The Effect of "Them That's Got Shall Have" Laws on General Election Outcomes[*]

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Abstract: This paper examines the single most common class of ballot ordering procedures used in general elections in the U.S., which give the most advantageous ballot position to the currently-prevailing political party. An unusual variant of these procedures in the state of Wyoming allows their effects on vote share to be estimated using modern methods and within-state data only. The results indicate that, in all statewide elections except those for U.S. President and U.S. Senator, being listed in first position confers a 2-3 percentage point advantage in vote share, a substantially larger effect than found by other studies analyzing other, more innocuous ballot ordering schemes. This advantage was large enough to flip the result of Wyoming's 2006 Congressional election, and possibly switched the result of an earlier gubernatorial election as well.

Keywords: ballot order; elections; voting; primacy effects

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1. Introduction

Democracy is glorious; administering elections is tedious. It amounts to a sequence of pedestrian activities: registering voters, validating candidates, generating ballots, conducting the election, and tallying the vote. Yet experience tells us that the way in which these activities are executed can have genuine effects on electoral outcomes and their legitimacy.

The task of specifying how these activities should be conducted generally falls to state legislatures. Broadly speaking, they can approach it in three ways: as a nuisance, a responsibility, or an opportunity. The nuisance perspective seeks to minimize the trouble or inconvenience these rules cause election officials, election workers, and voters. The responsibility perspective seeks to maximize the fairness of the election and the integrity of the results. The opportunity perspective seeks to optimize political advantage, which often amounts to ensuring that the party in power remains there. Despite the American presumption of free and fair elections, this last perspective often can be put into practice, because of uncertainty about the effects of such rules, tradeoffs involving their cost to voters or election administrators, or evolving legal standards.

One electoral detail ripe for exploitation in this way is the order in which candidates for a given office are arranged on the ballot. To the extent that this ordering influences vote share, it can be used to buttress the fortunes of the party in power. This paper explores the prevalence and practical effects of laws that attempt to do this, which we will call, channeling the singer Billie Holiday, "Them's That Got Shall Have" (TTGSH) laws.

It has long been anecdotally believed that it is advantageous to be listed higher on the ballot than one's competitors (see Krosnick, Miller, and Tichy, 2004). In the last two decades,

this question has attracted increased formal scrutiny. The results are generally supportive, especially for low-information, down-ballot contests (Meredith and Salant, 2013) and primary elections in which party affiliation cannot guide voters' choices (Grant, 2017). There, the literature largely agrees that a primacy effect exists for first ballot position, which, in downballot races, can be as large as ten percentage points in vote share.

On the other hand, primary elections are intra-party contests in which the opportunity motive is diminished. It only comes into full force in inter-party contests, namely, general elections. However, the literature on these elections says less about TTGSH laws than we would like, and what it does say is mixed. Two studies find no effect of being in first ballot position: Darby (1986), for Colorado, and Ho and Imai (2008), for California. On the other hand, positive effects of first position are found in California, New Hampshire, North Dakota, and Ohio by Miller and Krosnick (1998), Krosnick, Miller and Tichy (2004), Chen et al. (2013), Pasek et al. (2014), and MacInnis et al. (2021). Each of these studies presents a large number of candidate- or contest-specific estimates, which range widely in part due to sampling variation. In elections for federal or state executive office, these estimates generally center around one percentage point of vote share.[1] Even this modest finding may overstate the case, for our purposes. Instead of comparing first position with second position, the change in ballot order that is effectuated by TTGSH, these studies generally compare first and last position, which yields larger effects (see, for example, Meredith and Salant, 2013, and Grant, 2017).

Adding to this modest body of evidence would be reason enough to conduct another

[1] Larger effects, of two percentage points or more in vote share, are found only in Miller and Krosnick (1998), and then mostly in downballot judicial and state legislative races. Alvarez, Sinclair, and Hasen (2006) also investigate the ballot order effect, but do not present their findings in a way that magnitudes can be inferred. However, the findings are so varied that, on balance, they provide little evidence for systematic ballot order effects. In statewide elections, the estimated effect of being listed first is negative more often than it is positive.

study of ballot order effects in general elections. But there is more important reason as well. None of these studies examine TTGSH laws directly. Rather, they analyze their opposite, "responsibility-oriented" approaches that randomize or rotate ballot position across candidates. This is advantageous from an estimation perspective, as such approaches minimize endogeneity and omitted variables bias and thus increase the plausibility of the estimates. On the other hand, these approaches are qualitatively different than TTGSH and need not generate identical effects. Constantly shifting the positions of Democratic, Republican, and third-party candidates removes any *informational* content of ballot position. Any effect of these laws must stem from the cognitive biases described in the psychology literature (e.g., Miller and Krosnick, 1998; Mussweiler, 2003). In contrast, TTGSH laws provide such content, namely, that the first-listed candidate's party is "more popular" in some sense; furthermore, they often do so repeatedly for the same party over a sequence of elections. Thus, these laws could encourage or even habituate voters into choosing the first-listed candidate, and thus could have larger effects on vote share. The only way to know for sure is to study these laws directly.

We do so in this paper, examining almost fifty years' worth of elections for federal and state executive office in Wyoming. While most TTGSH laws mandate a uniform ballot position across the state, Wyoming's is unusual in that TTGSH is applied separately within each county. This allows panel methods to be used to estimate these laws' effects, in a way that would not be possible if ballot position were uniform.

We find consistent evidence of an effect that is, indeed, substantially larger than that found in the existing literature. Except in high-profile contests (for President and U.S. Senator), a move from second to first ballot position is associated with a two to three percentage point increase in vote share, a very substantial effect. It is probable that this "ballot order effect"

altered the outcome of one of the ninety-five contests in our data, and entirely possible that it altered a second contest's outcome as well. "Them That's Got Shall Have" meaningfully affects general election results.

