

More Candidates and Fewer Voters: How an Abundance of Choice Demobilizes the Electorate

Spencer Goidel*

October 2, 2023

This article has been accepted for publication in *American Politics Research* published by Sage Publishing.

Abstract

Voters, like consumers, experience choice overload when presented with too many similar options. The literature on consumer behavior finds overwhelmed consumers often opt out of making a decision altogether. Yet, how large candidate fields affect American voter behavior remains unexplored. I use an aggregate-level analysis leveraging exogenous changes to Louisiana's electoral institutions and an individual-level analysis to investigate the effect of varying quantities of choice on ballot rolloff in U.S. House elections. Ballot rolloff is the phenomenon where voters turn out to vote, yet abstain in a given election. I find that an electoral institution that incentivizes candidate entry causes 4.6-5.7 percent more ballot rolloff, and also that individuals are more likely to rolloff when there are more candidates running in their House election. Louisiana is simply the best case to explore a phenomenon that is likely occurring in party primaries throughout the U.S.—choice overload at the ballot box.

Keywords: candidate choice; choice overload; ballot rolloff; jungle primary; voting; elections

*Department of Political Science, Auburn University, Auburn, AL 36849, USA, e-mail: goidel@auburn.edu

There are a variety of contexts in American politics where the number of candidates in an election is potentially overwhelming. For example, on Election Day, 2020, Georgia voters were presented ballots including both a regular Senate election and a concurrent Senate special election. Three candidates were running in the Georgia Senate election,¹ and 20 candidates were running in the special election.² A DeKalb County, Georgia sample ballot is shown in Figure 1 to emphasize this stark difference in choice between the two Senate elections. The first election on every Georgia ballot was the national presidential election with three candidates. The next election was the regular Senate election with three candidates. The third election was the Georgia Senate special election with 20 candidates. A substantial number of Georgians that turned out to vote in the presidential and regular Senate elections chose to abstain from voting in the Senate special election. This phenomenon where citizens turn out to vote, cast ballots in one or more elections, yet abstain from casting ballots in subsequent elections is called ballot rolloff.

Other than the size of the candidate field, the two Georgia Senate elections were strikingly similar. The two races were equally competitive: both were Republican-held seats classified as “tossups” by Cook Political Report.³ As shown on the sample ballot, both elections had incumbents running for reelection and their incumbency status was noted on the ballot. Yet, there were 37,814 more votes cast in the Senate election with 3 candidates than in the special election with 20 candidates.⁴ How much does 37,814 fewer votes matter? In swing states like Georgia, smaller margins often determine the outcomes of elections. For example, Joe Biden won the state of Georgia by 11,779 votes, and David Perdue was only 2,455 votes short of an outright majority in the regular Senate election. Rolloff between the regular and special Senate elections was more than three times the

¹Ballotpedia. 2021. “United States Senate election in Georgia, 2020.” Available at https://ballotpedia.org/United_States_Senate_election_in_Georgia,2020.

²Ballotpedia. 2021. “United States Senate special election in Georgia, 2020.” Available at https://ballotpedia.org/United_States_Senate_special_election_in_Georgia,2020.

³Cook Political Report. 2021. “2020 Final Senate Race Ratings.” Available at www.cookpolitical.com/final-2020-senate-ratings.

⁴45,541 voters rolled off between the presidential election and the regular Senate election.

For President of the United States (Vote for One)	SPECIAL ELECTION
<input type="radio"/> Donald J. Trump - President Michael R. Pence - Vice President (Incumbent) Republican	For United States Senate (To Fill the Unexpired Term of Johnny Isakson, Resigned) (Vote for One)
<input type="radio"/> Joseph R. Biden - President Kamala D. Harris - Vice President Democrat	<input type="radio"/> Al Bartell Independent
<input type="radio"/> Jo Jorgensen - President Jeremy "Spike" Cohen - Vice President Libertarian	<input type="radio"/> Allen Buckley Independent
<input type="radio"/> _____ Write-in	<input type="radio"/> Doug Collins Republican
For United States Senate (Vote for One)	<input type="radio"/> John Fortuin Green
<input type="radio"/> David A. Perdue (Incumbent) Republican	<input type="radio"/> Derrick E. Grayson Republican
<input type="radio"/> Jon Ossoff Democrat	<input type="radio"/> Michael Todd Greene Independent
<input type="radio"/> Shane Hazel Libertarian	<input type="radio"/> Annette Davis Jackson Republican
<input type="radio"/> _____ Write-in	<input type="radio"/> Deborah Jackson Democrat
	<input type="radio"/> Jamesia James Democrat
	<input type="radio"/> A. Wayne Johnson Republican
	<input type="radio"/> Tamara Johnson-Shealey Democrat
	<input type="radio"/> Matt Lieberman Democrat
	<input type="radio"/> Kelly Loeffler (Incumbent) Republican
	<input type="radio"/> Joy Felicia Slade Democrat
	<input type="radio"/> Brian Slowinski Libertarian
	<input type="radio"/> Valencia Stovall Independent
	<input type="radio"/> Ed Tarver Democrat
	<input type="radio"/> Kandiss Taylor Republican
	<input type="radio"/> Raphael Warnock Democrat
	<input type="radio"/> Richard Dien Winfield Democrat
	<input type="radio"/> _____ Write-in

Figure 1: Sample ballot: Georgia Senate Election (left) and Special Election, 2020

From DeKalb County, Georgia, <https://www.dekalbcountyga.gov/sites/default/files/users/user304/2020-11-03%20Composite%20Sample%20Ballot%20rev%203.pdf>

margin of victory in the presidential election, and more than 15 times the number of votes Perdue needed to win a majority. While two elections in Georgia were decided by fewer than 37,814 votes, neither candidate in the special election—Kelly Loeffler or Raphael Warnock—could have won a majority with the additional votes.

