Online Appendix for "Hail to the Pork?: The Influence of Federal Spending on Presidential Elections"

List of Tables

	All	All	All	All	All	Lib	Mod	Con
Change in per capita grants (in 1,000s)	0.620***	0.552***	0.493***			0.444	0.495**	0.310**
	(0.112)	(0.111)	(0.112)			(0.271)	(0.247)	(0.148)
Change in per capita grants × non-competitive state				0.341**				
				(0.140)				
Change in per capita grants × competitive state				0.792***				
				(0.168)				
Change in per capita grants × 0 co-partisans					0.075			
					(0.268)			
Change in per capita grants × 1 co-partisan					0.058			
					(0.190)			
Change in per capita grants × 2 co-partisans					0.419**			
					(0.186)			
Change in per capita grants × 3 co-partisans					1.292***			
					(0.208)			
Change in per capita income (in 1,000s)		0.225***	0.196***	0.196***	0.186***	0.524***	0.270***	0.099**
		(0.031)	(0.032)	(0.032)	(0.032)	(0.112)	(0.066)	(0.045)
Television ad difference			0.066***	0.067***	0.065***	0.063*	0.039	0.071***
			(0.012)	(0.012)	(0.012)	(0.032)	(0.025)	(0.017)
Campaign appearance difference			0.214***	0.212***	0.220***	0.315***	0.202***	0.214***
			(0.019)	(0.019)	(0.018)	(0.047)	(0.032)	(0.032)
Change in pres party House vote			0.013***	0.013***	0.012***	0.002	0.021***	0.013***
			(0.003)	(0.003)	(0.003)	(0.006)	(0.005)	(0.004)
Iraq casualties in county 2004			−0.485***	−0.483***	−0.443***	−0.690***	−0.692***	−0.323***
			(0.125)	(0.125)	(0.124)	(0.233)	(0.210)	(0.119)
Iraq casualties in county 2008			−0.264***	−0.263***	−0.244***	−0.278**	−0.344***	−0.370***
			(0.074)	(0.074)	(0.072)	(0.110)	(0.108)	(0.083)
% change in county population			−0.291	−0.320	−0.022	1.703	−1.897	1.699
			(1.231)	(1.232)	(1.219)	(3.754)	(2.589)	(1.724)
Competitive state – within 5%				0.057				
				(0.108)				
One co-partisan in Congress					0.695***			
					(0.116)			
Two co-partisans in Congress					0.923***			
					(0.118)			
Three co-partisans in Congress					1.778***			
					(0.136)			
Constant	−0.112	−0.305***	−6.647***	−6.648***	−7.313***	−1.915***	−2.730***	−3.516***
	(0.075)	(0.078)	(0.122)	(0.126)	(0.146)	(0.337)	(0.271)	(0.187)
Observations	17,976	17,976	17,799	17,799	17,799	4,216	5,808	7,765
R-squared	0.479	0.481	0.500	0.500	0.509	0.542	0.613	0.545

Robust standard errors clustered on county in parentheses
*** p<0.01, ** p<0.05, * p<0.10

Table 1: The electoral consequences of the change in federal grant spending per capita. These six models replicate the results from Tables 1-4 in the manuscript using the change in per capita grant spending in a county as the independent variable of interest, instead of the percentage change in grant spending in the county. The results are substantively identical to those presented in the manuscript. Increased per capita grant spending in a county boosts the incumbent party's prospects in the next presidential election, particularly in counties from competitive states and in counties that are represented in Congress by members of the president's party. Also consistent with theory, the relationship is significantly stronger in liberal and moderate counties than in conservative counties.