The paper proceeds as follows. Section 2 discusses TTGSH laws in more detail, documenting their prevalence and controversial nature. Section 3 discusses Wyoming elections specifically and introduces our data. Section 4 develops our estimation method and presents the results, while Section 5 applies our estimates to two close elections in our data in order to generate counterfactual outcomes in the absence of TTGSH. Section 6 concludes.

2. Procedures for Determining Ballot Order and "Them That's Got Shall Have"

To document the prevalence of TTGSH laws and put them in broader context, Table 1 places all states' ballot ordering procedures into one of three groups: "fairness-oriented" systems that focus on the responsibility ethic, "convenience-oriented" systems that stress convenience, and "power-oriented" procedures that emphasize opportunity.

As the table shows, most states use fairness-oriented and power-oriented systems. Only eight less-populous states use convenience-oriented systems that order candidates alphabetically or leave it to election officials' discretion. The remaining states are roughly split between the other two systems.

Fairness-oriented systems, in turn, take three types: randomization, rotation, and what we call "inverse TTGSH," in which the minority party is placed first on the ballot. The first two types are particularly common west of the Mississippi River, though they occasionally appear in the East as well. When carried out at the state level, as in Utah, randomization still favors the

first-listed candidate, but that person's identity is determined by fortune, not fate. When carried out at the county level, as in Arkansas, randomization should balance out ballot order reasonably well across the state, significantly decreasing aggregate ballot order effects in statewide races (but not necessarily in local races). Rotation systems distribute ballot positions even more evenly across candidates, especially when implemented across precincts (as in North Dakota), though small deviations may occur for incidental reasons, such as variations in precinct size. Some states' laws take care to snuff out even those.

Power-oriented systems almost always take the form of TTGSH. (The one exception, Massachusetts, gives first position to incumbents, which usually but not universally favors the Democratic Party, the dominant party in the state.) Most such laws are explicit or de jure, giving first ballot position to the party that won the most recent election for Governor, Secretary of State, or President (within that state). These are supplemented by a few de facto laws that specify the first-listed party directly (Delaware, Missouri) or implement TTGSH through indirect means. While the number of *states* using TTGSH almost matches the number using fairness-oriented systems, the TTGSH states are more populous. As a result, more than half of all votes nationwide are cast under a TTGSH system.

One could argue, as did several election officials in *Jacobson v. Florida Secretary of State*, that a TTGSH law primarily promotes convenience, as it "allows voters to more quickly find their preferred candidate [and] promotes uniformity in administering elections" (957 F. 3d 1199, 2020). In our view, this interpretation is undermined by the ballot-ordering procedures used in TTGSH states' primary and nonpartisan contests, most of which are responsibility-oriented schemes. Of the sixteen de jure TTGSH states, eleven—including Wyoming and Florida—use randomization or rotation systems for all primaries, while a twelfth uses them for

some primaries (also see Grant, 2021). If such schemes are not overly burdensome in these elections, it is hard to claim otherwise for inter-party contests.

TTGSH laws are not only numerous, but persistent. Almost two decades ago, Krosnick, Miller, and Tichy (2004) published a detailed compendium of all states' general election ballot ordering procedures. Using that, we determined which states' procedures changed over the intervening 18 years and identified them in Table 1. The changes are few in number and split in direction. Two states, Tennessee and Missouri, implemented power-oriented systems, and two, North Carolina and New Hampshire, discarded them. One of these changes itself could have been motivated by a quest for political advantage (or the negation of political disadvantage): North Carolina's 2018 repeal of a TTGSH system requiring ballot placement according to the most recent gubernatorial vote. After Democrat Roy Cooper was elected governor in 2016, the Republican-dominated legislature replaced this procedure with a quasi-randomization rule. Its counterpart, New Hampshire, changed its law after a 2006 state Supreme Court decision mandated an end to the prevailing TTGSH system.

While changes have been few in number, TTGSH laws have come under increasing legislative and judicial scrutiny. In 2021, bills to remove TTGSH were filed in the state legislatures of Pennsylvania and Wyoming, though neither made it to a final vote, while recent federal lawsuits sought to overturn these laws in five states.[2] Four of these five suits eventually foundered on the issue of standing. However, the plaintiffs in these four suits were voters and party organizations (such as the Democratic Senatorial Campaign Committee) but not candidates. This distinction appears to be important. The fifth lawsuit, in West Virginia,

[2] In Florida, *Jacobson v. Florida Secretary of State* was filed in May 2018; in Texas, *Miller v. Hughs* was filed in Nov. 2019; in Georgia, *S.P.S. ex rel. Short v. Raffensperger* was filed in Nov. 2019; in Arizona, *Mecinas v. Hobbs* was filed in Nov. 2019; in West Virginia, *Nelson v. Warner* was filed in Dec. 2019.

included a candidate for state office among its plaintiffs and passed the test of standing in both the district and appeals courts. However, in a split 2-1 ruling, a panel for the 4th Circuit Court of Appeals ruled that the burden imposed by West Virginia's statute was "at most…modest" and justified the state's interest in reducing voter confusion (912 F. 4th 380, 2021). At present, then, case law surrounding TTGSH is evolving and further evidence on its effects is warranted.

3. Wyoming Elections and the Data

The political consequences of TTGSH laws can be uncovered by estimating their effects on vote share. In general, this is not easy to do. Most such laws assign ballot order uniformly across the state, so that these laws' effects are identified solely from those rare occasions in which the statewide vote for the "index contest" that governs ballot placement switches parties. Credible estimates cannot be formed in this way.

