

Online Appendix for **Agency Problems in Political Campaigns: Media Buying and Consulting**

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Consulting Firm Descriptive Statistics

Tables A.1, A.2, and A.3 provide information on the number and total revenues of active firms, the distribution of firms by revenue, and the concentration of the consulting industry, respectively.

Cycle	Active Firms		Total Revenues (\$MM)	
	Dem	Rep	Dem	Rep
2010	84	149	348	326
2012	96	139	297	380
2014	86	136	258	287

Table A.1: Number of Active Media Firms and Total Revenues, by Party and Election Cycle.

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Cycle	Dem			Rep		
	25%	50%	75%	25%	50%	75%
2010	82	357	1979	69	396	1272
2012	30	191	1157	82	408	1624
2014	48	246	1836	56	321	1254

Table A.2: Quantiles of Revenue (\$K) per Firm, by Party and Election Cycle.

Cycle	Clients		Revenue	
	Dem	Rep	Dem	Rep
2010	315	168	937	431
2012	302	202	1647	629
2014	295	205	919	558

Table A.3: Herfindahl-Hirschman Indices for Media Consulting, by Party and Election Cycle.

Regression Tables and Output

Tables A.4 through A.7 report coefficient estimates and standard errors for the models presented graphically in Figure 1.

Table A.4: Regressions of FEC expenditures to media consulting firms on Nielsen TV ad expenditure X race competitiveness.

	Total FEC Expenditure to Media Firms		
Nielsen Ad Exp.	0.752*** (0.207)	0.768** (0.339)	0.813*** (0.239)
Nielsen Ad Exp. x D3	0.639*** (0.241)	1.012* (0.579)	0.698** (0.291)
Nielsen Ad Exp. x D2	0.254 (0.212)	-0.169 (0.817)	0.364 (0.262)
Nielsen Ad Exp. x D1	0.002 (0.205)	0.152 (0.250)	0.124 (0.191)
Nielsen Ad Exp. x R1	0.199 (0.278)	-0.110 (0.416)	0.152 (0.285)
Nielsen Ad Exp. x R2	0.690*** (0.244)	0.767 (0.586)	1.113*** (0.295)
Nielsen Ad Exp. x R3	1.513*** (0.405)	1.922*** (0.722)	1.796*** (0.363)
D3	-474,524.100*** (148,322.300)	-812,058.000*** (308,835.400)	-605,029.300*** (230,004.200)
D2	-145,171.100 (157,819.800)	-337,036.500 (381,191.200)	-353,367.900 (251,147.000)
D1	83,481.140 (159,686.800)	-266,441.400 (269,950.900)	-110,464.100 (200,428.000)
R1	-75,913.230 (179,021.500)	-8,636.933 (330,582.800)	-241,639.700 (251,821.300)
R2	-439,173.400*** (151,165.900)	-504,676.500* (257,325.600)	-717,203.500*** (236,172.400)
R3	-601,256.300*** (153,758.400)	-757,966.600*** (268,623.100)	-708,749.800*** (239,082.300)
Fixed Effects:	None	Candidate	District
N	820	820	820
R ²	0.609	0.938	0.790

*p < .1; **p < .05; ***p < .01

Cluster-robust standard errors in parentheses (clustered by candidate).

Table A.5: Regressions of FEC expenditures to media consulting firms on Nielsen TV ad expenditure X incumbency.

Total FEC Expenditure to Media Firms				
Nielsen Ad Exp. x Challenger	1.496*** (0.100)	1.187*** (0.340)	1.477*** (0.113)	1.478*** (0.155)
Nielsen Ad Exp. x Incumbent	1.344*** (0.200)	1.498*** (0.289)	1.317*** (0.153)	1.310*** (0.216)
Challenger	280,731.800*** (51,719.170)			
Incumbent	488,171.200*** (115,348.400)	-178,565.600 (232,070.900)	320,687.600*** (101,084.400)	422,210.900** (166,034.000)
Fixed Effects:	None	Candidate	District	District-Year
p-value for I=C	0.495	0.478	0.265	0.357
N	1,264	1,264	1,264	1,264
R ²	0.804	0.990	0.910	0.916

*p < .1; **p < .05; ***p < .01

Cluster-robust standard errors in parentheses (clustered by candidate).

