Online Appendix

How Do Campaign Spending Limits Affect Elections? Evidence from United Kingdom 1885-2019

Appendix

Contents

A.1. Data Quality

A.1.1. How Reliable Is the Campaign Spending Data?

There are three key concerns one needs to keep in mind when interpreting the results. Firstly, to what extent were candidates incentivized to disclose true and accurate information? The extensive disclosure requirements and the threat of high fines for reporting erroneous information would suggest that massive discrepancies between actual campaign activities and reported spending are unlikely.

However, certain types of expenditures are notoriously difficult to audit. While advertisement costs are fairly easy to verify against receipts, it is more difficult, if not to say impossible, to accurately account for labor. For example, it is a challenge to verify the actual number of hours a campaign staffer worked for a given salary.

Secondly, the data does not reflect pre-dissolution campaign activities. The reported numbers reflect candidates' expenditures during the period from the day the election is called to the day of the general election. If a party engages in campaign activities, such as distributing printed materials in a particular constituency, say, a year prior to the general election, the costs of these activities do not count against the spending limit faced by the representing candidate.[1]

Thirdly, the spending limits only apply to the individual candidates, not their parties. The major national parties are, for obvious reasons, keenly interested in winning seats in key swing constituencies and, as a result, they may intensify their campaign activities in these constituencies. Costs only count against a candidate's spending limit when their name is explicitly mentioned in the campaign material, but due to the nature of the first-past-

[1]Expenditures before the election date is announced are permitted if they are designed to promote the local party rather than the individual candidate. For further details, see **?**, chapter 9

the-post electoral system used in British elections, campaigning for the party in a particular constituency is de facto equivalent to campaigning for the individual candidate, and this blurs the line between costs incurred by individual candidates and their parties.

As a consequence of the three caveats discussed above, the reported spending may not fully account for the true costs of campaigning, and one has to keep this in mind when interpreting the results presented below. However, any reporting issues are presumably somewhat constant from one year to the next within each constituency. Whereas reporting issues like these may bias estimates in simple cross-sectional studies, they are less likely to do so in a design leveraging within-constituency variation. Moreover, if spending limits are only rules de jure that do not restrict any campaign behavior de facto, this would bias towards finding no effects of spending limits on electoral competition.

A.1.2. Data Collection Process

The data was digitized by manually entering all information into excel files.[2] The information pertaining to each general election was entered by two independent research assistants (or one research assistant and myself), and then the two files were compared to check for inconsistencies.

While the vast majority of candidates/agents submitted the spending returns in a timely manner, there are some missing cases in the data. When I merge the spending information with election outcomes, I can check whether candidates reported their spending. None of the spending returns are available for the 1918 general election, and none of the spending returns pertaining to by elections, with the exception of the period 2008-2013, are available. Other than that, the data contains information on almost all (99.7%) parliamentary candidates. Table A.1 shows how this number varies over time.

To minimize errors in the data from typos in spending reports, data-entry mistakes etc., I implement a number of checks to flag potential issues. In particular:

1. Check that the reported aggregated spending is equal to the sum of the disaggregated spending.

2. Check that the limited spending is not greater than the spending limit.

3. Check that the reported spending limit is equal to the predicted spending limit calculated using the relevant formula and inputs.

4. Check that formula inputs (constituency type and size of the electorate) match previously published information.

[2]Initially I tried to automate the digitization process, but this induced a high number errors in the data.

Table A.1: **Missing Spending Returns**

Period	# Missing Candidate Reports	Total # Candidates	Pct. Reporting
1885-1917	13	8,935	99.85
1919-1944	9	8,685	99.90
1945-1969	7	11,336	99.94
1970-1996	80	13,703	99.42
1997-2019	91	28,283	99.68
Total	200	70742	99.72

NOTE: Due to the loss of all the filed spending reports, the election of 1918 is excluded from the calculations.

Table A.2: **Spending Returns with Irreconcilable Inconsistencies**

Period	# Inconsistent Candidate Reports	Total # Candidates	Pct. Inconsistencies
1885-1917	80	8,935	0.90
1919-1944	12	8,685	0.14
1945-1969	5	11,336	0.04
1970-1996	15	13,703	0.11
1997-2019	8	28,283	0.03
Total	120	70822	0.17

NOTE: Due to the loss of all the filed spending reports, the election of 1918 is excluded from the calculations.

5. Check that votes reported in spending limit files are consistent with previously published information.

Whenever any of these checks reveal an inconsistency in the data, I consult the original files and other sources to identify the reason for the inconsistency. In most cases, the inconsistencies can be reconciled, but in some cases it is not possible. In those cases, I make a note of the inconsistency. Table A.2 reports the number of irreconcilable inconsistencies in the data.

A.2. Spending Limits

A.2.1. Spending Limit Formula

Table A.3: Spending Limit Formula.

Period	Borough	County
1885-1917	$\begin{cases} 350 & \text{if } electors < 2000 \\ 380 + 30 \times \left\lfloor \frac{electors}{1000} - 2 \right\rfloor & \text{if } electors \geq 2000 \end{cases}$	$\begin{cases} 650 & \text{if } electors < 2000 \\ 710 + 60 \times \left\lfloor \frac{electors}{1000} - 2 \right\rfloor & \text{if } electors \geq 2000 \end{cases}$
1918-1928	$\frac{5}{240} \times electors$	$\frac{7}{240} \times electors$
1929-1948	$\frac{6}{240} \times electors$	$\frac{7}{240} \times electors$
1949-1968	$450 + \frac{1.5}{240} \times electors$	$450 + \frac{2}{240} \times electors$
1969-1973	$750 + \frac{1}{20} \times \left\lfloor \frac{electors}{8} \right\rfloor$	$750 + \frac{1}{20} \times \left\lfloor \frac{electors}{6} \right\rfloor$
1974-1977	$1075 + \frac{6}{100} \times \left\lfloor \frac{electors}{8} \right\rfloor$	$1075 + \frac{6}{100} \times \left\lfloor \frac{electors}{6} \right\rfloor$
1978-1981	$1750 + \frac{1.5}{100} \times electors$	$1750 + \frac{2}{100} \times electors$
1982-1986	$2700 + \frac{2.3}{100} \times electors$	$2700 + \frac{3.1}{100} \times electors$
1987-1991	$3370 + \frac{2.9}{100} \times electors$	$3370 + \frac{3.8}{100} \times electors$
1992-1996	$4430 + \frac{3.7}{100} \times electors$	$4430 + \frac{4.9}{100} \times electors$
1997-2000	$4965 + \frac{4.2}{100} \times electors$	$4965 + \frac{5.6}{100} \times electors$
2001-2004	$5483 + \frac{4.6}{100} \times electors$	$5483 + \frac{6.2}{100} \times electors$
2005-2010	$7150 + \frac{5}{100} \times electors$	$7150 + \frac{7}{100} \times electors$
2011-2019	$8700 + \frac{6}{100} \times electors$	$8700 + \frac{9}{100} \times electors$

