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Getting things straight: The effects of ballot design and electoral structure on voter participation☆

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ABSTRACT

This paper considers the implications of the straight-party voting option (STVO) on participation in judicial elections. Voters using straight-party options (by definition) do not vote for candidates in nonpartisan elections. Consequently, ballot roll-off in these elections is more likely to occur when people are given the chance to vote the party ticket and complete the voting process quickly. This is the case because nonpartisan judicial elections are considerably less salient than statewide and federal partisan elections. This article separates out the effects of the institutional structure of the election on political participation with the effects of ballot design. We find that in nonpartisan elections, the straight-party option *decreases* voter participation since voters who utilize the straight-ticket option may erroneously believe that they have voted for these nonpartisan offices, or simply ignore them. However, in nonpartisan elections without straight-ticket voting, participation is *increased* compared to nonpartisan elections with straight-ticket voting. Additionally, both forms of nonpartisan elections have less participation than partisan elections, all of which have the straight-ticket option. Thus, voter participation is affected not only by the type of election, but the type of voting rules in the election.

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Citizen participation in the political process is regarded as a vital prerequisite to a healthy democracy. Elections serve as the primary mechanisms for inducing accountability and responsiveness in the American political system. Yet despite the lofty ends elections serve, participation and political decision-making are functions not only of retrospective evaluations and partisan aspirations, but also of electoral systems and institutional rules. Scholars have long studied various elements of the electoral process, from the voting method (Frisina et al., 2008; Mather, 1964) to how names are listed on the ballot (Hamilton and Ladd, 1996; Krosnick et al., 2003; Miller and Krosnick, 1998; Walker, 1966) to the design of the ballot itself (Kimball and Kropf, 2008; Niemi and Herrnson, 2003; Walker, 1966). Variation in ballot format and electoral systems has been linked to a variety of issues ranging from accurate vote counting (Ansolabehere and Stewart, 2005) to citizens' willingness to accept the legitimacy of election results (Saltman, 2006). In this article, our principal objective is to provide evidence demonstrating that the impact of certain features of the electoral process depends on the presence or absence of other electoral features. Specifically, we consider the relationship between partisan labels and the straight-ticket voting option (STVO), both of which are only offered on ballots in certain states. While a variety of considerations have been found to impact voter participation, scholars tend to analyze in

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isolation either individual ballot features, such as the use of partisan cues in decision-making (Schaffner et al., 2001) or differences in electoral setting, such as the consequences of election type on the ideology of nominees emerging from primaries (Gerber and Morton, 1998). Useful as these studies are, they do not consider the interactive effects of multiple dimensions of such variation (e.g. ballot features *and* electoral setting) on voter behavior. Since elections often vary on more than one dimension, we argue that this is a critical shortcoming in the literature, and seek to fill this important void.

Scholars of elections have found that voter participation is enhanced by having partisan labels on the ballot (Bonneau and Hall, 2009; Hall and Bonneau, 2008, 2013; Dubois, 1979, 1980; Schaffner et al., 2001). Indeed, as Beck notes, "for millions of Americans, the party label is the chief cue for their decisions about candidates or issues" (Beck, 1997, 8). By providing voters the party identification of candidates, states give voters an important cue that helps them make an informed choice (Aldrich, 1995; Downs, 1957; Mondak, 1993a; Rahn, 1993; Schaffner et al., 2001). Some states go even further in making it easy to cast a ballot by allowing voters to select a straight-ticket option which records a vote for all candidates on the ballot who are members of the selected political party, regardless of the office for which they are running.

In this paper, we ask whether the benefits – or drawbacks – of the STVO are consistent across electoral systems. Specifically, do the effects of the STVO vary based on whether the election is partisan or nonpartisan? Because we need to study an office that has variation on type of election as well as the presence of the STVO, we examine state supreme court elections from 1990 to 2008. In some states, justices are selected in competitive partisan elections, where parties select candidates and the partisan affiliation of the candidates appears next to their name on the ballot. In other states, there are competitive elections, and the parties may be involved in the selection of nominees and on campaigning on behalf of them, but the party identification of the candidates is not present on the ballot.[1] Thus, if a state offers the STVO, a voter choosing the straight-ticket option would have her vote recorded for state supreme court race if it occurred in a partisan state, but would not have her vote recorded if the election occurred in a nonpartisan state. If there is no variation across election systems, then policymakers interested in increasing voter participation should strongly consider instituting a STVO on the ballot. However, if it is the case that the STVO only induces participation under certain electoral arrangements, then the decision to institute the STVO is less clear, and having that option may, in fact, depress participation.

While ballot design and format varies in a number of ways (for instance, the use of a party-list versus office bloc form) we focus on STVO because it is a particularly timely and significant issue given recent developments in both federal and state legislatures concerning the future of the straight-ticket option.[2] In 2013, members of the U.S. House introduced a bill (H.R. 936) that would eliminate the STVO in elections. One of the sponsors of the bill stated that, "This legislation will promote thoughtful decision making in the voting booth by ensuring that ballots are designed to ask voters to select an individual candidate rather than a political party" (Kasperowicz, 2013). Additionally, legislators in four states (Iowa, Texas, Utah, and West Virginia) introduced similar measures the same year. One purpose of this paper is to provide empirical evidence that speaks to the likely consequences if these pieces of legislation are passed. As we demonstrate below, eliminating the STVO would likely lead to a *decrease* in voter participation in states with partisan elections and an *increase* in voter participation in states with nonpartisan elections.

1. The straight-ticket voting option (STVO) in low salience elections

The straight-ticket voting option is a feature that appears on some states' ballots that allows voters to select a single box to cast a vote for *all* candidates of a particular party for all offices on the ballot. Following the adoption of the Australian ballot, the straight-party option became a popular feature on ballots in the United States (Rusk, 1970). For much of the twentieth century, the straight-party option was available in over half of the states, but in recent years a number of states have removed it from their ballots (Burden and Kimball, 2002; Kimball et al., 2001). Today, a healthy minority of states—fourteen—offer a straight-

[1] There are, of course, two other methods of selection. First, some states use straight-up gubernatorial or legislative appointment. Second, several states use "merit selection," where a judicial nominating committee provides the governor with a list of 3–5 names, and the governor must select an appointee from that list. After a period of time, the justice must face the voters in a retention vote, where the voters are simply asked if the judge should retain her job. If a judge receives a majority of the vote (a few states require a super-majority), she keeps her position for a full term of six to twelve years. While it would be interesting to examine the effects of the STVO on retention elections, at this point we limit our focus to competitive elections. Retention elections are not "elections" in the same way that partisan and nonpartisan elections are since the voters are deprived of meaningful choice in the election: they can choose not to support the incumbent, but they have no choice about who the successor is. Given the well-documented differences between retention elections and competitive elections in terms of average percentage of the vote, campaign spending, incumbent defeat rate, etc. (Bonneau and Hall, 2009), it is prudent to exclude them at this point in the project.