	All	All	All	All	All	Lib	Mod	Con
% change in grants	0.855***	0.771***	0.707***			0.990***	0.814***	0.285*
	(0.117)	(0.119)	(0.119)			(0.355)	(0.267)	(0.155)
% change in grants × non-competitive state				0.489***				
				(0.146)				
% change in grants × competitive state				1.139***				
				(0.187)				
% change in grants × 0 co-partisans					0.396			
					(0.278)			
% change in grants × 1 co-partisan					0.312			
					(0.212)			
% change in grants × 2 co-partisans					0.708***			
					(0.202)			
% change in grants × 3 co-partisans					1.475***			
					(0.239)			
Change in per capita income (in 1,000s)		0.191***	0.166***	0.165***	0.155***	0.455***	0.254***	0.085**
		(0.028)	(0.029)	(0.029)	(0.029)	(0.108)	(0.068)	(0.036)
Television ad difference			0.072***	0.072***	0.070***	0.075**	0.043*	0.077***
			(0.012)	(0.012)	(0.012)	(0.031)	(0.025)	(0.017)
Campaign appearance difference			0.209***	0.207***	0.214***	0.309***	0.203***	0.201***
			(0.019)	(0.019)	(0.018)	(0.047)	(0.032)	(0.032)
Change in pres party House vote			0.012***	0.013***	0.012***	0.002	0.022***	0.012***
			(0.003)	(0.003)	(0.003)	(0.006)	(0.005)	(0.004)
Iraq casualties in county 2004			−0.457***	−0.454***	−0.408***	−0.644***	−0.609***	−0.388***
			(0.125)	(0.124)	(0.123)	(0.210)	(0.191)	(0.132)
Iraq casualties in county 2008			−0.261***	−0.258***	−0.241***	−0.258***	−0.318***	−0.389***
			(0.077)	(0.077)	(0.074)	(0.096)	(0.098)	(0.090)
% change in county population			−0.137	−0.211	0.102	2.999	−1.297	1.381
			(1.215)	(1.215)	(1.208)	(3.693)	(2.576)	(1.700)
Competitive state – within 5%				−0.000				
				(0.110)				
One co-partisan in Congress					0.721***			
					(0.121)			
Two co-partisans in Congress					0.950***			
					(0.122)			
Three co-partisans in Congress					1.783***			
					(0.139)			
Constant	−0.112	−0.321***	−2.691***	−2.700***	−3.742***	−2.011***	−2.694***	−3.379***
	(0.075)	(0.078)	(0.143)	(0.150)	(0.172)	(0.320)	(0.263)	(0.185)
Observations	18,170	17,843	17,665	17,665	17,665	4,177	5,725	7,755
R-squared	0.479	0.483	0.501	0.501	0.510	0.540	0.616	0.546

Robust standard clustered on county errors in parentheses
*** p<0.01, ** p<0.05, * p<0.10

Table 2: The electoral consequences of percent change in grant spending, excluding state capital counties. Block grants which are given to the state governments and then distributed to other parts of the state are assigned to the state capital county. To insure that this is not skewing our results, these models replicate the results from Tables 1-4 excluding state capital counties. All results are virtually identical to those presented in the manuscript.

	All	All	All	All	All	Lib	Mod	Con
% change in grants	0.843***	0.754***	0.687***			1.056***	0.805***	0.299*
	(0.117)	(0.119)	(0.119)			(0.348)	(0.268)	(0.155)
% change in grants × non-competitive state				0.469***				
				(0.146)				
% change in grants × competitive state				1.123***				
				(0.187)				
% change in grants × 0 co-partisans					0.372			
					(0.275)			
% change in grants × 1 co-partisan					0.245			
					(0.213)			
% change in grants × 2 co-partisans					0.678***			
					(0.201)			
% change in grants × 3 co-partisans					1.418***			
					(0.237)			
Change in per capita income (in 1,000s)		0.201***	0.173***	0.173***	0.163***	0.460***	0.259***	0.096***
		(0.028)	(0.029)	(0.028)	(0.029)	(0.105)	(0.068)	(0.035)
Television ad difference			0.068***	0.068***	0.064***	0.059**	0.044*	0.081***
			(0.012)	(0.012)	(0.012)	(0.030)	(0.025)	(0.017)
Campaign appearance difference			0.208***	0.207***	0.214***	0.319***	0.201***	0.194***
			(0.019)	(0.019)	(0.018)	(0.045)	(0.032)	(0.032)
Change in pres party House vote			0.012***	0.013***	0.012***	0.001	0.022***	0.014***
			(0.003)	(0.003)	(0.003)	(0.006)	(0.005)	(0.004)
Iraq casualties in county 2004			−0.529***	−0.528***	−0.509***	−0.626***	−0.713***	−0.440***
			(0.134)	(0.134)	(0.138)	(0.212)	(0.220)	(0.134)
Iraq casualties in county 2008			−0.283***	−0.280***	−0.273***	−0.256***	−0.353***	−0.429***
			(0.079)	(0.078)	(0.078)	(0.098)	(0.111)	(0.092)
% change in county population			−0.311	−0.393	0.099	1.420	−1.919	1.170
			(1.211)	(1.211)	(1.202)	(3.712)	(2.585)	(1.701)
Competitive state – within 5%				−0.049				
				(0.108)				
One co-partisan in Congress					0.890***			
					(0.122)			
Two co-partisans in Congress					1.242***			
					(0.128)			
Three co-partisans in Congress					2.267***			
					(0.150)			
Lagged incumbent vote share	0.984***	0.982***	0.980***	0.979***	0.960***	1.060***	0.983***	0.949***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.013)	(0.017)	(0.008)
Constant	−2.315***	−2.176***	−1.454***	0.884***	−1.585***	−12.969***	−1.680	1.843***
	(0.247)	(0.245)	(0.292)	(0.189)	(0.297)	(0.834)	(1.057)	(0.319)
Observations	18,464	18,137	17,959	17,959	17,959	4,290	5,826	7,834
R-squared	0.905	0.905	0.909	0.909	0.911	0.882	0.824	0.948

