# Why do Legislators Skip Votes?
# Position Taking versus Policy Influence

# Supplemental Appendix

## A. Multilevel Models Including Age

In this section, we present the results of models that include age. We exclude age in our primary models because we lack age information on 38% of the legislators. The results are in Table A1. Each of the models uses only the observations for which we have age data: 2,708 legislators and 1,762,826 legislator-votes. The first column includes only the random effects (a null or empty model), and the second column includes all of the covariates, including age (a full model). The third column has the Final Model with Age of the main text (which is also the second column of Table 3). The last column has the Final Model without Age for comparison (which is similar to the third column of Table 1, but using the data subset that has legislator ages).

[Table A1]

The primary finding of these models is that the results we present in the main text are robust to including age. In particular, the coefficient on our key covariate of vote margin is qualitatively the same across all specifications, including those in the main text.

We also present the caterpillar plots for the Full Model with Age (Table A1, second column) in Figure A1. The results are qualitatively similar to the caterpillar plots of the Final Model (Figure 3), particularly, the variance of legislator random effects. This means that the

variance in legislator abstention is driven by factors other than those included in the Full Model with Age.

[Figure A1]

## B. Single-level Models

This section presents a simpler, alternative approach to analyzing our data. Rather than consider all levels of analysis simultaneously using a combined crossed and nested multilevel model, we instead consider each level of analysis separately. The coefficients are generally in the same direction in these models as in the main manuscript's specification, but the patterns of statistical significance sometimes vary. Where differences arise, we have far greater confidence in the main manuscript's analysis than in the tables reported here; the reasons are given in the main manuscript. Indeed, the differences that do arise attest to the biases inherent in failing to take account of the crossed and nested nature of the data.

We begin with individual legislators. In Table B1, the dependent variable is the percentage of floor votes (between 0 and 100) missed by each legislator in 2011. This variable is left-censored at 0; no matter how dedicated a legislator may be, she cannot miss fewer than 0 votes.[1] Tobit analysis is most appropriate in the case of censored data; we include OLS estimates for comparison. In both specifications, standard errors are cluster corrected by state.[2] The individual-level models in Table B1 can test four of our hypotheses: C1, C3, D1, and M3. The strangest finding here is that legislators who live farther from their capitol miss fewer votes, not more, exactly the opposite of what Congressional work has found (C1). This odd result persists

[1] Though it is also potentially right-centered at 100, this situation did not arise in practice.
[2] Cluster corrections by chamber rather than state makes no meaningful difference.

even when we drop Alaska from the model, where commuting distances are sometimes extreme. We note that this relationship disappears from the better-specified model presented in the main manuscript, though.

[Table B1]

Next, we shift the level of analysis to the voting event. Here, the dependent variable is the percentage of legislators who missed a particular vote. First, we examine our key relationship between abstention and closeness of the vote. In Figure B2, we plot the proportion of legislators abstaining against the vote margin for each vote. We also plot the OLS regression line for this data. As the vote margin increases, abstention decreases. In other words, legislators miss votes more often when the vote is close, which supports Mayhew's logic (M1). Thus, our key finding is evident even when we do not control for other variables or for the hierarchical nature of the data.

[Figure B2]

For our multivariate analysis, found in Table B2, we rely again on Tobit, due to left-censored data. Many bills received multiple votes, so standard errors are cluster-corrected by bill. Here, we do see evidence that absenteeism is higher in lower chambers (D1), though the finding appears in only the Tobit specification. Table B2 finds clear evidence against the rational calculus (P1 and B1) and in favor of Mayhew's strategic waffling (M1 and M2). It appears that state legislators are more interested in strategically skipping close votes (M1) than in maximizing their potential influence (P1). Likewise, legislators prefer to skip votes on major bills (M2) rather than participate in the most consequential decisions (B1). When a vote comes up dealing with appropriations, fiscal policy, or executive nominations, legislators flee the chamber. Rather than

show up when the policy stakes are greatest (as predicted by B1), legislators skip the vote to avoid taking a clear stance on a major issue (as predicted by M2).

[Table B2]

Finally, we examine data at the chamber level. The dependent variable is percentage of votes missed by each chamber's median legislator.[3] In Figure B3, we plot the relationship between the abstention rate and the number of days in a legislative session for each chamber. As discussed in C4, we expect absenteeism to be higher in states with shorter sessions, and the scatterplot supports that hypothesis.

