Senate primary elections. For comments and suggestions, the authors thank Avi Acharya, Anthony Fowler, Alisa Hall, and John Sides. All remaining errors are the authors' responsibility.

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