Robust standard errors clustered on county in parentheses
*** p<0.01, ** p<0.05, * p<0.10

Table 3: Influence of the percent change in grant spending on the incumbent administration party's vote share. Instead of analyzing the effect of grant spending on the change in the incumbent administration party's vote share, these models replicate the results for Tables 1-4 by using the party's actual vote share as the dependent variable and by including it's vote share in the preceding election as an independent variable. The results are virtually identical to those presented in the manuscript across specifications.

	All	All	All	All	All	Lib	Mod	Con
% change in grants	0.690***	0.633***	0.609***			1.138***	0.683***	0.260**
	(0.097)	(0.098)	(0.099)			(0.259)	(0.203)	(0.119)
% change in grants × non-competitive state				0.395***				
				(0.117)				
% change in grants × competitive state				1.036***				
				(0.169)				
% change in grants × 0 co-partisans					0.220			
					(0.224)			
% change in grants × 1 co-partisan					0.118			
					(0.180)			
% change in grants × 2 co-partisans					0.681***			
					(0.168)			
% change in grants × 3 co-partisans					1.505***			
					(0.204)			
Change in per capita income (in 1,000s)		0.152***	0.136***	0.134***	0.130***	0.300***	0.164***	0.077***
		(0.022)	(0.023)	(0.023)	(0.023)	(0.076)	(0.051)	(0.027)
Television ad difference			0.058***	0.061***	0.059***	0.053**	0.017	0.068***
			(0.010)	(0.011)	(0.011)	(0.024)	(0.018)	(0.015)
Campaign appearance difference			0.165***	0.162***	0.167***	0.198***	0.171***	0.159***
			(0.013)	(0.014)	(0.013)	(0.030)	(0.020)	(0.022)
Change in pres party House vote			0.012***	0.012***	0.011***	0.001	0.022***	0.012***
			(0.002)	(0.002)	(0.002)	(0.005)	(0.004)	(0.003)
Iraq casualties in county 2004			−0.157***	−0.153***	−0.124**	−0.184*	−0.142*	−0.151*
			(0.058)	(0.057)	(0.057)	(0.111)	(0.079)	(0.082)
Iraq casualties in county 2008			−0.167***	−0.165***	−0.151***	−0.129**	−0.187***	−0.321***
			(0.045)	(0.045)	(0.043)	(0.058)	(0.044)	(0.059)
% change in county population			2.234***	2.103***	2.340***	0.743	1.835*	3.173***
			(0.523)	(0.524)	(0.525)	(1.467)	(1.070)	(0.649)
Competitive state – within 5%				0.155**				
				(0.073)				
One co-partisan in Congress					0.516***			
					(0.090)			
Two co-partisans in Congress					0.877***			
					(0.089)			
Three co-partisans in Congress					1.347***			
					(0.113)			
Constant	−0.084	−3.202***	−2.886***	−2.949***	−3.741***	−4.553***	−7.342***	1.754***
	(0.074)	(0.092)	(0.113)	(0.116)	(0.136)	(0.187)	(0.180)	(0.099)
Observations	18,464	18,137	17,959	17,959	17,959	4,290	5,826	7,834
R-squared	0.402	0.405	0.419	0.420	0.427	0.406	0.453	0.431

Robust standard errors clustered on county in parentheses
*** p<0.01, ** p<0.05, * p<0.10

Table 4: The electoral consequences of percent change in grant spending, without county fixed effects. These models employ identical specifications to those used to produce Tables 1-4, except that they do not include county fixed effects. All of the results are virtually identical to those presented in the manuscript.