However, three states—Arizona, Indiana, and Wyoming—implement TTGSH at the county level instead. The oldest of these laws, adopted in 1973, is Wyoming Statute § 22-6-121 (a), which states the following:[3]

> Political party position shall be determined on the general election ballot according to the number of votes received by each party within the county for the office of representative in congress at the last preceding general election. The party receiving the highest number of votes shall appear first following the names of the offices to be voted for and other parties shall follow in the order of their respective numbers of such votes.

This law is also unique in assigning ballot order biennially, based on the contest for Wyoming's sole U.S. House seat, instead of quadrennially. Consequently, it generates sufficient *within-state* variation in ballot placement over time that its effects on vote share can be estimated.

[3] This text is from 2020. The law, but not the ordering procedure, has been revised since 1973.

Accordingly, we use county-level election results in Wyoming to analyze the effect of TTGSH on all contests that are decided statewide: three for federal office (President, Senate, House) and five for state executive office (Governor, Secretary of State, Treasurer, Auditor, Superintendent of Public Instruction). There are 24 biennial electoral cycles between 1973 and 2020 and 23 counties in Wyoming, yielding over 2,000 county*year*office observations for analysis. This is sufficient to estimate the effects of ballot order reasonably precisely.

The two-way fixed effects regression specification that we introduce below identifies the effect of ballot order on vote share through changes in ballot order within counties over time. Table 2 shows that such changes are reasonably common. In addition to the national ebb and flow of partisan lean, Wyoming's politics have evolved locally over time. Coal-rich counties in the southern half of the state became more conservative as union influence waned, while more populous counties in the southeast and northwest corners of the state became more liberal, in line with similar developments nationwide. A total of 51 ballot order switches are observed in our sample period, involving 16 of Wyoming's 23 counties, and almost evenly split in direction. At least seven occur in each of the five decades represented in the data.

Table 2 shows that the number of contested offices in our sample is also almost evenly split, between federal and state. While some general elections for state office were uncontested—this happened for every office but governor—95 contested elections remain available for analysis. County-level data on each of these contests was gathered from various sources: Wyoming's Secretary of State, the political data website Our Campaigns, and Wyoming's historical Blue Book.[4] We analyze this data using the techniques described next.

[4] Election results from 1996 forward are available from Wyoming's Secretary of State online at https://sos.wyo.gov/Elections/ElectionResults.aspx and in printed form before then, in biennial editions of the *Official Directory of Wyoming and Election Returns for the Preceding Year*.

4. Estimation

A. Specification

In practice, TTGSH laws determine which of the two major parties is placed first on the general election ballot, and which is placed second. Accordingly, our analysis estimates what we will call the "ballot order effect," specifically, the advantage in two-party vote share in general election contests that comes from being listed first on the ballot instead of second. Following the literature, we allow this effect to vary across offices, so that the ballot order effect in contests for governor need not equal that in federal races, for instance.

These ballot order effects are estimated with a county-level panel regression using the data just described, relating candidates' vote shares to their ballot order and controls. The controls are threefold. Fixed effects identifying each general election contest—for Auditor in 1990, for example—capture the (relative) appeal of the candidates in that contest statewide, while county fixed effects capture persistent (time-invariant) differences in party preference across counties.

While the contest-specific fixed effects will reflect statewide shifts in party preferences over time, we also wish to account for local, county-specific variation in such preferences beyond that captured by these fixed effects. It is impractical to do this using objective demographic measures such as mean age and education, which are not measured with the

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"Our Campaigns" results can be accessed by following the links here: https://www.ourcampaigns.com/ContainerDetail.html?ContainerID=14. The three most recent editions of the Blue Book are at https://wyoarchives.wyo.gov/pdf/WyomingBlueBookThree.pdf, https://wyoarchives.wyo.gov/pdf/WyomingBlueBookFour.pdf, and https://wyoarchives.wyo.gov/pdf/BlueBookFinal.pdf.

necessary persistence, accuracy, and detail over the full sample period. Instead, we take a more direct approach, utilizing that county's vote share in the congressional race, the only race held in every biennial cycle throughout the sample period. (Note that this variable's inclusion also addresses the "variable trends" issue pertinent to two-way fixed effects models.)

Altogether, this suggests a regression specification of the following form:

$$Y_{c,t} = \alpha H_{c,t} + \beta_Y F_{c,t} + \sigma_c + \tau_t + \varepsilon_{c,t} \quad \textbf{(1)}$$

where $H_{c,t}$ is the observed Republican share of the major party vote in the congressional (House) race in county c in year t, $Y_{c,t}$ is the analogous quantity for the office of interest, such as governor, and $F_{c,t}$ is an indicator variable that equals one if the Republican is listed first on the ballot and zero otherwise.[5] The terms α and β_Y are parameters, while σ and τ represent county and year fixed effects, which subsume the regression constant, and ε is an error term. The coefficient of interest, β_Y, represents the ballot order effect.

The sticking point in using this approach is that all partisan races on the same ballot are subject to ballot order influences, and all such races are identically ordered within each county. Thus, any race used to control for party preference is itself affected by ballot order. To illustrate, let $H^*_{c,t}$ be the Republican vote share in the House race that would be observed without such an effect—for example, if the Republican was listed first on half the ballots and the Democrat on the other half—and $Y^*_{c,t}$ be the analogous quantity for the office of interest. Then:

$$H_{c,t} = H^*_{c,t} + \beta_H(F_{c,t} - ½) \quad \textbf{(2)}$$

$$Y_{c,t} = Y^*_{c,t} + \beta_Y(F_{c,t} - ½) \quad \textbf{(3)}$$

[5] Because *H* is defined as the share of the vote going to the two major parties and no third party candidate was ever listed first on the ballot, defining *H* and *F* in terms of the Republican party is inconsequential. Identical results would obtain were *H* and *F* defined in terms of Democrats instead. Because third party candidates invariably received a small vote share, omitting them from the analysis is also inconsequential. There were several such candidates in the data, from the Libertarian and Constitutional parties.

where β_H represents the ballot order effect in the House contest. This need not equal β_Y.

