Replication Files Read Me for

Partisanship and the allocation of federal spending: Do same-party legislators or voters benefit from shared party affiliation with the president and House majority?*

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1 Intro

These replication files are set up so that others can obtain the original data used for the analysis and then replicate the entire analysis starting with those original files. The entire process is run using Stata statistical software. The code (or "do files") for running the analysis are in the folder "statadofiles." Script 0-0 is set up to run all of the code. You can also run each individual script (numbers 1-1 through 3-2) separately.

We also included the finalized data set that results after compiling and cleaning up the original data sources so that those without the original data can still recreate the tables and figure from the paper and appendix. This data set, called "dynes-huber_2015_partisanship_replication_final-dataset.dta" is also in the folder "statadofiles." To replicate the tables and figure, run script 3-2. (We also included the finalized data set in .csv file format for those who do not have Stata.)

The sources of the original data are listed in Table R1 in Section 2. In the current replication files, we do not include some of the proprietary data sets. Links to the website hosting these data sets and/or the contact information of the professors who originally compiled the data are listed in the references in Section 5. Even without these data sets, the analysis and can be replicated with the files included by running just script 3-2.

In these replication folders, we've included all of the original files for recreating the analysis except for the Leip data set, which has presidential election results by state from 2000 through 2008.

2 Variable Description and Data Sources

Table R1: Variable Names, Description, and Data Sources

Variable / Name in Equations	Description / Name in Tables	Data Source (Time Period) [Name and Location of File in Replication Folders]
Y	Log of All Spending	FAADS outlays: • Bickers and Stein (fiscal years 1983 to 1997) [..\faads_bickersstein\fase{YEAR}.zip\ fase{YEAR}.dta] • Berry (fiscal years 1998 to 2002) [..\faads_census_berry\ faads{YEAR}{QUARTER}.zip\ faads{YEAR}{QUARTER}.dta] • U.S. Census Bureau (fiscal years 2003 to 2010) [..\faads_census\ faads{YEAR}{QUARTER}.zip\ faads{YEAR}{QUARTER}.txt] Proportion of county population in each House District: • Missouri Census Data Center (102nd to 111th Congress or fiscal years 1992 to 2010; FAADS data prior to FY1992 were already allocated to House districts) [..\geo_countytodistrict_mable\
	Log of High-variance Spending	

		{YEAR}FIPSCounty_{CONGRESS}Districts.csv]
α	Fixed Effect for geographically constant House districts within a census	• Jacobson [..\cong_electionreturns\ jacobson_house4610.csv]
In House Majority	Member of House Majority (1=yes)	• Jacobson [..\cong_electionreturns\ jacobson_house4610.csv] • Carroll et al. [..\cong_dwnominate\ HL01111E21_PRES.dta]
House Majority Republican	House is Republican (1=yes)	
In President's Party	Member of President's Party (1=yes)	• Jacobson [..\cong_electionreturns\ jacobson_house4610.csv] • Carroll et al. [..\cong_dwnominate\ HL01111E21_PRES.dta]
President Republican	President is Republican (1=yes)	
District Republican Tendency	District Republican Tendency (-1 to 1)	• Jacobson [..\cong_electionreturns\ jacobson_house4610.csv]
State Margin in Presidential Race	Winning presidential candidate's margin in state (0 to 1)	• David and Claggett (elections from 1984 to 1996) [..\pres_electionreturns\ elections_major-offices_by-state_1872-1996.dta] • Leip (elections from 2000 to 2008) [..\pres_electionreturns\election-returns_pres_{YEAR RANGE}_by-state.csv]
Components of House Leadership Position	Committee chair (1=yes)	• Nelson (97th to 102nd Congress) [..\cong_committees\nelson_house-comm_{CONGRESS RANGE}.txt] • Stewart and Woon (103rd to 112th Congress) [..\cong_committees\ stewart_house_assignments_103-112-1.csv] [..\cong_committees\ stewart_house_members_103-112-1.csv]
	Ranking minority member on committee (1=yes)	
	Member of Appropriations Committee (1=yes)	
	Member of Ways & Means Committee (1=yes)	
	Member of party leadership (1=yes)	• Nelson (97th to 102nd Congress) [..\cong_committees\nelson_house-comm_{CONGRESS RANGE}.txt] • Heitshusen (97th to 102nd Congress) • Stewart and Woon (103rd to 112th Congress) [..\cong_committees\ stewart_house_assignments_103-112-1.csv] [..\cong_committees\ stewart_house_members_103-112-1.csv]
	Member is Republican (1=yes)	• Jacobson [..\cong_electionreturns\ jacobson_house4610.csv] • Carroll et al. [..\cong_dwnominate\ HL01111E21_PRES.dta]
	Member's last election was	• Jacobson [..\cong_electionreturns\

