ONLINE APPENDIX

Robustness Checks and Supplementary Analyses for

Ballot Reform, the Personal Vote, and Political Representation in the United States

Contents

A.1 The Timing of Ballot Reform

Table A.1 contains the year of adoption of the Australian ballot for each state. We use coding on the timing of ballot reform from Finocchiaro and MacKenzie (2018), which relies on information from Ludington (1909, 1911), Evans (1917), and Albright (1942).[28]

Table A.1: Year of Adoption of the Australian Ballot

AL	1893	IN	1889	NC	1929	RI	1889
AR	1891	KS	1893	ND	1891	SC	1950
AZ	1891	KY	1892	NE	1891	SD	1891
CA	1891	LA	1896	NH	1891	TN	1922
CO	1891	MA	1888	NJ	1911	TX	1905
CT	1909	MD	1892	NM	1905	UT	1896
DE	1891	ME	1891	NV	1891	VA	1894
FL	1895	MI	1891	NY	1895	VT	1890
GA	1922	MN	1891	OH	1891	WA	1890
IA	1892	MO	1891	OK	1890	WI	1889
ID	1891	MS	1890	OR	1891	WV	1891
IL	1891	MT	1889	PA	1891	WY	1890

As discussed in the article, there is some debate as to whether the adoption of ballot reform reflects a triumph of progressive reformists or the party politicians themselves (or perhaps both). Engstrom and Kernell (2014, 28) offer a summary of the two predominant accounts for why states adopted ballot reform:

> The traditional explanation has irrepressible progressive reformers prevailing over the rear guard efforts for machine politicians. The second is more complicated. Party politicians grasped popular ballot reform as a way to solve serious internal management problems that had become increasingly severe toward the end of the nineteenth century. In addition to giving state agencies, a state printed ballot ruled out down-ticket substitution of candidates preferred by a local party organization. The various regulations that enacted to administer the new state ballots also served the purposes of party politicians by setting entry barriers for independent candidacies and splinter-party and fusion party-party movements (Argersinger 1992).

[28]This coding is based on statewide adoption, so there are some states with localities that adopted reforms prior to statewide adoption.

Engstrom and Kernell (2014, 190) ultimately conclude that there is truth in both of these accounts, but they place greater emphasis on the role of party politicians:

> Although the spur for change certainly included pressure from both reform groups and public opinion, party politicians in the states were ultimately responsible for crafting the new rules. And in ballot reform they found a solution to the collective action dilemmas of the party ticket. Evidence for regular party support of ballot reform can be seen in the generally bipartisan support it garnered (Ware 2002).

The account of progressive activists successfully pushing for reform in spite of the will of party officials would imply that we should likely expect states with stronger progressive reform movements and weaker party organizations to adopt reforms earlier. The other account of party officials willingly accepting (and perhaps pushing for reform) to assert greater control over ballot access implies that we should likely expect these reforms to take hold earlier in states with greater conflict between state and local party organizations. Unfortunately, to our knowledge, there are not useful measures available that capture these phenomena for the pre-ballot reform era.

Table A.2: Median Year of Adoption of the Australian Ballot by Region

Northeast	1891
Midwest	1891
West	1891
Confederate South	1896
Non-Confederate South	1891.5

The most apparent pattern in the timing of adoption is that Southern states tended to be laggards. For example, if we compare the median adoption year across regions[29], there is little difference except in the Confederate South (see Table A.2).[30] Given the exceptionalism of the South, in terms of the timing of ballot

[29]Here we are using Census regions and further subdividing the South into states that were part of the Confederacy and those that were not.

[30]States that were not admitted into the union prior to 1888 are excluded from this analysis.

reform and the Democratic party's dominance among other things, we present results in Section A.12 in which we exclude states that were part of the Confederacy. It is worth noting that much of the variation in timing seems somewhat idiosyncratic with, for example, Massachusetts adopting extremely early (1888) and Connecticut quite late (1909).

A.2 Sample Composition and Restrictions

For analyses performed at the state level (for the government outputs outcomes), we construct state-level panels for the period indicated in Table 1 in the article. For these analyses, an observation is a state-Congress in which a Congress indicates the two-year period that corresponds to a Congress (for example, the 52nd Congress corresponds to 1891-1892). In general, we take an average of each outcome across the two-year period if the outcome is measured on an annual basis. In rare cases, we were only able to find data from a single year, and, in such cases, we simply use that value for the two-year Congress rather than averaging. In the case of the pensions data, we were unable to find state-level (or any sub-state level) data for fiscal years 1883-1885. To construct an uninterrupted panel, we omit the data from 1882 for our main specifications, which results in the panel starting in 1886.[31] Of note, territories that become states enter the panel upon statehood.

For the analyses performed at the district/legislator level (for the legislator effort and the legislator ideological behavior outcomes, excluding roll-call discretion from parties), we construct district- / legislator-level panels for the period indicated in Table 1 in the article. For these analyses, an observation is a district/legislator-Congress. We restrict the sample to legislators who served the full term in a given Congress.

For the roll-call discretion from parties analysis, we construct state-party panels for the period from 1881-1914. For these analyses, an observation is a state-party-Congress (e.g., the Republican delegation from Ohio in the 51st Congress). A party must have at least one member in a state's House and Senate delegation in a given Congress to be an observation in the panel.

[31] See Table A.24 for results based on a sample including the pensions data from 1882.

A.3 Example of Private Bill

The following is a representative private bill from this time period, which demonstrates that private legislation was used a means of constituency service. The bill, 62 H.R. 267, was introduced in the House on April 4, 1911 by Representative Edgar Dean Crumpacker (R-IN) and was referred to the Committee on Invalid Pensions.

62D CONGRESS, 1ST SESSION. **H. R. 267.**

IN THE HOUSE OF REPRESENTATIVES

APRIL 4, 1911.

MR. CRUMPACKER introduced the following bill; which was referred to the Committee on Invalid Pensions and ordered to be printed.

A BILL

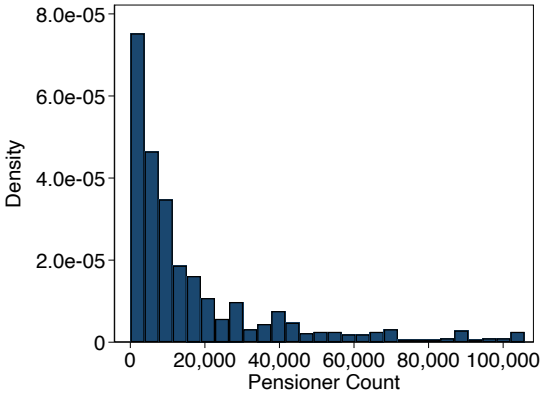
Granting an increase of pension to Charles W. Sexton.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Interior be, and he is hereby, authorized and directed to place on the pension roll, subject to the provisions and limitations of the pension laws, the name of Charles W. Sexton, late of Company I, Second Regiment New York Volunteer Cavalry, and pay him a pension at the rate of seventy-two dollars per month in lieu of that he is now receiving.

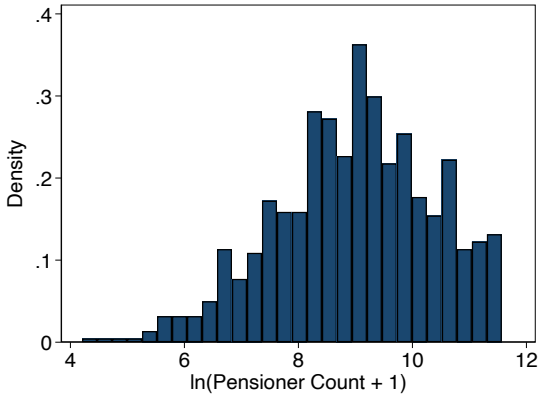
A.4 Distribution of Outcome Measures

Figure A.1: Distribution of Log-Transformed Outcomes, Original & Log-Transformed

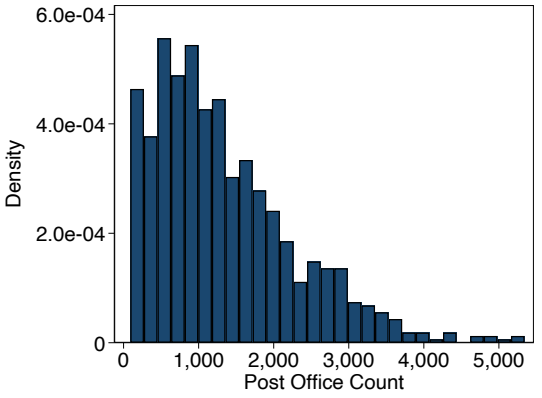
(a) Pensioner Count



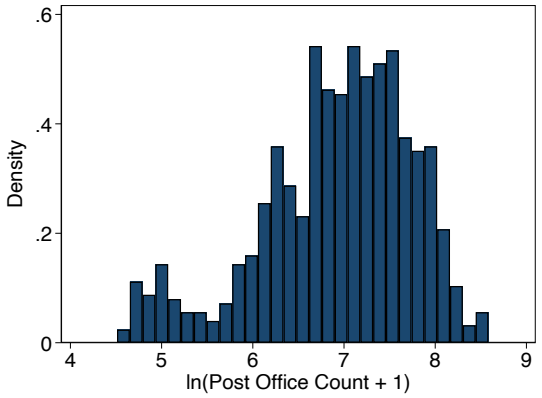
(b) ln(Pensioner Count +1)