Note: During the period 2001-2004, the formula for boroughs in Scotland was: $5483 + \frac{5}{100} \times electors$

A.2.2. Descriptive Statistics on Spending Limit Reforms

Table A.4: **Changes in Spending Limits in Counties and Boroughs in Reform Years**

Reform	Counties				Boroughs			
Year	Mean	St. Dev.	Min	Max	Mean	St. Dev.	Min	Max
1918	-106,849.1	57,363.5	-376,948.6	-61,513.8	-24,889.1	13,418.6	-63,083.9	25,600.6
1929	11,890.6	8,202.7	-360.0	73,229.6	17,699.1	7,293.6	7,370.3	50,682.9
1950	-27,498.2	12,877.9	-89,357.0	-2,759.3	-18,350.5	10,895.4	-45,468.3	10,727.0
1970	3,433.6	386.1	2,625.5	5,590.0	3,010.5	305.6	2,059.7	4,104.0
1974	-114.2	870.7	-5,591.7	4,042.4	-78.7	346.6	-1,693.2	1,302.9
1979	-2,851.9	354.5	-3,687.6	-534.8	-3,246.5	244.4	-3,993.7	-2,250.4
1983	-1,215.6	1,291.6	-5,617.1	580.0	-751.2	546.1	-2,225.3	973.0
1987	778.3	241.8	79.5	2,520.8	606.7	203.3	-286.3	1,436.9
1992	-665.0	224.8	-2,320.8	67.7	-859.8	217.4	-1,820.6	450.1
1997	-387.0	2,794.2	-31,545.6	1,438.3	-217.0	348.5	-1,821.8	899.7
2001	-56.0	167.0	-590.9	620.0	-165.1	205.1	-822.7	507.4
2005	2,035.8	248.8	1,165.3	3,201.5	1,666.1	202.9	931.3	2,406.7
2015	764.6	235.5	-289.7	1,654.5	239.1	220.5	-234.1	1,245.2

A.3. Robustness to Alternative Specifications

In this section, I show how the results are robust to alternative specifications.

A.3.1. Adjusting for Deposits Lost in Previous Election

Table A.5: **Adjusting for Deposits Lost in Previous Election: Spending Effects.**

	Spending			
Spending Limit (£10,000)	6094.60	5543.09	5353.25	6298.90
	(118.28)	(151.72)	(393.86)	(782.30)
Observations	18,000	18,000	18,000	18,000
Constituencies	3,733	3,733	3,733	3,733
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓
$Lost\ Deposits_{i,t-1}$	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.6: **Adjusting for Deposits Lost in Previous Election: Competition Effects.**

	Candidates			
Spending Limit (£10,000)	-0.09	-0.05	-0.09	-0.04
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	18,000	18,000	18,000	18,000
Constituencies	3,733	3,733	3,733	3,733
	Effective Candidates			
Spending Limit (£10,000)	-0.04	-0.02	-0.08	-0.04
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	18,000	18,000	18,000	18,000
Constituencies	3,733	3,733	3,733	3,733
	Effective Spenders			
Spending Limit (£10,000)	-0.06	-0.04	-0.08	-0.04
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	17,967	17,967	17,967	17,967
Constituencies	3,733	3,733	3,733	3,733
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓
$Lost\ Deposits_{i,t-1}$	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.7: **Adjusting for Deposits Lost in Previous Election: Constituency-level Incumbency Effects**

	Incumbent Vote %			
Spending Limit (£10,000)	0.73	0.39	0.63	0.77
	(0.05)	(0.07)	(0.25)	(0.36)
Observations	15,098	15,098	15,098	15,098
Constituencies	3,682	3,682	3,682	3,682
	Incumbent Spending %			
Spending Limit (£10,000)	1.08	0.87	0.58	0.72
	(0.06)	(0.08)	(0.25)	(0.42)
Observations	15,098	15,098	15,098	15,098
Constituencies	3,682	3,682	3,682	3,682
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, electors$			✓	✓
α_i				✓
$Lost\ Deposits_{i,t-1}$	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.8: **Adjusting for Deposits Lost in Previous Election: Individual-level Incumbency Effects.**

	% Spending		% Votes	
Incumbent	2.24	1.10	3.57	2.73
	(0.23)	(0.33)	(0.21)	(0.29)
Incumbent × Spending Limit (£10,000)		0.23		0.19
		(0.06)		(0.05)
Spending Limit (£10,000)		0.00		0.02
		(0.09)		(0.09)
Observations	70,651	70,362	72,425	72,108
α_j	✓	✓	✓	✓
δ_{pt}	✓	✓	✓	✓
Lost Deposits$_{j,t-1}$	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.9: **Adjusting for Deposits Lost in Previous Election: Partisan Effects**

	Spending	% Spending	% Votes
Spending Limit (£10,000)	5807.52	0.38	0.22
	(328.57)	(0.15)	(0.14)
Spending Limit (£10,000) × Labour	-3967.23	-1.15	-1.21
	(474.07)	(0.27)	(0.28)
Spending Limit (£10,000) × Liberal (Dem.)	-361.18	-0.30	0.06
	(473.53)	(0.18)	(0.19)
Spending Limit (£10,000) × Other	-1232.39	-0.45	-0.12
	(802.09)	(0.34)	(0.32)
Observations	70,536	70,362	72,108
α_j	✓	✓	✓
δ_{pt}	✓	✓	✓
Lost Deposits$_{i,t-1}$	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

A.3.2. Adjusting for Previous Competitiveness

Table A.10: **Adjusting for Previous Competitiveness: Spending Effects.**

	Spending			
Spending Limit (£10,000)	6198.54	5543.18	5509.28	6264.50
	(106.40)	(146.30)	(376.31)	(772.95)
Observations	17,999	17,999	17,999	17,999
Constituencies	3,733	3,733	3,733	3,733
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓
$Competitive\ Constituency_{i,t-1}$	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.11: **Adjusting for Previous Competitiveness: Competition Effects.**

	Candidates			
Spending Limit (£10,000)	-0.15	-0.08	-0.09	-0.04
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	17,999	17,999	17,999	17,999
Constituencies	3,733	3,733	3,733	3,733
	Effective Candidates			
Spending Limit (£10,000)	-0.04	-0.02	-0.08	-0.04
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	17,999	17,999	17,999	17,999
Constituencies	3,733	3,733	3,733	3,733
	Effective Spenders			
Spending Limit (£10,000)	-0.07	-0.04	-0.08	-0.04
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	17,966	17,966	17,966	17,966
Constituencies	3,733	3,733	3,733	3,733
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓
$Competitive\ Constituency_{i,t-1}$	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.12: **Adjusting for Previous Competitiveness: Constituency-level Incumbency Effects**