It is impossible to know if the gap in turnout would have been smaller if the number of candidates was the same in both elections; however, the runoff elections serve as an interesting comparison to the general elections. David Perdue and Jon Ossoff advanced to the regular Senate election runoff, while Kelly Loeffler and Raphael Warnock advanced to the special Senate election runoff. Georgia runoff elections pit the top-two vote getters against each other to ensure the victor is a recipient of the majority vote. In the January 5, 2021 runoff elections, a mere 52 more votes were cast in the special election than in the regular election. The discrepancy in votes between the regular and special elections almost completely disappeared when the same number of candidates competed in the runoffs. This case of the concurrent Georgia Senate elections is illustrative of the burden that a crowded candidate field places on voters.

Recent changes and reforms—such as ranked-choice voting and top-two primaries—to state and local electoral rules are spurring the growth of large candidate fields. There is evidence that ranked-choice and top-two primaries have normatively desirable effects on polarization and representation. These electoral systems can result in less ideologically extreme candidates (Crosson 2021), or greater descriptive representation for marginalized groups (Terrell, Lamendola and Reilly 2021). Since 2000, Alaska, California, Maine, Nebraska, and Washington—along with many local or municipal governments—have adopted ranked-choice or top-two primaries.⁵ Despite the benefits and increasing popularity of these reforms, they both affect candidate entry in a way that could be detrimental to voters. John, Smith and Zack (2018) find cities that have switched to ranked-choice voting see a 24 percent increase in the average number of candidates. Similarly, top-two

⁵Ballotpedia. 2020. “Primary election types by state.” Available at https://ballotpedia.org/Primary_election_types_by_state.

primaries incentivize the entry of challengers from the incumbent's party (Sparks 2020). The previous literature explores the effects of democratizing party primaries on the types of candidates that run and get elected, but it ignores the effect of large candidate fields on voter behavior.

In this paper, I systematically explore the effect of large candidate fields on ballot rolloff. I argue that ballot rolloff will increase when the number of candidates in an election increases. To test my hypothesis, I use both aggregate- and individual-level analyses. For the aggregate analysis, I use a difference-in-differences design using the states of Louisiana and its similar neighbor, Mississippi, as the control. By leveraging a change in Louisiana's electoral rules brought about by two Supreme Court decisions, the first research design is uniquely positioned to causally identify the effect of an institutional change on county-level ballot rolloff. Then, using Louisiana respondents to the Cooperative Election Study, I investigate whether voters in congressional districts with more candidates are more likely to abstain in their House election than voters with less crowded House elections. Both analyses lend support to my argument. Use of the so-called jungle primary—a majority-vote, nonpartisan blanket primary held on Election Day—led to an approximately five percent increase in ballot rolloff at the aggregate level, and, on average, the addition of one more candidate in an election causes a one percent increase in the likelihood an individual rolls off in a given election. Thus, changes in the number of candidates affect voters' decisions to vote in a given election after already deciding to turn out.

Choice Overload & Ballot Rolloff

It is well established in political science that the number of candidates (or parties) in an election is influenced by the design of the electoral institution (Duverger 1954). Majority-vote elections lead to more candidates, because needing less than a plurality of the vote

to make it to the runoff is much less costly than needing a plurality of the vote in the first round. Wright and Riker (1989) formally model the efficiency of plurality- and majority-vote elections at selecting Condorcet winners. They find that the most preferred candidate is less likely to win a majority-vote election than a plurality-vote election, because majority-vote elections feature more than two candidates on average. While Duverger and Wright and Riker investigate the effect of these electoral institutions on candidate entry or candidate selection, they ignore the effect on voter behavior. I contribute to this literature by showing that an electoral institution that positively incentivizes candidate entry negatively affects voters—the adoption of the jungle primary causes an increase in ballot rolloff.

In elections, voters assume the role of consumer—calculating first whether or not to make a purchase (vote) and, if purchasing (voting), which product (candidate) to purchase (vote for). The greater the informational burden placed on the voter, the more likely it should be that the voter abstains. Like shoppers choosing between gourmet jams (Iyengar and Lepper 2000), voters become overwhelmed by choosing between more than two candidates. As I explain below, candidate overload occurs because 1) voters struggle to distinguish between many similar candidates, and 2) coordinating with other voters becomes less clear as the number of candidates increases.

Informational burdens increase as the number of options in a choice set of limited range increases (Chernev, Böckenholt and Goodman 2015). When these informational burdens increase, consumers become more reliant on cognitively cheap heuristics like brand-name recognition (Iyengar and Kamenica 2010). The choice between foods at a grocery store is not as burdensome as the choice between many variations of one product. Because of the two-party system, expanded choice in the American political context mostly resembles the latter scenario—choosing between many variations of one product. An increase in candidates is more likely to be seen in Democratic or Republican party primaries. When consumers face a large choice set they either opt out of making a de-

cision entirely or make a decision and experience buyer's remorse (Haynes 2009; Jilke, Van Ryzin and Van de Walle 2016). Similarly, I expect an increase in the number of candidates to cause abstention among voters in the form of ballot rolloff.

With increasingly ideologically-homogenous parties (Webster and Abramowitz 2017), a greater number of same-party candidates means less ideological distance and more issue overlap between each candidate. Voters are less capable of distinguishing between candidates as the number of candidates and ideological overlap increases (Kroh 2009). Selecting between multiple candidates with overlapping issue positions requires additional thought or calculation from voters. This additional calculation is an informational burden or cost incurred by all voters. Candidate overload should be more pronounced in less salient elections where voters lack candidate-specific information. In House elections, for example, constituents struggle to recognize the names of challengers (Miller 1990).

In addition to the difficulty of distinguishing between same-party candidates with issue overlap, voters must attempt to identify which one of their preferred candidates has the best chance of winning or making it to the second round. Voters are more likely to abstain or cast "wasted" votes—votes cast for a candidate with no chance of winning or advancing to the next round—when they feel less certain they can predict the decisions of other voters (Hall and Snyder Jr 2015; Grosser and Schram 2006). The jungle primary exacerbates coordination failures which can lead to two opposing-party candidates advancing to the second round (Alvarez and Sinclair 2015). Coordination failures occur when votes are "wasted" on candidates without a real chance of winning. Voters should be less confident that they are casting a meaningful vote and subsequently more likely to abstain in jungle primaries featuring many same-party candidates.