[2] Furthermore, there is little variation across states today between office-bloc ballot (where each race has a separate section on the ballot and candidates for that office are listed underneath it) versus a party column ballot (where all candidates are listed under a party label and symbol and offices are listed as rows). While there is research suggesting that the form matters – incumbents, for instance, benefit from the office bloc since it emphasizes individual candidates over parties (Roberts, 2008), far fewer states use the party column ballot than use the STVO. Following the 2002 Help America Vote Act, the use of the office bloc form increased considerably. By 2008, only four states still used a party column ballot (Roberts, 2010). In addition, since the STVO is by definition designed to allow voters to bypass all the individual races, voters have a choice to vote the straight-ticket at the top of the ballot *prior* to encountering the type of form being used. Consequently, while we agree that a variety of differences across ballots can impact electoral outcomes, the controversy and timeliness concerning the straight-ticket option makes it a particularly worthwhile topic of inquiry.

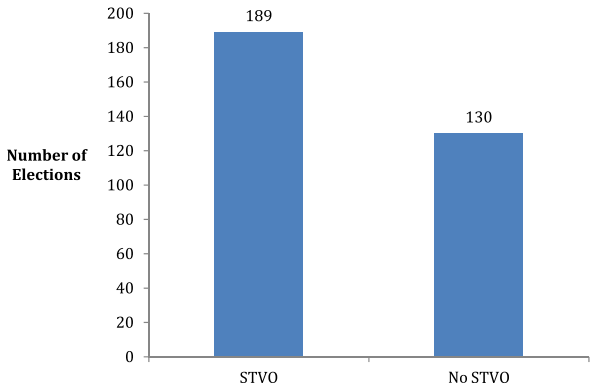

Fig. 1. Frequency of STVO option in non-retention judicial elections, 1990–2008.

party option to voters.[3] In our data, slightly more than half the elections have the STVO (189 versus 130 without it), as seen in Fig. 1. But among the many Americans who are given the STVO on Election Day, why—and when—should we expect them to use it?

Scholars agree that, by and large, voters tend to be politically unsophisticated. Most voters are not policy experts (Caplan, 2007), nor, many have argued, are they ideologically constrained (e.g. Converse, 1964; Zaller, 1992). Consequently, those who wish to participate in politics must obtain information in order to make political decisions (Delli Carpini and Keeter, 1996). Yet information is costly, and voters tend to prefer cognitive shortcuts to infer information about political candidates rather than seek the complete information themselves (Downs, 1957; Lupia, 1994; McDermott, 2005). Indeed, as Miller and Krosnick (1998, 292) put it, "the cognitive demands of sifting through lots of […] [information] and extracting useful, substantive information about candidates' positions are […] probably so substantial as to outstrip most voters' incentives to do the work."

One way voters are known to resolve this issue is to identify cues and heuristics that streamline the information-gathering process. Party labels are the most common example of such a device. Parties simplify voting options by associating candidates with general party philosophies, and voters can more easily link policy views to parties rather than unknown candidates (Rahn, 1993; Schaffner and Streb, 2002). In the absence of party cues in nonpartisan elections, voters turn to other accessible cues such as incumbency (Schaffner et al., 2001) or candidates' names (Byrne and Pueschel, 1974; Hamilton and Ladd, 1996; Krosnick et al., 2003) or gender (Byrne and Pueschel, 1974; McDermott, 1997). Voter demand for cognitive efficiency is greatest in down-ticket contests where the number of races is large but the overall information people have about each election is low (Byrne and Pueschel, 1974; Mondak, 1993a,b). Consequently, the effect of heuristics is amplified in non-presidential elections (e.g. Lupia and McCubbins, 1998; Popkin, 1994).

We argue that the STVO falls into the same category as other heuristics: in a low-information environment, the option allows voters to simplify the voting process considerably by eliminating the need to contemplate every office on the ballot in lieu of selecting a single box in support of a single party. State elections often feature ballots containing dozens of individual offices. Indeed, "In any single election, American voters face much higher information costs than the citizens of almost any other democracy in the world" (Wattenberg et al., 2000, 234). In 2008, for instance, voters in Travis County, Texas were asked not only to vote for a president and vice president, but also thirty-nine other positions which included a County Tax Collector, a Railroad Commissioner, and sixteen judges. It borders on the inconceivable that voters are even partially informed about all of these races. When Travis County residents entered the voting booth in Texas, however, their first option on the ballot was a straight-party vote that afforded them an opportunity to dramatically reduce the time and energy needed to cast a ballot.

The extant empirical evidence is consistent with this logic. Voters tend to use the straight-ticket option when it is presented to them, and doing so can impact their overall vote choices. The authors of the seminal *The American Voter* note that the "sheer ease" of voting the straight-ticket leads to differences in how ballots are cast between states which offer the STVO and those which do not, with STVO states registering significantly fewer split tickets (Campbell et al., 1960, 276). Additional scholarship affirms that voters living in states that offer a STVO are less likely to split their tickets among multiple parties than voters living in states that do not offer the option (Burden and Kimball, 1998; Campbell and Miller, 1957; Hamilton and Ladd, 1996; McAllister and Darcy, 1992).[4] Relatedly, ballot "roll-off," or the phenomenon by which voters cast votes for some offices while leaving other offices blank, is also reduced when voters are provided with the STVO. Bullock and Dunn (1996) find that the option reduces roll-off in municipal elections. Dubois' (1979) study of state judicial elections also finds that participation is higher when the STVO is offered.[5] Kimball et al. (2002) even find an

[3] Source: http://www.ncsl.org/legislatures-elections/elections/straight-ticket-voting.aspx. Some states place limits on the scope of the STVO. For example, North Carolina allows the option in all races *except* presidential elections. That is, voters can vote a straight ticket for all offices except president and vice president, which have to be filled in separately. North Carolina is coded as a STVO state in this analysis.