	Incumbent Vote %			
Spending Limit (£10,000)	0.85	0.43	0.42	0.79
	(0.05)	(0.06)	(0.21)	(0.35)
Observations	15,097	15,097	15,097	15,097
Constituencies	3,682	3,682	3,682	3,682
	Incumbent Spending %			
Spending Limit (£10,000)	1.21	0.92	0.46	0.73
	(0.05)	(0.07)	(0.22)	(0.41)
Observations	15,097	15,097	15,097	15,097
Constituencies	3,682	3,682	3,682	3,682
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, electors$			✓	✓
α_i				✓
$Competitive\ Constituency_{i,t-1}$	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.13: **Adjusting for Previous Competitiveness: Individual-level Incumbency Effects.**

	% Spending		% Votes	
Incumbent	2.62	2.16	4.58	4.57
	(0.28)	(0.40)	(0.26)	(0.37)
Incumbent × Spending Limit (£10,000)		0.08		0.00
		(0.07)		(0.06)
Spending Limit (£10,000)		-0.02		0.05
		(0.10)		(0.09)
Observations	56,902	56,687	57,361	57,133
α_j	✓	✓	✓	✓
δ_{pt}	✓	✓	✓	✓
$Competitive\ Constituency_{i,t-1}$	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.14: **Adjusting for Previous Competitiveness: Partisan Effects**

	Spending	% Spending	% Votes
Spending Limit (£10,000)	6205.58	0.21	0.17
	(346.42)	(0.16)	(0.16)
Spending Limit (£10,000) × Labour	-4345.21	-0.96	-1.13
	(506.78)	(0.28)	(0.32)
Spending Limit (£10,000) × Liberal (Dem.)	-504.01	-0.14	0.09
	(511.71)	(0.19)	(0.21)
Spending Limit (£10,000) × Other	-1535.98	-0.28	-0.06
	(849.55)	(0.36)	(0.35)
Observations	56,861	56,687	57,133
α_j	✓	✓	✓
δ_{pt}	✓	✓	✓
$Competitive\ Constituency_{i,t-1}$	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

A.3.3. Adjusting for Previous Margin of Victory

Table A.15: **Adjusting for Previous Margin of Victory: Spending Effects.**

	Spending			
Spending Limit (£10,000)	6377.36	5627.92	5420.99	6291.38
	(102.85)	(140.36)	(359.77)	(781.23)
Observations	17,999	17,999	17,999	17,999
Constituencies	3,733	3,733	3,733	3,733
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓
$Victory\ Margin_{\ i,t-1}$	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.16: **Adjusting for Previous Margin of Victory: Competition Effects.**

	Candidates			
Spending Limit (£10,000)	-0.15	-0.08	-0.09	-0.04
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	17,999	17,999	17,999	17,999
Constituencies	3,733	3,733	3,733	3,733
	Effective Candidates			
Spending Limit (£10,000)	-0.04	-0.02	-0.08	-0.04
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	17,999	17,999	17,999	17,999
Constituencies	3,733	3,733	3,733	3,733
	Effective Spenders			
Spending Limit (£10,000)	-0.07	-0.04	-0.08	-0.04
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	17,966	17,966	17,966	17,966
Constituencies	3,733	3,733	3,733	3,733
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓
$Victory\ Margin_{\ i,t-1}$	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.17: **Adjusting for Previous Margin of Victory: Constituency-level Incumbency Effects**

	Incumbent Vote %			
Spending Limit (£10,000)	0.61	0.31	0.54	0.77
	(0.04)	(0.05)	(0.16)	(0.35)
Observations	15,097	15,097	15,097	15,097
Constituencies	3,682	3,682	3,682	3,682
	Incumbent Spending %			
Spending Limit (£10,000)	1.05	0.84	0.53	0.72
	(0.04)	(0.06)	(0.20)	(0.41)
Observations	15,097	15,097	15,097	15,097
Constituencies	3,682	3,682	3,682	3,682
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, electors$			✓	✓
α_i				✓
$Victory\ Margin_{\ i,t-1}$	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.18: **Adjusting for Previous Margin of Victory: Individual-level Incumbency Effects.**

	% Spending		% Votes	
Incumbent	2.59	2.14	4.57	4.55
	(0.29)	(0.40)	(0.27)	(0.38)
Incumbent × Spending Limit (£10,000)		0.08		0.00
		(0.07)		(0.06)
Spending Limit (£10,000)		-0.00		0.06
		(0.10)		(0.10)
Observations	56,902	56,687	57,361	57,133
α_j	✓	✓	✓	✓
δ_{pt}	✓	✓	✓	✓
$Victory\ Margin_{\ i,t-1}$	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.19: **Adjusting for Previous Margin of Victory: Partisan Effects**

	Spending	% Spending	% Votes
Spending Limit (£10,000)	6194.04	0.22	0.17
	(346.39)	(0.16)	(0.17)
Spending Limit (£10,000) × Labour	-4338.25	-0.97	-1.14
	(505.98)	(0.28)	(0.32)
Spending Limit (£10,000) × Liberal (Dem.)	-514.65	-0.13	0.10
	(511.22)	(0.19)	(0.22)
Spending Limit (£10,000) × Other	-1557.52	-0.25	-0.04
	(850.20)	(0.36)	(0.35)
Observations	56,861	56,687	57,133
α_j	✓	✓	✓
δ_{pt}	✓	✓	✓
$Victory\ Margin_{\ i,t-1}$	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

A.3.4. Region-by-Time Fixed Effects

Table A.20: **Region-by-Time Fixed Effects: Spending Effects.**

	Spending			
Spending Limit (£10,000)	6406.35	5634.29	4365.06	5565.42
	(104.31)	(142.16)	(375.75)	(650.27)
Observations	21,282	21,282	21,282	21,282
Constituencies	3,853	3,853	3,853	3,853
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.21: **Region-by-Time Fixed Effects: Competition Effects.**

	Candidates			
Spending Limit (£10,000)	-0.17	-0.09	-0.11	-0.04
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	21,282	21,282	21,282	21,282
Constituencies	3,853	3,853	3,853	3,853
	Effective Candidates			
Spending Limit (£10,000)	-0.05	-0.02	-0.11	-0.03
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	21,282	21,282	21,282	21,282
Constituencies	3,853	3,853	3,853	3,853
	Effective Spenders			
Spending Limit (£10,000)	-0.07	-0.05	-0.11	-0.04
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	21,249	21,249	21,249	21,249
Constituencies	3,853	3,853	3,853	3,853
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.22: **Region-by-Time Fixed Effects: Constituency-level Incumbency Effects**

	Incumbent Vote %			
Spending Limit (£10,000)	0.78	0.40	1.36	0.35
	(0.05)	(0.07)	(0.21)	(0.38)
Observations	15,098	15,098	15,098	15,098
Constituencies	3,682	3,682	3,682	3,682
	Incumbent Spending %			
Spending Limit (£10,000)	1.17	0.90	1.14	0.77
	(0.05)	(0.08)	(0.20)	(0.43)
Observations	15,098	15,098	15,098	15,098
Constituencies	3,682	3,682	3,682	3,682
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.23: **Region-by-Time Fixed Effects: Individual-level Incumbency Effects.**