	All	All	All	All	All	Lib	Mod	Con
% change in grants	0.697***	0.636***	0.588***			1.003***	0.684***	0.256**
	(0.093)	(0.094)	(0.094)			(0.254)	(0.190)	(0.113)
% change in grants × non-competitive state				0.385***				
				(0.114)				
% change in grants × competitive state				1.004***				
				(0.155)				
% change in grants × 0 co-partisans					0.241			
					(0.220)			
% change in grants × 1 co-partisan					0.185			
					(0.171)			
% change in grants × 2 co-partisans					0.584***			
					(0.158)			
% change in grants × 3 co-partisans					1.404***			
					(0.191)			
Change in per capita income (in 1,000s)		0.151***	0.130***	0.130***	0.122***	0.335***	0.174***	0.064**
		(0.022)	(0.022)	(0.022)	(0.023)	(0.076)	(0.048)	(0.026)
Television ad difference			0.073***	0.073***	0.072***	0.072***	0.040**	0.076***
			(0.011)	(0.011)	(0.011)	(0.026)	(0.019)	(0.015)
Campaign appearance difference			0.203***	0.202***	0.210***	0.272***	0.180***	0.194***
			(0.017)	(0.017)	(0.016)	(0.038)	(0.025)	(0.027)
Change in pres party House vote			0.010***	0.010***	0.009***	0.005	0.019***	0.008***
			(0.002)	(0.002)	(0.002)	(0.005)	(0.004)	(0.003)
Iraq casualties in county 2004			−0.209***	−0.208***	−0.174***	−0.245*	−0.192**	−0.200**
			(0.066)	(0.066)	(0.066)	(0.132)	(0.083)	(0.086)
Iraq casualties in county 2008			−0.183***	−0.181***	−0.167***	−0.150**	−0.192***	−0.346***
			(0.049)	(0.049)	(0.047)	(0.066)	(0.045)	(0.065)
% change in county population			0.505	0.529	0.587	0.019	−0.148	1.091
			(0.521)	(0.520)	(0.520)	(1.504)	(1.095)	(0.695)
Competitive state – within 5%				−0.003				
				(0.098)				
One co-partisan in Congress					0.618***			
					(0.094)			
Two co-partisans in Congress					0.967***			
					(0.100)			
Three co-partisans in Congress					1.703***			
					(0.120)			
Constant	−3.240***	−3.201***	−2.792***	−2.802***	−3.793***	−7.520***	−2.803***	−3.121***
	(0.089)	(0.089)	(0.115)	(0.121)	(0.139)	(0.296)	(0.189)	(0.147)
Observations	18,464	18,137	17,959	17,959	17,959	4,290	5,826	7,834
R-squared	0.438	0.442	0.458	0.458	0.467	0.445	0.502	0.473

Robust standard errors clustered on county in parentheses
*** p<0.01, ** p<0.05, * p<0.10

Table 5: The electoral consequences of percent change in grant spending, with state fixed effects. These models employ identical specifications to those used to produce Tables 1-4, except that they employ state fixed effects instead of county fixed effects. All of the results are virtually identical to those presented in the manuscript.

% change in grants × 0 co-partisans	0.273
	(0.295)
% change in grants × 1 co-partisan	0.267
	(0.227)
% change in grants × 2 co-partisans	0.613***
	(0.215)
% change in grants × 3 co-partisans	1.333***
	(0.246)
Change in per capita income (in 1,000s)	0.105***
	(0.030)
Television ad difference	0.071***
	(0.014)
Campaign appearance difference	0.256***
	(0.021)
Change in pres party House vote	0.008***
	(0.003)
Iraq casualties in county 2004	−0.667***
	(0.136)
Iraq casualties in county 2008	−0.601***
	(0.087)
% change in county population	1.806
	(1.332)
One co-partisan in Congress	0.564***
	(0.133)
Two co-partisans in Congress	0.828***
	(0.134)
Three co-partisans in Congress	1.647***
	(0.147)
Constant	−7.224***
	(0.162)
Observations	15,714
R-squared	0.515

Robust standard errors clustered on county in parentheses
*** p<0.01, ** p<0.05, * p<0.10

Table 6: How partisan accountability mediates the influence of federal grant spending. This model replicates Table 3, but includes data only from those counties that are located completely within a single congressional district. The results are virtually identical to those presented in the manuscript.

% change in grants	0.889***
	(0.142)
Change in per capita income (in 1,000s)	0.031
	(0.036)
Television ad difference	0.058***
	(0.012)
Campaign appearance difference	0.173***
	(0.020)
Change in pres party House vote	0.012***
	(0.003)
Iraq casualties in county 2004	−0.497***
	(0.123)
Iraq casualties in county 2008	−0.276***
	(0.077)
% change in county population	−6.915***
	(1.551)
County unemployment rate	−0.382***
	(0.052)
Constant	−6.425***
	(0.253)
Observations	14,951
R-squared	0.525

Robust standard errors clustered on county in parentheses
*** p<0.01, ** p<0.05, * p<0.10

Table 7: Base results controlling for county unemployment rate. This model replicates the full specification in Table 1, but also includes the election year unemployment rate in each county (data available from 1990 to 2008). The results are virtually identical to those presented in the manuscript.