[Figure B3]

Our multivariate analysis is in Table B3. Once again, left-censoring at zero makes Tobit the appropriate specification. Standard errors are cluster corrected by state. Table B3 contains tests of P2, P3, C2, C4, and D1. We do not find that chamber size or the partisan seat margin have meaningful effects, when we control for other factors. Legislator salary appears to have a negative relationship with absenteeism; legislators who earn more money miss fewer votes.

[Table B3]

Though we include these tables for reference, we have less confidence in them, as they do not account for the crossed and nested structure of the data.

[3] We could also use the absentee rate during each chamber's median voting event. The two indicators correlate at $r=0.94$ ($p<0.0001$), though, so the choice is inconsequential.

Figure B1: Caterpillar Plots of Random Effects for Each Level (Full Model with Age)

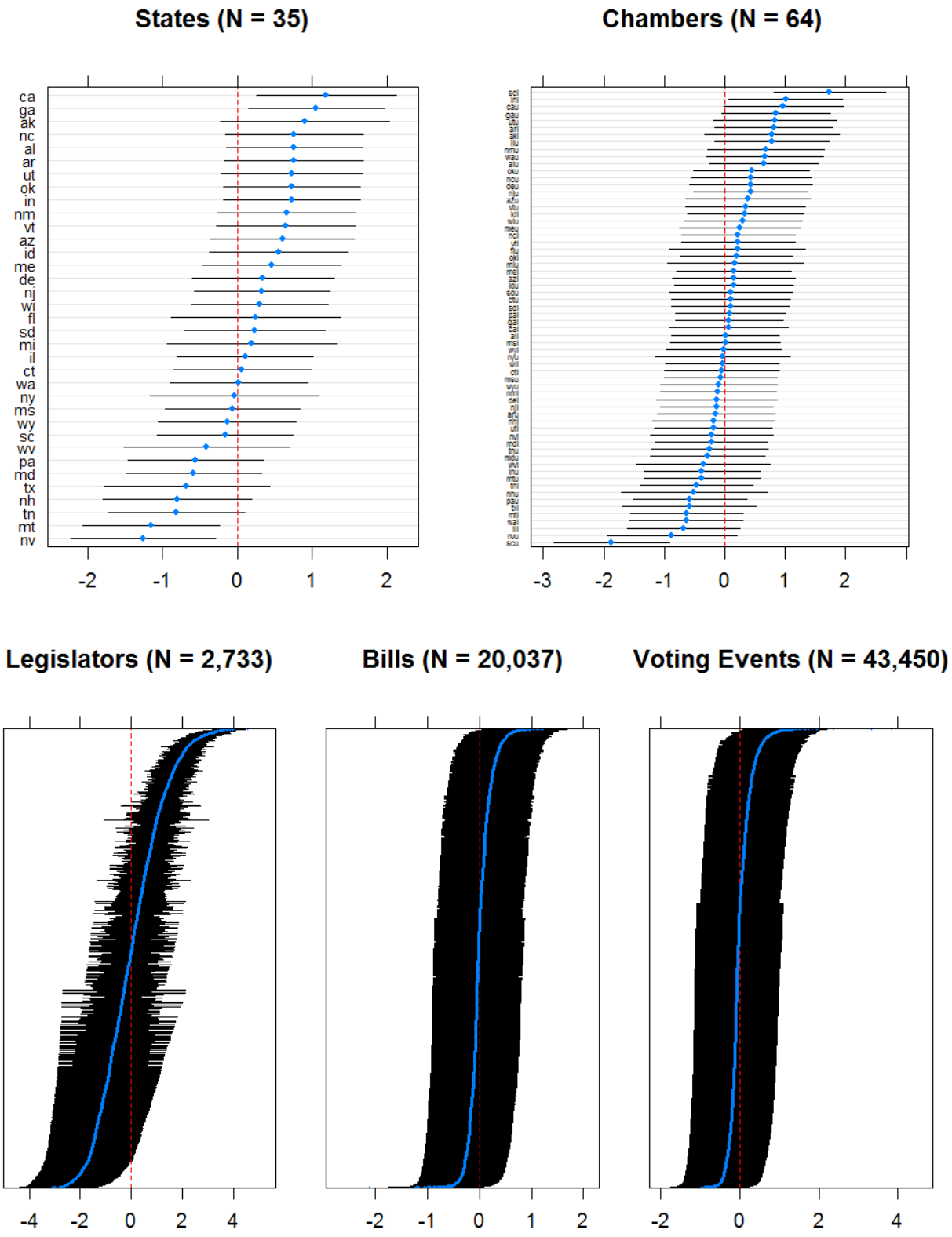

Figure B2: Absenteeism and Vote Margin for each vote.