	% Spending		% Votes	
Incumbent	1.97	1.06	3.50	2.79
	(0.24)	(0.33)	(0.21)	(0.29)
Incumbent × Spending Limit (£10,000)		0.18		0.15
		(0.06)		(0.05)
Spending Limit (£10,000)		0.03		0.06
		(0.09)		(0.09)
Observations	70,651	70,362	72,425	72,108
α_j	✓	✓	✓	✓
δ_{pt}	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.24: **Region-by-Time Fixed Effects: Partisan Effects**

	Spending	% Spending	% Votes
Spending Limit (£10,000)	5843.44	0.39	0.31
	(319.21)	(0.14)	(0.13)
Spending Limit (£10,000) × Labour	-4094.78	-1.20	-1.36
	(448.21)	(0.28)	(0.28)
Spending Limit (£10,000) × Liberal (Dem.)	-354.23	-0.31	-0.01
	(462.44)	(0.17)	(0.18)
Spending Limit (£10,000) × Other	-1226.90	-0.44	-0.42
	(692.48)	(0.36)	(0.32)
Observations	70,536	70,362	72,108
α_j	✓	✓	✓
δ_{pt}	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

A.3.5. Constituency-Specific Linear Trends

Table A.25: **Constituency-Specific Linear Trends: Spending Effects.**

	Spending			
Spending Limit (£10,000)	6406.35	5634.29	4365.06	5565.42
	(104.31)	(142.16)	(375.75)	(650.27)
Observations	21,282	21,282	21,282	21,282
Constituencies	3,853	3,853	3,853	3,853
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓
$\theta_i t$	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.26: **Constituency-Specific Linear Trends: Competition Effects.**

	Candidates			
Spending Limit (£10,000)	-0.17	-0.09	-0.11	-0.04
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	21,282	21,282	21,282	21,282
Constituencies	3,853	3,853	3,853	3,853
	Effective Candidates			
Spending Limit (£10,000)	-0.05	-0.02	-0.11	-0.03
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	21,282	21,282	21,282	21,282
Constituencies	3,853	3,853	3,853	3,853
	Effective Spenders			
Spending Limit (£10,000)	-0.07	-0.05	-0.11	-0.04
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	21,249	21,249	21,249	21,249
Constituencies	3,853	3,853	3,853	3,853
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓
$\theta_i t$	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.27: **Constituency-Specific Linear Trends: Constituency-level Incumbency Effects**

	Incumbent Vote %			
Spending Limit (£10,000)	0.78	0.40	1.36	0.35
	(0.05)	(0.07)	(0.21)	(0.38)
Observations	15,098	15,098	15,098	15,098
Constituencies	3,682	3,682	3,682	3,682
	Incumbent Spending %			
Spending Limit (£10,000)	1.17	0.90	1.14	0.77
	(0.05)	(0.08)	(0.20)	(0.43)
Observations	15,098	15,098	15,098	15,098
Constituencies	3,682	3,682	3,682	3,682
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, electors$			✓	✓
α_i				✓
$\theta_i t$	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.28: **Constituency-Specific Linear Trends: Individual-level Incumbency Effects.**

	% Spending		% Votes	
Incumbent	1.97	1.06	3.50	2.79
	(0.24)	(0.33)	(0.21)	(0.29)
Incumbent × Spending Limit (£10,000)		0.18		0.15
		(0.06)		(0.05)
Spending Limit (£10,000)		0.03		0.06
		(0.09)		(0.09)
Observations	70,651	70,362	72,425	72,108
α_j	✓	✓	✓	✓
δ_{pt}	✓	✓	✓	✓
$\theta_i t$	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.29: **Constituency-Specific Linear Trends: Partisan Effects**

	Spending	% Spending	% Votes
Spending Limit (£10,000)	5843.44	0.39	0.31
	(319.21)	(0.14)	(0.13)
Spending Limit (£10,000) × Labour	-4094.78	-1.20	-1.36
	(448.21)	(0.28)	(0.28)
Spending Limit (£10,000) × Liberal (Dem.)	-354.23	-0.31	-0.01
	(462.44)	(0.17)	(0.18)
Spending Limit (£10,000) × Other	-1226.90	-0.44	-0.42
	(692.48)	(0.36)	(0.32)
Observations	70,536	70,362	72,108
α_j	✓	✓	✓
δ_{pt}	✓	✓	✓
$\theta_i t$	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

A.3.6. Alternative Constituencies

Table A.30: **Alternative Constituencies: Spending Effects.**

	Spending			
Spending Limit (£10,000)	6406.35	5634.29	5451.32	4921.35
	(107.36)	(156.75)	(386.27)	(733.77)
Observations	21,282	21,282	21,282	21,282
Constituencies	4,310	4,310	4,310	4,310
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.31: **Alternative Constituencies: Competition Effects.**

	Candidates			
Spending Limit (£10,000)	-0.17	-0.09	-0.08	-0.03
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	21,282	21,282	21,282	21,282
Constituencies	4,310	4,310	4,310	4,310
	Effective Candidates			
Spending Limit (£10,000)	-0.05	-0.02	-0.08	-0.04
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	21,282	21,282	21,282	21,282
Constituencies	4,310	4,310	4,310	4,310
	Effective Spenders			
Spending Limit (£10,000)	-0.07	-0.05	-0.08	-0.03
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	21,249	21,249	21,249	21,249
Constituencies	4,310	4,310	4,310	4,310
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.32: **Alternative Constituencies: Constituency-level Incumbency Effects**

	Incumbent Vote %			
Spending Limit (£10,000)	0.78	0.40	0.63	0.07
	(0.05)	(0.07)	(0.25)	(0.45)
Observations	15,098	15,098	15,098	15,098
Constituencies	4,121	4,121	4,121	4,121
	Incumbent Spending %			
Spending Limit (£10,000)	1.17	0.90	0.59	0.24
	(0.05)	(0.07)	(0.25)	(0.57)
Observations	15,098	15,098	15,098	15,098
Constituencies	4,121	4,121	4,121	4,121
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.33: **Alternative Constituencies: Individual-level Incumbency Effects.**

	% Spending		% Votes	
inc	1.83	0.62	2.41	0.82
	(0.24)	(0.32)	(0.21)	(0.28)
Incumbent × Spending Limit (£10,000)		0.29		0.39
		(0.06)		(0.05)
Spending Limit (£10,000)		-0.02		-0.05
		(0.09)		(0.09)
Observations	70,651	70,362	72,425	72,108
α_j	✓	✓	✓	✓
δ_{pt}	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.34: **Alternative Constituencies: Partisan Effects**

