

Electronic Appendix B: Detailed Statistical Treatment

This appendix addresses three statistical issues raised in the text. First, as mentioned in Section 3, there are significant differences between counties with in-state media markets and those with out-of-state media markets. We corrected for this difference by matching counties along each of the four dimensions summarized in Table B.2. We matched each out-of-state county with the in-state county that had the most similar demographic characteristics. Thus, the averages for the counties in in-state and out-of-state markets along each dimension became statistically indistinguishable. The results are summarized below in Table B.3. As reported above, controlling for these factors had no real effect on our main result – the difference in incumbency advantage due to television is small and statistically insignificant.

Second, as mentioned in Section 2, our method exploits the panel-data structure of two features of American elections. These features are (1) The United States holds many elections for any one type of office at one time, and (2) these elections occur at regular intervals. The results in the body of the paper do not exploit a third feature of American elections: the fact that the United States holds many elections within a given state or county at the same time. Since we examine both Senatorial and Gubernatorial elections we can exploit this feature to some extent; however, since we examine *only* these two types of elections our ability to exploit this feature is limited.

Exploiting these features allows us to avoid statistical problems associated with estimating a normal vote. We take this normal vote into account by using year fixed effects to exploit the first feature above, and county fixed effects to exploit the second feature above. If we were able to exploit the third feature above, we would be able to use a combined county-year fixed effect. However, we believe that estimating county and year fixed effects separately is also

valid, since the normal vote varies much across counties in a given year than it does over time in a given county (see Ansolabehere and Snyder, 2002, for details).

The three formulas below correspond to the three columns of Table B.4. Let i index offices, let j index counties, and let t index years. Let V_{ijt} be the share of the two-party vote received by the Democratic candidate running for office i in county j contained in state k in year t . Let $I_{ikt} = 1$ if the Democratic candidate running for office i in state k in year t is an incumbent, let $I_{ikt} = -1$ if the Republican candidate running for office i in state k in year t is an incumbent, and let $I_{ikt} = 0$ if the contest for office i in state k in year t is an open-seat race. Additionally let year t be in decade d . Then:

$$V_{ijt} = \mathbf{a}_{jt} + \mathbf{b}_i I_{ikt} + \mathbf{e}_{ijt}$$

$$V_{ijt} = \mathbf{a}_{jd} + \mathbf{q}_t + \mathbf{b}_i I_{ikt} + \mathbf{e}_{ijt}$$

$$V_{ijt} = \mathbf{a}_j + \mathbf{q}_{tk} + \mathbf{b}_{in} I_{ikt} + \mathbf{e}_{ijt}$$

As in the body of the paper, we estimate each equation separately for counties in in-state and out-of-state dominated media markets. We also allow the parameters to vary each decade.

Finally, the last two tables in the appendix are the unweighted (OLS) versions of Table 4-Table 6 in the main body of the paper. These tables use year and county fixed effects, as do all the tables in the main body of the paper. We number these tables B.5-B.7.

Table B.1: Summary of Media Market Data					
	Number of Stations	In-State Hits	Average # Per Market	Out-State Hits	Average # Per Market
All Markets	91	10,675	210	1,045	20
10 Most Populous Markets in Sample					
Media Market	Station	In-State Hits	Governor	Out-State Hits	Governor
Chicago, IL	WBBM	95	Blagojevich	15	IN: O'Bannon, Kernan*
	WLS	280	Blagojevich	44	IN: O'Bannon, Kernan
Atlanta, GA	WGNX	222	Perdue	6	AL: Riley
	WXIA	100	Perdue	2	AL: Riley
Pittsburgh, PA	WTAE	82	Rendell	7	MD: Ehrlich
	KDKA	133	Rendell	4	MD: Ehrlich
Denver, CO	KCNC	250	Owens	4	NE: Johanns
	KMGH	80	Owens	1	NE: Johanns
	KUSA	50	Owens	5	NE: Johanns
Salt Lake City, UT	KSL	630	Leavitt, Walker	2	ID: Kempthorne
				0	NV: Guinn
	KTVX	32	Leavitt, Walker	1	ID: Kempthorne
				0	NV: Guinn
Raleigh, NC	WNCN	89	Easley	13	VA: Warner
Nashville, TN	WSMV	500	Bredesen	22	KY: Patton, Fletcher
	WTUV	114	Bredesen	0	KY: Patton, Fletcher
Buffalo, NY	WIVB	100	Pataki	1	PA: Randell
	WGRZ	3	Pataki	0	PA: Randell
New Orleans, LA	WDSU	31	Blanco, Foster	1	MS: Barbour, Musgrove
	WWLT	399	Blanco, Foster	9	MS: Barbour, Musgrove
Albuquerque, NM	KOAT	188	Richardson	3	CO: Owens
				0	AZ: Napolitano
	KOB	24	Richardson	1	CO: Owens
				1	AZ: Napolitano
* IN Governor O'Bannon died during the period surveyed; most articles are about his					