Table A.6: Regressions of FEC expenditures to media consulting firms on Nielsen TV ad expenditure X campaign experience

Total FEC Expenditure to Media Firms				
Previous Federal Campaign	120,955.100 (107,148.100)	53,637.760 (195,535.100)	197,851.900** (97,193.690)	247,217.200* (149,381.100)
Nielsen Ad Exp. x No Prev. Fed. Camp.	1.462*** (0.112)	1.897*** (0.477)	1.453*** (0.118)	1.460*** (0.161)
Nielsen Ad Exp. x Prev. Fed. Camp.	1.413*** (0.158)	1.517*** (0.295)	1.393*** (0.146)	1.404*** (0.206)
Fixed Effects:	None	Candidate	District	District-Year
p-value for Exp. = Inexp.	0.785	0.039	0.641	0.733
N	1,264	1,264	1,264	1,264
R ²	0.802	0.991	0.908	0.914

*p < .1; **p < .05; ***p < .01

Cluster-robust standard errors in parentheses (clustered by candidate).

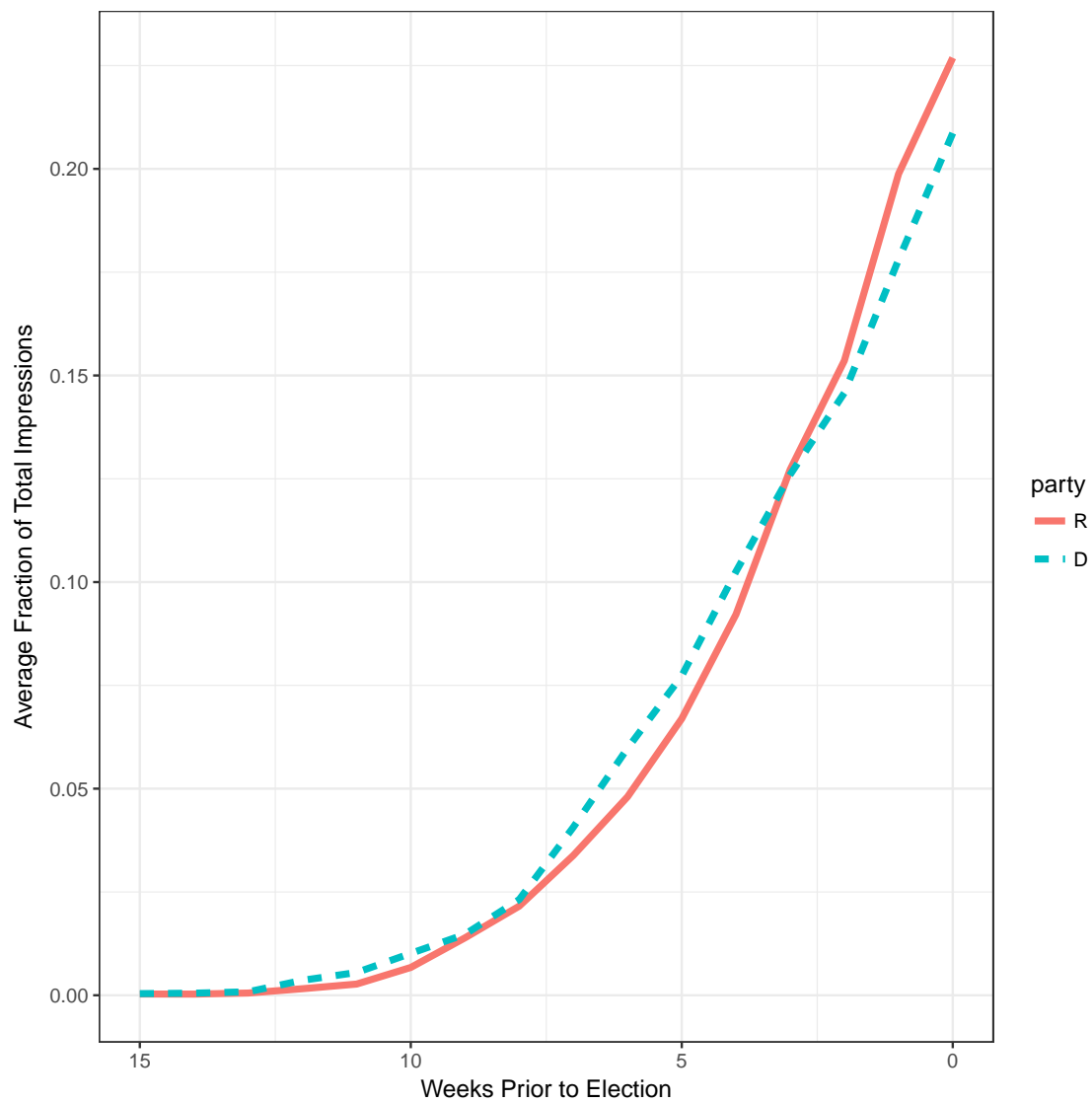


Figure A.1: The timing of advertising purchases relative to the election date, by party. The Y axis measures the fraction of total advertising impressions by candidates belonging to each party that are made in each week prior to the general election. The plot includes only general election advertising purchases.