	Spending	% Spending	% Votes
Spending Limit (£10,000)	5807.52	0.38	0.22
	(328.57)	(0.15)	(0.14)
Spending Limit (£10,000) × Labour	-3967.23	-1.15	-1.21
	(474.07)	(0.27)	(0.28)
Spending Limit (£10,000) × Liberal (Dem.)	-361.18	-0.30	0.06
	(473.53)	(0.18)	(0.19)
Spending Limit (£10,000) × Other	-1232.39	-0.45	-0.12
	(802.09)	(0.34)	(0.32)
Observations	70,536	70,362	72,108
α_j	✓	✓	✓
δ_{pt}	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

A.3.7. Linear-log Specifcations

Table A.35: **Linear-log Specification: Spending Effects.**

	Spending			
Log Spending Limit	35533.48	28847.06	52210.58	29264.18
	(572.40)	(709.01)	(3562.37)	(6508.16)
Observations	21,282	21,282	21,282	21,282
Constituencies	3,853	3,853	3,853	3,853
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.36: **Linear-log Specification: Competition Effects.**

	Candidates			
Log Spending Limit	-1.19	-0.87	-0.75	-0.34
	(0.02)	(0.03)	(0.16)	(0.19)
Observations	21,282	21,282	21,282	21,282
Constituencies	3,853	3,853	3,853	3,853
	Effective Candidates			
Log Spending Limit	-0.30	-0.18	-0.74	-0.34
	(0.01)	(0.02)	(0.15)	(0.16)
Observations	21,282	21,282	21,282	21,282
Constituencies	3,853	3,853	3,853	3,853
	Effective Spenders			
Log Spending Limit	-0.49	-0.37	-0.72	-0.51
	(0.01)	(0.02)	(0.15)	(0.18)
Observations	21,249	21,249	21,249	21,249
Constituencies	3,853	3,853	3,853	3,853
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.37: **Linear-log Specification: Constituency-level Incumbency Effects**

	Incumbent Vote %			
Log Spending Limit	4.35	1.86	1.71	3.40
	(0.26)	(0.37)	(3.48)	(5.65)
Observations	15,098	15,098	15,098	15,098
Constituencies	3,682	3,682	3,682	3,682
	Incumbent Spending %			
Log Spending Limit	7.07	5.65	2.55	2.85
	(0.27)	(0.35)	(3.53)	(6.12)
Observations	15,098	15,098	15,098	15,098
Constituencies	3,682	3,682	3,682	3,682
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.38: **Linear-log Specification: Individual-level Incumbency Effects.**

	% Spending		% Votes	
Incumbent	2.24	-1.92	3.57	0.92
	(0.23)	(1.16)	(0.21)	(0.99)
Incumbent × Log Spending Limit		1.17		0.76
		(0.34)		(0.29)
Log Spending Limit		-0.18		0.21
		(0.82)		(0.80)
Observations	70,651	70,362	72,425	72,108
α_j	✓	✓	✓	✓
δ_{pt}	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.39: **Linear-log Specification: Partisan Effects**

	Spending	% Spending	% Votes
Log Spending Limit	48287.65	3.75	4.41
	(3094.37)	(1.35)	(1.33)
Log Spending Limit × Labour	-3.6e+04	-11.34	-14.94
	(3377.64)	(1.86)	(1.90)
Log Spending Limit × Liberal (Dem.)	544.53	-2.17	-1.16
	(3934.28)	(1.73)	(1.81)
Log Spending Limit × Other	-1.4e+04	-5.96	-5.05
	(6663.35)	(2.85)	(2.61)
Observations	70,536	70,362	72,108
α_j	✓	✓	✓
δ_{pt}	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

A.4. Robustness to Alternative Samples

A.4.1. Exclude Pre-1918 Observations (First Reform)

Table A.40: **Exclude Pre-1918 Observations: Spending Effects.**

	Spending			
Spending Limit (£10,000)	5065.55	4635.47	4000.70	1057.90
	(96.20)	(81.90)	(255.70)	(566.21)
Observations	16,792	16,792	16,792	16,792
Constituencies	3,361	3,361	3,361	3,361
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.41: **Exclude Pre-1918 Observations: Competition Effects.**

	Candidates			
Spending Limit (£10,000)	-0.30	-0.24	-0.02	-0.07
	(0.01)	(0.01)	(0.02)	(0.03)
Observations	16,792	16,792	16,792	16,792
Constituencies	3,361	3,361	3,361	3,361
	Effective Candidates			
Spending Limit (£10,000)	-0.06	-0.05	-0.07	-0.10
	(0.00)	(0.00)	(0.03)	(0.02)
Observations	16,792	16,792	16,792	16,792
Constituencies	3,361	3,361	3,361	3,361
	Effective Spenders			
Spending Limit (£10,000)	-0.11	-0.10	-0.06	-0.09
	(0.01)	(0.00)	(0.02)	(0.02)
Observations	16,766	16,766	16,766	16,766
Constituencies	3,361	3,361	3,361	3,361
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.42: **Exclude Pre-1918 Observations: Constituency-level Incumbency Effects**

	Incumbent Vote %			
Spending Limit (£10,000)	0.40	0.29	-0.54	1.62
	(0.10)	(0.10)	(0.64)	(1.22)
Observations	11,955	11,955	11,955	11,955
Constituencies	3,190	3,190	3,190	3,190
	Incumbent Spending %			
Spending Limit (£10,000)	1.39	1.31	-0.66	1.32
	(0.10)	(0.10)	(0.62)	(1.34)
Observations	11,955	11,955	11,955	11,955
Constituencies	3,190	3,190	3,190	3,190
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.43: **Exclude Pre-1918 Observations: Individual-level Incumbency Effects.**

	% Spending		% Votes	
Incumbent	1.88	1.23	3.35	3.16
	(0.24)	(0.40)	(0.22)	(0.34)
Incumbent × Spending Limit (£10,000)		0.20		0.07
		(0.12)		(0.10)
Spending Limit (£10,000)		-0.60		-0.49
		(0.18)		(0.17)
Observations	61,743	61,519	63,491	63,241
α_j	✓	✓	✓	✓
δ_{pt}	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.44: **Exclude Pre-1918 Observations: Partisan Effects**

	Spending	% Spending	% Votes
Spending Limit (£10,000)	3021.08	-0.15	0.33
	(403.66)	(0.31)	(0.30)
Spending Limit (£10,000) × Labour	-1410.18	-0.69	-1.37
	(427.02)	(0.38)	(0.41)
Spending Limit (£10,000) × Liberal (Dem.)	-737.39	-0.45	-1.09
	(712.78)	(0.40)	(0.38)
Spending Limit (£10,000) × Other	-3086.71	-1.24	-1.54
	(887.18)	(0.78)	(0.70)
Observations	61,678	61,519	63,241
α_j	✓	✓	✓
δ_{pt}	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

A.4.2. Exclude Pre-1928 Observations (Second Reform)