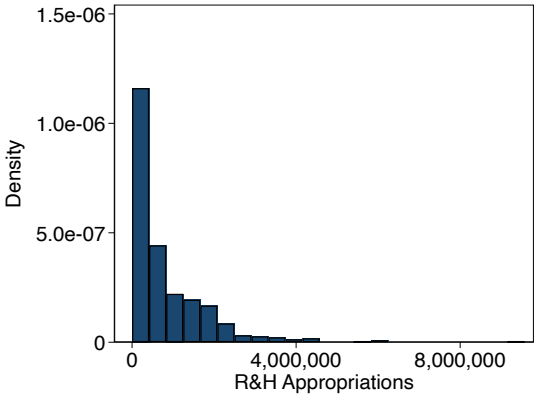
(c) Count of Post Offices



(d) ln(Post Office Count +1)



(e) Rivers & Harbors Appropriations



(f) ln(Rivers & Harbors Appropriations +1)

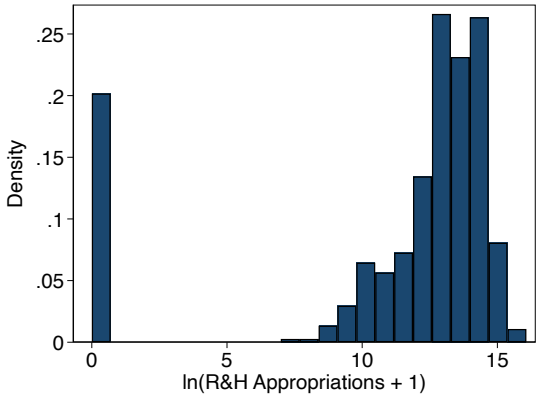
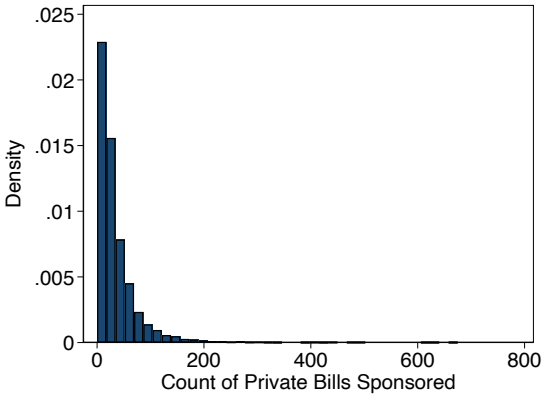
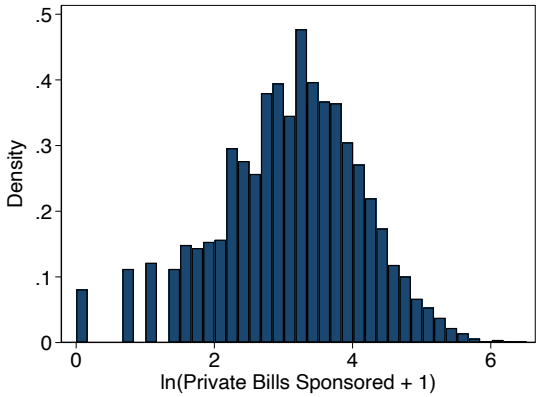


Figure A.1: Distribution of Log-Transformed Outcomes, Original & Log-Transformed, *Continued*

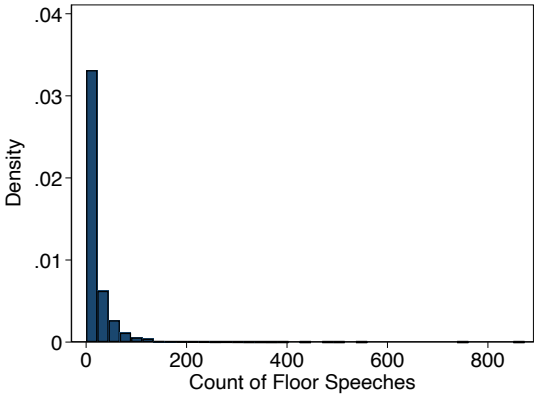
(g) Count of Private Bills Sponsored



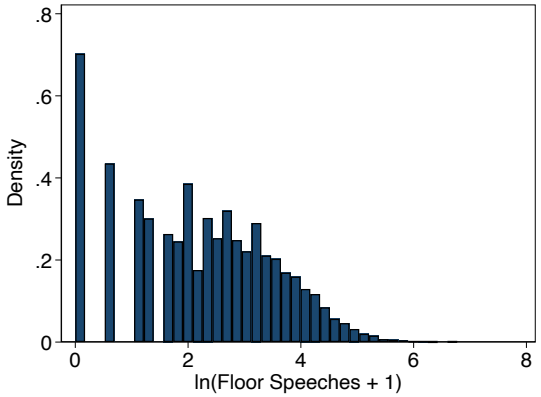
(h) ln(Private Bills Sponsored +1)



(i) Count of Floor Speeches



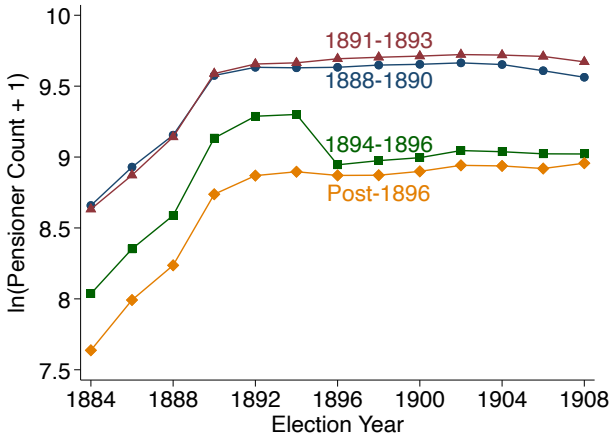
(j) ln(Floor Speeches +1)



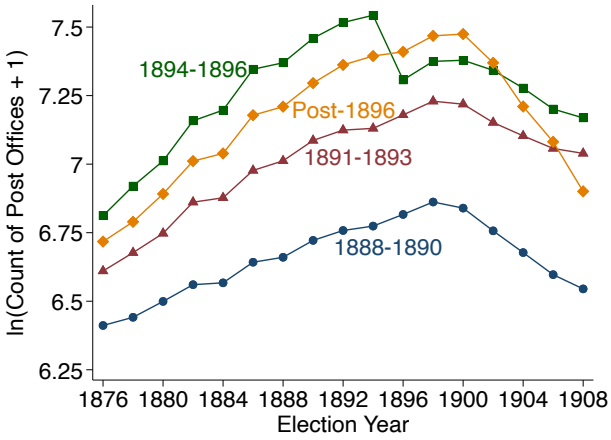
A.5 Trends and Pre-Trends

Figure A.2: (Pre-)Trends by Election Year Cohort of Australian Ballot

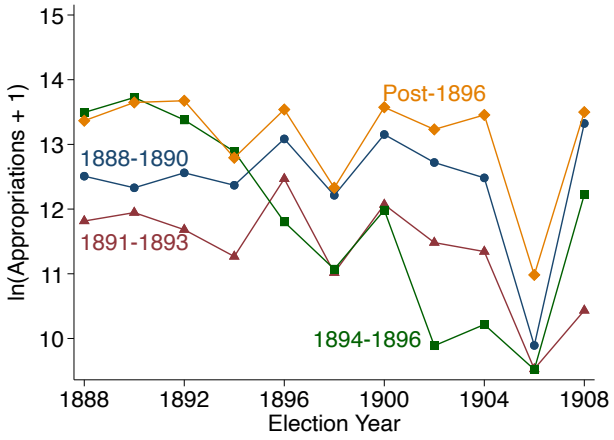
(a) ln(Pensioner Count +1)