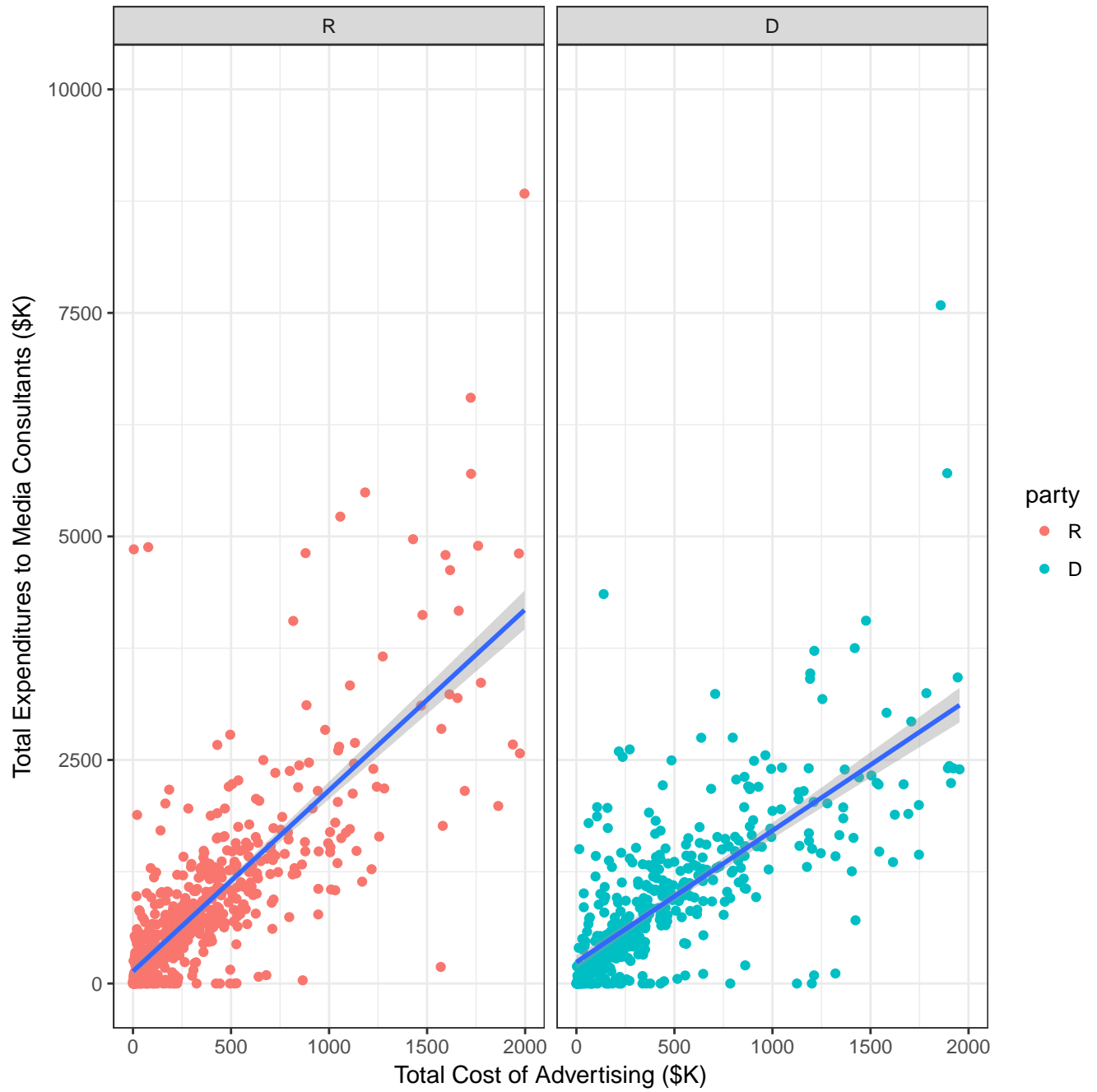


Figure A.2: Consulting firm revenues against advertising output, by party. Each point is a candidate-election cycle; the blue line is the least squares fit.

Table A.7: Regressions of FEC expenditures to media consulting firms on Nielsen TV ad expenditure x party.