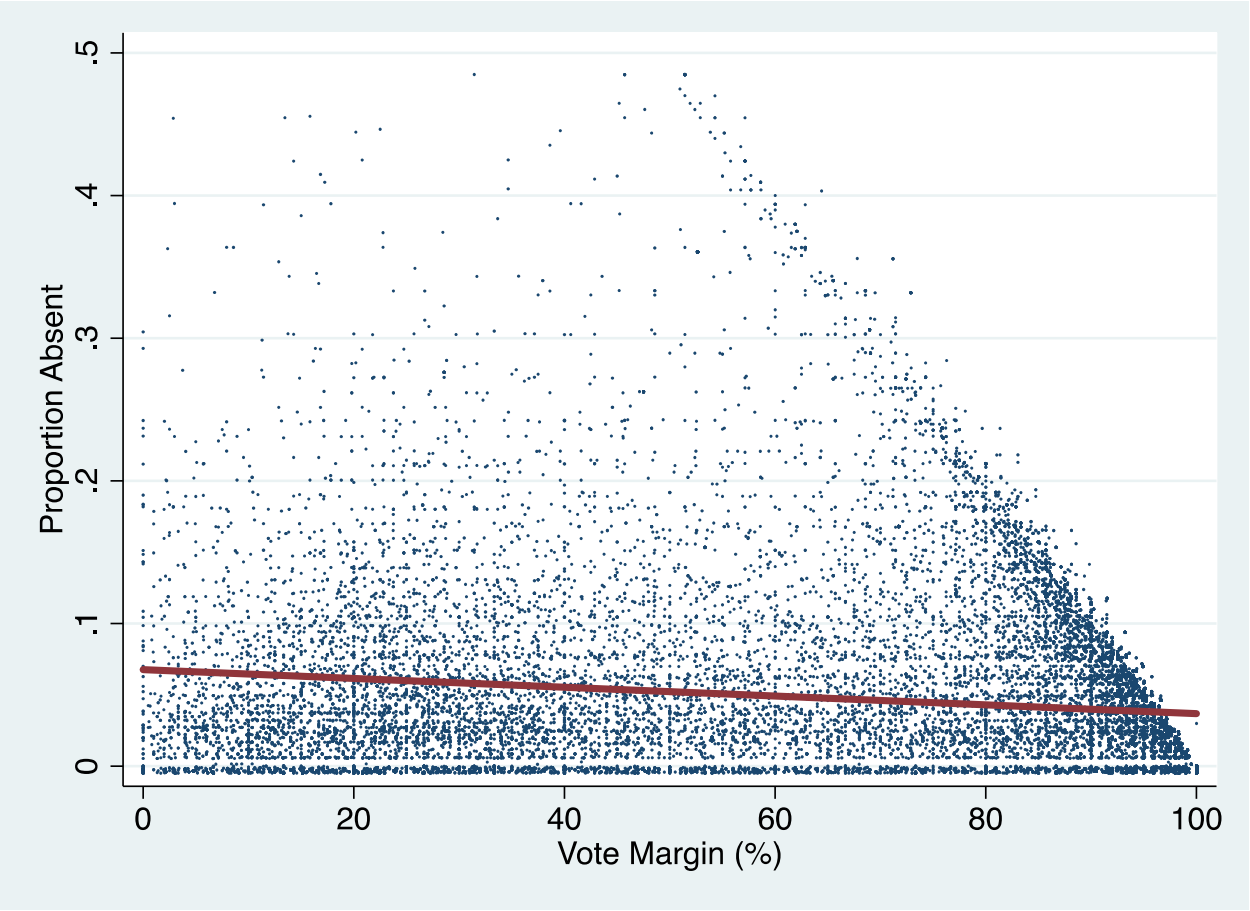

Figure B3: Absenteeism and Session length for each chamber.