Having removed the influence of ballot order, our previous logic implies that $Y^*_{c,t}$ is related to $H^*_{c,t}$ as follows:

$$Y^*_{c,t} = \alpha H^*_{c,t} + \sigma_c + \tau_t + \varepsilon_{c,t} \quad \textbf{(4)}$$

Using eqq. (2) and (3) to replace unobserved H^* and Y^* with their observed equivalents yields the following:

$$\begin{aligned} Y_{c,t} &= \alpha H_{c,t} - \alpha\beta_H(F_{c,t} - ½) + \beta_Y(F_{c,t} - ½) + \sigma_c + \tau_t + \varepsilon_{c,t} \\ &= \alpha H_{c,t} + (\beta_Y - \alpha\beta_H)F_{c,t} + (\sigma_c + (\alpha\beta_H - \beta_Y)/2) + \tau_t + \varepsilon_{c,t} \end{aligned} \quad \textbf{(5)}$$

As this equation shows, neither β_H nor β_Y are identified. Rather, the coefficient estimate on F reflects a weighted difference between the ballot order effects in the two contests. If these are similar, this difference is likely to be close to zero.

To solve this problem, we specify the theoretical relationship using the lagged congressional vote share instead:

$$Y^*_{c,t} = \alpha H^*_{c,t-2} + \sigma_c + \tau_t + \varepsilon_{c,t} \quad \textbf{(6)}$$

where H^* is lagged two years because Wyoming elections occur in two year cycles, that is, in even-numbered years. This relationship should still adequately account for local idiosyncrasies in party preference.[6] Now the analog to equation (5) can be written as follows:

$$Y_{c,t} = \alpha H_{c,t-2} - \alpha\beta_H F_{c,t-2} + \beta_Y F_{c,t} + (\sigma_c + \frac{\alpha\beta_H}{2} - \frac{\beta_Y}{2}) + \tau_t + \varepsilon_{c,t} \quad \textbf{(7)}$$

The coefficient of interest, β_Y, is now identified (as is every other parameter). The only cost to this approach is that two lagged election cycles are now needed to determine $F_{c,t}$ and $F_{c,t-2}$, shortening the estimation period to 1978-2020.

[6] Using the vote share in the previous election for the same office is impractical because, as noted above, such elections were not infrequently uncontested. The U.S. House race also has the advantage of being two years distant, as opposed to four years' distant for most other contests.

In addition to identifying β_Y, this specification has three other advantageous properties. First, since $H_{c,t-2}$ determines current ballot order, controlling for it directly ensures that $F_{c,t}$ does not indirectly or "inadvertently" pick up party preference as well, removing a potential source of bias. Second, because current and lagged ballot order are both included, more sign restrictions are generated, which serve as a check on the soundness of the specification, as discussed below. Finally, since $H_{c,t}$ is not employed as a control, it can be used as the dependent variable, allowing the ballot order effect for the House race to be estimated as well.

B. Estimator

While equation (7) can be estimated directly, it is nonlinear in the parameters, which unnecessarily complicates estimation. We therefore estimate a simpler, "reduced form" analog that is linear in the parameters, to wit:

$$Y_{c,t} = \alpha H_{c,t-2} + \beta_Y F_{c,t} + \gamma F_{c,t-2} + \tilde{\sigma}_c + \tau_t + \varepsilon_{c,t} \quad \textbf{(8)}$$

Primacy effects, which would be consistent with the "opportunity" motive for TTGSH, imply that β_Y is positive and γ negative, as it "backs out" the effect of ballot order on the House race used as a control. When House contests are analyzed using this regression, $Y_{c,t} \equiv H_{c,t}$ and $\beta_Y \equiv \beta_H$ in equation (7), thus the restriction $\alpha\beta_H = -\gamma$ should hold in equation (8).

We estimate equation (8) using standard methods, making two adjustments to address issues with the residuals.

First, we account for heteroskedasticity by weighting the observations slightly. As discussed in detail in Grant (2017), small counties should have greater "sampling error," in which randomness in the subset of registered voters who actually cast a ballot materially

influences the vote share. Grant shows that a simple weighting scheme, which sets the weight equal to the logarithm of the number of voters, adequately accounts for this heteroskedasticity, so we apply this scheme here as well.

Second, a small number of substantial outliers were observed, thickening the tails of the residual distribution relative to normality. Further investigation traces at least some of these outliers to "favorite son" effects, in which a candidate from a given county earned many crossover votes in that county. In small counties this can materially influence vote share. However, this is difficult to control for directly. While most election winners' biographies are obtainable, this is not so for challengers, and many candidates have lived in multiple places in Wyoming, growing up (and having family) in one county and settling down and running for office in another. It is unclear how to code favorite son effects in such a situation. Thus, we addressed this issue conservatively by estimating the parameters using least absolute deviation instead of least squares. This common approach for dealing with thick-tailed residuals is well supported in the literature (Dasgupta and Mishra, 2004; Bassett and Koenker, 1978; Koenker and Bassett, 1978) and absorbs no additional degrees of freedom.