	Total FEC Expenditure to Media Firms		
Nielsen Ad Exp. x Democrat	1.271*** (0.143)	1.280*** (0.113)	1.293*** (0.162)
Nielsen Ad Exp. x Republican	1.607*** (0.114)	1.585*** (0.112)	1.588*** (0.152)
Republican	-44,740.300 (108,853.300)	-68,944.330 (78,101.230)	-67,483.410 (110,627.200)
Fixed Effects:	None	District	District-Year
p-value for D=R	0.065	0.008	0.04
N	1,264	1,264	1,264
R ²	0.814	0.915	0.921

*p < .1; **p < .05; ***p < .01

Cluster-robust standard errors in parentheses (clustered by candidate).

Robustness Checks

Table A.9 presents a regression specification comparable to that in Table A.4, but restricts attention to consultant expenditures and advertising purchases made in the general election period. The qualitative pattern is very similar to that in the main regression.

Tables A.10 through A.12 present results comparable to the model of Table A.7 but excluding campaigns that are expenditure outliers relative to advertising spending. These restrictions of the sample make very little difference to the point estimates, indicating that the partisan difference is not driven by these outlier observations.

Table A.13 presents results of a model comparable to Table 1, but using a log-log functional form. Results are qualitatively similar to Table 1, but the fit to the data is not as good. We prefer the linear specification due to its empirical match to the common markup-based contracts described in the Grossmann (2009) study of consultant compensation schemes.

Table A.8: Regressions of Nielsen TV ad expenditure on race competitiveness, by party.

	Nielsen Ad Expenditure		
D3 x Dem.	-758,002.600*** (168,002.700)	-698,143.500 (424,747.600)	-410,150.700*** (154,222.200)
R3 x Rep.	-497,609.400*** (80,767.860)	-361,281.600 (237,449.100)	-292,102.700** (138,259.100)
D2 x Dem.	-452,190.100*** (173,470.400)	-489,376.200 (482,483.600)	-254,737.000 (174,479.000)
R2 x Rep.	-341,721.300*** (87,825.650)	-180,841.900 (213,359.000)	-144,005.200 (128,602.400)
D1 x Dem.	-263,705.800* (159,415.000)	-134,653.700 (475,648.100)	-6,579.797 (174,858.400)
R1 x Rep.	-153,681.900* (92,545.720)	35,636.970 (211,023.700)	20,918.580 (139,484.600)
R1 x Dem.	-431,518.100** (197,431.200)	-314,354.600 (495,216.400)	-217,995.200 (198,740.400)
D1 x Rep.	-169,779.400 (107,067.100)	68,550.970 (332,850.500)	63,507.910 (146,245.600)
R2 x Dem.	-755,572.600*** (166,799.400)	-505,787.200 (536,648.700)	-562,539.400*** (166,006.900)
D2 x Rep.	-298,478.800*** (78,977.130)	-146,717.100 (270,038.200)	-140,030.000 (152,475.800)
R3 x Dem.	-902,709.400*** (165,470.700)	-1,411,114.000 (1,227,823.000)	-751,307.800*** (166,307.300)
D3 x Rep.	-424,993.200*** (91,330.740)	-123,606.700 (238,477.700)	-186,254.800 (138,738.500)
Fixed Effects:	None	Candidate	District
N	820	820	820
R ²	0.236	0.879	0.641

*p < .1; **p < .05; ***p < .01

Cluster-robust standard errors in parentheses (clustered by candidate).

Table A.9: Regressions of general election FEC expenditures to media consulting firms on general election Nielsen TV ad expenditure X race competitiveness.

	General Election FEC Expenditure to Media Firms		
Gen. Election Ad Exp.	0.836*** (0.173)	0.912*** (0.192)	0.802*** (0.220)
Gen. Election Ad Exp. x D3	0.481** (0.211)	0.988** (0.435)	0.631** (0.263)
Gen. Election Ad Exp. x D2	0.025 (0.192)	-0.399 (0.548)	0.246 (0.234)
Gen. Election Ad Exp. x D1	-0.130 (0.178)	0.075 (0.226)	0.031 (0.168)
Gen. Election Ad Exp. x R1	0.268 (0.280)	0.376 (0.447)	0.356 (0.261)
Gen. Election Ad Exp. x R2	0.367 (0.242)	0.566 (0.801)	0.955*** (0.337)
Gen. Election Ad Exp. x R3	1.329*** (0.304)	0.781 (0.808)	1.339*** (0.462)
D3	-438,445.500*** (122,210.800)	-695,576.100*** (222,997.600)	-576,285.700*** (188,829.600)
D2	-128,645.700 (131,744.400)	-256,711.900 (284,106.000)	-403,185.400** (196,207.300)
D1	97,544.260 (134,217.000)	-169,807.200 (274,224.400)	-86,819.130 (171,212.500)
R1	-147,746.300 (154,654.500)	-229,876.900 (316,037.800)	-319,296.100 (200,166.600)
R2	-375,358.600*** (123,435.300)	-364,806.700 (258,944.700)	-653,205.500*** (186,195.800)
R3	-547,607.200*** (121,415.100)	-557,171.900** (233,314.100)	-685,754.500*** (194,899.900)
Fixed Effects:	None	Candidate	District
N	820	820	820
R ²	0.638	0.943	0.791