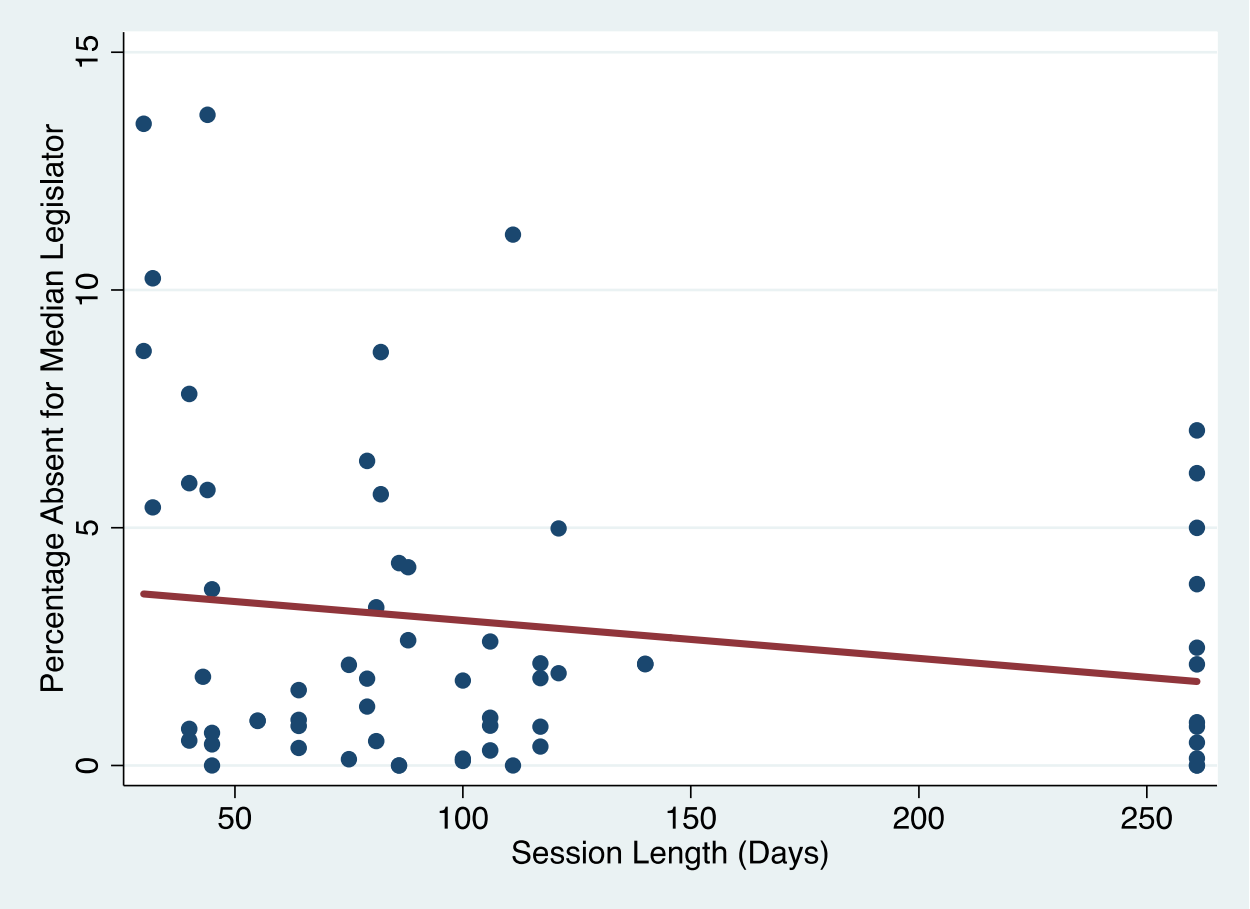

Table A1: Absenteeism in the state legislatures using the sample with age data

| Variable | Null model | Full Model with Age | Final Model with Age | Final Model without Age |
|---|---|---|---|---|
| *Level: Voting event* | (*N=43,450*) | (*N=43,450*) | (*N=43,450*) | (*N=43,450*) |
| Vote margin (%) [P1+ vs. M1−] | | −0.0062** | −0.0060** | −0.0060** |
| Bill originated in voting chamber | | −0.058** | −0.058** | −0.058** |
| *Level: Bill* | (*N=20,037*) | (*N=20,037*) | (*N=20,037*) | (*N=20,037*) |
| Appropriations [B1− vs. M2+] | | 0.42** | 0.43** | 0.43** |
| Fiscal policy [B1− vs. M2+] | | −0.31** | −0.30** | −0.31** |
| Nomination [B1− vs. M2+] | | 0.44** | 0.44** | 0.45** |
| State amendment [B1− vs. M2+] | | −0.33 | | |
| *Level: Legislator* | (*N=2,733*) | (*N=2,733*) | (*N=2,733*) | (*N=2,733*) |
| Republican | | −0.21** | −0.20** | −0.21** |
| Member of majority | | −0.22** | −0.23** | −0.20** |
| Election percentage [M3+] | | 0.0047** | 0.0050** | 0.0048** |
| log(bills sponsored) [C3+] | | 0.53* | 0.52* | 0.55* |
| Multi-member district | | 0.55 | 0.40* | 0.43* |
| Election percentage × MMD | | −0.0037 | | |
| Leadership [C3+] | | −0.45 | | |
| log(miles to capitol) [C1+] | | 0.021 | | |
| Elected in 2010 (baseline: 2007) | | −0.40 | | |
| Elected in 2009 (baseline: 2007) | | −0.78 | | |
| Elected in 2008 (baseline: 2007) | | −0.37 | | |
| Age 35-44 (baseline Age < 35) | | 0.31* | 0.33* | |
| Age 45-54 (baseline Age < 35) | | 0.087 | 0.096 | |
| Age 55-64 (baseline Age < 35) | | 0.029 | 0.045 | |
| Age 65-74 (baseline Age < 35) | | 0.087 | 0.098 | |
| Age 75-84 (baseline Age < 35) | | 0.28 | 0.30 | |
| Age > 84 (baseline Age < 35) | | 1.32** | 1.38** | |
