**State Politics and Policy Quarterly**

**Online Appendix – Alternative Models**

**“Are Initiatives an End Run Around the Legislative Process?**

**Divided Government and Voter Support for California Initiatives”**

**Results for Logistic Regressions with Alternative Dependent Variable**

Tables A1-A3 present results for logistic regression models using a dummy variable for whether an initiative passed. Table A1 shows the base models for the time period 1912 to 2020. These models do not include controls for the economy or campaign spending. The variable of interest, divided government, is significant and negative in one of the three models. In the Fiscal Initiatives model, divided government decreases the likelihood that an initiative will pass. This is consistent with our hypothesis that the divided setting in the capitol is a reflection of the lack of consensus on issues in the electorate.

**Table A1. Logistic Regression Models for Initiative Passage, 1912-2020**

|  |  |  |  |
| --- | --- | --- | --- |
| *Independent Variable* | All Initiatives | Fiscal Initiatives | Non-Fiscal Initiatives |
| **Divided Government** | **-.28**  **(.24)** | **-.86\*\***  **(.38)** | **.25**  **(.33)** |
| Ballot Order | -.01  (.02) | -.02  (.03) | -.00  (.02) |
| % ∆ Population | .05  (.06) | .16\*\*  (.09) | -.01  (.08) |
| Primary Election | -.22  (.33) | -.16  (.50) | -.39  (.43) |
| Year | .01\*\*  (.01) | .03\*\*\*  (.01) | .00  (.01) |
| Constant | -25.88\*\*  (11.30) | -56.93\*\*\*  (20.62) | -8.30  (14.37) |
| Pseudo R2 | .02 | .07 | .01 |
| Wald X2 | 7.94 | 14.42\*\* | 3.08 |
| N | 378 | 157 | 221 |

*\*\*\*p*<.01; \*\**p*<.05\*\*; \**p*<.10 (one-tailed)

Note: The dependent variable is a dummy variable for whether the initiative passed (1=measure passed). Robust standard errors are in parentheses.

Table A2 shows the results for models that include controls for the economy and campaign spending. This significantly shortens the time period of the data (1976-2020) because the campaign spending data is not available prior to this time. Nevertheless, the sample sizes are still adequate to perform an analysis. As shown in the table, divided government is again significant and negative in the Fiscal Initiatives model. Unexpectedly, the coefficient is significant and positive in the Non-Fiscal Initiatives model. Because the coefficient for divided government in this model meets the lower 10 percent threshold and because the positive finding is not consistent with the findings in the other logistic regression models and with the regression models in the article, we do not put much weight in this unexpected finding.

**Table A2. Logistic Regression Models for Initiative Passage, 1976-2020**

|  |  |  |  |
| --- | --- | --- | --- |
| *Independent Variable* | All  Initiatives | Fiscal  Initiatives | Non-Fiscal Initiatives |
| **Divided Government** | **-.06**  **(.31)** | **-1.09\*\***  **(.51)** | **.62\***  **(.43)** |
| Ballot Order | -.03  (.03) | .06  (.07) | -.08\*\*  (.05) |
| Unemployment Rate | .07  (.08) | .25\*\*  (.12) | -.05  (.10) |
| % ∆ Population | .47\*\*\*  (.19) | .62\*\*  (.35) | .48\*\*  (.28) |
| Logged Support Spending | .09\*\*  (.05) | .14\*\*  (.08) | .09\*  (.06) |
| Logged Oppose Spending | -.11\*\*\*  (.03) | -.14\*\*\*  (.05) | -.11\*\*\*  (.04) |
| Primary Election | -.34  (.37) | -.32  (.70) | -.71\*  (.52) |
| Year | .04\*\*  (.02) | .04  (.05) | .05\*  (.03) |
| Constant | -78.76\*\*  (47.20) | -74.34  (94.44) | -106.84\*  (65.33) |
| Pseudo R2 | .08 | .16 | .10 |
| Wald X2 | 20.96\*\*\* | 17.01\*\* | 14.27\*\*\* |
| N | 227 | 105 | 122 |

*\*\*\*p*<.01; \*\**p*<.05\*\*; \**p*<.10 (one-tailed)

Note: The dependent variable is a dummy variable for whether the initiative passed (1=measure passed). Robust standard errors are in parentheses.