Despite the wide range of work done on consumer behavior and choice (Chernev, Böckenholt and Goodman 2015), previous research has not investigated the effect of crowded candidate fields on voter behavior when party cues are constant across candidates. An emerging literature in political science investigates the paradox of choice in the context

of Latin American elections, where there is an abundance of candidates and political parties. For example, recent research finds large fields of candidates in Brazilian elections make voters more dependent on cues such as race (Aguilar et al. 2015) and ballot position (Cunow et al. 2021). Additionally, Cohen (2018) finds that the effect of the number of candidates on abstention is moderated by the number of parties. An increase in the number of candidates causes more abstention when the number of parties is held constant. U.S. primary elections serve as a unique case where multiple candidates with the same party label run in the same election—by definition eliminating the usefulness of party cues. I expect voters, in the absence of differentiating party cues, will experience candidate overload as the number of same-party candidates exceeds one.

We understand from the literature that ballot rolloff is a product of informational demands placed upon or taken off voters. For example, Herrnson, Taylor and Curry (2015) find that, where multi-member districts are used in America, voters are more likely to abstain in their multi-member district elections. Multi-member district elections are much more cognitively demanding than their single-member counterparts. Similarly, the inclusion of complex language or ballot propositions causes an increase in rolloff (Bowler, Donovan and Happ 1992; Reilly and Richey 2011). Informational burdens do not need to be insurmountable to significantly affect rates of ballot rolloff. Regardless of the complexity, rolloff is more likely in elections near the bottom of the ballot. In contrast, technologies that make voting easier decrease ballot rolloff. The introduction of electronic voting machines led to an immediate decline in rolloff (Nichols and Strizek 1995). While the ballot rolloff literature has widely explored the effects of various informational burdens, previous work does not consider how variation in the burden of choice affects ballot rolloff. I contribute to the literature by showing an increase in the number of candidates causes an increase in rolloff.

Why Louisiana?

Different primary rules may lead to crowded candidate fields in the primaries, but general elections are effectively limited to the two major-party candidates and one or two third party candidates. The jungle primary in Louisiana, which occurs on federal Election Day, is both a primary and a general election rolled into one. If no candidate gets a majority of the vote, then the top two vote-getters move on to the runoff 32 days later in December. If a candidate receives a majority of the vote, then there is no runoff election.⁶ Louisiana's jungle primary is the only electoral system in the U.S. that allows for multiple candidates from the same party to compete on Election Day.

The state of Louisiana and its election of House and Senate candidates provides an interesting case to investigate how electoral changes can affect ballot rolloff. Since the 1970s, Louisiana had the majority-vote primary (known as the jungle primary) in October concurrently paired with a plurality vote general election. However, in 1997, the Supreme Court ruled in *Foster v. Love* that the jungle primary was unconstitutional since the winner could be selected before the federal Election Day if any one candidate received a majority of the vote in the first round. Louisiana adhered to the ruling by moving the jungle primary from October to November's federal Election Day. Then, in *California Democratic Party v. Jones*, the Supreme Court ruled that states could not control party nomination processes—affecting all states with blanket primary systems. In compliance with the United States Justice Department, the Louisiana legislature adopted the closed primary system for the 2008 and 2010 federal elections. Following a 2008 Supreme Court ruling upholding Washington's electoral system (*Washington State Grange v. Washington State Republican Party*) and effectively reversing their prior ruling, Louisiana readopted the jungle primary on Election Day.

Does the jungle primary incentivize candidate entry? The 2008 election is the only

⁶Louisiana's novel electoral system has made it the focus of recent political science research (Holman and Lay 2021; Keele et al. 2017).

congressional election, with a concurrent presidential election, in which Louisiana does not use the jungle primary. Instead, only party nominees compete in the election on Election Day. Unsurprisingly, when the jungle primary is in use there are, on average, two more candidates in each congressional election. The wide variation in the number of candidates in each congressional election justifies my mixed-methods approach to identifying the effect of large candidate fields on ballot rolloff.

In my first set of analyses, I use difference-in-differences and synthetic control models. I compare ballot rolloff in Louisiana to ballot rolloff in Mississippi and ballot rolloff in a synthetic state before and after Louisiana switched back to the jungle primary. Mississippi serves as the control in the difference-in-differences model for two reasons: first, Mississippi is demographically and economically similar to Louisiana—both of which affect voter turnout—and, second, Mississippi neighbors Louisiana, thus, it is geographically proximate and similar. Because there’s only one presidential election (2008) in which Mississippi and Louisiana have similar electoral designs, I cannot be certain Mississippi