[4] There are consequences of the STVO that can potentially hinder participation. In a large-scale field experiment, Herrnson et al. (2008) find that voters who are given the STVO option are significantly more likely to report needing help completing their ballots. The authors argue that the STVO may actually complicate the voting process by adding a layer of complexity (i.e. one more decision to make). Voters who had never encountered the STVO before were particularly vulnerable to confusion. While the authors raise a legitimate concern, we argue that in light of the results of the voluminous turnout literature, it is fair to conclude that the STVO is a net positive for participation.

[5] The author also compares roll-off in other types of judicial elections (nonpartisan, merit) by testing differences in ballot type. At the time, ballots differed in that states could include nonpartisan elections on the general ballot or provide a separate ballot for nonpartisan offices. However, no evidence is found to suggest that separating nonpartisan elections from the main ballot has a systematic effect on roll-off. This is because voter fatigue could be assuaged *or* exacerbated by separating the judicial races from the others, as a separate ballot both adds work for the voter but could also serve as a reminder about additional races in which to vote.

effect at the presidential level, the most salient race of them all. More generally, research such as that exploring voting rights and ballot access contribute additional evidence that voting rates swell as the costs of participation shrink (e.g. Highton, 2010; Rosenstone and Wolfinger, 1978).

While these studies teach us much about the STVO, they are all conducted on offices that are partisan in nature. However, most elections in the United States are nonpartisan. Indeed, scholars have found that three-fourths of municipal elections in the U.S. are nonpartisan (DeSantis and Ronner, 1991), and over half of all elections in the U.S. do not contain the party identifications of the candidates on the ballot (Adrian, 1959). In order to ascertain the effects of the STVO on electoral behavior, we need to examine instances where the type of election varies as well as the presence of the STVO. State supreme court elections provide exactly this environment.

2. The asymmetric impact of the STVO in judicial elections

Attractive as the STVO may be to voters in low-information elections, in reality we should expect its utility to vary based on the type of election in which those voters are participating. Judicial elections are classified as one of three types: *partisan*, where judges run for office under party labels like candidates for other offices; *nonpartisan*, where judges run for office without party labels; and, *retention*, where incumbent judges run unopposed and voters vote simply to keep them there or remove them from office.[6] Each of these electoral designs has different implications concerning how we should expect the STVO to impact voter participation. Consistent with the literature on straight-ticket voting (e.g. Bullock and Dunn, 1996), we expect that the presence of the STVO will increase voter participation in states that have partisan elections for their judges. The reason behind this is simple and intuitive: casting a straight-ticket ballot automatically registers a vote for all partisan offices on the ballot. Thus, voters choosing the STVO do not have the opportunity to *not* participate in certain races. This overcomes three barriers to participation: fatigue (voters getting tired after voting for so many offices), ignorance (voters not having enough information to cast an informed ballot), and accident (voters intending to vote but neglecting to do so).

Scholars of judicial elections have found that partisan elections are characterized by higher levels of voter participation relative to nonpartisan elections (Bonneau and Hall, 2009; Dubois, 1979; Hall, 2007; Hall and Bonneau, 2008). They assume that the cause of this higher level of voter participation is due to the presence of the partisan identification on the ballot. If they are correct, then regardless of whether the STVO is present we should observe analogous voting patterns across partisan and nonpartisan states. That is, partisan elections should have higher participation than nonpartisan elections. However, if there are differences based on the STVO, this means that while the type of election can affect participation, it is conditioned by the type of ballot options voters have.

Unfortunately, in our data, we do not have many cases of partisan elections with no STVO. Indeed, there are only 13 potential cases in 4 states that have partisan elections with no STVO. Each state, furthermore, presents unique challenges. Two of these states (Arkansas and Mississippi) no longer have partisan elections; they switched to nonpartisan elections during the period covered by our dataset. The other two states (Illinois and Louisiana) both elect their judges in districts as opposed to statewide (as does Mississippi). Moreover, Illinois only has partisan elections for initial terms of office, but judges keep their positions via retention elections; Illinois also only had STVO until it was abolished in 1997.[7] As for Louisiana, it is common for judicial elections to be held when there is no top-of-the-ballot race (e.g. gubernatorial or presidential election), resulting in low turnout simply because the elections are particularly non-salient. Thus, for the purposes of understanding ballot roll-off, we effectively have no tractable cases of partisan elections that do not have the STVO. For this reason, we omit these cases from the dataset. Consequently, all partisan elections also have the STVO in the analysis below, and these contests should have the highest levels of voter participation of any election format we test.

In contrast to partisan elections, we expect the opposite effect in nonpartisan judicial elections: the presence of the STVO in states with nonpartisan judicial elections will decrease voter participation. Nonpartisan elections or those featuring ballot propositions are complicated by the presence of the STVO (Niemi and Herrnson, 2003). This is because the STVO may lure some voters into a sense that they have voted for all offices on the ballot when in fact they have not (Nichols, 1998). As Darcy and Schneider (1989, 353) note, "it is likely that some voters who used the straight party provision at the top of the ballot were under the impression they were voting the entire ballot."[8] Since failure to vote for nonpartisan races in this scenario is unintentional, we refer to it as accidental roll-off.

Not all roll-off is accidental, however. Some voters may skip down-ticket races intentionally because they lack information to make a meaningful decision. That is, some voters in nonpartisan judicial elections may know they have skipped certain offices on the ballot, but the absence of party cues complicates their voting decision and they opt

[6] In this paper, we limit our analysis to partisan and nonpartisan elections. See Footnote 1 for an explanation.

[7] Interestingly, the battle over keeping the STVO ended up in the Illinois Supreme Court. The legislature abolished the STVO in 1997 on the last day before a new legislature came into office. Opponents fought the new law in court and in 1998 the state supreme court refused to overturn the legislation banning the STVO from future ballots.