C. Results

Coefficient estimates are presented in Table 4. There are four sets of estimates: for the most frequently contested federal office (U.S. Representative) and all federal offices together, and for the most frequently contested state office (Governor) and all state offices together. When offices are grouped together, a uniform ballot order effect is estimated for all of them, but the

fixed effects are expanded to allow the year and time dummies to vary by office.[7] Grouping offices together increases statistical power at this cost of uniformity. As the number of observations for individual offices is generally quite limited, we have little choice but to do so.

In three of these four regressions—for U.S. House, Governor, and all state executive offices together—the results are similar and consistent with expectations. The coefficient estimates on the lagged congressional vote share run from 0.4 to 0.7, indicating that this variable meaningfully reflects local (countywide) variation in party preference. The estimated ballot order effects in each of these regressions are also similar, ranging from two to three percentage points in vote share. Finally, the coefficient estimates on lagged ballot order are all negative, as expected (though none is significantly different from zero).

Taking these three regressions in turn, the U.S. House estimates imply a two percentage point advantage for first ballot position, a sizeable effect that is easily statistically significant, a consequence of the large number of House contests in the sample (which allows precision in the estimates). A Wald test of the coefficient restriction generated above for this race, $\alpha\beta_Y = -\gamma$, yields a test statistic of 0.14. This value is far below the critical value needed to reject this null, reinforcing confidence in our specification.

Turning to state office, the estimated ballot order effect for the governor's race alone is nearly three percentage points. It is statistically insignificant, however, as the standard error is very large. This problem is remedied in the "all state contests" estimates, which utilize many more observations. Here the estimated effect is easily significant, with a point estimate resembling that for governor and a much lower standard error. When separate regressions are conducted for each executive office separately (available from the author), each office's

[7] This is necessary to ensure there is a separate fixed effect for each contest (such as Auditor in 1990). When offices are grouped together, year dummies no longer serve this purpose.

estimates are positive and reasonably similar, but only one is statistically significant. Again, this is a consequence of the limited number of each of these contests in the sample, which materially raises the standard errors. In addition, the coefficient on lagged ballot order has roughly the right magnitude in both regressions, further affirmation of our specification.[8] On balance, then, the evidence indicates that ballot order effects for state executive positions are sizeable.

The remaining regression, in the second column of the table, groups all three federal offices together. Here the estimates are aberrant and inconsistent with primacy effects. While lagged vote share continues to be relevant, the ballot order effect is not significant and the lagged ballot order coefficient takes the wrong sign. These results are not overly surprising. The ballot order literature consistently indicates stronger effects in races where voters have less information, and contests for President and U.S. Senator do not fall into this category. It is common for other studies to obtain small or nil effects in these high-information races as well. Our finding that ballot order effects obtain only for downballot contests for U.S. House and below is consistent with this literature.

D. Extension

While our specification is straightforward and our estimates are reasonable, it is still desirable to probe the robustness of our findings, in order to ensure that they do not hinge on our choice of estimator or method of parameter identification.[9] Here, an alternative estimation and

[8] The absolute value of $\hat{\gamma}$ is about 0.5 in these two regressions. It should equal the product of $\hat{\alpha}$ (which is about 0.45) and $\hat{\beta}_H$ in the House race in column one (which is about 2). This product equals 0.9, which is within one standard error of $\hat{\gamma}$.

[9] Two well-known econometric concerns theoretically pertain to equation (8). The first applies only to the U.S. House regression in the first column of Table 3: the use of the lagged dependent

identification approach readily presents itself, built around the fact that *F* is determined by a threshold of 0.5 for *H*. This threshold, while politically and logically sensible, is econometrically arbitrary; for *H* values sufficiently near 0.5, we can think of the resulting value of *F* as equally arbitrary. Thus, one can estimate (more technically, bound) β_Y by comparing vote shares (*Y*) on either side of this threshold.

To do so, we first drop $H_{c,t-2}$ $F_{c,t}$, and $F_{c,t-2}$ from equation (8) and estimate it using least absolute distance estimation, as before. The residuals from this regression equal $Y_{c,t}$ swept of county and year/contest fixed effects. We then select a "thin slice of observations" in the neighborhood of the discontinuity point $H_{c,t-2} = 0.5$ and relate these first stage residuals to $F_{c,t}$, $F_{c,t-2}$, and a constant. The first regressor, which indicates whether Republicans are listed first on the current ballot, is governed by the threshold for $H_{c,t-2}$ of 0.5, while the second regressor indicates whether Republicans were listed first in the previous election (when $H_{c,t-2}$ was determined). Following the logic in subsection B, the coefficient estimate on the first dummy should be positive and that on the second dummy negative.[10]

The results are presented in Table 4, for the House contest alone and all state executive

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variable as a regressor. This can bias the coefficient on that variable and possibly affect the coefficients of interest indirectly. The second, the "Goodman-Bacon problem," occurs whenever "treatment" is staggered across cross-sectional units over time. This issue is most salient when treatment is "irreversible," which is not the case here. This fact also rules out two standard approaches to addressing this issue (Callaway and Sant'Anna, 2021; Sun and Abraham, 2021); the presence of two treatments, not one (ballot order, lagged ballot order) complicates a third (Goodman-Bacon, 2021). Neither concern applies to the alternative estimation approach developed here, which provides particularly strong evidence for the U.S. House race.