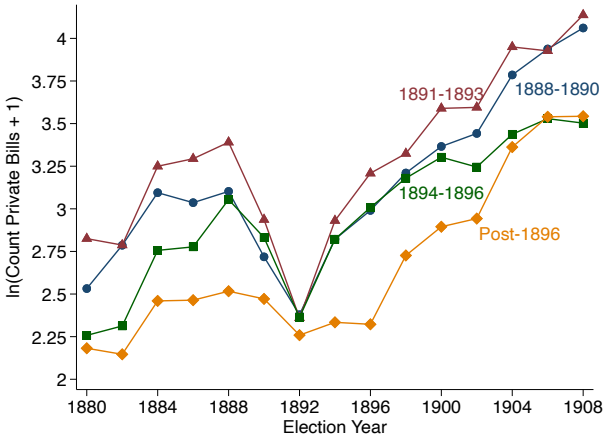
(b) ln(Post Offices Count + 1)



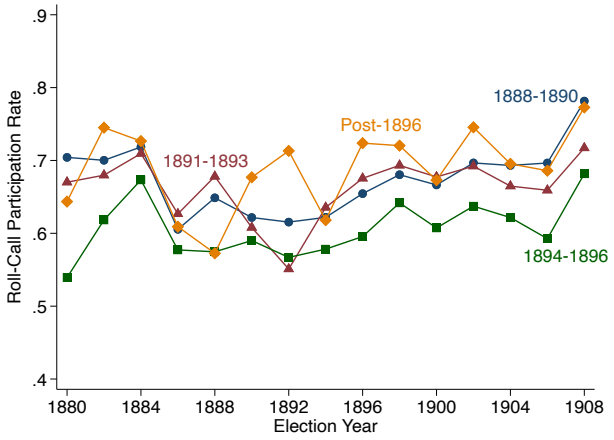
(c) ln(Rivers & Harbors Appropriations + 1)



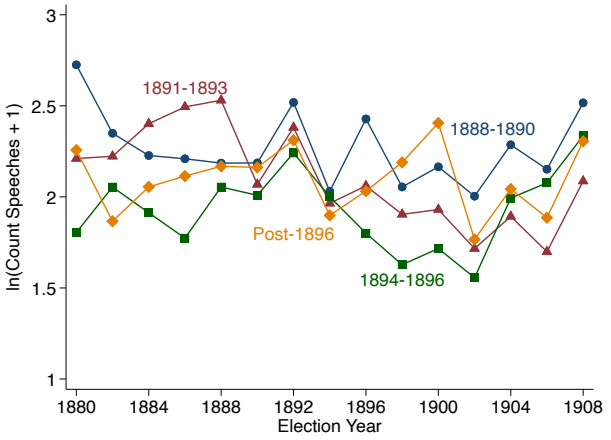
(d) ln(Private Bills Sponsored + 1)



(e) Roll-Call Participation Rate



(f) ln(Floor Speeches +1)



Nine states adopted the Australian ballot between 1888 and 1890, 22 states between 1891 and 1893, 7 states between 1894 and 1896, and 10 states post-1896.

A.6 Alternative Measures of Dependent Variables

Tables A.3 displays results based on alternative measurement strategies for the three dependent variables that capture federal resource allocation. In the main text, we employ the count of pensioners (logged, plus one), the count of post offices (logged, plus one), and appropriations ($) to rivers and harbors projects (logged, plus one). In this section, we also report results from alternative measures of each: the dollar value of the pension rolls (logged, plus one), the count of post offices per capita, and the count of rivers and harbors projects (logged, plus one). Across all specifications, the results provide no indication that the arrival of the Australian ballot altered the allocation of federal resources.

Table A.3: The Australian Ballot & the Distribution of Federal Resources, Alternative Outcome Measures

	(1)	(2)	(3)
Panel A. Pensions			
Australian Ballot	-0.046	-0.055	-0.015
	(0.057)	(0.045)	(0.046)
Panel B. Post Offices			
Australian Ballot	0.013	0.012	-0.030
	(0.051)	(0.044)	(0.056)
Panel C. Rivers & Harbors			
Australian Ballot	0.125	0.156	0.145
	(0.095)	(0.089)	(0.093)
Congress Fixed Effects	✓	✓	✓
Unit Fixed Effects	✓	✓	✓
Controls		✓	✓
State-Specific Trends			✓
Panel A Observations	762	762	762
Panel B Observations	893	893	893
Panel C Observations	532	532	532

Robust standard errors clustered by state are in parentheses. * $p < 0.05$. The dependent variable for Panel A is the logged value of the pension roll. The dependent variable for Panel B is the count of post offices per 1,000 in the population. The dependent variable for Panel C is the logged count of rivers and harbors projects. Control variables include log population, primary election status, and past Republican share of the two-party presidential vote. State-specific trends are state-specific linear trends.

We also create an index of government outputs based on the three primary measures (the count of pensioners, the count of post offices, and appropriations to rivers and harbors projects as well as an index of legislator effort based on the three primary effort measures (the count of private bills sponsored, the roll-call participation rate, and the count of floor speeches). We follow Dal Bó and Rossi (2011) and Kling, Liebman, and Katz (2007) and construct these indices by taking the simple average of the Z score of each component measure from each two-year Congress.[32] Combining multiple measures can reduce random measurement error and increase precision in estimates (Ansolabehere, Rodden, and Snyder 2008). Because some measures are not available throughout the entire sample period (see Table 1 in the article), we only include years for which all component measures for a given index are available.

Table A.4 displays the results the government outputs index, and Table A.5 displays the results for the legislator effort index. The results are broadly similar to those reported in Tables 2-3. In the case of the government outputs index, across all three specifications, the estimated coefficient is near to zero and not statistically distinguishable from zero. In the case of the legislator effort index, across all six specifications, the estimated coefficient is negative and in one instance is statistically distinguishable from zero. A negative relationship between the Australian ballot and legislator effort implies that legislators are exerting less effort with the introduction of the Australian ballot. Similarly, in Table 3, 17 of the 18 estimates are negative. Overall, these results provide no evidence that the Australian ballot resulted in a higher-effort style of representation.

In addition, we present results using an alternative distance metric for the legislator discretion from state party leaders measure based on the mean absolute difference rather than the mean squared difference. More formally:

$$\text{Discretion}_{spt} = \frac{1}{n_{spt}} \sum_{i=1}^{n_{spt}} \left| H_{ispt} - \bar{S}_{spt} \right|,$$

where H_{ispt} indicates the ideal point of representative i in state s and party p in Congress t, $\bar{S}_{spt}$ represents the state party's ideal point as measured by the average of the roll-call scores of the Senate delegation in state s and party p in Congress t, and n_{spt} is the number of members in the House delegation of state s and party p in Congress t. Similar to the results from Table 4 in the article, all four estimated coefficients

[32] In other words, the Z scores for each component measure are calculated based on the mean and standard deviation of the measure from each two-year Congress.

Table A.4: Australian Ballot & Index of Government Outputs

	(1)	(2)	(3)
Australian Ballot	0.014	0.039	-0.035
	(0.046)	(0.042)	(0.038)
Year Fixed Effects	✓	✓	✓
State Fixed Effects	✓	✓	✓
Controls		✓	✓
State-Specific Trends			✓
Observations	532	532	532

Robust standard errors clustered by state are in parentheses. * $p < 0.05$. The dependent variable is an index constructed from the count of pensions, count of post offices, and appropriations to rivers and harbors projects. Control variables include log population, primary election status, and past Republican share of the two-party presidential. vote. State-specific trends are state-specific linear trends.

Table A.5: Australian Ballot & Index of Legislator Effort

	(1)	(2)	(3)	(4)	(5)	(6)
Australian Ballot	-0.173	-0.200*	-0.105	-0.104	-0.117	-0.007
	(0.105)	(0.099)	(0.083)	(0.070)	(0.060)	(0.084)
Congress Fixed Effects	✓	✓	✓	✓	✓	✓
District Fixed Effects	✓	✓	✓			
Member Fixed Effects				✓	✓	✓
Controls		✓	✓		✓	✓
District/Member-Specific Trends			✓			✓
Observations	8,840	8,840	8,840	8,840	8,840	8,840

Robust standard errors clustered by state are in parentheses. * $p < 0.05$. The dependent variable is an index constructed from the count of private bills sponsored, the roll-call participation rate, and the count of floor speeches. Control variables include member of majority party, Republican, seniority, past electoral margin, chair or ranking member of any committee, committee fixed effects, and primary election status in the state. District- or member-specific trends are district-specific linear trends for specification (3) and member-specific linear trends for specification (6).

are near to zero and not statistically significant in Table A.6.

Table A.6: Discretion from the State Party on Roll-Call Voting, Alternative Outcome Measure

	(1)	(2)	(3)	(4)
Australian Ballot	-0.006	-0.003	-0.011	-0.009
	(0.011)	(0.013)	(0.011)	(0.011)
State FEs	✓	✓		
Congress FEs	✓	✓		
State-Party FEs			✓	✓
Congress-Party FEs			✓	✓
Unit-Specific Trends		✓		✓
Observations	746	746	746	746

Robust standard errors clustered by state are in parentheses. * $p < 0.05$.
Dependent variable is the mean absolute distance from a House state-party delegation to the corresponding Senate delegation.
Unit-specific trends are state-specific linear trends for model (2) and state-party-specific linear trends for model (4).