| *Level: Chamber* | (*N=64*) | (*N=64*) | (*N=64*) | (*N=64*) |
| log(votes held today) | | −0.056** | −0.056** | −0.056** |
| Number of legislators [P3+] | | 0.0054* | 0.0062** | 0.0063** |
| GOP has chamber majority | | −0.66* | −0.61* | −0.62 |
| Partisan margin (%) [P2+] | | 0.012** | | |
| Lower chamber [D1+] | | 0.16 | | |
| *Level: State* | (*N=35*) | (*N=35*) | (*N=35*) | (*N=35*) |
| Must vote (baseline: abstain with cause) | | 1.22 | 1.05* | 1.07 |
| Abstain anytime (baseline: with cause) | | 1.13** | 1.17* | 1.13* |
| log(session length) [C4−] | | −0.15 | −0.25* | −0.25 |
| log(legislator salary) [C2−] | | −0.058 | | |
| log(legislator staff) [C2−] | | 0.32* | | |
| *Level: Legislator-vote* | (*N=1,762,826*) | (*N=1,762,826*) | (*N=1,762,826*) | (*N=1,762,826*) |
| Vote by the bill's sponsor [B2−] | | −0.59** | −0.59** | −0.58** |
| *Cross-level interactions* | | | | |
| log(bills sponsor) × log(session) [C4−] | | −0.15** | −0.15** | −0.15** |
| Leadership × log(session) [C4−] | | 0.096 | | |
| Vote margin × Election percentage | | −0.0000025 | | |
| Intercept | −4.42** | −4.88** | −2.99** | −2.86** |
| *Random effects* | *Std. Dev.* | *Std. Dev.* | *Std. Dev.* | *Std. Dev.* |
| Voting event | 0.58 | 0.56 | 0.56 | 0.56 |
| Bill | 0.45 | 0.44 | 0.44 | 0.44 |
| Legislator | 1.42 | 1.39 | 1.39 | 1.39 |
| Chamber | 0.96 | 0.76 | 0.78 | 0.79 |
| State | 0.93 | 0.82 | 0.84 | 0.86 |
| AIC | 503397 | 502280 | 502260 | 502266 |
| BIC | 503471 | 502812 | 502631 | 502563 |

*p≤0.05, **p≤0.01 (two-tailed). The dependent variable is a dichotomous indicator for missed votes (1=legislator was absent), estimated using a combined nested and crossed random effects logit model.