The results in Table A3 show models that include an interaction term between divided government and party polarization. We hypothesized that polarization would intensify the effects of divided government on support for initiatives. Two out of the three models support this thinking. In the All Initiatives and Non-Fiscal Initiatives models, the interaction term is significant and negative. This suggests voter support for initiatives declines when there is divided government and higher levels of party polarization.

**Table A3. Logistic Regression Models for Initiative Passage, 1993-2018**

|  |  |  |  |
| --- | --- | --- | --- |
| *Independent Variable* | All  Initiatives | Fiscal  Initiatives | Non-Fiscal Initiatives |
| **Divided Government** | **.76**  **(.62)** | **.23**  **(1.04)** | **1.37\***  **(.93)** |
| Party Polarization | -.29  (.63) | .20  (.92) | -.83  (.99) |
| **Divided Government X Party Polarization** | **-.85\*\***  **(.47)** | **-.41**  **(.71)** | **-1.13\*\***  **(.66)** |
| Ballot Order | -.05  (.06) | .02  (.09) | -.10  (.09) |
| Unemployment Rate | .15\*  (.09) | .23\*  (.14) | .06  (.12) |
| % ∆ Population | 1.14\*\*\*  (.38) | 1.61\*\*\*  (.68) | 1.08\*\*  (.48) |
| Logged Support Spending | .11\*\*  (.05) | .15\*  (.11) | .12\*  (.08) |
| Logged Oppose Spending | -.11\*\*\*  (.03) | -.14\*\*\*  (.05) | -.10\*\*  (.06) |
| Primary Election | -1.13\*\*  (.56) | -2.12\*  (1.51) | -1.07\*  (.72) |
| Year | .16\*  (.10) | .12  (.17) | .24\*\*  (.14) |
| Constant | -324.70\*  (200.30) | -252.97  (336.86) | -493.49\*\*  (286.88) |
| Pseudo R2 | .14 | .23 | .14 |
| Wald X2 | 27.03\*\*\* | 18.33\*\* | 16.55\* |
| N | 144 | 70 | 74 |

*\*\*\*p*<.01; \*\**p*<.05\*\*; \**p*<.10 (one-tailed)

Note: The dependent variable is a dummy variable for whether the initiative passed (1=measure passed). Robust standard errors are in parentheses.

Overall, the results for the logistic regressions are consistent with those for the regression models presented in the main paper. Divided government is significant in fewer of the logistic regression models than the regression models, but this is probably due to the higher variance of the dependent variable, the percentage of the no vote, in the regression models. The findings for both dependent variables strongly suggest that divided government can be an indicator that voter support for initiatives will be lower under these circumstances. In addition, the high levels of party polarization that have characterized the legislative environment and the electorate in recent decades also signal that voters will be less receptive to initiative efforts.

**Results of Models with Alternative Divided Government Measures**

The results in Tables A4-A6 show models that include two different measures for divided government. One measure captures cross-branch divided government between the executive and legislative branches, while the second captures a split legislature. These models are estimated to determine whether one type of divided government is a stronger indicator of voter opposition to initiatives. We include two policy liberalism variables in these models instead of the year variable (see footnote 5 in the main paper). Both divided government variables are significant and positive in two out of the three models in Table A4. The coefficients are slightly larger for split legislature, but this is likely because there are fewer cases of a split legislature. Thus, it does not seem that one type of divided government has stronger effects than the other.