A.7 Poisson Models

Several of the outcome measures used in the article are count variables. Due to their highly skewed distributions, we log-transform these measures prior to analysis (see Section A.4). In this section, we present estimated coefficients all count outcome measures based on Poisson models. Tables A.7-A.8 contain the results from these models for all of main outcome measures that are counts. Across both tables, only six out of 21 estimates are signed in the hypothesized direction, and the single estimate statistically distinguishable from zero is not signed in the hypothesized direction.

Table A.7: Poisson Results:
the Distribution of Federal Resources

	(1)	(2)	(3)
Panel A. Pensions			
Australian Ballot	-0.009	-0.032	-0.002
	(0.023)	(0.020)	(0.013)
Panel B. Post Offices			
Australian Ballot	-0.021	-0.024	-0.049
	(0.035)	(0.034)	(0.025)
Panel C. Rivers & Harbors			
Australian Ballot	0.070	0.131	0.094
	(0.126)	(0.100)	(0.108)
Congress Fixed Effects	✓	✓	✓
Unit Fixed Effects	✓	✓	✓
Controls		✓	✓
State-Specific Trends			✓
Panel A Observations	800	800	800
Panel B Observations	893	893	893
Panel C Observations	489	489	487

Robust standard errors clustered by state are in parentheses.
* $p < 0.05$. Reported coefficients are estimated from Poisson models. The dependent variable for Panel A is the count of pensioners. The dependent variable for Panel B is the count of post offices. The dependent variable for Panel C is the count of dollars appropriated to rivers and harbors projects. Control variables include log log population, primary election status, and past Republican share of the two-party presidential vote. State-specific trends are state-specific linear trends.

Table A.8: Poisson Results:
Legislator Effort

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Private Bill Sponsorship						
Australian Ballot	-0.286*	-0.310*	-0.023	-0.181	-0.184	0.020
	(0.123)	(0.119)	(0.128)	(0.117)	(0.107)	(0.100)
Panel B. Floor Speeches						
Australian Ballot	-0.047	-0.165	-0.064	-0.132	-0.107	-0.069
	(0.119)	(0.115)	(0.121)	(0.088)	(0.085)	(0.104)
Congress Fixed Effects	✓	✓	✓	✓	✓	✓
District Fixed Effects	✓	✓	✓			
Member Fixed Effects				✓	✓	✓
Controls		✓	✓		✓	✓
District/Member-Specific Trends			✓			✓
Panel A Observations	8,612	8,612	8,600	7,822	7,822	7,791
Panel B Observations	8,553	8,553	8,401	7,588	7,588	7,232

Robust standard errors clustered by state are in parentheses. * $p < 0.05$. Reported coefficients are estimated from Poisson models. The dependent variable for Panel A is the count of private bills introduced by the member. The dependent variable for Panel B is the count of floor speeches given by the member. Control variables include member of majority party, Republican, seniority, past electoral margin, chair or ranking member of any committee, committee fixed effects, and primary election status in the state. District- or member-specific trends are district-specific linear trends for specification (3) and member-specific linear trends for specification (6). The South is defined as the 11 states of the former Confederacy.

A.8 Alternative Difference-in-Differences Estimators with Staggered a Treatment

An abundance of recent scholarship has pointed to problems with the use of two-way fixed-effects (TWFE) models in the context of a staggered treatment—i.e., treatment occurs in different time periods for some units (e.g., Callaway and Sant'Anna 2021; Goodman-Bacon 2021; Imai and Kim 2021; Strezhnev 2018). In particular, a standard TWFE model does not ensure that comparisons are restricted to be between treated and never-treated (and/or not-yet-treated) units, which can result in the comparison of a treated unit with another already-treated unit. In the context of heterogeneous treatment effects, these "forbidden comparisons" can result in negative weights such that TWFE can yield a quantity that is of the opposite sign to all of the individual level effects.[33]

To remedy these potential concerns, in this section, we report results based on three alternative estimators for staggered difference-in-differences designs all of which eliminate so-called "forbidden comparisons" between treated and already-treated units. The three alternative estimators are from de Chaisemartin and D'Haultfoeuille (2020), Callaway and Sant'Anna (2021), and Borusyak, Jaravel, and Spiess (2022).[34] Table A.9 contains the results for the government outputs outcomes, and Table A.10 displays the results for the legislator effort outcomes. For ease of comparison, we also display the equivalent TWFE estimates; these estimates are the same as those reported in column (1) of Table 2 and in columns (1) and (4) of Table 3. For the government outputs outcomes, the results from the alternative estimators are broadly similar to those based on TWFE. We do observe one statistically significant positive estimate for the post offices outcome based on the Callaway and Sant'Anna (2021) estimator. On the other hand, the estimates for the post offices outcome based on the other two alternative estimators are smaller in magnitude and one is actually negative. Thus, on the whole, these results are consistent with the results based on TWFE. Again, in the case of the legislator effort outcomes in Table A.10, the results are broadly similar to those based on TWFE. The only statistically significant estimates that we observe based on these alternative estimators for the legislator effort outcomes have the opposite sign of the hypothesized direction.

[33]For a review of advances in difference-in-differences methods and the problems associated with the traditional TWFE approach, see Roth et al. (2022).

[34]In Tables A.9-A.10, we label estimates pertaining to de Chaisemartin and D'Haultfoeuille (2020) as dC-DH, Callaway and Sant'Anna (2021) as C-S, and Borusyak, Jaravel, and Spiess (2022) as B-J-S.

Table A.9: The Australian Ballot & Government Outputs – Alternative DiD Methods

	(1)	(2)	(3)	(4)
Panel A. Pensions				
Treatment Effect	-0.061	-0.048	-0.055	-0.082
	(0.052)	(0.028)	(0.108)	(0.076)
Panel B. Post Offices				
Treatment Effect	-0.007	-0.018	0.142*	0.081
	(0.046)	(0.010)	(0.032)	(0.063)
Panel C. Rivers & Harbors				
Treatment Effect	-0.121	-0.022	-0.016	-0.578
	(0.372)	(0.192)	(0.701)	(0.392)
Method	TWFE	dC-DH	C-S	B-J-S
Unit	State	State	State	State
Panel A Obs.	800	151	729	729
Panel B Obs.	893	151	836	836
Panel C Obs.	532	108	477	477

Robust standard errors clustered by state are in parentheses. * $p < 0.05$. The dependent variable for Panel A is the logged count of pensioners. The dependent variable for Panel B is the logged count of post offices. The dependent variable for Panel C is the logged appropriations to rivers and harbors projects. No control variables are included in any specification.

Table A.10: The Australian Ballot & Legislator Effort – Alternative DiD Methods

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A. Private Bill Sponsorship								
Treatment Effect	-0.202	-0.062	0.038	-0.008	-0.115	0.039	0.030	-0.030
	(0.107)	(0.111)	(0.066)	(0.145)	(0.137)	(0.104)	(0.134)	(0.089)
Panel B. Roll-Call Participation Rate								
Treatment Effect	-0.048*	-0.058	-0.056*	-0.077*	-0.017	-0.013	0.008	0.029
	(0.019)	(0.038)	(0.012)	(0.017)	(0.021)	(0.019)	(0.017)	(0.020)
Panel C. Floor Speeches								
Treatment Effect	-0.081	-0.037	0.021	-0.542*	-0.079	-0.053	-0.115	-0.071
	(0.149)	(0.154)	(0.151)	(0.125)	(0.097)	(0.090)	(0.152)	(0.088)
Method	TWFE	dC-DH	C-S	B-J-S	TWFE	dC-DH	C-S	B-J-S
Unit	District	District	District	District	Member	Member	Member	Member
Panel A Obs.	8,845	942	3,236	3,841	8,845	738	2,475	3,257
Panel B Obs.	8,840	942	3,235	3,839	8,840	738	2,474	3,255
Panel C Obs.	8,845	942	3,236	3,841	8,845	738	2,475	3,257

Robust standard errors clustered by state are in parentheses. * $p < 0.05$. The dependent variable for Panel A is the logged count of private bills introduced by the member. The dependent variable for Panel B is the roll-call participation rate (measured as a proportion). The dependent variable for Panel C is the logged count of floor speeches given by the member. No control variables are included in any specification.