Table A.45: **Exclude Pre-1928 Observations: Spending Effects.**

	Spending			
Spending Limit (£10,000)	4553.52	4398.65	3443.01	1232.94
	(91.44)	(79.27)	(258.22)	(901.27)
Observations	15,035	15,035	15,035	15,035
Constituencies	3,361	3,361	3,361	3,361
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.46: **Exclude Pre-1928 Observations: Competition Effects.**

	Candidates			
Spending Limit (£10,000)	-0.28	-0.25	-0.01	0.02
	(0.01)	(0.01)	(0.02)	(0.05)
Observations	15,035	15,035	15,035	15,035
Constituencies	3,361	3,361	3,361	3,361
	Effective Candidates			
Spending Limit (£10,000)	-0.06	-0.05	-0.07	-0.09
	(0.00)	(0.00)	(0.02)	(0.04)
Observations	15,035	15,035	15,035	15,035
Constituencies	3,361	3,361	3,361	3,361
	Effective Spenders			
Spending Limit (£10,000)	-0.11	-0.10	-0.05	-0.04
	(0.00)	(0.00)	(0.02)	(0.05)
Observations	15,009	15,009	15,009	15,009
Constituencies	3,361	3,361	3,361	3,361
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.47: **Exclude Pre-1928 Observations: Constituency-level Incumbency Effects**

	Incumbent Vote %			
Spending Limit (£10,000)	0.46	0.40	0.01	0.72
	(0.09)	(0.09)	(0.65)	(1.50)
Observations	10,587	10,587	10,587	10,587
Constituencies	3,190	3,190	3,190	3,190
	Incumbent Spending %			
Spending Limit (£10,000)	1.41	1.39	-0.10	-0.26
	(0.09)	(0.09)	(0.58)	(1.64)
Observations	10,587	10,587	10,587	10,587
Constituencies	3,190	3,190	3,190	3,190
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.48: **Exclude Pre-1928 Observations: Individual-level Incumbency Effects.**

	% Spending		% Votes	
Incumbent	1.84	1.23	3.61	3.29
	(0.26)	(0.42)	(0.23)	(0.35)
Incumbent × Spending Limit (£10,000)		0.22		0.12
		(0.13)		(0.10)
Spending Limit (£10,000)		-0.62		-0.53
		(0.21)		(0.18)
Observations	57,354	57,272	57,692	57,610
α_j	✓	✓	✓	✓
δ_{pt}	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.49: **Exclude Pre-1928 Observations: Partisan Effects**

	Spending	% Spending	% Votes
Spending Limit (£10,000)	3328.40	-0.33	0.38
	(351.37)	(0.37)	(0.35)
Spending Limit (£10,000) × Labour	-1796.88	-0.42	-1.40
	(383.24)	(0.44)	(0.45)
Spending Limit (£10,000) × Liberal (Dem.)	-2219.72	-0.03	-0.94
	(609.48)	(0.44)	(0.39)
Spending Limit (£10,000) × Other	-2937.77	-0.99	-1.34
	(997.20)	(0.89)	(0.93)
Observations	57,431	57,272	57,610
α_j	✓	✓	✓
δ_{pt}	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

A.4.3. Exclude Pre-1948 Observations (Third Reform)

Table A.50: **Exclude Pre-1948 Observations: Spending Effects.**

	Spending			
Spending Limit (£10,000)	11386.78	11470.40	8583.22	2296.46
	(113.37)	(112.64)	(892.21)	(744.61)
Observations	12,662	12,662	12,662	12,662
Constituencies	2,853	2,853	2,853	2,853
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.51: **Exclude Pre-1948 Observations: Competition Effects.**

	Candidates			
Spending Limit (£10,000)	-1.75	-1.74	0.57	0.15
	(0.03)	(0.03)	(0.08)	(0.14)
Observations	12,662	12,662	12,662	12,662
Constituencies	2,853	2,853	2,853	2,853
	Effective Candidates			
Spending Limit (£10,000)	-0.33	-0.36	0.15	-0.09
	(0.01)	(0.01)	(0.07)	(0.07)
Observations	12,662	12,662	12,662	12,662
Constituencies	2,853	2,853	2,853	2,853
	Effective Spenders			
Spending Limit (£10,000)	-0.45	-0.46	0.27	-0.17
	(0.01)	(0.01)	(0.08)	(0.13)
Observations	12,636	12,636	12,636	12,636
Constituencies	2,853	2,853	2,853	2,853
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.52: **Exclude Pre-1948 Observations: Constituency-level Incumbency Effects**

	Incumbent Vote %			
Spending Limit (£10,000)	3.33	3.91	-4.45	11.19
	(0.32)	(0.31)	(4.37)	(3.68)
Observations	8,746	8,746	8,746	8,746
Constituencies	2,726	2,726	2,726	2,726
	Incumbent Spending %			
Spending Limit (£10,000)	4.04	4.17	-2.95	11.80
	(0.34)	(0.34)	(5.19)	(5.60)
Observations	8,746	8,746	8,746	8,746
Constituencies	2,726	2,726	2,726	2,726
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.53: **Exclude Pre-1948 Observations: Individual-level Incumbency Effects.**

	% Spending		% Votes	
Incumbent	1.76	1.91	3.69	2.51
	(0.27)	(1.03)	(0.24)	(0.86)
Incumbent × Spending Limit (£10,000)		-0.08		0.62
		(0.50)		(0.43)
Spending Limit (£10,000)		0.65		1.32
		(0.72)		(0.78)
Observations	51,304	51,304	51,639	51,639
α_j	✓	✓	✓	✓
δ_{pt}	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.54: **Exclude Pre-1948 Observations: Partisan Effects**

	Spending	% Spending	% Votes
Spending Limit (£10,000)	10345.68	5.60	11.41
	(558.66)	(1.26)	(1.63)
Spending Limit (£10,000) × Labour	-4144.74	-11.93	-22.38
	(836.67)	(1.85)	(2.44)
Spending Limit (£10,000) × Liberal (Dem.)	-5665.74	-1.52	-7.18
	(858.18)	(1.90)	(1.95)
Spending Limit (£10,000) × Other	-9831.07	-7.50	-11.12
	(845.40)	(2.15)	(2.04)
Observations	51,464	51,304	51,639
α_j	✓	✓	✓
δ_{pt}	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

A.4.4. Exclude Post-1970 Observations

Table A.55: **Exclude Post-1970 Observations: Spending Effects.**

	Spending			
Spending Limit (£10,000)	6009.32	5393.28	5557.46	5300.27
	(126.19)	(170.68)	(429.54)	(749.47)
Observations	12,386	12,386	12,386	12,386
Constituencies	1,736	1,736	1,736	1,736
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.56: **Exclude Post-1970 Observations: Competition Effects.**