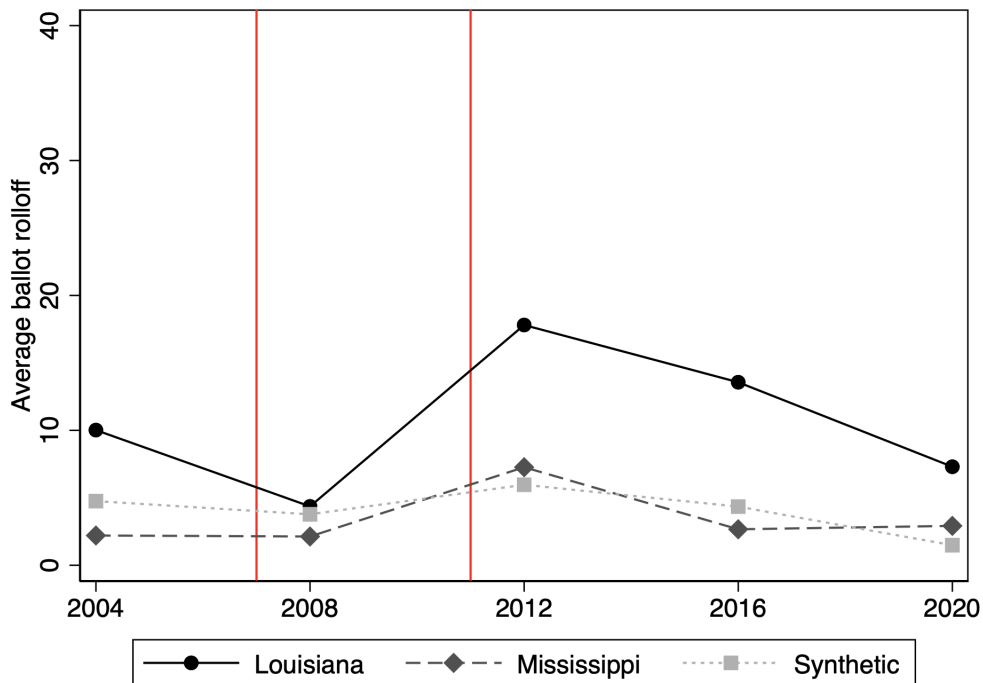


Figure 2: Average level of ballot rolloff, 2004-2020

satisfies the parallel trends assumption necessary to use a difference-in-differences design. I include a synthetic control model to alleviate these concerns. Figure 2 shows that the differences in ballot rolloff between Louisiana and Mississippi, and Louisiana and the synthetic control are smallest in 2008. Ballot rolloff in the synthetic control is very similar to ballot rolloff in Mississippi, although it is slightly less volatile across elections in the synthetic control.

For the aggregate-level study, I hypothesize that the use of the jungle primary causes an increase in ballot rolloff.

Hypothesis 1: *Use of the jungle primary in Louisiana House elections will cause an increase in ballot rolloff.*

In my second analysis, I see whether voters in Louisiana congressional districts with more candidates are more likely to rolloff. This second analysis is not as strong of a causal test, but it provides evidence consistent with my general theory about choice and abstention. For the individual-level study, I hypothesize that voters are more likely to abstain at the ballot box when there are more candidates in their House election.

Hypothesis 2: *Louisiana voters will be more likely to rolloff when there are more House candidates in their congressional district.*

Aggregate-Level Analysis

I look at U.S. House of Representatives elections in Louisiana and Mississippi to estimate the effect of Louisiana's jungle primary on parish-level ballot rolloff. To test my theory, I use a generalized difference-in-differences model with fixed effects and cluster-robust standard errors at the county level,

$$Y_{it} = \beta_1 + \beta_2 T_t + \beta_3 D_i + \beta_4 (T_t * D_i) + \beta_5 X_{it} + \lambda_1 Z_i + \epsilon_{it}.$$

where Y_{it} is ballot rolloff, D_i is the treatment indicator, T_t is the time indicator, X_{it} are the controls, and Z_i are the county fixed effects.

Following the difference-in-differences framework, my explanatory variable of interest is an interaction between two dummy variables indicating the treatment condition and the period in which the jungle primary is in effect, $(T_t * D_i)$. The treatment dummy variable, D_i , takes on the value of 1 for Louisiana parishes and 0 for Mississippi counties. The time dummy variable, T_t , takes the value of 0 for the 2008 election and 1 for the 2004, 2012, 2016 and 2020 elections. The interaction between these two dummy variables captures the average treatment effect on the treated—the effect of Louisiana’s jungle primary on ballot rolloff in Louisiana parishes. I include controls, X_{it} , in my difference-in-differences model to reduce the error variance in the regression and to obtain more precise estimates, as well as county fixed effects, Z_i .

Ballot rolloff is calculated as one minus the proportion of parish/county votes in the House election to votes in the presidential election.

$$\text{rolloff} = 1 - \frac{\text{votes cast for House}}{\text{votes cast for president}}$$

The proportion is subtracted from one so the measure indicates the proportion of presidential election voters that did not vote in their respective House election. Higher values of ballot rolloff indicate a larger proportion of people voted in the presidential election than the House election. Whereas, smaller values indicate that the gap between presidential and House votes is narrow. The parish/county vote totals are from Louisiana and Mississippi’s secretaries of state. I use parish and county vote so the analysis is not affected by redistricting. There are 64 parishes in Louisiana and 82 counties in Mississippi. To measure county-level ballot rolloff there must be a concurrent House and presidential election. Thus, the data are limited to the five presidential elections from 2004 to 2020.⁷

⁷County-level data before the 2004 presidential election is not publicly available on the Mississippi Secretary of State’s website.

Additionally, House elections with only one candidate are dropped from the analysis because there are no votes cast in single-candidate races in Louisiana and Mississippi.⁸ As a result, there are 655 observations total.

I include four controls in this difference-in-differences model. First, I control for whether there is a major-party challenge in the House election.⁹ Ballot rolloff should be higher when there is only one viable option presented to voters, since voters are more likely to rolloff when an election is not contested by the opposing major party (Streb, Frederick and LaFrance 2009; Fisk 2020; Patterson Jr 2020; Bonneau and Zaleski 2021). Second, I control for whether there is a concurrent Senate election.¹⁰ The salience of an election on the ballot affects the rate of ballot rolloff (Milton 1983). If the presence of a concurrent Senate election attracts more voters, then these additional voters should be more likely to rolloff in the House election. Third, I control for the competitiveness of the district in the previous presidential election.¹¹ Voters are less likely to cast a vote in non-competitive elections (Hall 2007). Fourth, I control for whether an incumbent is running for reelection.¹² The presence of a partisan incumbent running for reelection should cause more ballot rolloff as incumbency also serves as a signal of election competitiveness.