A.9 Decomposing the Type of Ballot

In the article, we focus on the effect of the advent of the Australian ballot, which entails both the government printing and supplying the ballot to voters, and the voter being ensured secrecy in casting her vote. However, states adopted different versions of ballot reform and shifted between types of the Australian ballot across time. In particular, while the party column format allowed a voter to quickly and conveniently cast a straight-party ticket (by voting for all candidates in that party's column), the office bloc format made casting a straight-party ballot somewhat less convenient. Because of the relative ease of casting a straight-party ballot with the party column format, it could be that the effect of the Australian ballot is more concentrated in electoral settings with such a format. We examine this hypothesis in this section by decomposing our results by ballot type. Examining outcomes related to government outputs (Table A.11), legislator effort (Table A.12), and legislator discretion from state parties (Table A.13), we do not uncover evidence indicating that ballot reform's effects were concentrated in places with a particular ballot format. For government outputs, five of the nine estimated coefficients for the office bloc format are in the hypothesized direction and none are statistically significant. In the case of legislator effort, there are several statistically significant estimates for both the party column and office bloc coefficients. However, all of these significant coefficients are not signed in the hypothesized direction. And, finally, for the roll-call discretion measure, all estimated coefficients are near to zero and non-significant.[35]

[35]See also results within Tables A.21-A.23. Again, none of the reported estimates provide evidence in support of the claim that office bloc (or party column) format in particular affected government outputs or legislator behavior as hypothesized.

Table A.11: The Australian Ballot & the Distribution of Federal Resources by Ballot Type

	(1)	(2)	(3)
Panel A. Pensions			
Party Column	-0.086	-0.085	-0.031
	(0.055)	(0.047)	(0.037)
Office Bloc	-0.017	-0.023	-0.013
	(0.067)	(0.041)	(0.041)
Panel B. Post Offices			
Party Column	-0.000	0.035	-0.023
	(0.058)	(0.055)	(0.036)
Office Bloc	0.062	0.034	-0.043
	(0.063)	(0.055)	(0.043)
Panel C. Rivers & Harbors			
Party Column	0.031	0.045	0.281
	(0.437)	(0.417)	(0.265)
Office Bloc	0.600	0.603	0.594
	(0.425)	(0.472)	(0.304)
Congress Fixed Effects	✓	✓	✓
Unit Fixed Effects	✓	✓	✓
Controls		✓	✓
State-Specific Trends			✓
Panel A Observations	800	800	800
Panel B Observations	893	893	893
Panel C Observations	532	532	532

Robust standard errors clustered by state are in parentheses. * $p < 0.05$. The dependent variable for Panel A is the logged count of pensioners. The dependent variable for Panel B is the logged count of post offices. The dependent variable for Panel C is the logged appropriations to rivers and harbors projects. Control variables include log population, primary election status, and past Republican share of the two-party presidential vote. State-specific trends are state-specific linear trends.

Table A.12: The Australian Ballot & Legislator Effort by Ballot Type

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Private Bill Sponsorship						
Party Column	-0.244*	-0.273*	-0.056	-0.167	-0.177	0.055
	(0.090)	(0.093)	(0.100)	(0.145)	(0.122)	(0.078)
Office Bloc	-0.082	-0.088	0.039	-0.002	0.001	0.105
	(0.150)	(0.138)	(0.114)	(0.170)	(0.151)	(0.093)
Panel B. Roll-Call Participation Rate						
Party Column	-0.039*	-0.040*	-0.053*	-0.008	-0.017	-0.020
	(0.016)	(0.017)	(0.024)	(0.018)	(0.017)	(0.025)
Office Bloc	-0.048	-0.047	-0.062	-0.038	-0.045	-0.026
	(0.030)	(0.025)	(0.034)	(0.029)	(0.024)	(0.030)
Panel C. Floor Speeches						
Party Column	-0.100	-0.184	-0.118	0.020	0.018	0.012
	(0.184)	(0.158)	(0.132)	(0.089)	(0.094)	(0.118)
Office Bloc	-0.009	-0.077	-0.130	-0.258*	-0.237*	-0.158
	(0.141)	(0.128)	(0.144)	(0.118)	(0.116)	(0.111)
Congress Fixed Effects	✓	✓	✓	✓	✓	✓
District Fixed Effects	✓	✓	✓			
Member Fixed Effects				✓	✓	✓
Controls		✓	✓		✓	✓
District/Member-Specific Trends			✓			✓
Panel A Observations	8,845	8,845	8,845	8,845	8,845	8,845
Panel B Observations	8,840	8,840	8,840	8,840	8,840	8,840
Panel C Observations	8,845	8,845	8,845	8,845	8,845	8,845

Robust standard errors clustered by state are in parentheses. * $p < 0.05$. The dependent variable for Panel A is the logged count of private bills introduced by the member. The dependent variable for Panel B is the roll-call participation rate (measured as a proportion). The dependent variable for Panel C is the logged count of floor speeches given by the member. Control variables include member of majority party, Republican, seniority, past electoral margin, chair or ranking member of any committee, committee fixed effects, and primary election status in the state. District- or member-specific trends are district-specific linear trends for specification (3) and member-specific linear trends for specification (6).

Table A.13: Discretion from the State Party on Roll-Call Voting

	(1)	(2)	(3)	(4)
Party Column	-0.002	0.001	-0.004	-0.002
	(0.004)	(0.004)	(0.003)	(0.004)
Office Bloc	0.001	-0.002	-0.000	-0.003
	(0.004)	(0.005)	(0.004)	(0.005)
State FEs	✓	✓		
Congress FEs	✓	✓		
State-Party FEs			✓	✓
Congress-Party FEs			✓	✓
Unit-Specific Trends		✓		✓
Observations	746	746	746	746

Robust standard errors clustered by state are in parentheses. * $p < 0.05$.
Dependent variable is the mean squared distance from a House state-party delegation to the corresponding Senate delegation.
Unit-specific trends are state-specific linear trends for model (2) and state-party-specific linear trends for model (4).

A.10 Heterogeneity by Party

In this section, we explore the possibility of heterogeneity with respect to party in the effect of the Australian ballot. In other words, we consider whether pooling all legislators together regardless of partisan affiliation perhaps obscures a meaningful relationship within one of the parties. To examine this possibility, we interact an indicator variable for Republican affiliation with the Australian ballot variable. We examine the main outcomes from the article that are measured at the legislator/district level: private bill sponsorship, roll-call participation rate, and floor speech activity. For all specifications without member fixed effects, we include the Republican constituent term of the interaction.[36]

In Table A.14, the estimated coefficient on the Australian ballot variable represents the magnitude of the relationship for Democrats. For Republicans, the sum of the estimated coefficient on Australian ballot and the estimated coefficient on the interaction term represents the magnitude of the relationship. There is little evidence consistent with the adoption of the Australian ballot resulting in increased effort from Democratic legislators: only three of the 18 estimates are positive and none of these positive estimates are statistically distinguishable from zero. For Republican legislators, only one of the 18 estimates are positive (specification 6 in Panel C), and this estimate is not statistically distinguishable from zero.[37]

[36]The member fixed effects fully absorb the Republican variable, as there is no variation within member.

[37]As noted above, the magnitude of the estimated relationship for Republican legislators is calculated by taking the sum of the estimated coefficient on Australian ballot and the estimated coefficient on the interaction term. To determine statistical significance, we conduct an F test with the null hypothesis being that the sum of the coefficients on Australian ballot and the interaction term is equal to zero.

Table A.14: The Australian Ballot & Legislator Effort by Party

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Private Bill Sponsorship						
Australian Ballot	-0.176	-0.185	0.052	-0.069	-0.073	0.132
	(0.112)	(0.107)	(0.094)	(0.160)	(0.134)	(0.073)
Australian Ballot × Republican	-0.064	-0.114	-0.235*	-0.146	-0.166	-0.199
	(0.091)	(0.086)	(0.088)	(0.187)	(0.171)	(0.167)
Panel B. Roll-Call Participation Rate						
Australian Ballot	-0.041*	-0.028	-0.031	-0.009	-0.008	0.004
	(0.020)	(0.020)	(0.027)	(0.022)	(0.021)	(0.026)
Australian Ballot × Republican	-0.021	-0.058*	-0.072*	-0.023	-0.053	-0.070
	(0.023)	(0.026)	(0.025)	(0.040)	(0.038)	(0.061)
Panel C. Floor Speeches						
Australian Ballot	-0.016	-0.127	-0.072	-0.074	-0.080	-0.206
	(0.155)	(0.140)	(0.127)	(0.118)	(0.122)	(0.150)
Australian Ballot × Republican	-0.180	-0.099	-0.078	-0.014	0.031	0.413*
	(0.181)	(0.155)	(0.136)	(0.153)	(0.144)	(0.181)
Congress Fixed Effects	✓	✓	✓	✓	✓	✓
District Fixed Effects	✓	✓	✓			
Member Fixed Effects				✓	✓	✓
Controls		✓	✓		✓	✓
District/Member-Specific Trends			✓			✓
Panel A Observations	8,845	8,845	8,845	8,845	8,845	8,845
Panel B Observations	8,840	8,840	8,840	8,840	8,840	8,840
Panel C Observations	8,845	8,845	8,845	8,845	8,845	8,845

Robust standard errors clustered by state are in parentheses. * $p < 0.05$. The dependent variable for Panel A is the logged count of private bills introduced by the member. The dependent variable for Panel B is the roll-call participation rate (measured as a proportion). The dependent variable for Panel C is the logged count of floor speeches given by the member. The Republican indicator variable (the constituent term for the interaction) is included in all specifications except those with member fixed effects, which fully absorb it. Control variables include member of majority party, seniority, past electoral margin, chair or ranking member of any committee, committee fixed effects, and primary election status in the state. District- or member-specific trends are district-specific linear trends for specification (3) and member-specific linear trends for specification (6).