	Candidates			
Spending Limit (£10,000)	-0.04	-0.02	-0.08	-0.05
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	12,386	12,386	12,386	12,386
Constituencies	1,736	1,736	1,736	1,736
	Effective Candidates			
Spending Limit (£10,000)	-0.02	-0.00	-0.08	-0.04
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	12,386	12,386	12,386	12,386
Constituencies	1,736	1,736	1,736	1,736
	Effective Spenders			
Spending Limit (£10,000)	-0.04	-0.02	-0.07	-0.04
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	12,379	12,379	12,379	12,379
Constituencies	1,736	1,736	1,736	1,736
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.57: **Exclude Post-1970 Observations: Constituency-level Incumbency Effects**

	Incumbent Vote %			
Spending Limit (£10,000)	0.59	0.24	0.46	0.67
	(0.06)	(0.08)	(0.27)	(0.37)
Observations	9,186	9,186	9,186	9,186
Constituencies	1,685	1,685	1,685	1,685
	Incumbent Spending %			
Spending Limit (£10,000)	0.93	0.67	0.28	0.61
	(0.06)	(0.08)	(0.27)	(0.42)
Observations	9,186	9,186	9,186	9,186
Constituencies	1,685	1,685	1,685	1,685
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.58: **Exclude Post-1970 Observations: Individual-level Incumbency Effects.**

	% Spending		% Votes	
Incumbent	2.43	0.29	3.17	0.96
	(0.31)	(0.50)	(0.28)	(0.46)
Incumbent × Spending Limit (£10,000)		0.29		0.33
		(0.07)		(0.06)
Spending Limit (£10,000)		-0.03		-0.04
		(0.09)		(0.08)
Observations	28,996	28,707	30,439	30,122
α_j	✓	✓	✓	✓
δ_{pt}	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.59: **Exclude Post-1970 Observations: Partisan Effects**

	Spending	% Spending	% Votes
Spending Limit (£10,000)	5790.17	0.35	0.17
	(308.19)	(0.14)	(0.13)
Spending Limit (£10,000) × Labour	-3967.58	-1.06	-1.05
	(443.41)	(0.24)	(0.24)
Spending Limit (£10,000) × Liberal (Dem.)	-330.75	-0.28	0.10
	(437.29)	(0.17)	(0.17)
Spending Limit (£10,000) × Other	-1177.14	-0.41	-0.09
	(755.46)	(0.32)	(0.30)
Observations	28,721	28,707	30,122
α_j	✓	✓	✓
δ_{pt}	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

A.4.5. Exclude Observations with Unreconciled Issues in Reported Spending

Table A.60: **Exclude Observations with Unreconciled Issues in Reported Spending: Spending Effects.**

	Spending			
Spending Limit (£10,000)	6395.21	5630.35	5414.57	5298.83
	(104.20)	(141.64)	(379.30)	(731.19)
Observations	21,182	21,182	21,182	21,182
Constituencies	3,853	3,853	3,853	3,853
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.61: **Exclude Observations with Unreconciled Issues in Reported Spending: Competition Effects.**

	Candidates			
Spending Limit (£10,000)	-0.17	-0.09	-0.08	-0.05
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	21,182	21,182	21,182	21,182
Constituencies	3,853	3,853	3,853	3,853
	Effective Candidates			
Spending Limit (£10,000)	-0.05	-0.02	-0.08	-0.04
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	21,182	21,182	21,182	21,182
Constituencies	3,853	3,853	3,853	3,853
	Effective Spenders			
Spending Limit (£10,000)	-0.07	-0.05	-0.08	-0.04
	(0.00)	(0.00)	(0.01)	(0.01)
Observations	21,149	21,149	21,149	21,149
Constituencies	3,853	3,853	3,853	3,853
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, Electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.62: **Exclude Observations with Unreconciled Issues in Reported Spending: Constituency-level Incumbency Effects**

	Incumbent Vote %			
Spending Limit (£10,000)	0.79	0.40	0.58	0.70
	(0.05)	(0.07)	(0.25)	(0.36)
Observations	15,034	15,034	15,034	15,034
Constituencies	3,680	3,680	3,680	3,680
	Incumbent Spending %			
Spending Limit (£10,000)	1.17	0.90	0.55	0.65
	(0.05)	(0.08)	(0.25)	(0.41)
Observations	15,034	15,034	15,034	15,034
Constituencies	3,680	3,680	3,680	3,680
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.63: **Exclude Observations with Unreconciled Issues in Reported Spending: Individual-level Incumbency Effects.**

	% Spending		% Votes	
Incumbent	2.23	1.09	3.57	2.71
	(0.23)	(0.33)	(0.21)	(0.29)
Incumbent × Spending Limit (£10,000)		0.23		0.19
		(0.06)		(0.05)
Spending Limit (£10,000)		-0.01		0.01
		(0.09)		(0.09)
Observations	70,531	70,244	72,305	71,990
α_j	✓	✓	✓	✓
δ_{pt}	✓	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

Table A.64: **Exclude Observations with Unreconciled Issues in Reported Spending: Partisan Effects**

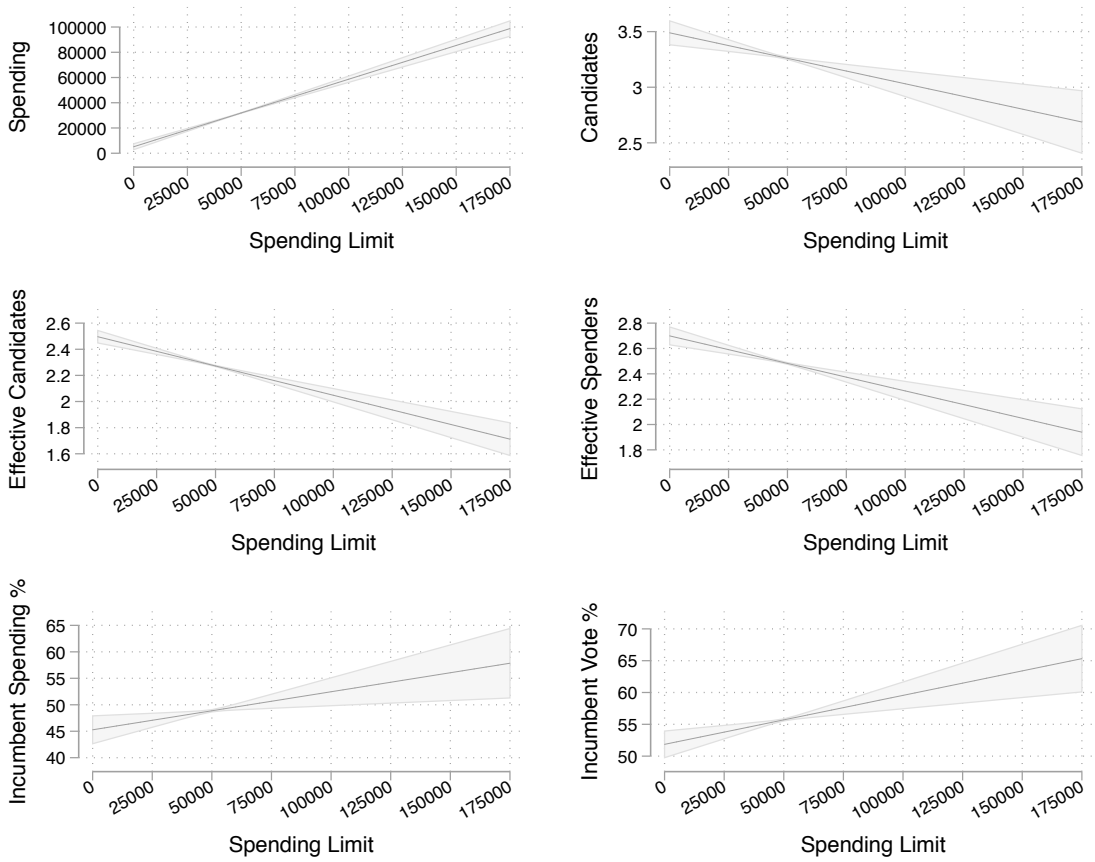
	Spending	% Spending	% Votes
Spending Limit (£10,000)	5795.37	0.38	0.22
	(329.71)	(0.15)	(0.14)
Spending Limit (£10,000) × Labour	-3957.65	-1.16	-1.21
	(474.87)	(0.27)	(0.28)
Spending Limit (£10,000) × Liberal (Dem.)	-348.73	-0.31	0.05
	(477.04)	(0.18)	(0.19)
Spending Limit (£10,000) × Other	-1150.13	-0.53	-0.18
	(783.11)	(0.33)	(0.32)
Observations	70,418	70,244	71,990
α_j	✓	✓	✓
δ_{pt}	✓	✓	✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.