[10] The approach taken here is simpler than in standard regression discontinuity methods (Lee and Lemieux, 2010), because this paper's data is not fully suitable for such methods. Here, there are two running variables, not one: $H_{c,t-2}$ when the Republican was listed first on the ballot, and $H_{c,t-2}$ when the Democrat was listed first. Furthermore, each of these variables features many observations to one side of the threshold and just a few on the other. However, theory bounds the effect of these running variables on the outcome, allowing the use of the simpler, means-based approach described in the text. (See Lee and Lemieux, 2010, Sec. 4.2-4.3.)

offices together, for bandwidths of one, two, and three percentage points. (A bandwidth of one percentage point includes only races with $H_{c,t-2} \in [0.5 \pm 0.01]$, and similarly for the others.) Only a small subset of observations fall into these categories, as the table shows, and the standard errors are enlarged correspondingly. Given the paucity of observations, we present both ordinary least squares (mean) and least absolute deviation (median) estimates.

For the House contests in the two top rows of the table, the estimates fully conform to expectations, though not all are statistically significant. Point estimates on current ballot order are large and positive, while those on lagged ballot order are negative. While the latter estimates can be taken at face value, the former somewhat overstate the ballot order effect, since the modest difference in mean $H_{c,t-2}$ between contests just above, and just below, the threshold of 0.5 will still have some impact on $Y_{c,t}$. However, we can bound this impact from above, since one additional percentage point of $H_{c,t-2}$ should increase $Y_{c,t}$ by less than one percentage point. Using this fact, we can amend the point estimates in Table 4 by subtracting off the mean difference in $H_{c,t-2}$ above and below this threshold, that is, $(\overline{H}_{c,t-2}|F_{c,t} = 1)$ - $(\overline{H}_{c,t-2}|F_{c,t} = 0)$.[11] Doing so places a lower bound on point estimates of the ballot order effect. These lower bounds remain large, ranging from three to six percentage points, with a standard error of about three percentage points. These values somewhat exceed the corresponding estimates in Table 3, though the differences are not statistically significant.

In the state executive office estimates in the bottom two rows of the table, somewhat milder estimates obtain that, nevertheless, usually take the expected signs. The amended lower

[11] Conveniently, this difference roughly equals the bandwidth itself. For a neighborhood of two percentage points, for example, the mean $H_{c,t-2}$ of ballots listing Democrats first is approximately the midpoint of 0.48 and 0.50, that is, 0.49, while that of ballots listing Republicans first is roughly the midpoint of 0.50 and 0.52, that is, 0.51. The difference between these two means is 0.02, which equals the bandwidth of two percentage points.

bounds of the ballot order effect center around one or two percentage points,[12] while the coefficient estimates on lagged ballot order hover around zero. On balance, both sets of estimates in Table 4, though imprecise, conform to our preferred, full sample, more precise estimates in Table 3.

In summary, in all but the two most prominent offices elected in Wyoming, ballot order effects are sizeable: two percentage points in contests for U.S. House and three percentage points for state executive positions. These estimates markedly exceed those found in the existing literature, which analyzes rotation or randomization-based ordering procedures. As noted in the introduction, these studies find effects for comparable offices of around one percentage point. Based on our estimates, this literature substantially understates the effects of TTGSH laws.

5. Counterfactual Outcomes

Were these ballot order effects large enough to alter the outcome of any of the 95 contests in our data? To explore, we first identified those two contests in which the winner had less than 51% of the major party vote: the 1978 governor's race, in which Democrat Ed Herschler won with a vote share of 50.9%, and the 2006 U.S. House race, in which Republican Barbara Cubin won with 50.3%. In both of these contests, ballot order worked in the winner's favor. The year 1976 was strong for Democrats, and the Democratic incumbent Congressman performed well that year, winning 14 counties containing over three-quarters of all voters. In contrast, 2004 was strong for Republicans, with the Republican incumbent, Cubin, winning 20 counties containing

[12] Amending this estimate using the Table 3 $\hat{\alpha}$ of about 0.5, instead of the theoretical upper bound of 1.0 used in the text, would yield an effect of two to three percentage points, fully in line with $\widehat{\beta_Y}$ in the fourth column of Table 3.

almost three-quarters of all voters. These results determined ballot order in 1978 and 2006.

To calculate hypothetical outcomes absent the ballot order effect, we apply equations (2) and (3) to each county, taking into account whether each candidate was listed first or second on the ballot in that county, and using the office-specific coefficient estimate from Table 3. (While the gubernatorial estimate is insignificant, it is almost identical to the significant estimate for all state offices together). The results estimate $H^*_{c,t}$ (in 2006) and $Y^*_{c,t}$ (in 1978) in each county; these counterfactual vote totals are then added together to determine the winner of this hypothetical election. The results are placed in Table 5.

In the 2006 U.S. House race, the vote shares of the two candidates are roughly reversed. Cubin won that race by almost exactly 1,000 votes; in the counterfactual, she loses by over 700. Had it not been for TTGSH, her opponent Gary Trauner probably would have been Wyoming's representative in the 110th U.S. Congress.

For the 1978 gubernatorial race, the results are too close to be definitive. Herschler won that race by over 2,000 votes, but in the counterfactual he wins by less than 200. Given the uncertainty in the estimates, it is possible (though not probable) that this calculation modestly understates the true effect of TTGSH in this race. If so, Herschler's opponent John Ostlund would have become governor. That may not have been the only consequence of TTGSH here, as Herschler went on to be re-elected in 1982.

In summary, ballot order probably affected the outcome of one of the 95 general elections in our data and could plausibly have affected the outcome of a second. In both cases, TTGSH provided a boost of about 1,000 votes to the candidate who won the election and subtracted 1,000 from the loser, relative to a system that equalized ballot order so as to level the playing field. In the sparsely populated state of Wyoming, this is a lot of votes.