A.11 Do Members Engage in Anticipatory Behavior?

For legislators from many states it is plausible that they were aware of ballot reform in advance of the subsequent election and, thus, altered their behavior in anticipation of reform. We test this hypothesis by using a leading indicator for ballot reform. Overall, we find scant evidence that legislators secured distributive goods, increased effort, or became more independent of their parties in anticipation. We report a single statistically significant estimated coefficient in the hypothesized direction (see column 6 of Panel C in Table A.16) versus five significant coefficients in the opposite direction (two of which are also in Panel C of Table A.16).

Table A.15: The Australian Ballot (in Forthcoming Election) & the Distribution of Federal Resources

	(1)	(2)	(3)
Panel A. Pensions			
Australian Ballot $_{t+1}$	-0.024	-0.060	-0.016
	(0.055)	(0.044)	(0.036)
Panel B. Post Offices			
Australian Ballot $_{t+1}$	-0.005	-0.013	-0.056
	(0.042)	(0.039)	(0.042)
Panel C. Rivers & Harbors			
Australian Ballot $_{t+1}$	0.366	0.301	0.193
	(0.333)	(0.360)	(0.220)
Congress Fixed Effects	✓	✓	✓
Unit Fixed Effects	✓	✓	✓
Controls		✓	✓
State-Specific Trends			✓
Panel A Observations	800	800	800
Panel B Observations	893	893	893
Panel C Observations	532	532	532

Robust standard errors clustered by state are in parentheses. * $p < 0.05$. The dependent variable for Panel A is the logged count of pensioners. The dependent variable for Panel B is the logged count of post offices. The dependent variable for Panel C is the logged appropriations to rivers and harbors projects. Control variables include log population, primary election status, and past Republican share of the two-party presidential vote. State-specific trends are state-specific linear trends.

Table A.16: The Australian Ballot & Legislator Effort

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Private Bill Sponsorship						
Australian Ballot $_{t+1}$	-0.264*	-0.272*	-0.150	-0.160	-0.157	-0.069
	(0.109)	(0.104)	(0.089)	(0.132)	(0.115)	(0.084)
Panel B. Roll-Call Participation Rate						
Australian Ballot $_{t+1}$	-0.037	-0.034	-0.043*	-0.020	-0.019	0.001
	(0.025)	(0.023)	(0.020)	(0.026)	(0.022)	(0.024)
Panel C. Floor Speeches						
Australian Ballot $_{t+1}$	-0.215	-0.252*	-0.271*	-0.046	-0.033	0.242*
	(0.135)	(0.108)	(0.123)	(0.126)	(0.120)	(0.113)
Congress Fixed Effects	✓	✓	✓	✓	✓	✓
District Fixed Effects	✓	✓	✓			
Member Fixed Effects				✓	✓	✓
Controls		✓	✓		✓	✓
District/Member-Specific Trends			✓			✓
Panel A Observations	8,845	8,845	8,845	8,845	8,845	8,845
Panel B Observations	8,840	8,840	8,840	8,840	8,840	8,840
Panel C Observations	8,845	8,845	8,845	8,845	8,845	8,845

Robust standard errors clustered by state are in parentheses. * $p < 0.05$. The dependent variable for Panel A is the logged count of private bills introduced by the member. The dependent variable for Panel B is the roll-call participation rate (measured as a proportion). The dependent variable for Panel C is the logged count of floor speeches given by the member. Control variables include member of majority party, Republican, seniority, past electoral margin, chair or ranking member of any committee, committee fixed effects, and primary election status in the state. District- or member-specific trends are district-specific linear trends for specification (3) and member-specific linear trends for specification (6).

Table A.17: Discretion from the State Party on Roll-Call Voting

	(1)	(2)	(3)	(4)
Australian Ballot $_{t+1}$	-0.002	-0.001	-0.002	-0.001
	(0.003)	(0.003)	(0.003)	(0.003)
State FEs	✓	✓		
Congress FEs	✓	✓		
State-Party FEs			✓	✓
Congress-Party FEs			✓	✓
Unit-Specific Trends		✓		✓
Observations	746	746	746	746

Robust standard errors clustered by state are in parentheses. * $p < 0.05$. Dependent variable is the mean squared distance from a House state-party delegation to the corresponding Senate delegation. Unit-specific trends are state-specific linear trends for model (2) and state-party-specific linear trends for model (4).

A.12 Excluding the South

Because southern States were so dominated by a single party, there is some concern that the inclusion of the South could dilute much of the effect of ballot reform. In this section, we exclude the 11 states of the former Confederacy. Again, these estimates excluding the South do not meaningfully change the substantive interpretation of any relationships.

Table A.18: The Australian Ballot & the Distribution of Federal Resources, Excluding the South

	(1)	(2)	(3)
Panel A. Pensions			
Australian Ballot	-0.065	-0.001	-0.011
	(0.053)	(0.024)	(0.021)
Panel B. Post Offices			
Australian Ballot	-0.001	0.059	0.010
	(0.051)	(0.039)	(0.019)
Panel C. Rivers & Harbors			
Australian Ballot	-0.946	-0.957	-0.092
	(0.578)	(0.594)	(0.290)
Congress Fixed Effects	✓	✓	✓
State Fixed Effects	✓	✓	✓
Controls		✓	✓
State-Specific Trends			✓
Panel A Observations	602	602	602
Panel B Observations	662	662	662
Panel C Observations	400	400	400

Robust standard errors clustered by state are in parentheses.
* $p < 0.05$. The dependent variable for Panel A is the logged count of pensioners. The dependent variable for Panel B is the logged count of post offices. The dependent variable for Panel C is the logged appropriations to rivers and harbors projects. Control variables include log population, primary election status, and past Republican share of the two-party presidential vote. State-specific trends are state-specific linear trends. The South is defined as the 11 states of the former Confederacy.

Table A.19: The Australian Ballot & Legislator Effort, Excluding the South

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Private Bill Sponsorship						
Australian Ballot	-0.049	-0.040	0.003	-0.044	-0.031	0.137
	(0.102)	(0.100)	(0.090)	(0.110)	(0.099)	(0.075)
Panel B. Roll-Call Participation Rate						
Australian Ballot	-0.008	-0.012	-0.015	0.002	-0.003	0.024
	(0.022)	(0.022)	(0.036)	(0.025)	(0.022)	(0.020)
Panel C. Floor Speeches						
Australian Ballot	-0.284	-0.255	-0.157	-0.202*	-0.187	0.039
	(0.168)	(0.155)	(0.187)	(0.093)	(0.095)	(0.082)
Congress Fixed Effects	✓	✓	✓	✓	✓	✓
District Fixed Effects	✓	✓	✓			
Member Fixed Effects				✓	✓	✓
Controls		✓	✓		✓	✓
District/Member-Specific Trends			✓			✓
Panel A Observations	6,637	6,637	6,637	6,637	6,637	6,637
Panel B Observations	6,632	6,632	6,632	6,632	6,632	6,632
Panel C Observations	6,637	6,637	6,637	6,637	6,637	6,637

Robust standard errors clustered by state are in parentheses. * $p < 0.05$. The dependent variable for Panel A is the logged count of private bills introduced by the member. The dependent variable for Panel B is the roll-call participation rate (measured as a proportion). The dependent variable for Panel C is the logged count of floor speeches given by the member. Control variables include member of majority party, Republican, seniority, past electoral margin, chair or ranking member of any committee, committee fixed effects, and primary election status in the state. District- or member-specific trends are district-specific linear trends for specification (3) and member-specific linear trends for specification (6). The South is defined as the 11 states of the former Confederacy.

Table A.20: Discretion from the State Party on Roll-Call Voting, Excluding the South

	(1)	(2)	(3)	(4)
Australian Ballot	-0.000	0.004	-0.002	0.003
	(0.006)	(0.007)	(0.005)	(0.006)
State FEs	✓	✓		
Congress FEs	✓	✓		
State-Party FEs			✓	✓
Congress-Party FEs			✓	✓
Unit-Specific Trends		✓		✓
Observations	555	555	555	555

Robust standard errors clustered by state are in parentheses. * $p < 0.05$. Dependent variable is the mean squared distance from a House state-party delegation to the corresponding Senate delegation. Unit-specific trends are state-specific linear trends for model (2) and state-party-specific linear trends for model (4). The South is defined as the 11 states of the former Confederacy.