	close (1=vote margin < 5%)	jacobson_house4610.csv]
	Member is in first term (1=yes)	• Jacobson [..\cong_electionreturns\ jacobson_house4610.csv] • Carroll et al. [..\cong_dwnominate\ HL01111E21_PRES.dta]
Senate-Related Variables (Table A11 in the Appendix)		• Carroll et al. [..\cong_dwnominate\ HL01111E21_PRES.dta]

3 Coding Rules

The following is the coding rules for calculating each of the variables used in the regression analyses and listed in Table A1.

Log of All Spending: This is the log of all outlays—except for loans and contingent expenditures (see below)—reported in the Federal Assistance Award Data System (FAADS) as being transferred to a recipient in the House district during the fiscal year, which runs from October 1st through September 31st of the fiscal year. Outlays are adjusted to 2010 dollars before taking logs.

Outlays in FAADS are reported by program, geographic location (either the county or Congressional district as it existed in fiscal year *t*), and quarter of the fiscal year in which the funds are transferred from the federal government to the initial, nonfederal government recipient. Most outlays are reported by congressional district, but several large programs are reported by county. These are primarily transfers to individual citizens such as programs within the Social Security Administration and Department of Health and Human Services. For these transactions, we follow previous work (Bickers and Stein 1991, 1995; Berry et al. 2010) by allocating spending to the district weighted by the proportion of the county population living in that district. We also follow previous work (Bickers and Stein 1991, 1995; Berry et al. 2010) by dropping transactions that are direct loans, guaranteed/insured loans, insurance, and other reimbursable, contingent, intangible, or indirect financial assistance. This leaves block grants, formula grants, project grants, cooperative agreements, and direct payments for either specified or unrestricted use. We then aggregate the outlays by fiscal year and district.

Log of High-variance Spending: This is calculated exactly the same as the *Log of All Spending* except that only transfers from "High-Variance" programs are included in the calculation.

Each program is determined to be high-variance based on its "coefficient of variation," which we calculate in two steps: first, we divide the standard deviation of its outlays across all districts in a given year by the mean of its outlays across all districts in that same year; second, we calculate the mean, across all years, of the figure derived in step one. Following previous work, we then identified a natural break at the lower end of a histogram of the coefficients of variation. A break occurred at 1; thus programs above that break are considered high-variance. For reasons explained in the paper, we exclude districts that cross boundaries with state capitals when calculating the coefficient of variation.

Previous work uses slightly different methods for calculating the coefficient of variation and does not exclude state capital districts. Levitt and Snyder first calculate the mean amount spent from each program in each district across all years in their data. They then divide the standard deviation of that figure across all districts by its mean across all districts. They report a natural break in the coefficient of variation at 2/3 and use that as the cut off to identify high variation programs.

Berry et al. change the calculation slightly from Levitt and Snyder to account for the fact that their data cover a much larger time span. Their coefficient of variation "is equal to the standard deviation of [a program's] outlays across districts and years divided by the mean of its outlays across districts and years" (2010b, 49). Berry et al. find a natural break at 3/4 and use that as the cut off.

We adjusted the calculation of the coefficient of variation slightly to account for the possibility that programs with low variation across districts each year but high variation across years could end up being labeled as high-variation even though the variation across years might not be due to political manipulation. Like previous work, we use nominal dollars in calculating the coefficient of variation.