*p < .1; **p < .05; ***p < .01

Cluster-robust standard errors in parentheses (clustered by candidate).

Table A.10: Regressions of FEC expenditures to media consulting firms on Nielsen TV ad expenditure x party, excluding campaigns with zero consultant expenditure.

	Total FEC Expenditure to Media Firms		
Nielsen Ad Exp. x Democrat	1.260*** (0.144)	1.273*** (0.117)	1.287*** (0.170)
Nielsen Ad Exp. x Republican	1.601*** (0.115)	1.583*** (0.115)	1.586*** (0.158)
Republican	-87,515.040 (121,017.400)	-114,528.200 (88,845.600)	-106,931.100 (127,592.800)
Fixed Effects:	None	District	District-Year
p-value for D=R	0.064	0.009	0.045
N	1,145	1,145	1,145
R ²	0.814	0.916	0.921

*p < .1; **p < .05; ***p < .01

Cluster-robust standard errors in parentheses (clustered by candidate). Results excluding observations with zero recorded expenditures to media consulting firms.

Table A.11: Regressions of FEC expenditures to media consulting firms on Nielsen TV ad expenditure x party, excluding campaigns with very high consultant expenditure relative to ad spending.

	Total FEC Expenditure to Media Firms		
Nielsen Ad Exp. x Democrat	1.281*** (0.148)	1.286*** (0.124)	1.297*** (0.178)
Nielsen Ad Exp. x Republican	1.614*** (0.116)	1.580*** (0.120)	1.580*** (0.163)
Republican	-61,747.640 (127,437.700)	-88,372.120 (96,834.590)	-76,412.520 (143,139.900)
Fixed Effects:	None	District	District-Year
p-value for D=R	0.076	0.017	0.069
N	1,054	1,054	1,054
R ²	0.833	0.926	0.930

*p < .1; **p < .05; ***p < .01

Cluster-robust standard errors in parentheses (clustered by candidate). Results excluding observations with very high (>5x) expenditures to media consulting firms relative to ad quantities.

Table A.12: Regressions of FEC expenditures to media consulting firms on Nielsen TV ad expenditure x party, excluding outliers.

	Total FEC Expenditure to Media Firms		
Nielsen Ad Exp. x Democrat	1.272*** (0.150)	1.282*** (0.128)	1.292*** (0.185)
Nielsen Ad Exp. x Republican	1.608*** (0.117)	1.577*** (0.122)	1.579*** (0.168)
Republican	-95,874.200 (139,379.100)	-118,902.500 (106,913.400)	-114,743.600 (160,200.000)
Fixed Effects:	None	District	District-Year
p-value for D=R	0.076	0.019	0.074
N	964	964	964
R ²	0.834	0.926	0.931

*p < .1; **p < .05; ***p < .01

Cluster-robust standard errors in parentheses (clustered by candidate). Results excluding observations with both zero expenditures to media consulting firms and very high (>5x) expenditures to media consulting firms relative to ad quantities.

Table A.13: Log-Log Regression of FEC expenditures to media consulting firms on Nielsen TV ad expenditure.

	Log (1+Total FEC Expenditure to Media Firms)				
Log (1+Nielsen Advertising Expenditure)	1.228*** (0.068)	1.231*** (0.068)	0.732*** (0.243)	1.315*** (0.098)	1.382*** (0.137)
Fixed Effects:	None	Year	Candidate	District	District-Year
N	1,211	1,211	1,211	1,211	1,211
R ²	0.311	0.312	0.930	0.599	0.715

*p < .1; **p < .05; ***p < .01

Cluster-robust standard errors in parentheses (clustered by candidate).

References

Grossmann, Matt. 2009. "Campaigning as an Industry: Consulting Business Models and Intra-Party Competition." *Business and Politics* 11(1):1–19.