A.13 District-Level Analysis of Rivers and Harbors

The data from Wilson (1986) measuring rivers and harbors projects and appropriations were collected at the U.S. House district level. For the sake of simplicity and concision, we aggregate the data to the state level given that the other government output outcome measures used in the article (i.e., pensions and post offices) are all measured at the state level, and the treatment (implementation of the Australian ballot) is measured at the state level. While unsurprising, it is worth noting that results from a district-level analysis are very similar to the results from the state-level analysis in the article. In Table A.21, we report results from a U.S. House district level analysis of the rivers and harbors data. Examining all 21 of the relevant estimated coefficients in Table A.21, none are statistically significant, and 11 out of 21 are positive. In other words, the district-level analysis does not provide any evidence that members elected via the Australian ballot were able to deliver more rivers and harbors appropriations/projects for their districts.

Table A.21: Rivers & Harbors Projects, District-Level Analysis

	(1)	(2)	(3)
Panel A. Main Specification: Logged Appropriations			
Australian Ballot	-0.390	-0.236	-0.300
	(0.246)	(0.296)	(0.376)
Panel B. Alternative Outcome: Logged Project Count			
Australian Ballot	-0.017	-0.001	-0.019
	(0.043)	(0.045)	(0.051)
Panel C. Decomposing by Ballot Type			
Party Column	-0.246	-0.095	-0.320
	(0.287)	(0.350)	(0.361)
Office Bloc	-0.801	-0.649	-0.835
	(0.481)	(0.578)	(0.544)
Panel D. Anticipatory Legislator Behavior			
Australian Ballot $_{t+1}$	0.151	0.188	-0.322
	(0.398)	(0.391)	(0.463)
Panel E. Excluding States in the South			
Australian Ballot	-0.786*	-0.802*	0.069
	(0.319)	(0.313)	(0.433)
Panel F. Member Fixed Effects			
Australian Ballot	0.212	0.358	-0.682
	(0.304)	(0.433)	(0.465)
Congress Fixed Effects	✓	✓	✓
District Fixed Effects	✓	✓	
Member Fixed Effects			✓
Controls		✓	✓
Unit-Specific Trends			✓
Panel A Observations	4,040	4,039	4,039
Panel B Observations	4,040	4,039	4,039
Panel C Observations	4,040	4,039	4,039
Panel D Observations	4,040	4,039	4,039
Panel E Observations	3,006	3,006	3,006
Panel F Observations	4,040	4,039	4,039

Robust standard errors clustered by state are in parentheses.
* $p < 0.05$. The dependent variable for Panels A, C, D, E, and F is the logged count of rivers and harbors projects. The dependent variable for Panel B is the logged rivers and harbors appropriations. Unit-specific trends are district-specific linear trends for Panels A-E and member-specific linear trends for Panel F.

A.14 Ideological Adaptation

To examine legislator responsiveness to constituent preferences, we utilize a similar approach to Gailmard and Jenkins (2009). We use the first dimension of Nokken-Poole (2004) scores from Lewis et al. (2022) to characterize the ideological nature of congressional voting behavior from 1876 to 1924. Following common practices in the literature, we characterize district preferences using district-level presidential vote shares. We then interact this term with the indicator for whether the secret ballot was in place. If the secret ballot strengthened the agency relationship between representatives and their constituents, we expect to observe a stronger relationship between constituent preferences and the roll-call behavior of their elected representatives.

The results are shown in Table A.22. Our within-member estimates—columns (3) and (4)—provide no evidence that, in the absence of the secret ballot, individual legislators exhibit changes in legislative behavior as the preferences of their constituents change. The estimated coefficient on Republican presidential vote share is small in magnitude and not statistically distinguishable from zero. This is the case for the main set of specifications reported in Panel A as well as all of the alternative sets of specifications reported in Panels B-D. The results also indicate that the secret ballot did not significantly change the nature of this relationship, as the interaction term is also small in magnitude and not statistically significant (again, this is the case across all sets of specifications reported in this table). These results suggest that members of Congress exhibit relatively consistent patterns of voting behavior over the courses of their career such that ballot reforms are unlikely to meaningfully shift their voting patterns in Congress.

Models (1) and (2) provide within-district estimates of legislative behavior. The coefficients for Republican vote share are positive and statistically significant (except for model (1) in Panel D), indicating that districts are more likely to select more conservative [liberal] representatives as the district becomes increasingly conservative [liberal]. However, the interaction between the Australian ballot and presidential vote share is relatively small in magnitude and statistically indistinguishable from zero, indicating that the secret ballot did not meaningfully change how legislators' voting records respond to district preferences. While we acknowledge the limitations of the data used in this analysis—for instance, the secret ballot may have also changed the degree to which presidential vote shares reasonably characterized constituent preferences—the results in Table A.22 do not support the hypothesis that the secret ballot caused

Table A.22: The Australian Ballot & Responsiveness

	(1)	(2)	(3)	(4)
Panel A. Main Specification				
Australian Ballot × GOP Pres. Share	-0.006	-0.139	0.036	-0.010
	(0.106)	(0.117)	(0.051)	(0.048)
Australian Ballot	0.050	0.048	0.027	0.018
	(0.048)	(0.047)	(0.024)	(0.025)
GOP Pres. Share	0.479*	0.472*	0.023	0.044
	(0.120)	(0.143)	(0.053)	(0.056)
Panel B. Decomposing by Ballot Type				
Party Column × GOP Pres. Share	0.026	-0.114	0.037	-0.009
	(0.123)	(0.139)	(0.053)	(0.052)
Office Bloc × GOP Pres. Share	-0.156	-0.228	0.056	0.012
	(0.130)	(0.135)	(0.059)	(0.053)
Party Column	0.042	0.062	0.026	0.020
	(0.065)	(0.060)	(0.026)	(0.028)
Office Bloc	0.080	0.044	0.020	0.007
	(0.058)	(0.057)	(0.027)	(0.028)
GOP Pres. Share	0.531*	0.496*	0.014	0.033
	(0.129)	(0.148)	(0.050)	(0.055)
Panel C. Anticipatory Legislator Behavior				
Australian Ballot $_{t+1}$ × GOP Pres. Share	-0.177	-0.206*	0.021	-0.021
	(0.120)	(0.091)	(0.049)	(0.044)
Australian Ballot $_{t+1}$	0.076	0.036	0.033	0.022
	(0.056)	(0.046)	(0.021)	(0.020)
GOP Pres. Share	0.638*	0.534*	0.037	0.055
	(0.137)	(0.130)	(0.050)	(0.057)
Panel D. Excluding States in the South				
Australian Ballot × GOP Pres. Share	-0.674	-0.879	0.156	0.133
	(0.659)	(0.472)	(0.130)	(0.120)
Australian Ballot	0.418	0.413	-0.042	-0.062
	(0.383)	(0.262)	(0.070)	(0.069)
GOP Pres. Share	1.197	1.215*	-0.100	-0.091
	(0.667)	(0.440)	(0.123)	(0.125)
District Fixed Effects	✓	✓		
Member Fixed Effects			✓	✓
Congress Fixed Effects		✓		✓
Panel A Observations	7,712	7,712	7,712	7,712
Panel B Observations	7,712	7,712	7,712	7,712
Panel C Observations	7,712	7,712	7,712	7,712
Panel D Observations	5,648	5,648	5,648	5,648

Robust standard errors clustered by state are in parentheses. * $p < 0.05$.

The dependent variable for all panels is the first dimension of Nokken-Poole scores.

legislators to become *more* responsive to district preferences.

Additionally, we examine the degree to which the secret ballot may have dampened party loyalty in the House using party unity scores. We use legislators' party unity scores from 1880 to 1930.[38] The results from several specifications are shown in Table A.23. Across various specifications of our within-district and within-legislator models, we find consistently negative coefficient estimates for the effect of the secret ballot, suggesting that the secret ballot reduced legislators' fidelity to their political parties. For our main set of specifications in Panel A, none of the estimates is statistically significant. Of the 30 estimated coefficients, we only observe two statistically significant estimates. Both of these significant estimated coefficients are in Panel B when the results are decomposed by ballot type, indicating that the office bloc ballot format may have resulted in a decreased party loyalty. However, the magnitude of all the estimates are extremely small. The dependent variable is measured on a scale ranging from zero to 100, indicating the percentage of roll calls in which a legislator votes with a majority of his party against a majority of the opposite party. The largest coefficient is -2.6, which indicates that, at most, the secret ballot reduced a legislators' level of party unity by about 2.6 percentage points. The small magnitudes of these estimates provide little evidence that the secret ballot severed legislators' commitments to their political parties.