6. Conclusion

Pedestrian details matter. In general elections, most voters fall under a de facto or de jure "Them That's Got Shall Have" ballot ordering system that favors the politically powerful at the expense of the politically weak. These systems are enduring, with only two states leaving this system, and two adopting it, in the last twenty years. However, lawsuits and legislation seeking to dismantle TTGSH are increasingly frequent, occurring in at least seven states since 2018. Now is a propitious time to document the prevalence of TTGSH and ascertain its effects.

We do so in this paper, examining almost fifty years of general elections in Wyoming, which uses an unusual, county-level TTGSH mechanism that permits estimation using modern panel methods. The results indicate that these laws increase vote share in most statewide contests by two to three percentage points for the major-party candidate who is listed first, relative to the candidate listed second. Third party candidates placed further down the ballot—unexamined in this study—are likely to suffer even more, as the evidence indicates that second ballot position is itself advantageous to lower positions.

It may be tempting to view a state like Wyoming, which gave the Republican candidate for president his largest margin in 2020, as so partisan that it is impervious to ballot order effects, or that electoral margins are so large that these effects would be inconsequential even if they did occur. This is not the case. Democrats are regularly elected to office in our data, and two elections were quite close, with the winning candidate obtaining less than 51% of the major-party vote. In these two contests, TTGSH probably changed the outcome of one race and possibly changed the outcome of the second. Ballot order matters, and, in Wyoming, "Them That's Got Shall Have" has successfully alters electoral outcomes in favor of the party in power.

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Table 1. Procedures for Ordering Names on General Election Ballots, Grouped, and the Number of Congressional Seats Elected in 2020 in Each Group (relevant statute in parentheses, with states that changed their procedure since Krosnick, Miller, and Tichy, 2004 underlined).

Fairness-Oriented Systems (163 seats)	Convenience-Oriented Systems (36 seats)	Power-Oriented Systems (236 seats)
Randomization (80 seats)	*Alphabetical (13 seats)*	*De Jure TTGSH (197 seats)*
AR* (§ 7-5-207(3)(c)(1))	HI (§ 11-115)	AZ* (§ 16-502(E))
CO (§ 1-5-404)	LA (§ 18:551(C)(c)(i))	CT (§ 9-249 (a))
NM (§ 1-10-8.1)	NV (§ 293.267)	FL (§ 101.151.6(3)(a))
NC (§ 163-165.6(c))	VT (17 V.S.A § 2472 (b)(2))	GA (§ 21-2-285(c))
OH (§ 3513.052(e)(1))		IN* (§ 3-11-2-6)
OK (§ 26-6-106)		KY (118.215(1))
OR (§ 254.155)		MD (§ 9-210(j)(2)(i))
SD (§ 12-16-3.1)		MI (§ 168.703)
UT (§ 20A-6-305)		NE (§ 32-815)
VA (§ 24.1-613(c))		NY (§ 7-116-1)
WA (§ 29A.36.151) **		PA (§ 25.2963)
		TN (§ 2-5-208(d)(1))
		TX (§ 52.091(b))
		WV (§ 3-6-2(c)(3))
		WI (§ 5.64(1)(b))
		WY* (§ 22-6-121(a))
Rotation (64 seats)	*Official's Choice (23 seats)*	*De Facto TTGSH (30 seats)*
AK (§ 15.15.030.6)	ME (§ 601.1.2)	DE (§ 4502(a)(5)) #
CA (§ 13111)	NJ* (§ 19.49.2)	IA (§ 43.73, § 49.37)
ID (§ 34-903)	RI (§ 17-19.6)	IL (10 ILCS 5/16-3) **
KS (§ 25-610)	SC* (§ 7-13-320)	MO (§ 115.237.3) #
MT (§ 13-21-205)		
ND (§ 16.1-06-05.4, § 16.1-11-27)		
NH (§ 656:5-a)		
Inverse TTGSH† (19 seats)		*Other‡ (9 seats)*
AL		MA (§ 54.42)
MS		
MN (§ 204D.13(2))		

Note: Statutes current as of Jan. 2022.

* The procedure is carried out at the county level.

** A primary is followed by a runoff, in which the top vote getter is listed first. In WA, this is a "jungle" primary containing all candidates irrespective of party; in IL, the primary is closed, but all candidates' vote totals are reported on a single list.

[#] Explicitly lists the Democratic party (DE) or Republican party (MO) first; these are the dominant parties in these states.

[†] Reverse TTGSH, in which the minority party is listed first. In AL and MS, this is de facto, in MN, it is de jure. While Ala. Code § 17-6-25 requires names to be listed in alphabetical order, the sample ballots promulgated by Alabama's Secretary of State, to which the counties adhere, list Democrats first.

[‡] Incumbents are listed first, followed by challengers in alphabetical order.

Table 2. Descriptive Statistics.

Year	Counties Switching Ballot Order		Number of General Election Contests	
	R to D	D to R	Federal	State Executive
2020	0	0	3	0
2018	1	0	2	4
2016	0	0	2	0
2014	0	0	2	2
2012	0	3	3	0
2010	0	3	1	2
2008	4	0	4*	0
2006	3	0	2	4
2004	0	0	2	0
2002	0	1	2	3
2000	0	1	3	0
1998	0	2	1	4
1996	2	0	3	0
1994	0	1	2	4
1992	1	2	2	0
1990	4	0	2	5
1988	0	0	4*	0
1986	0	0	1	5
1984	0	0	3	0
1982	0	3	2	5
1980	0	11	2	0
1978	2	1	2	4
1976	6	0	3	0
Totals	23	28	53	42

Note: * includes a 2008 special Senate election and a 1989 special House election (using the same ballot orders as the 1988 election). A general election was considered contested if both major parties fielded a candidate. Many races classified as uncontested included independents or members of other parties, especially the Libertarian and Constitutional Parties. Federal races include president, U.S. senator, and U.S. representative. State executive positions include Governor, Secretary of State, Treasurer, Auditor, and Superintendent of Public Instruction.