[8] Another important factor is the type of voting machine. Electronic voting machines make it easier for voters to participate in all elections on the ballot. However, there is wide variation in the type of voting equipment used both among the states as well as within states. Unfortunately, obtaining longitudinal data on the type of machine used by voters is elusive. That being said, the increase in the use of voting machines that make it more difficult for voters to roll-off makes our estimates of the STVO conservative. If we were able to control for the use of non-electronic voting machines, our results would almost certainly improve since electronic voting machines can be programmed to remind voters when they have skipped an office, lowering accidental non-participation.

instead to simply not vote for judicial candidates. In the words of Wattenberg et al. (2000, 247), "voting in the United States is like taking an SAT test; if people do not know enough to make an informed decision, they leave the question blank." We thus acknowledge the distinction between accidental roll-off, a function of confusion, and intentional roll-off, a function of ignorance, even though they are observationally equivalent in the empirical analysis that follows.

3. Summary and empirical expectations

Our argument is that electoral participation is influenced both by the type of election as well as the nature of the ballot used in that election. Given the extant literature on the power of party labels to encourage voting in low-salient elections, we expect participation to be highest in partisan elections which feature ballots containing the STVO. In nonpartisan elections, we expect participation to drop across the board, but the *magnitude* of roll-off should depend on the presence or absence of an STVO on election ballots. States that offer the STVO in nonpartisan elections should experience the highest drop in participation among the three conditions tested, as voters should be most likely to skip judicial elections in this condition, either mistakenly or intentionally. When the STVO is not offered to voters in nonpartisan elections, participation should go up as voters must consider each office individually, but we do not expect it to reach the same levels as participation in partisan elections. Table 1 summarizes our expectations.

More specifically, our hypotheses are as follows:

- H_1: Partisan judicial elections, which have the STVO, should have higher levels of participation than all nonpartisan elections.
- H_2: In nonpartisan elections with the STVO, voter participation should be lower than in both partisan elections and nonpartisan elections without the STVO.
- H_3: In nonpartisan elections without the STVO, voter participation should be higher than in nonpartisan elections with the STVO, but lower than partisan elections.

4. Research design and data

States vary in terms of which combination of election type (partisan versus nonpartisan) and STVO (present versus absent) they use. Fig. 2 shows the distribution of the STVO by voting system. Of the elections in our dataset, 51 occur in nonpartisan states with the STVO and 130 occur in nonpartisan states without the STVO. Thus, we should be able to isolate the effects of the STVO independent of whether the party affiliation of the candidates is on the ballot in order to ascertain whether or not having the STVO has differential effects on voter participation across elections.

Table 1
Anticipated relative participation rates across different voting regimes.

	STVO option	No STVO option
Partisan election	Highest	N/A
Nonpartisan	Lowest	Low

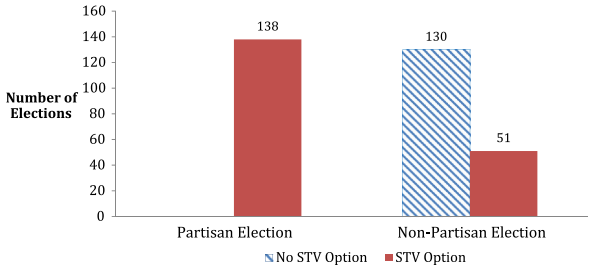

Fig. 2. Frequency STV by judicial election type, 1990–2008.

Table 2
Straight ticket voting by state (*Partisan States in Italics*).

State	STVO Years	State	STVO Years
Alabama	1980–2008	*New Mexico*	1980–2008
Arkansas[a]	N/A	North Carolina[b]	1980–2008
Georgia	1980–1994	North Dakota	N/A
Idaho	N/A	Ohio	N/A
Illinois	1980–1997	Oregon	N/A
Kentucky	1980–2008	*Pennsylvania*	1980–2008
Michigan	1980–2008	*Texas*	1980–2008
Minnesota	N/A	Washington	N/A
Mississippi	N/A	*West Virginia*	1980–2008
Montana	N/A	Wisconsin	1980–2008
Nevada	N/A		

[a] Partisan until 2002.
[b] Partisan until 2004.

To evaluate the effects of straight-ticket voting on voter participation, we examine participation in state supreme court elections that took place between 1990 and 2008, as they vary in terms of both the type of election (partisan or nonpartisan) and the status of an STVO (present or absent). We follow the lead of Bonneau and Hall (2009; Hall, 2007; Hall and Bonneau, 2008) in using ballot roll-off (*Ballot Roll-off*) as our measure of voter participation.[9] Ballot roll-off is defined as the difference between the percentage of people who turnout to vote in the election for the top office (president, governor, or senator) and the percentage of people who vote in "down-ticket" judicial races. For example, if 100 people vote for president, and 80 of them also vote in the state supreme court race, then ballot roll-off is 20%. Higher roll-off indicates less participation. We use roll-off as opposed to turnout because, like many down-ticket races, voters do not decide to turnout to vote to cast a ballot in a judicial election; rather, they turnout to vote for other races and, while there, they may participate in other elections as well.

[9] Because of how we measure voter participation, we need a top of ballot race in order to measure ballot roll-off. Thus, consistent with other scholars (Bonneau and Hall, 2009; Hall, 2007; Hall and Bonneau, 2008) we omit elections that occur in unusual times of the year or in off-year elections, unless there is a gubernatorial election held at the same time.

Table 3
Variable descriptions for a model of ballot roll-off in state supreme court elections.

Variable		Variable description
Dependent variable		
Ballot roll-off	=	Percentage of ballot roll-off in the election
Independent variables		
STVOnonpartisan	=	1 if the election is a nonpartisan election with the STVO 0 otherwise
Nonpartisan	=	1 if the election is a nonpartisan election with no STVO 0 otherwise
District	=	1 if the election occurs in a district 0 otherwise
Total spending	=	Natural log of the total amount of campaign spending (1990 dollars) in the election by all candidates
Per capita spending	=	Natural log of the total amount of campaign spending (1990 dollars) in the election by all candidates divided by voting age population (1000s)
Presidential election	=	1 if the election occurs in a presidential election year 0 otherwise
Education level	=	Percentage of the state population 25 years of age or older with a high school diploma
Post-*White*	=	1 if the election occurred after the *White* decision 0 otherwise

Our main independent variable is whether the state has a straight-ticket voting option (*STVO*) on the ballot. This not only varies across states, but, for some, also within states across years. Table 2 summarizes these data.