[38]These data were obtained from https://legacy.voteview.com/k7ftp/House_Party_Unity_35-113.xls (accessed March 25, 2019).

Table A.23: The Australian Ballot & Party Unity

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Main Specification						
Australian Ballot	-0.954	-0.738	-1.522	-0.653	-0.456	-0.995
	(1.069)	(0.934)	(1.153)	(0.938)	(0.969)	(1.306)
Panel B. Decomposing by Ballot Type						
Party Column	-0.086	-0.138	-0.758	-0.127	-0.025	-0.842
	(0.929)	(0.822)	(1.184)	(1.052)	(1.029)	(1.387)
Office Bloc	-1.545	-0.817	-1.989	-1.861*	-1.651	-2.627*
	(1.292)	(1.210)	(1.489)	(0.911)	(0.970)	(1.255)
Panel C. Anticipatory Legislator Behavior						
Australian Ballot $_{t+1}$	-0.440	0.159	0.142	-0.264	-0.130	-1.476
	(1.220)	(1.173)	(1.224)	(0.927)	(0.923)	(0.864)
Panel D. Excluding States in the South						
Australian Ballot	-1.428	-0.535	-2.244	-0.001	0.055	-0.611
	(1.614)	(1.219)	(1.791)	(1.315)	(1.172)	(1.669)
Congress Fixed Effects	✓	✓	✓	✓	✓	✓
District Fixed Effects	✓	✓	✓			
Member Fixed Effects				✓	✓	✓
Controls		✓	✓		✓	✓
District/Member-Specific Trends			✓			✓
Panel A Observations	8,826	8,826	8,826	8,826	8,826	8,826
Panel B Observations	8,826	8,826	8,826	8,826	8,826	8,826
Panel C Observations	8,826	8,826	8,826	8,826	8,826	8,826
Panel D Observations	6,620	6,620	6,620	6,620	6,620	6,620

Robust standard errors clustered by state are in parentheses. * $p < 0.05$. The dependent variable for all panels is the party unity score. Control variables include member of majority party, Republican, seniority, past electoral margin, chair or ranking member of any committee, committee fixed effects, and primary election status in the state. District- or member-specific trends are district-specific linear trends for specification (3) and member-specific linear trends for specification (6).

A.15 Inclusion of FY 1882

As noted in the data section of the article, due to a gap in our panel between FY1882 and FY1886, we exclude observations from FY1882 for the main analyses. In Table A.24, we report results including the FY1882 observations in our panel. As with the primary results reported in Panel A of Table 2, the estimated coefficients across all three specifications are of substantively small magnitude and not statistically significant.

Table A.24: Pensions Rolls and the Australian Ballot, Including Observations FY1882

	ln(Pensioner Count + 1)			ln(Pension Roll Value + 1)		
	(1)	(2)	(3)	(4)	(5)	(6)
Australian Ballot	-0.043	-0.051	-0.036	-0.027	-0.036	-0.001
	(0.054)	(0.041)	(0.041)	(0.057)	(0.048)	(0.052)
Year Fixed Effects	✓	✓	✓	✓	✓	✓
State Fixed Effects	✓	✓	✓	✓	✓	✓
Controls		✓	✓		✓	✓
State-Specific Trends			✓			✓
Observations	838	838	838	800	800	800

Robust standard errors clustered by state are in parentheses. * $p < 0.05$.
Dependent variable for models (1)-(3) is the log of the count of pensionsers on the roll in the state, and dependent variable for models (4)-(6) is the log of the annual value ($) of the pension roll in the state. Control variables include log population, primary election status, and past Republican share of the two-party presidential vote. State-specific trends are state-specific linear trends.

A.16 The Secret Ballot and the Media Environment

We explore whether the secret ballot meaningfully changed the media and information environment in which voters decided between candidates. If the secret ballot improved representation by strengthening the accountability mechanism, voters would have needed to have sufficient information about the candidates between which they could choose. We explore whether the secret ballot was accompanied by a shift in the media environment that reflected a more candidate-centered informational context. To do so, we use data from Ban et al. (2019) on the newspaper coverage in each state provided to political candidates. These data are the most comprehensive data available on the nature of media coverage of politics during the period in which the secret ballot was adopted, reflecting "nearly 50 million historical newspaper pages from 2,700 local US newspapers over the years 1877-1977" (Ban et al. 2019, 1). The measure of candidate coverage reflects the number of news stories dedicated where candidates for major offices, including governor, US senator, and US House, are mentioned. Ban et al. (2019) identify newspaper stories that use the word-stem "candidate" in close proximity to a mention of one of these political offices. To be clear, our approach does not allow us to distinguish as to whether candidates *sought* greater coverage or whether the media opted to provide more coverage of candidates in response to the new electoral environment (post-ballot reform).

We follow the empirical approach from the text and estimate models for the period from 1880 to 1920 and include state and year fixed effects. In Table A.25, we examine whether the secret ballot was associated with an increased number of news stories about political candidates. The dependent variable in models (1)-(3) is the raw number of news stories about political candidates in the state in a given year; because this quantity is positively skewed, models (4)-(6) report results using the logged (+1) value of this variable. Models (1) and (4) are bivariate regressions with state and year fixed effects; models (2) and (5) include control variables to account for population (logged), whether the state used the direct primary, and past Republican share of the two-party presidential vote; and models (3) and (6) include state-specific linear trends. Table A.26 reports results from similar models; here, however, we index for the general level of political coverage newspapers provided by creating a measure used in Ban et al. (2019) on the amount of political coverage dedicated to candidates *relative* to political party committees. The dependent variable in models (1)-(3) is the percentage of stories about candidates and ranges from zero to 1, and the dependent variable in models (4)-(6) is the logged value of this quantity plus one. As before, we cluster standard errors on state in all models.

Neither table provides evidence that the secret ballot systematically increased the supply of information about political candidates. A third of the coefficients are negatively signed, opposite what we would expect if the secret ballot was accompanied by a growth in political coverage that could help voters distinguish between competing candidates. Moreover, all of the coefficients are imprecisely estimated, with none of them larger in magnitude than their standard errors. The results from these tables suggest the absence of a potential mechanism that could have

helped improve the quality of voter decision making and thereby strengthen the incentives for officeholders to represent their constituents. If voters did not have more access to candidate-specific political information—either because candidates did not perceive the incentives to secure it or because newspaper editors did not perceive the incentives to print it—it is unlikely that ballot reform would have meaningfully affected their choices. These results suggest some of the scope conditions of our findings and raise the possibility that the secret ballot could have had greater representational consequences in a more information-rich and candidate-centered environment.

Table A.25: Candidate Newspaper Coverage and the Australian Ballot

	Candidate Mentions			ln(Candidate Mentions + 1)		
	(1)	(2)	(3)	(4)	(5)	(6)
Australian Ballot	-127.442	-75.609	543.047	0.082	0.080	0.136
	(835.548)	(818.515)	(585.684)	(0.187)	(0.191)	(0.186)
Year Fixed Effects	✓	✓	✓	✓	✓	✓
State Fixed Effects	✓	✓	✓	✓	✓	✓
Controls		✓	✓		✓	✓
State-Specific Trends			✓			✓
Observations	1,374	1,374	1,374	1,374	1,374	1,374

Robust standard errors clustered by state are in parentheses. * $p < 0.05$.
Dependent variable for models (1)-(3) is the number of news stories in the state, and dependent variable for models (4)-(6) is the logged number of news stories in the state. Control variables include log population, primary election status, and past Republican share of the two-party presidential vote. State-specific trends are state-specific linear trends.

Table A.26: Relative Candidate Newspaper Coverage and the Australian Ballot

	Percent Mentions			ln(Percent Mentions + 1)		
	(1)	(2)	(3)	(4)	(5)	(6)
Australian Ballot	0.010	0.007	-0.001	0.007	0.005	-0.000
	(0.013)	(0.014)	(0.007)	(0.009)	(0.010)	(0.004)
Year Fixed Effects	✓	✓	✓	✓	✓	✓
State Fixed Effects	✓	✓	✓	✓	✓	✓
Controls		✓	✓		✓	✓
State-Specific Trends			✓			✓
Observations	1,374	1,374	1,374	1,374	1,374	1,374

Robust standard errors clustered by state are in parentheses. * $p < 0.05$.

Dependent variable for models (1)-(3) is the percentage of news stories on political candidates out of total stories on candidates and parties. The dependent variable for models (4)-(6) is the logged value of this quantity plus one. Control variables include log population, primary election status, and past Republican share of the two-party presidential vote. State-specific trends are state-specific linear trends.

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