**Table A4. Regression Models for Percentage Voting No on Initiatives, 1912-2016**

|  |  |  |  |
| --- | --- | --- | --- |
| *Independent Variable* | All Initiatives | Fiscal Initiatives | Non-Fiscal Initiatives |
| **Divided Exec-Legis Branches** | **2.69\***  **(1.96)** | **7.47\*\*\***  **(2.95)** | **-1.53**  **(2.59)** |
| **Split Legislature** | **4.43\*\***  **(2.62)** | **11.56\*\*\***  **(4.34)** | **.34**  **(3.31)** |
| Ballot Order | .22\*  (.16) | .31  (.26) | .08  (.20) |
| % ∆ Population | .15  (.44) | -.02  (.59) | .63  (.56) |
| Primary Election | -.83  (1.82) | -.54  (2.64) | .65  (2.41) |
| Social Policy Liberalism | -2.13\*  (1.34) | -.91  (2.09) | -2.42\*  (1.78) |
| Economic Policy Liberalism | 8.93\*\*\*  (3.18) | 8.88\*\*  (5.04) | 6.72\*\*  (3.81) |
| Constant | 38.81\*\*\*  (7.03) | 33.71\*\*\*  (10.39) | 44.24  (8.48) |
| R2 | .06 | .13 | .09 |
| F Statistic | 2.48\*\*\* | 2.71\*\*\* | 2.63\*\* |
| N | 268 | 120 | 148 |

*\*\*\*p*<.01; \*\**p*<.05\*\*; \**p*<.10 (one-tailed)

Note: The dependent variable is the percentage of voters that voted no on the initiative. Robust standard errors are in parentheses.

In Table A5, we present results controlling for the economy and campaign spending. Only divided executive-legislative branches is marginally significant and positive in the Fiscal Initiatives model and it is marginally significant and negative in the Non-Fiscal Initiatives model. Based on these results, neither type of divided government seems to be driving voter opposition to initiatives.

**Table A5. Regression Models for Percentage Voting No on Initiatives, 1976-2016**

|  |  |  |  |
| --- | --- | --- | --- |
| *Independent Variable* | All  Initiatives | Fiscal  Initiatives | Non-Fiscal Initiatives |
| **Divided Exec-Legis Branches** | **-.04**  **(2.07)** | **4.97\***  **(3.37)** | **-3.98\***  **(2.66)** |
| **Split Legislature** | **-1.91**  **(4.71)** | **8.10**  **(10.20)** | **-4.16**  **(5.83)** |
| Ballot Order | .59\*\*\*  (.22) | .12  (.36) | .71\*\*\*  (.29) |
| Unemployment Rate | -.46  (.45) | -.87  (.70) | -.22  (.61) |
| % ∆ Population | -.60  (1.13) | .09  (1.56) | -.89  (1.64) |
| Logged Support Spending | -.63\*\*\*  (.25) | -.77\*\*\*  (.32) | -.52\*  (.39) |
| Logged Oppose Spending | .71\*\*\*  (.17) | .94\*\*\*  (.22) | .62\*\*\*  (.27) |
| Primary Election | -.18  (1.82) | -.58  (2.90) | 1.86  (2.45) |
| Social Policy Liberalism | 3.72  (2.97) | 7.02\*  (4.52) | .34  (4.04) |
| Economic Policy Liberalism | -.21  (5.03) | 1.34  (7.37) | 1.11  (6.36) |
| Constant | 46.80\*\*\*  (13.71) | 38.76  (20.65) | 50.06\*\*\*  (17.60) |
| R2 | .16 | .29 | .14 |
| F Statistic | 3.82\*\*\* | 4.61\*\*\* | 2.05\*\*\* |
| N | 198 | 93 | 105 |

*\*\*\*p*<.01; \*\**p*<.05\*\*; \**p*<.10 (one-tailed)

Note: The dependent variable is the percentage of voters that voted no on the initiative. Robust standard errors are in parentheses.

Table A6 reports results for the interactive models using divided executive-legislative branches as the divided government variable. Due to collinearity, models using an interactive term for split legislature and party polarization could not be run. The models below include an interaction term with divided executive-legislative branches and party polarization to see if polarization exacerbates the effects of divided government. As shown in the table, none of the interactive terms is significant in any of the models.