Geographic Fixed Effects: A series of indicator variables, one for each geographically constant House district within a census—i.e., districts that are redistricted between the normal census redistricting receive a new fixed effect, and all districts, including those in one seat states, receive new fixed effects with the census redistricting. We include new fixed effects for districts at each census to account for the fact that even one-member states may experience over time demographic and political changes that would independently affect their level of federal support. In order to link outlays to Representatives, only observations in which the district's boundaries in fiscal year *t*, the year in which spending occurred, are the same as the boundaries in calendar year *t-1*, the year in which the district's representative participated in appropriating the spending for fiscal year *t*, can be included in the analysis.

Member of House Majority: 1 if district's representative caucused with the House majority party in year *t-1*. 0 otherwise.

House is Republican: 1 if House majority party is Republican is in year *t-1*. 0 if House majority party is Democratic is in year *t-1*.

Member of President's Party: 1 if the House party with which the district's representative caucused was the same as the President's party in year *t-1*. 0 otherwise.

President is Republican: 1 if the President is a Republican in year *t-1*. 0 if the President is a Democrat in year *t-1*.

District Republican Tendency: Averaging across all presidential elections within a geographic district fixed effect, the proportion of the district's two-party vote share for the Republican presidential candidate above the average proportion of all 435 districts' two-party vote share for the Republican presidential candidate in that same presidential election.

Formally, let Z_{it} for district i in election year t be calculated as *Republican Proportion of Two-Party Vote*$_{it}$ – Average(*Republican Proportion of Two-Party Vote*$_t$). *DistrictRepublicanTendency*$_i$ is the average of Z_{it} for all years for which a district is held geographically constant between censuses. That is, we calculate a separate measure of partisanship for districts that are redrawn between Censuses as well as a separate measure in each decade for districts that persist across multiple Censuses.

The calculation for a geographically constant House district, *i*, within a decennial census redistricting period that experiences *k* presidential elections is

$$\begin{matrix} District \\ Republican \\ Tendency \end{matrix}_i = \frac{1}{k}\sum_{e=1}^{k}(Z_{it}),$$

where

$$Z_{it} = v_{it} - \left(\frac{1}{435} \sum_{j=1}^{435} v_{jt} \right),$$

and *v* is the proportion of a district's two-party vote share for the Republican presidential candidate in presidential election year, *t*, and *j* indexes all districts in the U.S.

Since outlays in year *t* are appropriated by officials elected in year *t*-2, there is a two year lag between the fiscal years of the outlays assigned to a geographic district fixed effect and the election years used to calculate *District Republican Tendency*. Thus, for districts that do not experience any redistricting between censuses, the outlays from 1984 to 1992 (1994 to 2002) [2004 to 2010] are linked to the presidential elections in 1984 and 1988 (1992, 1996, and 2000) [2004 and 2008] for purposes of calculating *District Republican Tendency*.

Our results are robust to excluding districts that are redrawn between censuses. We have also tested the sensitivity of our results to alternative measures of district partisanship. One is simply the measure of *District Republican Tendency* in the most recent election, so the measure changes over time within fixed districts. The second is a standardized measure of *District Republican Tendency*, in which we divide Z_{it} by its standard deviation before averaging across elections. Results using these alternative measures are available upon request.

Winning presidential candidate's margin in state: The winning presidential candidate's two-party vote share margin from the state in which the district resides calculated as a proportion. More formally, state margin in presidential race, *M*, for a district in state, *i*, is

$$M_i = |v_i^D - v_i^R|,$$

Where v^D is the proportion of state i's two-party vote share for the Democratic presidential candidate, and v^R is the proportion of state i's two-party vote share for the Republican presidential candidate.

Since outlays in year *t* are appropriated by officials elected in year *t-2*, the results from the most recent presidential election in either year *t-2* or year *t-4* are used to calculate this variable.

Committee chair: 1 if district's representative was the chair of a committee in year *t-1*. 0 otherwise.

Ranking minority member on committee: 1 if district's representative was the ranking minority member of a committee in year *t-1*. 0 otherwise.

Member of Appropriations Committee: 1 if district's representative was a member of the Appropriations committee in year *t-1*. 0 otherwise.

Member of Ways & Means Committee: 1 if district's representative was a member of the Ways and Means committee in year *t-1*. 0 otherwise.