I include county-level fixed effects to control for time-invariant factors that might influence the rate at which a county rolls off at the ballot box. For example, the racial composition, median income, or average educational attainment of a county could affect ballot rolloff. However, the composition of a county should be mostly time invariant. County-level fixed effects should account for these differences between counties that do not change over time. Election fixed effects are included to control for any dif-

⁸Hurricane Gustav interfered with the 2008 election cycle in Louisiana and pushed back the elections for the 2nd, 3rd, 4th, and 5th congressional districts. Results in the third column of Table A1 of the Appendix show that limiting the analysis to the fully balanced parishes in the 1st, 6th, and 7th congressional districts does not substantively alter my findings.

⁹*Single-party* is a dummy variable coded 0 if there is a major-party challenge and 1 if there is not.

¹⁰*Senate* is a dummy coded 1 if there is a Senate election in the state in that election, and 0 otherwise.

¹¹*Competitive* is coded as the absolute value of the difference between Republican and Democratic vote share in the previous presidential election.

¹²*Incumbent* is coded as 1 if an incumbent is running for reelection and 0 otherwise.

ferences across elections that would affect ballot rolloff in Louisiana and Mississippi parishes/counties. For example, rolloff might be higher when turnout is higher because less informed or experienced voters are mobilized to vote. As I previously mentioned, the model I present in this article includes two-way fixed effects, however, in the Appendix I include various specifications to show the results are robust.

Findings

The difference between ballot rolloff in Louisiana and Mississippi when Louisiana uses the jungle primary is much larger than the difference between ballot rolloff in the two states when Louisiana temporarily abandons the jungle primary. Taking the averages for both states in both time periods, the difference in means is 7.92 percent when the jungle primary is in use, and 1.67 percent when the jungle primary is abandoned. Thus, with no controls or fixed effects, the difference in differences is 6.26 percent—ballot rolloff is 6.26 percent higher in Louisiana when the jungle primary is in use.

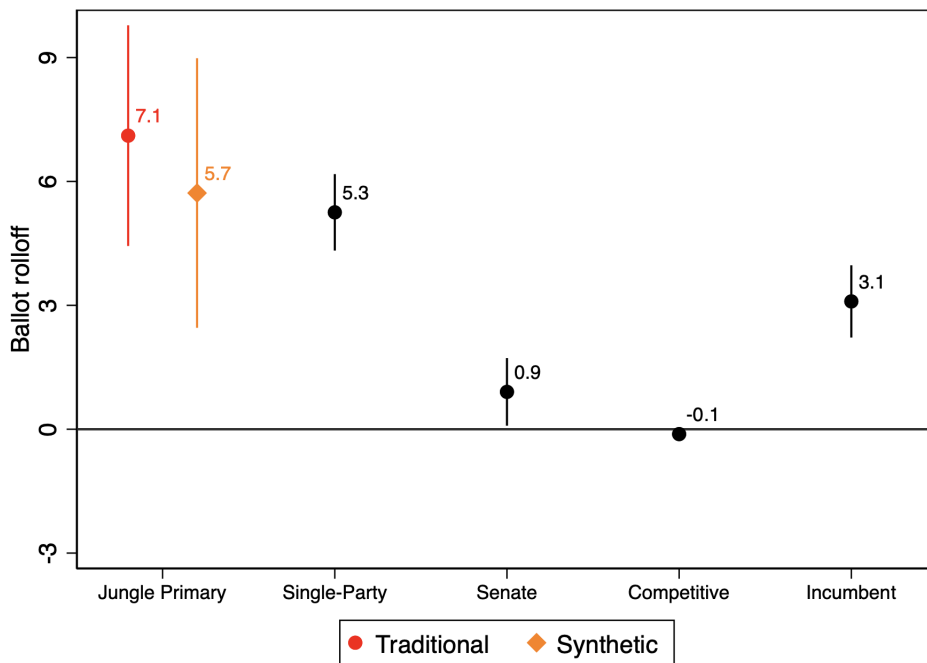


Figure 3: The effect of the jungle primary on ballot rolloff

The coefficients from the difference-in-differences regression with controls and fixed effects are presented in Figure 3. The coefficient for the difference-in-differences estimator, “DID,” is statistically significant ($p < 0.00$) and substantively large, providing support for Hypothesis 1. There is a 4.6 percent increase in ballot rolloff in Louisiana when Louisiana uses the jungle primary. On average, Louisiana House elections feature two more candidates when the jungle primary is in use (4.7 candidates versus 2.6 candidates). Therefore, the entry of one additional candidate causes a 2.3 percent increase in ballot rolloff.

The significant coefficient on “Time” means that there is a ballot rolloff increase in Mississippi as well when Louisiana uses the jungle primary; however, this increase is not substantial. There is no coefficient on the treatment dummy since it is collinear with the fixed effects for Louisiana parishes. Three of the four controls have significant effects in the direction I expected. When there is only one party in a House election, the parishes/counties within that district have 7.4 percent more ballot rolloff. Concurrent Senate elections cause ballot rolloff to increase by 2.0 percent, and an incumbent running for reelection causes an increase of 1.8 percent. Interestingly, the competitiveness of the district in the previous presidential election has no effect on ballot rolloff. Perhaps incumbency better serves as a proxy for the current election’s competitiveness. Compared to the other coefficients, the magnitude of the effect of the jungle primary on ballot rolloff is the second largest. Only elections without candidates from both parties cause more ballot rolloff. In Table A1 of the appendix, I include robustness checks where the analysis is limited to fully balanced panels and where parishes in Louisiana are matched to counties in Mississippi on a set of demographic variables. The alternative model specifications do not alter my findings.

A change in electoral rules to the jungle primary, which leads to a greater number of candidates, causes an increase in ballot rolloff. However, by using the electoral change and a difference-in-differences model, I do not directly test whether the number candidates in a House election causes greater rates of ballot rolloff. In the following section, I

use survey data to show that the number of candidates predicts the probability an individual rolls off.