**Table A6. Regression Models for Percentage Voting No on Initiatives, 1993-2016**

|  |  |  |  |
| --- | --- | --- | --- |
| *Independent Variable* | All  Initiatives | Fiscal  Initiatives | Non-Fiscal Initiatives |
| **Divided Exec-Legis Branches** | **.50**  **(2.12)** | **.91**  **(4.07)** | **-2.34**  **(2.80)** |
| Party Polarization | 3.80  (3.59) | 8.19\*  (5.45) | .79  (5.88) |
| **Divided Exec-Legis Branches X Party Polarization** | **-4.50**  **(4.18)** | **-6.39**  **(5.92)** | **-.93**  **(7.41)** |
| Ballot Order | .60\*\*  (.33) | .59  (.49) | .29  (.48) |
| Unemployment Rate | -1.80\*\*  (.92) | -3.38\*\*  (1.44) | -.87  (1.29) |
| % ∆ Population | -5.01\*\*  (2.64) | -6.84\*  (4.68) | -3.53  (4.23) |
| Logged Support Spending | -.72\*\*\*  (.25) | -.71\*\*\*  (.25) | -.68\*  (.46) |
| Logged Oppose Spending | .81\*\*\*  (.19) | 1.00\*\*\*  (.27) | .80\*\*  (.39) |
| Primary Election | .72  (2.24) | .53  (3.25) | 1.52  (3.24) |
| Social Policy Liberalism | -22.45  (18.34) | -42.14\*  (26.52) | -11.84\*  (28.14) |
| Economic Policy Liberalism | 19.88\*\*  (10.33) | 22.84\*  (17.03) | 16.68  (15.08) |
| Constant | 89.62\*\*  (41.57) | 145.38\*\*  (60.98) | 61.48  (61.38) |
| R2 | .21 | .29 | .19 |
| F Statistic | 3.51\*\*\* | 2.77\*\*\* | 1.74 |
| N | 122 | 60 | 62 |

*\*\*\*p*<.01; \*\**p*<.05\*\*; \**p*<.10 (one-tailed)

Note: The dependent variable is the percentage of voters that voted no on the initiative. Robust standard errors are in parentheses.

Overall, the results using separate measures for different types of divided government did not demonstrate any strong differences. This shows that one type of divided government is not a stronger indicator of potential voter opposition to initiatives. Thus, the measure reported in the paper that combines divided branches and a split legislature seems to be a better signal of voter opposition.

**Regression Models Incorporating Duration of Divided Government**

Tables A7-A9 shows model results that incorporate a measure for the duration of divided government that counts the number of elections that divided government (either divided branches or a split legislature) is present. We did not include the duration variable in the final models in the paper because of multicollinearity with the main divided government variable. In Table A7, divided government variable is significant and positive in one of the three models as expected. Duration of divided government is not significant in any of these models.

**Table A7. Regression Models for Percentage Voting No on Initiatives, 1912-2020**

|  |  |  |  |
| --- | --- | --- | --- |
| *Independent Variable* | All Initiatives | Fiscal Initiatives | Non-Fiscal Initiatives |
| **Divided Government** | **2.13**  **(2.11)** | **6.75\*\***  **(3.24)** | **-2.11**  **(2.73)** |
| Duration of Divided Government | .56  (.58) | .03  (.90) | .80  (.72) |
| Ballot Order | .23\*\*  (.11) | .39\*\*  (.21) | .11  (.13) |
| % ∆ Population | -.15  (.38) | -.99\*\*  (.54) | .48  (.50) |
| Primary Election | -.46  (1.80) | -1.11  (2.63) | 1.15  (2.38) |
| Year | -.08\*\*  (.04) | -.16\*\*\*  (.05) | -.02  (.05) |
| Constant | 207.74\*\*\*  (71.30) | 370.32\*\*\*  (104.44) | 95.46  (93.55) |
| R2 | .05 | .15 | .04 |
| F Statistic | 3.69\*\*\* | 5.01\*\*\* | 1.69\*\* |
| N | 378 | 157 | 221 |

*\*\*\*p*<.01; \*\**p*<.05\*\*; \**p*<.10 (one-tailed)

Note: The dependent variable is the percentage of voters that voted no on the initiative. Robust standard errors are in parentheses.

In Table A8, it shows model results controlling for the economy and campaign spending. Divided government is significant and positive in one of the three models, while it is significant and negative in one of the models. The duration variable is significant in two out of the three models. The multicollinearity between the two variables may explain why the coefficients on divided government are negative in two of the three models and why they are positive for the duration of divided government for the same two models.