A.5. Additional Results

A.5.1. Marginal-Effects Plots

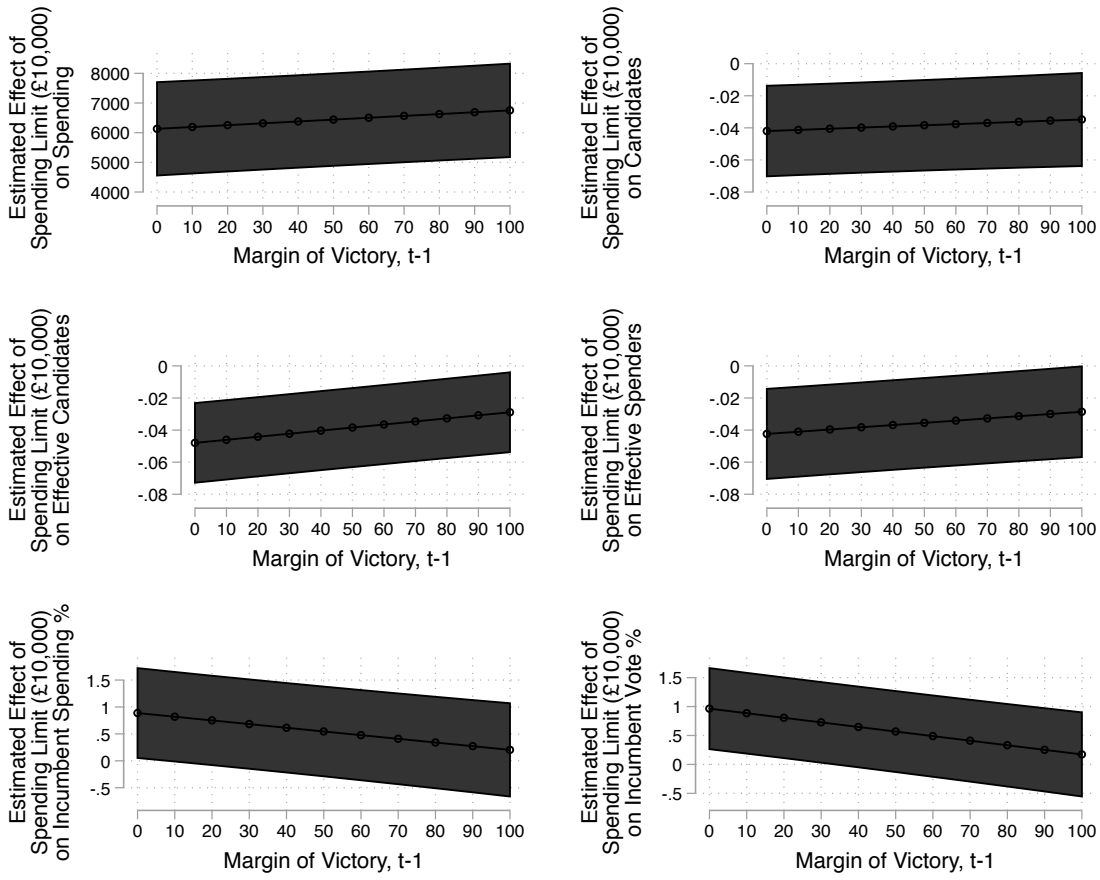
Figure A.1: **Marginal Effects Plot.**



NOTE: The figure shows the marginal effects plot based on OLS regressions of the following form $Y_{it} = \beta Spending\ Limit_{it} + \alpha_i + \delta_t + \gamma_t Electors_{it} + \psi County_i \times Electors_{it} + \varepsilon_{it}$

A.5.2. Heterogeneity in Treatment Effect: Previous Margin of Victory

Figure A.2: **Marginal Effects Plot: Heterogeneity across Margins of Victory**



NOTE: The figure shows the marginal effects plot based on OLS regressions of the following form $Y_{it} = \beta Spending\ Limit_{it} + \alpha_i + \delta_t + \gamma_t Electors_{it} + \psi County_i \times Electors_{it} + \varepsilon_{it}$

A.5.3. Effect on Top Challenger's Performance

Table A.65: **Effect on Top Challenger's Performance: The Top Challenger Performs Worse when Spending Limits Are Raised.**

	Top Challenger Vote %			
Spending Limit (£10,000)	-7.61	-4.55	-2.01	-3.16
	(0.20)	(0.26)	(0.54)	(0.99)
Observations	15,098	15,098	15,098	15,098
Constituencies	3,682	3,682	3,682	3,682
	Top Challenger Spending %			
Spending Limit (£10,000)	-6.60	-3.80	-2.53	-3.42
	(0.19)	(0.26)	(0.61)	(1.09)
Observations	15,098	15,098	15,098	15,098
Constituencies	3,682	3,682	3,682	3,682
$\phi\, Electors_{it}$		✓		
$\lambda\, County_i$		✓	✓	
$\psi\, Electors_{it} \times County_i$		✓	✓	✓
δ_t			✓	✓
$\gamma_t\, electors$			✓	✓
α_i				✓

NOTE: All models are estimated using OLS. Robust standard errors are clustered on constituencies and are reported in parentheses.