Member of party leadership: 1 if district's representative was a member of the House party leadership, meaning either the Speaker of the House, Majority Leader, Majority Whip, Minority Leader, or Minority Whip in year *t-1*. 0 otherwise.

Member is Republican: 1 if district's representative caucused with the House Republican party in year *t-1*. 0 if district's representative caucused with the House Democratic party in year *t-1*.

Member's last election was close: 1 if district's representative won her last general election by a margin less than 5% points. 0 otherwise.

Member is in first term: 1 if district's representative was in her first term in the House in year *t-1*. 0 otherwise.

4 Excluded Observations

Observations that meet the following criteria are excluded from our analysis[1]:

1. Districts that were redistricted in year *t-1*;
2. Districts containing state capitals; and
3. Districts with more than one representative in year *t-1*.

The reasons for excluding these observations are explained below.

1. Districts that were redistricted in year *t-1*

As in prior work (Berry et al. 2010), we drop any observation where a district was redrawn in the previous year because we link spending in year *t* to the representative from that district in year *t-1* and because FAADS data are reported by House district as they exist for members of Congress in year *t*. In order to link outlays to Representatives, only observations in which the district's boundaries in fiscal year *t*, the year in which the transfer occurred, are the same as the boundaries in calendar year *t-1*, the year in which the district's representative participated in approving the budget for fiscal year t, can be included in the analysis.

Since all districts—save those in states with single districts—are redistricted following the decennial census, all observations in years ending with a "3" (i.e., 1983, 1993, and 2003) are dropped from the regression analysis. Although most district boundary changes occur in the census redistricting, we also account for redistricting that occurs between the census redistricting. Jacobson's election returns dataset (2011) includes a variable that indicates whether or not a district's boundaries were redrawn since the previous general election.

2. Districts containing state capitals

In calculating program variances, as well as in the regression analysis, we exclude districts that contain a state capital or include part of a county that contains a state capital. The reason is that many programs' funds ultimately delivered to individual districts are instead reported, for accounting reasons, as going to

[1] Berry et al. (2010) also exclude observations from the last three quarters of fiscal year 2002 because spending in the last three quarters of that year was erroneously reported by the new district boundaries created after the 2000 Census even though the districts of the representatives who allocated the spending for fiscal year 2002 still had the pre-2000 census redistricting boundaries. In our version of the 2002 FAADS data, we do not find evidence of this same error, so we include all four quarters of 2002 in our analysis. Furthermore, the results from our analysis do not change if we exclude either the last three quarters of 2002, the first quarter of 2002, or all of 2002.

the state capitals and therefore the county that contains the state capital. Because we are unable to correctly assign those funds to the districts to which they are ultimately allocated, we are unable to ascertain the effects of political factors on their allocation.

When we assign county spending for certain programs to individual districts based on population, including districts in capital counties likely leads to inaccurate estimates because the county total includes pass through spending directed to the state capital. (This problem is also troublesome when calculating program variances, because state capitals, unlike average House districts, represent vastly different state population sizes, generating artificial variance across district spending.) Additionally, state capitals are often very different politically from other parts of their states, which may bias estimates of the correlation between political factors and spending levels. Previous studies (Berry et al. 2010; Levitt and Snyder 1995) retain state capitals although Levitt and Snyder (1995) control for them in their regressions. We note, however, that including state capitals in the analysis does not result in any significant changes to our substantive findings. These results are presented in section 3.5.

3. Districts with more than one representative in year *t-1*

We exclude observations in which the same seat is held by multiple members in year *t-1* because of the difficulty of identifying who would be responsible for the allocation of resources to that district in year *t*. We used both the DW-NOMINATE (Carroll et al. 2012) and committee assignment (Nelson 1993; Stewart and Woon 2011) datasets to determine which seats had multiple occupants.

5 References

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United States Census Bureau. 2011. Federal Assistance Award Data System: 2003 - 2010. Accessed: 29 November 2011, http://www.census.gov/govs/www/faads.html. [These data are no longer freely available from the U.S. Census Bureau but are now housed by the National Archives although we do not know where on their website or how to request the data from them. Please contact the National Archives first about obtaining the files. In the long term, we hope to make these files publicly available online for downloading.]