Table 3. Coefficient Estimates (in percentage points of vote share, with standard errors in parentheses), Contested Statewide General Elections, Wyoming, 1978-2020.

	Offices Analyzed			
Independent Variable (coefficient)	U.S. Representative	All Three Federal Offices	Governor	All Five State Executive Offices
Party's Vote Share in the Previous Congressional Race (α)	0.71* (0.05)	0.63* (0.03)	0.47* (0.11)	0.43* (0.04)
Party Listed First on Ballot (β_Y)	2.04* (0.72)	-0.33 (0.43)	2.92 (2.29)	2.88* (0.61)
Party Listed First on Ballot in Previous Congressional Race (γ)	-0.83 (0.67)	1.33* (0.41)	-0.46 (1.71)	-0.55 (0.56)
State Fixed Effects ($\tilde{\sigma}$)?	Yes	Yes, Interacted with Office	Yes	Yes, Interacted with Office
Year Fixed Effects (τ)?	Yes	Yes, Interacted with Office	Yes	Yes, Interacted with Office
Number of Observations	552	1219	253	966

Note: Estimates were obtained using least absolute distance estimation. Federal offices are President, U.S. Senator, and U.S. Representative. State offices are Governor, Secretary of State, Auditor, Treasurer, and Superintendent of Public Instruction. Not all state offices were contested in each election. * = $p < 0.05$.

Table 4. Discontinuity Estimates of the Ballot Order Effect.

Contest Independent Variable	*Mean* Bandwidth (in percentage points)			*Median** Bandwidth (in percentage points)		
	1	2	3	1	2	3
House	4.02	7.82	6.64	8.14	9.43	9.26
Party Listed First on Ballot	(2.85)	(2.99)	(2.47)	(3.20)	(2.99)	(3.17)
Lagged Party Listed First on Ballot	-5.68	-0.28	-3.03	-2.01	-0.28	-2.94
	(2.93)	(3.17)	(2.57)	(4.25)	(3.70)	(3.99)
N	16	36	56	16	36	56
State Exec. Office	-1.36	6.79	1.62	1.83	6.60	4.71
Party Listed First on Ballot	(4.98)	(3.15)	(2.88)	(5.47)	(2.00)	(2.42)
Lagged Party Listed First on Ballot	-7.09	0.08	-0.13	-0.21	1.64	2.24
	(4.92)	(3.27)	(2.95)	(7.03)	(1.95)	(2.64)
N	22	67	97	22	67	97

* Standard errors are approximate. The 95% confidence interval is not centered around the estimate.

Table 5. Actual and Counterfactual Vote Totals in Two Closely Contested Races.

	2006 U.S. House of Representatives				1978 Governor			
	Actual		Counterfactual		Actual		Counterfactual	
County	Cubin (R)	Trauner (D)	Cubin (R)	Trauner (D)	Herschler (D)	Ostlund (R)	Herschler (D)	Ostlund (R)
Albany	4133	7350	4250.1	7232.9	6610	2920	6470.9	3059.1
Big Horn	2986	1328	2942.0	1372.0	1786	2331	1846.1	2270.9
Campbell	7213	3289	7105.9	3396.1	1359	3403	1428.5	3333.5
Carbon	2634	2769	2578.9	2824.1	3435	2331	3350.8	2415.2
Converse	2674	2170	2624.6	2219.4	1465	1632	1419.8	1677.2
Crook	2077	717	2048.5	745.5	755	1166	783.0	1138.0
Fremont	6541	6610	6406.9	6744.1	5128	4941	4981.0	5088.0
Goshen	2662	1991	2614.5	2038.5	2296	2374	2227.8	2442.2
Hot Springs	1160	999	1138.0	1021.0	1193	1207	1158.0	1242.0
Johnson	2116	1117	2083.0	1150.0	1312	1316	1350.4	1277.6
Laramie	11,869	18,188	12,175.6	17,881.4	11,939	9564	11,625.1	9877.9
Lincoln	3881	2008	3820.9	2068.1	2211	1715	2153.7	1772.3
Natrona	10,793	13,848	10,541.7	14,099.3	9362	9806	9082.1	10,085.9
Niobrara	685	336	674.6	346.4	492	866	511.8	846.2
Park	7177	3867	7064.4	3979.6	2448	4594	2550.8	4491.2
Platte	1967	1842	1928.1	1880.9	1897	1553	1846.6	1603.4
Sheridan	5883	5255	5769.4	5368.6	4150	3558	4037.5	3670.5
Sublette	1717	1055	1688.7	1083.3	934	833	908.2	858.8
Sweetwater	5532	6648	5407.8	6772.2	5258	4586	5114.3	4729.7
Teton	2598	6218	2687.9	6128.1	1587	2201	1642.3	2145.7
Uinta	3476	2440	3415.7	2500.3	1885	1379	1837.3	1426.7
Washakie	1851	1457	1817.3	1490.7	1371	1969	1419.8	1920.2
Weston	1711	822	1685.2	847.8	1099	1350	1134.8	1314.2
Totals	**93,336**	**92,324**	**92,469.5**	**93,190.5**	**69,972**	**67,595**	**68,880.5**	**68,686.5**

Note: Votes for a third party candidate, Thomas Rankin of the Libertarian Party, are omitted from the 2006 contest. Mr. Rankin received 4,781 votes across the state. Hypotheticals assume that each major party candidate is listed first on the ballot an equal number of times, and is listed second when not listed first. Each hypothetical relies on the office-specific coefficient estimate in Table 3.