Our hypotheses predict that the impact of the STVO is contingent on the type of selection system. As noted above, since there are no usable cases of partisan elections without the STVO, we treat partisan STVO elections as our baseline category. We include a variable for nonpartisan races with the STVO (*STVOnonpartisan*) and a variable for nonpartisan races without the STVO (*Nonpartisan*). Specifically, as noted above, we expect voter participation to be highest in partisan elections, lowest in nonpartisan elections with the STVO, and somewhere in between for nonpartisan elections without the STVO.[10]

Another institutional factor in our analysis is whether the election was held in a district (*District*) or was held statewide. Scholars have found that district-based elections have less roll-off than statewide elections (Beechen, 1974; Hall and Aspin, 1987). However, this relationship is conditioned by whether partisan labels are on the ballot, with partisan district elections having significantly more roll-off than nonpartisan district elections (Bonneau and Hall, 2009; Hall, 2001, 2007; Hall and Bonneau, 2008). Thus, we include an interaction effect to capture the conditional nature of the relationship between election constituency and type of election (*Nonpartisan*District*).

Of course, voter participation may be affected by other factors in addition to the ballot format. Bonneau and Hall (2009; Hall and Bonneau, 2008) found that the more campaign spending in the race, the greater the amount of voter participation. Large amounts of campaign spending are a sign of a highly competitive race, and voters are more likely to participate when the race is more competitive, other things being equal. Thus, we expect that ballot roll-off will be less when there is more campaign spending (*Log of Total Spending*). To ensure that our results are not being driven simply by the size of the state (with larger states having more expensive races due to their size), we also estimate the model using a per capita measure of spending (*Log of Per Capita Spending*).

It is well established that ballot roll-off is higher in presidential election years (Bonneau and Hall, 2009; Dubois, 1980; Hall, 2007; Hall and Bonneau, 2008). The reason for this is simple: "highly visible presidential elections motivate large proportions of the electorate to vote, but a significant number of these voters have no information about, or interest in, other races on the ballot, including judicial elections" (Hall and Bonneau, 2008, 463). Thus, we expect higher levels of ballot roll-off in presidential election years (*Presidential Election*) than in non-presidential elections years.

Scholars have also found a relationship between education (*Education*) and voter turnout (Jackson, 1995; Lovrich and Sheldon, 1983) as well as roll-off (Bonneau and Hall, 2009; Hall, 2007; Hall and Bonneau, 2008; Milton, 1983), with higher levels of voter participation in states with higher percentages of individuals with a high school diploma (but see Nichols and Strizek, 1995; Streb and Frederick, 2011). We expect the same relationship to hold here.

Finally, we consider the impact of a 2002 U.S. Supreme Court ruling that has a direct impact on judicial elections. In *Republican Party of Minnesota v. White*, the Court determined that states cannot forbid judicial candidates from publicly announcing their personal views on legal and political disputes. Some claim that this decision was going to lead to more contested, more competitive, and more expensive races (Caufield, 2007; Margolies, 2002; Schotland, 2002). All of these factors should lead to decreases in ballot roll-off in elections after the *White* decision compared to before it. While Bonneau et al. (2011) and Hall and Bonneau (2013) found no such evidence of an effect, Hall and Bonneau (2013) did find that states that interpreted *White* more broadly experienced higher levels of voter participation. Thus, we include a variable to indicate races that occurred after the *White* decision (*Post*-White) to examine whether or not voter

[10] While Michigan and Ohio nominate candidates using partisan processes (convention and primaries, respectively), the partisan identification of candidates is absent from the general election ballot. Thus, we follow the convention in the literature of coding these states as nonpartisan (Bonneau and Cann, 2011; Bonneau and Hall, 2009; Canes-Wrone et al., 2012; Frederick and Streb, 2008, 2011; Hall, 2001; Hall and Bonneau, 2006, 2008; Streb and Frederick, 2009, 2011; Streb et al., 2009; but see Peters, 2007, 2008, 2009; Streb et al., 2007). This is particularly appropriate here since voters utilizing the STVO in Michigan would not have their votes counted for state supreme court races as they would in partisan states.

Table 4
Ballot roll-off in state supreme court elections.

Variable	Coefficient	Robust Std. Error	t	$P > \|t\|$
STVOnonpartisan	12.288	3.064	4.01	0.001
Nonpartisan	11.849	3.251	3.64	0.002
District	2.726	0.752	3.63	0.002
*Nonpartisan*District*	−17.152	3.475	−4.94	0.000
Total spending	−1.987	0.677	−2.93	0.010
Presidential election	3.337	0.931	3.58	0.002
Education level	−0.283	0.317	−0.89	0.385
Post-White	−0.313	2.362	−0.13	0.896
Constant	56.430	26.934	2.10	0.052

$N = 190$.
$R^2 = 0.435$.
Root MSE = 8.501.

participation has increased in the aftermath of the decision. For convenience, our variables (and their measurement) are summarized in Table 3.[11]

5. Results

We estimate our model using ordinary least squares regression, with robust standard errors clustered on each state, to take into account within-group (state) correlation.[12] Results are displayed in Table 4.

Consistent with the extant literature, the ancillary variables behave as expected: there is more voter participation when campaign spending is higher,[13] and less voter participation in years where there is also a presidential race on the ballot. Both the education level in the state and whether the election occurred after the *White* case are not related to ballot roll-off. Our null finding on education is likely due to the fact that we are measuring education in the electorate, not among actual voters. More highly educated voters turnout to vote; since we are measuring ballot roll-off (not turnout) it is not surprising that there is no educational difference between voters and non-voters, given that the more highly educated have already turned out to vote. Regarding the *White* case, the results here confirm those of Bonneau et al. (2011) that *White* did not have a measurable impact on participation. Additionally, nonpartisan district elections have higher levels of participation and partisan district and nonpartisan statewide elections have lower participation compared to partisan statewide elections.

However, our primary variables of interest relate to the type of election and presence of the STVO. We convert tabular coefficients into expected roll-off levels and present them Fig. 3.

As expected, the roll-off is lowest (and participation highest) in partisan elections. Based on our model, holding all other variables at their means, predicted roll-off in partisan elections is roughly 11%. Since all of these elections have the STVO, we are not able to uncover the degree to which this is due to party identification being on the ballot versus the presence of the STVO. A likely conclusion, however, is that the two mutually reinforce each other to encourage participation: partisan identification provides an important informational cue to the voter, while the STVO makes voting easier and more efficient. Both of these factors serve to lower voting costs, increasing voter participation. While the importance of party identification on the ballot cannot be overstated, the absence of the STVO might lower participation as some voters might skip down-ballot offices due to voter fatigue, even if party labels are provided. Alternatively, voters may also simply not care about offices outside of the top offices. Whatever the cause, the absence of STVO would likely lower voter participation in partisan elections.