Individual-level Analysis

For the individual-level analysis, I use Louisiana respondents in the Cooperative Election Study (CES) time series to investigate how individuals are affected by the number of candidates in their respective House election. Consistent with the previous analysis, the dependent variable is ballot rolloff. Ballot rolloff is coded 1 if the respondent reports that they voted in the presidential election but not their district's House election, and 0 otherwise.¹³ I estimate a logistic regression with standard errors clustered at the congressional district since the dependent variable is dichotomous and respondents are nested in their congressional district. The sample is limited to the 917 validated self-reported voters.

The explanatory variable of interest in this model is the number candidates in a respondent's congressional district. The number of candidates in each election are taken from the Louisiana secretary of state's election report. I include three of the same district-level dummy controls from the aggregate-level model, and slightly change one to make it more applicable to the individual level. The three that are the same are the two dummy variables indicating whether there is only one major party running in the House election and whether there is a concurrent Senate election, and the continuous measure of district competitiveness. I do control for incumbency, but, with individual-level data, I only control for whether the incumbent is from the respondent's party or the opposing party. This variable is coded 1 if there is an incumbent from the respondent's party, -1 if there is an incumbent from the opposing party running for office, and 0 otherwise. I include election year fixed effects since there could be election-specific factors influencing

¹³The mean of individual-level ballot rolloff is 5.5 percent in the CES data. This is close to the county-level ballot rolloff mean of 6.7 percent. If anything, it should be socially desirable for respondents to lie about rolling off. Therefore, any bias due to the survey format should bias my results towards the null.

an individual's propensity to rolloff. For example, more salient or competitive presidential elections might turn out voters that are less likely to vote in down ballot elections regardless of the number of candidates. I cannot include unit fixed effects since the respondents vary in each wave of the survey. Since I cannot include time-invariant fixed effects, I include a series of individual-level controls that could affect the likelihood a respondent rolls off. These controls include respondent age, party identification, education, employment status, marital status, race, and gender. Respondent age is a continuous variable ranging from 18 to 93. The other controls are dummy variables indicating whether the respondent is a Republican or Democrat, graduated college, has a job, is married, is white, and is male.

Findings

Table 4 shows the results from two logistic regressions. The model in the first column only includes election-specific controls, and the model in the second column includes both election-specific and individual-level controls. Supporting my hypothesis, the number of candidates has a positive and statistically significant effect on ballot rolloff under both specifications. Computing the average marginal effects from the model with individual-level controls, I find the presence of one additional candidate in an election causes a 1.0 percent increase in ballot rolloff. Looking at the controls with significant effects, I find the absence of a major-party challenger causes an 10.0 percent increase, and the presence of a same-party incumbent causes a 1.9 percent decrease. The controls for a concurrent Senate election and district competitiveness have a null effect on rolloff.

The results in Table 4 show that there is a positive relationship between the number of candidates and ballot rolloff, but otherwise the coefficients are nonintuitive for substantive interpretation. In Figure 4, I present the predicted probability of rolling off across the range of candidate field sizes. Underlying the plot of predicted probabilities, the histogram depicts the percent of respondents in elections of each size. Approximately

Introduction

Table 4: Logistic regressions predicting ballot rolloff

	(1)	(2)
	W/o Ind.-Level	W/ Ind.-Level
Number of Candidates	0.249** (0.086)	0.256** (0.099)
Constant	-5.327*** (0.941)	-5.106*** (1.335)
<i>Election-Specific Controls</i>		
Single-Party	2.588*** (0.436)	2.632*** (0.446)
Senate	0.096 (0.954)	-0.054 (0.902)
Competitive	-0.003 (0.024)	-0.006 (0.025)
Incumbent	-0.664*** (0.143)	-0.494** (0.155)
<i>Individual-Level Controls</i>		
Age		0.008 (0.011)
Republican		-0.517 (0.478)
Democratic		0.262 (0.422)
Education		-0.149 (0.100)
Employment Status		0.472 (0.404)
Marital Status		-0.192 (0.400)
Race		-0.312 (0.461)
Gender		0.335 (0.260)
Year FEs	✓	✓
N	1,043	1,043
pseudo R^2	0.143	0.166
Wald χ^2	94.6	1155.1

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

half of the respondents voted in House elections with two or three candidates, while the other half voted in elections with four or more candidates. When there are twelve candidates, a respondent is more than six times as likely to roll off than when there are two candidates—the likelihood of rolling off increases from 2.9 percent to 19.1 percent. But there is only one election in 2016 with 12 candidates, and such large candidate fields are rare. However, ballot rolloff becomes significantly more likely as the number increases by only three candidates. As a respondent moves from an election with two candidates