**Table A8. Regression Models for Percentage Voting No on Initiatives, 1976-2020**

|  |  |  |  |
| --- | --- | --- | --- |
| *Independent Variable* | All  Initiatives | Fiscal  Initiatives | Non-Fiscal Initiatives |
| **Divided Government** | **-.84**  **(2.89)** | **7.33\*\***  **(4.16)** | **-7.15\*\***  **(3.74)** |
| Duration of Divided Government | .98\*  (.73) | .08  (.99) | 1.76\*\*  (1.03) |
| Ballot Order | .48\*\*\*  (.20) | .13  (.35) | .65\*\*\*  (.25) |
| Unemployment Rate | -.62\*  (.39) | -1.01\*\*  (.58) | -.37  (.55) |
| % ∆ Population | -2.39\*\*  (1.15) | -1.92  (1.70) | -3.17\*\*  (1.64) |
| Logged Support Spending | -.53\*\*  (.26) | -.69\*\*  (.35) | -.58\*  (.38) |
| Logged Oppose Spending | .63\*\*\*  (.14) | .77\*\*\*  (.19) | .57\*\*\*  (.22) |
| Primary Election | .35  (1.84) | -.54  (3.05) | 3.16\*  (2.36) |
| Year | -.20\*  (.14) | -.01  (.26) | -.37\*\*  (.17) |
| Constant | 457.26\*  (289.90) | 71.07  (525.60) | 808.85\*\*  (352.59) |
| R2 | .14 | .24 | .17 |
| F Statistic | 4.68\*\*\* | 4.30\*\*\* | 3.29\*\*\* |
| N | 227 | 105 | 122 |

*\*\*\*p*<.01; \*\**p*<.05\*\*; \**p*<.10 (one-tailed)

Note: The dependent variable is the percentage of voters that voted no on the initiative. Robust standard errors are in parentheses.

Lastly, Table A9 shows results for the interactive models with duration of divided government as a control variable. All three of the interaction terms between divided government and party polarization are significant and positive as expected. The duration of divided government is not significant in any of the models.

**Table A9. Regression Models for Percentage Voting No on Initiatives, 1993-2018**

|  |  |  |  |
| --- | --- | --- | --- |
| *Independent Variable* | All  Initiatives | Fiscal  Initiatives | Non-Fiscal Initiatives |
| **Divided Government** | **-2.83**  **(3.89)** | **1.82**  **(5.44)** | **-6.99**  **(6.04)** |
| Party Polarization | 2.47  (3.14) | 2.22  (4.93) | 1.09  (4.58) |
| **Divided Government X Party Polarization** | **5.60\*\***  **(2.53)** | **4.92\***  **(3.59)** | **5.88\***  **(3.79)** |
| Duration of Divided Government | .21  (1.01) | -.65  (1.40) | .40  (1.69) |
| Ballot Order | .47\*\*  (.26) | .26  (.39) | .40  (.36) |
| Unemployment Rate | -.89\*\*  (.49) | -1.08\*  (.76) | -.43  (.70) |
| % ∆ Population | -3.64\*\*\*  (1.53) | -4.92\*\*  (2.54) | -3.82\*\*  (2.06) |
| Logged Support Spending | -.61\*\*\*  (.25) | -.67\*\*\*  (.24) | -.70\*  (.44) |
| Logged Oppose Spending | .71\*\*\*  (.16) | .83\*\*\*  (.20) | .69\*\*  (.30) |
| Primary Election | .74  (2.15) | .84  (3.08) | 1.59  (3.09) |
| Year | -1.14\*\*\*  (.46) | -1.16\*\*  (.69) | -1.04\*  (.65) |
| Constant | 2342.24\*\*\*  (915.92) | 2404.02\*  (1389.63) | 2155.18\*  (1311.09) |
| R2 | .23 | .30 | .22 |
| F Statistic | 4.34\*\*\* | 3.71\*\*\* | 1.99 |
| N | 144 | 70 | 74 |

*\*\*\*p*<.01; \*\**p*<.05\*\*; \**p*<.10 (one-tailed)

Note: The dependent variable is the percentage of voters that voted no on the initiative. Robust standard errors are in parentheses.

Overall, the inclusion of the duration of divided government did not change the main findings of the paper despite multicollinearity issues. The results show that voter opposition to initiatives rises under divided government, especially for fiscal initiatives, and is amplified by higher party polarization across all initiatives.