In nonpartisan elections, as hypothesized, we see roll-off increase relative to partisan contests. Moreover, as expected, there is also a statistically and substantively significant difference in roll-off across nonpartisan elections with the STVO (33.6%) and those without it (21.3%). When ballots do not include party labels, the presence of the STVO drives down voter participation (increases roll-off) because people skip down-ticket offices like state supreme court elections, either by accident or by choice. On the other hand, when a nonpartisan election lacks the STVO, people cannot use it to bypass nonpartisan offices. This compels them to take more time to fill out their ballots, and thus they are less likely to skip judicial elections.

Consistent with the literature discussed above, the results suggest a combination of factors contribute to ballot roll-off in nonpartisan elections. First, roll-off can result from fatigue: by the time voters reach the judicial offices on the ballot they have voted for so many offices already that

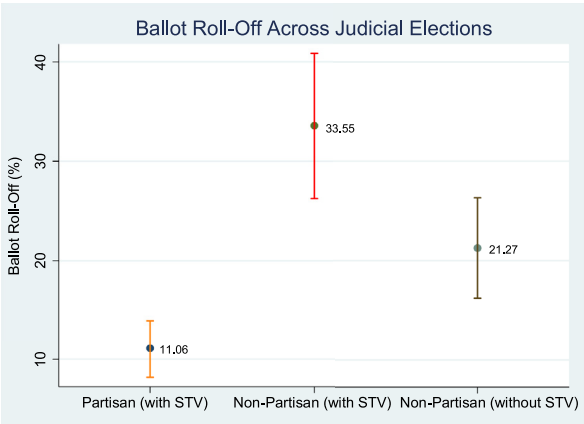

Fig. 3. Predicted roll-off across different state supreme court election regimes.

[11] We do not include dummy variables for each election year because there is no reason to expect changes in voter participation between years independent of the factors we explicitly include in our models. For example, while it is true that races have become more contested and competitive over time, we only examine contested races and control for the competitiveness of the race in our model (via campaign spending). Additionally, there should be more roll-off in presidential election years and, if the reformers are right, prior to the *White* case. These substantively important variables effectively control for any theoretically-relevant temporal variation.

[12] We also estimated a Heckman two-stage model to account for the fact that races are not contested randomly. Our results are identical in terms of significance regardless of the model we estimate.

[13] As a robustness check, we run the same model, except we use a per capita measure of campaign spending to ensure that our results are not being driven by the size of the state. Our results are robust to different measures of spending.

they cannot be bothered to invest further effort into additional offices. Alternatively, roll-off may stem from ignorance: voters tend to know little about down-ticket races to begin with, and coupled with the absence of a meaningful ballot cue, this ignorance may compel them to avoid making a decision all together. Finally, roll-off may also occur purely by accident. Voters living in states which hold nonpartisan judicial elections but offer an STVO may vote straight-ticket and simply not realize they have skipped the nonpartisan offices.

Partisan elections (which all feature the STVO) mitigate all three of these factors: the party identification of the candidates provides meaningful information to the voters, and utilizing the STVO prevents voters from accidentally skipping down-ticket races or suffering from fatigue. Nonpartisan elections with the STVO, however, activate factors that lower participation: these races provide little in the way of heuristic cues, and the STVO in these races makes it all the more likely that voters accidentally fail to vote for the nonpartisan offices. By checking the STVO, voters might think their work is done. In states that have nonpartisan elections without the STVO, voter fatigue and ignorance can still be a problem, but the dangers of accidental roll-off should be largely attenuated. Given the significant difference (about 12%) in roll-off between nonpartisan elections with the STVO and those without it, this difference suggests that accidental roll-off is a larger problem than voter fatigue.

While we caution against inferring too much about individual decision-making using aggregate election data, our results are consistent with the notion that voters are sensitive to the idiosyncrasies of individual state ballots. Indeed, one of the key findings of this article is that participation in down-ticket offices depends in large part on the interaction of different features on the election ballot. States wishing to boost participation in nonpartisan judicial or other nonpartisan down-ticket races may want to consider removing the STVO and/or switching to partisan elections. They may also wish to take advantage of electronic voting machines, which can help reduce accidental roll-off by being programmed to warn a voter if her ballot is incomplete prior to submission.[14]

A related issue worth considering is what happens when the status of either STVO or type of election changes *within* states. North Carolina provides an excellent case study on the impact of ballot cues in this situation. After the 2002 elections, North Carolina switched from partisan elections to nonpartisan elections.[15] Prior to the switch, North Carolina averaged ballot roll-off of 7.6% ($N = 12$); after switching to nonpartisan elections, average roll-off was an average of 25.0% ($N = 3$). Indeed, under partisan elections the *highest* ballot roll-off was 13.1%, while under nonpartisan elections the *lowest* ballot roll-off was 21.4%. While we cannot tell if voter participation would have been enhanced in the absence of the STVO after the switch to nonpartisan elections, it is clear that switching from partisan elections to nonpartisan elections has had significant effects on voter participation in these elections.

Table 5
Ballot roll-off and campaign spending in nonpartisan state supreme court elections.

Variable	Coefficient	Robust Std. Error	t	$P > \|t\|$
Total spending	−1.04	1.46	−0.72	0.489
Presidential election	3.57	1.30	2.74	0.019
District	−10.68	3.59	−2.97	0.013
Education level	0.43	0.43	0.99	0.345
Post-White	−3.08	3.08	−1.00	0.338
STVO	136.37	42.43	3.21	0.008
*STVO*Total spending*	−9.35	3.17	−2.95	0.013
Constant	−4.48	47.34	−0.09	0.926

$N = 96$.
$R^2 = 0.491$.
Root MSE = 8.153.