Table B1: Legislator characteristics and absenteeism

| | **OLS** | **Tobit** |
|---|---|---|
| Leadership [C3+] | –0.95* | –1.03 |
| | (0.46) | (0.55) |
| log(bills sponsored) [C3+] | –0.49 | –0.49 |
| | (0.32) | (0.38) |
| Republican | –0.48 | –0.91* |
| | (0.39) | (0.47) |
| Member of majority | –0.84* | –1.14* |
| | (0.39) | (0.44) |
| Lower chamber [D1+] | 0.82 | 1.22 |
| | (0.85) | (1.06) |
| log(miles to capitol) [C1+] | –0.32* | –0.39* |
| | (0.14) | (0.17) |
| Election percentage [M3+] | 0.023 | 0.031 |
| | (0.017) | (0.018) |
| Constant | 5.91** | 4.86** |
| | (1.49) | (1.54) |
| N | 4,392 | 4,392 |
| Model fit | $R^2$ 0.03 | Pseudo-$R^2$ 0.01 |
| | SER 6.93 | Sigma 7.94 (0.57) |

*Notes*: Standard errors (in parentheses) are cluster corrected by state.*p≤0.05, **p≤0.01 (two-tailed). The dependent variable is the percentage of floor votes missed by each legislator in 2011. In the Tobit specification, 760 observations are left-censored at zero. Inserting indicators for legislator age and education (from Project VoteSmart) lowers N to 2,621; neither variable is statistically significant when included.

Table B2: Voting events and absenteeism

| | **OLS** | **Tobit** |
|---|---|---|
| Bill originated in voting chamber | –0.42** | –0.53** |
| | (0.10) | (0.14) |
| Lower chamber [D1+] | 0.18 | 1.62** |
| | (0.09) | (0.12) |
| Vote margin (%) [P1+ vs. M1−] | –0.034** | –0.046** |
| | (0.002) | (0.003) |
| Appropriations [B1− vs. M2+] | 3.40** | 3.42** |
| | (0.56) | (0.58) |
| Fiscal policy [B1− vs. M2+] | 1.01** | 2.12** |
| | (0.14) | (0.16) |
| State amendment [B1− vs. M2+] | 0.88 | 0.85 |
| | (1.53) | (1.80) |
| Nomination [B1− vs. M2+] | 0.53** | 2.37** |
| | (0.16) | (0.27) |
| Constant | 7.72** | 6.47** |
| | (0.28) | (0.36) |
| N | 43,450 | 43,450 |
| Model fit | $R^2$ 0.03 | Pseudo-$R^2$ 0.01 |
| | SER 6.14 | Sigma 7.76 (0.069) |

*Notes*: Standard errors (in parentheses) are cluster-corrected by bill. *p≤0.05, **p≤0.01 (two-tailed). The dependent variable is the percentage of legislators who missed a particular voting event. In the Tobit specification, 11,557 observations are left-censored at zero. Among the bills, 7,549 bills had only one vote, 7,689 had two votes, and the rest had three or more votes.

Table B3: Chamber characteristics and absenteeism

| | **OLS** | **Tobit** |
|---|---|---|
| Lower chamber [D1+] | –0.024 | 0.11 |
| | (0.76) | (0.80) |
| GOP has chamber majority | –0.82 | –0.97 |
| | (0.86) | (0.89) |
| Partisan margin (%) [P2+] | 0.00002 | 0.005 |
| | (0.026) | (0.027) |
| Number of legislators [P3+] | 0.0006 | 0.002 |
| | (0.005) | (0.006) |
| log(legislator salary) [C2−] | –0.52* | –0.49* |
| | (0.21) | (0.23) |
| log(legislator staff) [C2−] | 0.81 | 0.79 |
| | (0.47) | (0.47) |
| log(session length) [C4−] | –1.10 | –1.26 |
| | (1.06) | (1.07) |
| Constant | 8.32 | 8.42 |
| | (4.58) | (4.78) |
| N | 64 | 64 |
| Model fit | $R^2$ 0.23 | Pseudo-$R^2$ 0.04 |
| | SER 3.13 | Sigma 3.16 (0.36) |

*Notes*: Standard errors (in parentheses) are cluster-corrected by state. *p≤0.05, **p≤0.01 (two-tailed). The dependent variable is the absentee rate (as a percentage) of each chamber's median legislator. In the Tobit specification, there are 6 observations left-censored at zero. 6 states have data for only one chamber, while 29 have data for two.