	(1)	(2)	(3)
% increase in grants	0.773***	0.710***	0.677***
	(0.158)	(0.160)	(0.161)
% decrease in grants	−1.119***	−0.962***	−0.800**
	(0.312)	(0.315)	(0.313)
Change in per capita income (in 1,000s)		0.197***	0.169***
		(0.028)	(0.029)
Television ad difference			0.070***
			(0.012)
Campaign appearance difference			0.210***
			(0.018)
Change in pres party House vote			0.012***
			(0.003)
Iraq casualties in county 2004			−0.487***
			(0.125)
Iraq casualties in county 2008			−0.269***
			(0.075)
% change in county population			−0.377
			(1.211)
Constant	−6.283***	−6.408***	−2.696***
	(0.115)	(0.122)	(0.158)
Observations	18,464	18,137	17,959
R-squared	0.477	0.481	0.499

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.10

Table 8: The electoral consequences of increases and decreases in federal grant spending. These models replicate the results from Table 1 in the manuscript, but disaggregate the percentage change in grants measure into increases and decreases. Voters reward the incumbent president for increases in grant spending and punish him for decreases.

	(1)	(2)	(3)
Republican	1.868***	1.914***	1.876***
	(0.252)	(0.255)	(0.239)
Democrat	−0.746***	−0.735***	−0.736***
	(0.244)	(0.243)	(0.236)
% change in grants	0.617**	0.836**	−1.458**
	(0.279)	(0.359)	(0.660)
% change in grants × Republican		−0.595	
		(0.478)	
% change in grants × liberalism			0.701***
			(0.238)
Liberalism	−0.511***	−0.522***	−0.634***
	(0.077)	(0.072)	(0.074)
White	0.425	0.466*	0.564**
	(0.275)	(0.258)	(0.230)
Married	−0.013	−0.012	−0.019
	(0.114)	(0.115)	(0.117)
Black	−1.254**	−1.215**	−1.097*
	(0.631)	(0.615)	(0.615)
Education	−0.031	−0.028	−0.033
	(0.051)	(0.051)	(0.052)
Age	−0.004	−0.004	−0.003
	(0.004)	(0.004)	(0.004)
Male	−0.213*	−0.204*	−0.186*
	(0.111)	(0.109)	(0.109)
Constant	0.788*	0.718*	0.911**
	(0.413)	(0.411)	(0.437)
Observations	2,074	2,074	2,074

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.10

Table 9: Individual-level analysis of the influence of district grant spending on vote choice, excluding state fixed effects. These models replicate those presented in Table 5, but exclude state fixed effects. All results are virtually identical to those presented in the manuscript.

	(1)	(2)	(3)
Republican	1.719***	1.736***	1.721***
	(0.170)	(0.173)	(0.169)
Democrat	−0.808***	−0.809***	−0.803***
	(0.173)	(0.173)	(0.173)
% change in grants	0.500***	0.582**	−0.500
	(0.193)	(0.231)	(0.547)
% change in grants × Republican		−0.237	
		(0.328)	
% change in grants × liberalism			0.348*
			(0.193)
Liberalism	−0.507***	−0.508***	−0.552***
	(0.052)	(0.052)	(0.056)
White	0.583***	0.585***	0.610***
	(0.189)	(0.188)	(0.184)
Married	0.139	0.140*	0.138
	(0.085)	(0.085)	(0.085)
Black	−1.239***	−1.220***	−1.207***
	(0.453)	(0.450)	(0.450)
Education	0.011	0.011	0.012
	(0.040)	(0.040)	(0.041)
Age	0.001	0.001	0.001
	(0.003)	(0.003)	(0.003)
Male	−0.102	−0.100	−0.096
	(0.083)	(0.082)	(0.083)
Constant	−0.299	−0.316	−0.238
	(0.708)	(0.708)	(0.718)
Observations	2,402	2,402	2,402

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.10

Table 10: Individual-level analysis of the influence of district grant spending on vote choice, excluding likely voter weights. These models replicate those presented in Table 5, but they do not employ Gallup's likely voter weights. All results are virtually identical to those presented in the manuscript.