While North Carolina switched their type of election over the course of our study but kept the STVO, Illinois eliminated the STVO but kept their method of selection.[16] Recall that we did not examine partisan elections without the STVO in our analysis due to their relative infrequency and the complications with them primarily occurring in district-based states. Within Illinois (a district-based state), though, we can look at roll-off both before and after the elimination of the STVO. Prior to its elimination in 1997, there were six elections for the Illinois Supreme Court and ballot roll-off averaged 13.8%, with a range of 3.9–30.1%. In the five elections that occurred after the elimination of the STVO, and as we expect theoretically, ballot roll-off increased to an average of 24.0%, with a range of 1.6–76.5%. Again, we have a small number of cases and are only looking at one state, but the data from Illinois support our contention that STVO increases voter participation in partisan elections while the results from our larger-N analysis demonstrate that this effect is reversed in nonpartisan elections.

Finally, we consider how the STVO impacts participation in conjunction with campaign spending. We have thus far uncovered evidence that ballot design and features can interact to affect participation in down-ticket elections. Does it also interact with features of the campaign itself, and not just the ballot? Given that the effects of spending remain a central question among scholars of judicial elections and that spending is known to boost participation, a natural question that emerges given the findings thus far is whether the presence of the STVO interacts with spending

[14] Since some states have employed electronic voting in at least some of the years of our study, our estimates are likely more conservative than they would have been when no one was using electronic voting. That is, states that use electronic voting may already be cutting into "accidental" roll-off. Indeed, the use of machines (as opposed to paper ballots) has been found to reduce roll-off (Nichols, 1998).

[15] Arkansas made the same switch after the 2000 elections. However, very few races in Arkansas are contested in the general election, especially after the switch to nonpartisan elections; most of the time judges are elected in the nonpartisan primary, which means we cannot calculate ballot roll-off. Thus, we are not able to analyze the effects of the switch on Arkansas, which is unfortunate given that Arkansas does not have the STVO.

[16] Georgia also eliminated the STVO during the course of our study. However, they had no contested general election races with the STVO; they all occurred after the elimination of the STVO. Thus, we cannot examine Georgia here.

to affect participation. We expect that the spending should interact with the STVO to generate a negative and significant coefficient, indicating that additional spending in states with the STVO leads to lower levels of roll-off than in states without the STVO. As before, data limitations restrict us to analyzing the STVO across nonpartisan elections only. Table 5 presents the results. Among nonpartisan judicial elections without the STVO, spending does not have a significant impact on roll-off. The positive and significant STVO coefficient indicates that, not surprisingly, roll-off increases in nonpartisan elections when the STVO is present.[17] However, as expected, roll-off *decreases* as a function of spending among states that have the STVO. That is, in nonpartisan states with the STVO, additional spending can partially offset the detrimental effects the STVO has on participation. The results are consistent with the conclusions reached by Bonneau and Hall (2009) and Hall and Bonneau (2008): campaign spending can provide information to voters and subsequently boosts participation in judicial elections. In nonpartisan states, which are disposed to lower levels of participation as a function of ballot design, additional spending can chip away at the gulf in participation between STVO and non-STVO states.

6. Propensity score matching analysis

One challenge observational studies like this encounter is that states (and voters) are not randomly assigned to have/encounter a ballot containing STVO or one without it, leading, potentially, to selection bias. Consequently, within the population of states that hold nonpartisan judicial elections, it is possible that differences in roll-off may be due to the fact that certain factors, unrelated to the STVO, may drive roll-off up or down differentially across ballot type. To evaluate this possibility and ensure the robustness of the findings above, we employ propensity score matching to reduce any bias that may result from confounding factors only affecting roll-off in one type of state (i.e. nonpartisan with STVO versus nonpartisan without STVO). Since it is impossible to observe same state-year observations that contain *both* STVO and no STVO (i.e. some residents of a state are given the option while others are not), this method will help us reject the possibility that unobserved counterfactual processes are the true drivers of ballot roll-off.

Propensity score matching (PSM) works to improve the accuracy of estimations of treatment effects by comparing each "treated" case (election) *i* with each non-treated case *j* when *i* and *j* are otherwise as similar as possible (Becker and Ichino, 2002). That is, we compare states which are similar with respect to the other covariates in the model but which differ in that some are "treated" (offer the STVO on ballots) and some are "untreated" (do not offer STVO on ballots). In effect, we mimic, but do not replicate, the process of randomization. The propensity score itself is simply the conditional probability of a state receiving a "treatment" given its pretreatment characteristics (Rosenbaum and Rubin, 1983). That is:

$$p(X) \equiv \Pr(D = 1|X) = E(D|X)$$

where $D = \{0,1\}$ indicates whether the case was treated (1) or not (0) and X is the multidimensional vector of pretreatment characteristics. If the presence of the STVO (the "treatment") is randomized over the population defined by X, it is *also* randomized over the population defined by the values of the one-dimensional variable $p(X)$ (Rosenbaum and Rubin, 1983). We can then split cases into clusters of observations with similar propensity scores. Then, within these blocks of observations, we can compare those cases with the treatment (STVO) to those in the control group (no STVO). In this way, PSM functions like a randomized experiment, as we can compare groups of observations that differ *only* in that one group received the treatment and the other group did not. It should be noted that PSM is a supplement to, and not a substitute for, the analysis above. Our objective here is to use PSM as a robustness check to affirm the evidence presented.

Table 6
Distribution of STVO in nonpartisan election states.

STV	Frequency	Percent
No ("0")	216	76.6
Yes ("1")	66	23.4
Total	282	100

Tables 6 and 7 provide a descriptive summary of the data used to conduct the PSM analysis. There are a total of 282 cases in nonpartisan election states. Of these, 66 occurred in states with the STVO and 216 took place in states without it. It is these two groups that will be matched on similar characteristics to assess whether participation increases in states offering the STVO. Unfortunately, in order to balance pretreatment characteristics so that for a given propensity score exposure to the treatment is effectively random among treated (STVO) and non-treated (No STVO) cases, we had to eliminate the education variable from the model.