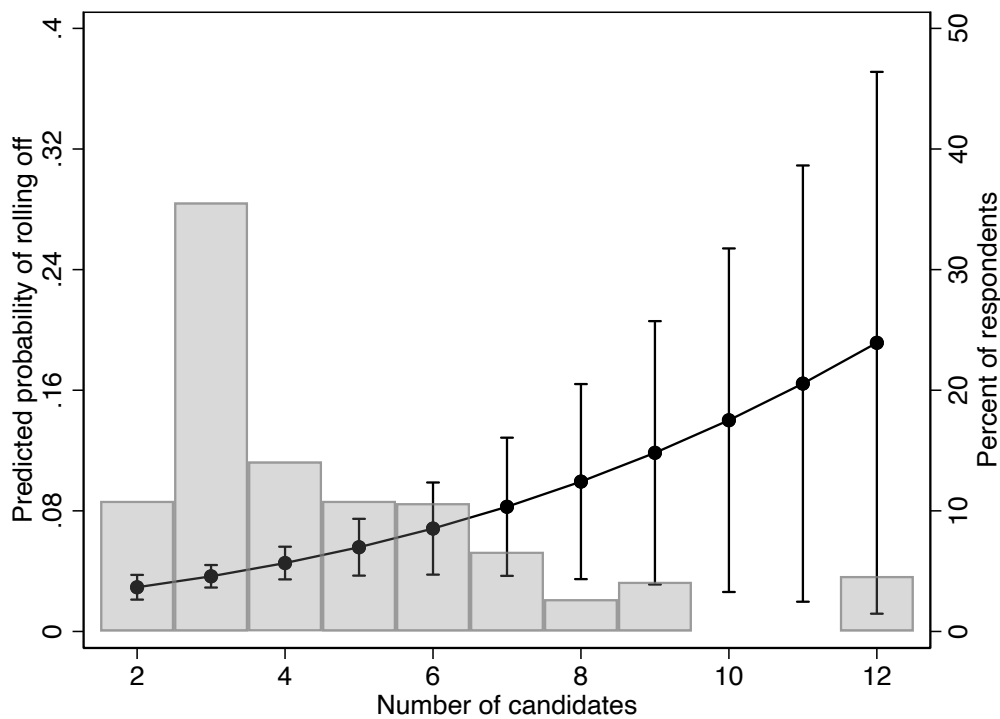


Figure 4: The probability of rolling off and the number of candidates

to five they become approximately 2.7 percent ($p=0.016$) more likely to roll off. These findings provide support for my theory that choice becomes burdensome when there are more than two candidates in an election, and that an individual’s likelihood of rolling off is affected by the number of candidates.

Conclusion

Electoral rules matter, and rational politicians respond to rules that incentivize candidate entry (Wright and Riker 1989). Recently adopted reforms such as ranked-choice and top-two primaries democratize the primary process and lower the cost of entry for candidates. When the cost of entry is lower, more candidates will enter an election. Normatively, democratizing the process may seem like a good thing; however, democratizing the primaries may come at a cost to political participation as voters struggle to navigate large candidate fields. In this paper, I argue that electoral rules that incentivize candidate entry depress voter participation. My analyses find that the entry of an additional candidate causes a 2.3 percent increase in aggregate-level ballot rolloff or makes an individual one percent more likely to rolloff. While these findings may be specific to Louisiana, the implications are not. Larger candidate fields in primaries are becoming increasingly more common as the cost of candidate entry cheapens.

In 2020, Alaska voted to adopt a top-four non-partisan primary election and ranked-choice general election. Less than two years after the adoption of the new reform, the House special election taking place on June 11, 2022 features 48 candidates who will all compete on the same ballot. One of the 48 candidates, John Coghill, noted that for voters “the overload is going to be very difficult to navigate through. It’s not impossible — it’s difficult.”¹⁴ Similarly, California had five top-two House primaries featuring eight or more candidates in 2020, and four in 2018. Democratic activists in California have expressed concern over the perpetually crowded top-two primaries.¹⁵ Lawmakers and voters in more states and cities are voting to adopt these democratizing electoral systems. In 2021, bills were proposed in 29 states to adopt ranked-choice voting in some capacity.¹⁶

¹⁴Samuels, Iris and Nathaniel Herz. “Alaska’s U.S. House race includes 48 candidates and a lot of uncertainty.” *Anchorage Daily News*, April 4, 2022.

¹⁵Mai-Duc, Christine. “California Democrats agree they have too many candidates for Congress. What to do about them is the problem.” *Los Angeles Times*, February 24, 2018.

¹⁶Vasilogambros, Matt. “Ranked-Choice Voting Gains Momentum Nationwide.” *The Pew Charitable Trusts*, March 12, 2021.

Voters already struggle to navigate low-information elections in a nationalized media environment with declining local news (Chapp and Aehl 2021; Darr, Hitt and Dunaway 2018). What happens when these conditions are paired with electoral systems that overwhelm voters with choice? When the media are nationalized, voters are more likely to rely on party cues in these less salient elections (Trussler 2021). But, how do voters distinguish between candidates when multiple candidates are from the same party? Future research should continue to investigate how electoral designs that incentivize candidate entry affect the informational demands placed upon voters.

References

- Aguilar, Rosario, Saul Cunow, Scott Desposato and Leonardo Sangali Barone. 2015. "Ballot structure, candidate race, and vote choice in Brazil." *Latin American Research Review* pp. 175–202.
- Alvarez, R Michael and J Andrew Sinclair. 2015. *Nonpartisan Primary Election Reform*. Cambridge University Press.
- Bonneau, Daniel D and John Zaleski. 2021. "The effect of California's top-two primary system on voter turnout in US House Elections." *Economics of Governance* 22(1):1–21.
- Bowler, Shaun, Todd Donovan and Trudi Happ. 1992. "Ballot propositions and information costs: Direct democracy and the fatigued voter." *Western Political Quarterly* 45(2):559–568.
- Chapp, Christopher and Peter Aehl. 2021. "Newspapers and political participation: The relationship between ballot rolloff and local newspaper circulation." *Newspaper Research Journal* 42(2):235–252.
- Chernev, Alexander, Ulf Böckenholt and Joseph Goodman. 2015. "Choice overload: A conceptual review and meta-analysis." *Journal of Consumer Psychology* 25(2):333–358.
- Cohen, Mollie J. 2018. "A dynamic model of the invalid vote: How a changing candidate menu shapes null voting behavior." *Electoral Studies* 53:111–121.
- Crosson, Jesse. 2021. "Extreme districts, moderate winners: Same-party challenges, and deterrence in top-two primaries." *Political science research and methods* 9(3):532–548.
- Cunow, Saul, Scott Desposato, Andrew Janusz and Cameron Sells. 2021. "Less is more: The paradox of choice in voting behavior." *Electoral Studies* 69:102230.
- Darr, Joshua P, Matthew P Hitt and Johanna L Dunaway. 2018. "Newspaper closures polarize voting behavior." *Journal of Communication* 68(6):1007–1028.
- Duverger, Maurice. 1954. "Political Parties: Their Organization and Activity in the Modern State." *Great Britain: University Printing House, Cambridge (Methuen & Co Ltd)* .
- Fisk, Colin A. 2020. "No Republican, No vote: Undervoting and consequences of the Top-Two primary system." *State Politics & Policy Quarterly* 20(3):292–312.
- Grosser, Jens and Arthur Schram. 2006. "Neighborhood information exchange and voter participation: An experimental study." *American political science Review* 100(2):235–248.
- Hall, Andrew B and James M Snyder Jr. 2015. "Information and Wasted Votes: A Study of US Primary Elections." *Quarterly Journal of Political Science* 10:433–459.
- Hall, Melinda Gann. 2007. "Voting in state supreme court elections: Competition and context as democratic incentives." *The Journal of Politics* 69(4):1147–1159.