Table 8 indicates that only the presidential election year dummy has a significant (and negative) impact on the likelihood of receiving the treatment of having the STVO on the ballot. The coefficients are then translated into propensity scores that are then subdivided into five intervals (blocks) such that *within* each interval, the control group cases and treatment group cases have, on average, the same propensity score. Each covariate is evaluated to confirm it is balanced; that is, covariates are checked to ensure they are similar across our treated and untreated groups, allowing us to compare the two groups simply on the basis of whether or not the STVO (the treatment) is available to voters. We have further specified that the cases be restricted on common support. This step excludes from the analysis cases where treated observations have some propensity score for which there is no untreated counterpart with a similar score (e.g. a treated case whose propensity

[17] Since the coefficient only represents the impact of the STVO when spending is zero – a practical impossibility in contested elections – the size of the coefficient has little meaning in the table. However, the strength of the statistical significance, coupled with the findings above, strongly suggests that accidental roll-off is occurring in nonpartisan states with the STVO.

Table 7
Descriptive statistics across "treatment" groups among nonpartisan states.

Variable	Mean STVO states (std deviation)	Mean non-STVO states (std deviation)
District	0.35 (0.48)	0.83 (0.28)
Per capita total spending	4.93 (1.46)	4.54 (1.66)
Presidential election	0.39 (0.49)	0.56 (0.50)
Education level	79.47 (7.33)	84.81 (4.71)
Post-White	0.38 (0.49)	0.34 (0.48)

Table 8
Estimation of propensity score.

Variable	Coefficient	Robust std. error	z	$P > \|z\|$
District	0.40	0.36	1.09	0.28
Per capita total spending	0.07	0.09	0.79	0.43
Presidential election	−0.58	0.25	−2.30	0.02
Post-White	0.14	0.32	0.44	0.66
Constant	−0.67	0.41	−1.63	0.10

score exceed that of the *highest* propensity score among control cases or a control case whose propensity score is located below the *lowest* propensity score among treated cases). The common support region, then, is effectively the range of scores for which there are both treated and untreated cases with similar propensity scores, thereby ensuring that any case *i* has a positive probability of being in either the treated or untreated groups. This specification yields higher quality matches that are used to calculate the average effect on the treated cases (Becker and Ichino, 2002).[18] With the propensity scores calculated and cases matched, we can turn to evaluate the actual effect of the STVO treatment on ballot roll-off in nonpartisan judicial elections. We employ the nearest neighbor matching method. This process first sorts all cases by propensity score and then matches treated cases not with *all* untreated cases but with those untreated cases that are closest in terms of propensity score to the treated case.[19] In other words, for each treated case *i* the nearest neighbor method selects the control case *j* that has the smallest distance between propensity scores. This yields closely matched cases, but ignores control cases that are more distant from the treated cases. Consequently, ill-fitting control cases are discarded.

Table 9 reports the ATT, or the average effect of the treatment (the STVO) on the treated cases (the races where the STVO was available). The 42 treated cases are matched with 20 control cases with very similar propensity scores.

Table 9
Propensity score matching on STVO across nonpartisan election states.

Treated cases (STVO)	Control cases (no STVO)	ATT	Standard error	*T*-statistic
42	20	10.85	4.02	2.70

The ATT statistic indicates that, among the population of nonpartisan elections and all else equal, states which offer the STVO see an increase in ballot roll-off of 10.85 percentage points relative to nonpartisan elections where the STVO is not offered. The standard error of 4.02 affirms a statistically significant relationship.[20] The PSM results are consistent with the regression analysis above. When states with nonpartisan elections offer the STVO, ballot roll-off significantly increases. This holds true even when evaluating a simulated experiment in which all other covariates are effectively held constant. Overall, there is little evidence to suggest that unobserved factors are impacting ballot roll-off across nonpartisan election states: differences in roll-off are a function of the presence or absence of the STVO on those states' ballots.

7. Conclusion

In this paper, we ask a simple but fundamental question about the effects of ballot rules and institutional design on voter participation: is turnout in down-ticket races a function of both ballot features *and* electoral context? Looking at state supreme court elections, we find this to be the case. The presence of the straight-ticket voting option has differential effects on voter participation depending on the type of election. Participation is highest in states with both partisan labels and the STVO option. Yet the STVO tends to decrease voter participation in nonpartisan elections. Moreover, the effect varies *within* the population of nonpartisan races. Turnout is lowest when nonpartisan elections feature the STVO. Without the STVO, however, turnout in nonpartisan elections increases somewhat, though not nearly to the levels of partisan elections.

Our results have implications for the ongoing debate over the efficacy of electing judges. While taking a position on whether judges ought to be elected is beyond the scope of this project, the evidence indicates that states which are considering a move to nonpartisan elections (as Arkansas and North Carolina have done in the past decade) should be aware that this move, especially if it is coupled with the STVO, will lead to lower levels of voter participation in judicial races. Part of this is due to the absence of the party affiliation of candidates (which provides information to voters), but part of this is also due to voters unintentionally neglecting or forgetting to participate. That said, this is a price that states might be willing to pay. Keeping the STVO reduces roll-off in partisan down-ticket elections, so a decrease in participation only in (nonpartisan) judicial elections might be preferable to eliminating the STVO and

[18] Imposing the common support restriction can potentially lead analysts to discard some quality matches (Lechner, 2001). Consequently, we also run the analysis without the common support restriction. Since cases are not eliminated, our N increases but the substantive effect (ATT) is identical to that found in Table 8.

[19] We also run the analysis with alternative specifications of PSM – radius, kernel matching, and stratification, all of which propose different solutions to the question of how cases should be matched. While the ATT varies minimally due to different rules guiding the matching process (i.e. cases that are matched under one method may not necessarily be matched under another), the substantive results, and their statistical significance, remain the same.

[20] Following common convention when using propensity score matching, we also estimate the ATT with bootstrapped standard errors (not shown), which only slightly alters the size of the errors. All substantive results remain the same.

causing a decrease in participation in races for other partisan offices. While we are not in a position to say one decision is necessarily better than the other, our results do point to the fact that removing the party identification of candidates from the ballot has differential effects on voter participation depending on whether the STVO option is present or not, and lawmakers need to think about the likely consequences of any institutional change on voter participation.

More generally, our results affirm the well-known importance of ease and information when it comes to encouraging participation: when it is easy to vote and voters have meaningful information (partisan, STVO states) they participate in higher numbers than when such information is lacking, fatigue sets in, and/or voters believe they have completed their ballot when, in fact, they have not (nonpartisan, STVO states). Future work in this area is needed for flesh out more fully how different types of voters respond to variation in ballot features. For the moment, however, this article provides a critical piece to the participation puzzle by identifying the conditional nature of ballot features and how they interact to influence participation in judicial elections.

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