- Haynes, Graeme A. 2009. "Testing the boundaries of the choice overload phenomenon: The effect of number of options and time pressure on decision difficulty and satisfaction." *Psychology & Marketing* 26(3):204–212.
- Herrnson, Paul S, Jeffrey A Taylor and James M Curry. 2015. "The Impact of District Magnitude on Voter Drop-Off and Roll-Off in American Elections." *Legislative Studies Quarterly* 40(4):627–650.
- Holman, Mirya R and J Celeste Lay. 2021. "Are You Picking Up What I Am Laying Down? Ideology in Low-Information Elections." *Urban Affairs Review* 57(2):315–341.
- Iyengar, Sheena S and Emir Kamenica. 2010. "Choice proliferation, simplicity seeking, and asset allocation." *Journal of Public Economics* 94(7-8):530–539.
- Iyengar, Sheena S and Mark R Lepper. 2000. "When choice is demotivating: Can one desire too much of a good thing?" *Journal of personality and social psychology* 79(6):995.
- Jilke, Sebastian, Gregg G Van Ryzin and Steven Van de Walle. 2016. "Responses to decline in marketized public services: An experimental evaluation of choice overload." *Journal of Public Administration Research and Theory* 26(3):421–432.
- John, Sarah, Haley Smith and Elizabeth Zack. 2018. "The alternative vote: Do changes in single-member voting systems affect descriptive representation of women and minorities?" *Electoral Studies* 54:90–102.
- Keele, Luke J, Paru R Shah, Ismail White and Kristine Kay. 2017. "Black candidates and black turnout: A study of viability in louisiana mayoral elections." *The Journal of Politics* 79(3):780–791.
- Kroh, Martin. 2009. *The ease of ideological voting: Voter sophistication and party system complexity*. Oxford University Press Oxford.
- Miller, Arthur H. 1990. "Public judgments of Senate and House candidates." *Legislative Studies Quarterly* pp. 525–542.
- Milton, Sande. 1983. "A cross-sectional analysis of the roll-off vote in New York state, 1948-1974." *Polity* 15(4):613–629.
- Nichols, Stephen M and Gregory A Strizek. 1995. "Electronic voting machines and ballot roll-off." *American Politics Quarterly* 23(3):300–318.
- Patterson Jr, Shawn. 2020. "Estimating the unintended participation penalty under top-two primaries with a discontinuity design." *Electoral Studies* 68:102231.
- Reilly, Shauna and Sean Richey. 2011. "Ballot question readability and roll-off: The impact of language complexity." *Political Research Quarterly* 64(1):59–67.
- Sparks, Steven. 2020. "Quality challenger emergence under the top-two primary: Comparing one-party and two-party general election contests." *Electoral Studies* 65:102136.

- Streb, Matthew J, Brian Frederick and Casey LaFrance. 2009. "Voter rolloff in a low-information context: Evidence from intermediate appellate court elections." *American Politics Research* 37(4):644–669.
- Terrell, Cynthia Richie, Courtney Lamendola and Maura Reilly. 2021. "Election Reform and Women's Representation: Ranked Choice Voting in the US." *Politics and Governance* 9(2):332–343.
- Trussler, Marc. 2021. "Get information or get in formation: The effects of high-information environments on legislative elections." *British Journal of Political Science* 51(4):1529–1549.
- Webster, Steven W and Alan I Abramowitz. 2017. "The ideological foundations of affective polarization in the US electorate." *American Politics Research* 45(4):621–647.
- Wright, Stephen G and William H Riker. 1989. "Plurality and runoff systems and numbers of candidates." *Public Choice* 60(2):155–175.

Appendix

Table A1: Effect of jungle primary on ballot rolloff

	(1)	(2)	(3)	(4)
	Full	Balanced	Synthetic	Placebo
Time	0.780* (0.346)	1.915*** (0.360)	-0.139 (1.140)	1.337 (0.721)
DID	4.562*** (1.158)	4.079** (1.242)	5.720*** (1.474)	1.115 (0.825)
Single-party	7.400*** (0.737)	6.589*** (0.962)	5.397*** (0.907)	-0.055 (0.430)
Senate	1.972*** (0.539)	4.117*** (0.736)	-1.148 (0.919)	2.363*** (0.394)
Competitive	-0.006 (0.073)	0.125 (0.094)	-0.257* (0.099)	-0.046 (0.075)
Incumbent	1.812*** (0.395)	2.382*** (0.442)	3.300*** (0.950)	2.206* (0.927)
Constant	0.087 (1.384)	-4.873** (1.787)	5.444** (1.993)	-0.327 (1.205)
R ²	0.54	0.39	0.37	0.04
N	655	420	160	680

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Use of the jungle primary in Louisiana leads to an approximately 4.1-5.7 percent increase in ballot rolloff. The identified effect is robust to the three model specifications in the first three columns of Table A1. The model with Mississippi as the control and the model with synthetic control—both presented in the body of this article—are shown in the first and third columns. The model in the second column only includes Louisiana parishes and Mississippi counties with House elections in all five election cycles.

I estimate the same model on a placebo state (Mississippi) and its synthetic control. The placebo test is shown in column four of Table A1. The difference-in-differences es-

timator has a null effect when the model is estimated on Mississippi counties. This test provides further evidence that the parallel trends assumption is satisfied in the synthetic control model.