Table B.2: Summary Statistics of Counties with In-State vs. Out-of-State Media Markets			
Decade	In-State Media Market	Out-of-State Media Market	Difference
<i>Population</i>			
1960	87,236	28,288	58,948
1970	94,811	34,328	60,482
1980	102,338	32,802	69,536
1990	102,930	35,917	67,012
<i>Median Income</i>			
1960	\$5,761	\$5,311	\$450
1970	\$10,490	\$9,615	\$875
1980	\$20,647	\$18,671	\$1,976
1990	\$28,963	\$26,765	\$2,197
<i>Pct. Urban</i>			
1960	38.73%	26.44%	12.29%
1970	40.57%	29.02%	11.55%
1980	40.73%	28.60%	12.12%
1990	40.63%	29.67%	10.96%
<i>Democrat P.</i>			
1960	52.59%	52.27%	0.32%
1970	50.90%	51.76%	0.86%
1980	47.98%	48.60%	0.62%
1990	46.71%	48.46%	1.76%
Bold = significant at the 0.01 level			
<i>Italics</i> = significant at the 0.1 level			

Table B.3: Estimates of Incumbency Advantage Controlling for Properties of Counties				
	Population	Median Income	Urban Percentage	Democratic Percentage
<i>1956 -1965</i>				
With In-State Media	3.45 (0.52)	2.99 (0.56)	3.45 (0.52)	2.01 (0.64)
With Out-of-State Media	2.88 (0.46)	2.95 (0.48)	2.93 (0.46)	2.75 (0.53)
Difference	0.57	0.04	0.52	-0.74
F	0.69	0	0.54	0.95
n	2,898	2,966	2,927	2,907
<i>1966 -1975</i>				
With In-State Media	3.74 (0.53)	4.73 (0.67)	4.00 (0.56)	3.97 (1.18)
With Out-of-State Media	4.33 (0.65)	4.27 (0.69)	4.33 (0.66)	4.03 (0.74)
Difference	-0.59	0.46	-0.33	-0.06
F	0.69	0.24	0.15	0.00
n	3,096	3,031	3,136	3,084
<i>1976 -1985</i>				
With In-State Media	5.80 (0.59)	5.06 (0.92)	6.11 (0.56)	3.72 (1.50)
With Out-of-State Media	5.55 (0.56)	5.60 (0.65)	5.36 (0.58)	4.66 (0.94)
Difference	0.15	-0.54	0.75	-0.94
F	0.10	0.28	0.95	0.28
n	3,156	3,104	3,210	2,997
<i>1986 -1995</i>				
With In-State Media	9.30 (0.55)	7.84 (0.50)	9.35 (0.57)	8.41 (0.77)
With Out-of-State Media	8.25 (0.56)	8.09 (0.54)	8.24 (0.58)	8.16 (0.62)
Difference	1.05	-0.25	1.09	0.25
F	1.91	0.12	1.96	0.06
n	3,559	3,568	3,665	3,510
Bold = significant at the 0.01 level <i>Italics</i> = significant at the 0.1 level				

Table B.4: Estimates of Incumbency Advantage Using Different Fixed Effect Models			
	County- Year	County- Decade & Year	State- Year & County
<i>1956 -1965</i>			
With In-State Media	3.37 (0.65)	3.23 (0.39)	3.42 (0.44)
With Out-of-State Media	4.39 (0.62)	3.39 (0.60)	3.48 (0.47)
Difference	-0.98	-0.17	0.06
F	1.29	0.05	0.01
n	9,109	9,109	9,109
<i>1966 -1975</i>			
With In-State Media	6.97 (0.70)	5.08 (0.43)	6.90 (0.44)
With Out-of-State Media	5.35 (1.07)	5.05 (0.70)	6.64 (0.61)
Difference	1.62	0.03	0.26
F	1.61	0.00	0.20
n	9,748	9,748	9,748
<i>1976-1985</i>			
<i>1976 -1985</i>			
With In-State Media	4.48 (0.62)	5.94 (0.40)	4.51 (0.35)
With Out-of-State Media	4.44 (1.13)	5.25 (0.68)	3.74 (0.46)
Difference	0.04	0.69	0.77
F	0.00	0.83	4.10
n	9,356	9,356	9,225
<i>1986 -1995</i>			
With In-State Media	7.23 (0.47)	6.88 (0.27)	7.28 (0.30)
With Out-of-State Media	8.77 (1.11)	7.63 (0.53)	7.47 (0.48)
Difference	1.54	-0.75	-0.19
F	1.62	1.59	0.16
n	11,107	11,107	10,822
Bold = significant at the 0.01 level			
<i>Italics</i> = significant at the 0.1 level			

**Table B.5: OLS Estimates of Incumbency Advantage
in Different Media Environments**

	All Data	Non-Pres. Election Year	Pres. Election Year
<i>1956 -1965</i>			
With In-State Media	3.18 (0.11)	2.71 (0.19)	4.14 (0.17)
With Out-of-State Media	3.38 (0.23)	3.62 (0.44)	3.94 (0.31)
Difference	-0.20	-0.91	0.20
F	0.66	3.61	0.32
n	9,109	3,722	5,387
<i>1966 -1975</i>			
With In-State Media	4.85 (0.14)	4.59 (0.16)	6.94 (0.35)
With Out-of-State Media	4.00 (0.30)	3.42 (0.41)	4.54 (0.71)
Difference	-0.85	1.17	2.40
F	6.89	7.21	9.66
n	9,751	6,406	3,345
<i>1976 -1985</i>			
With In-State Media	5.77 (0.13)	4.22 (0.17)	9.10 (0.26)
With Out-of-State Media	5.48 (0.31)	5.41 (0.54)	7.09 (0.60)
Difference	0.28	-1.19	2.01
F	0.72	4.52	9.78
n	9,358	5,038	4,320
<i>1986-1995</i>			
With In-State Media	7.39 (0.12)	6.88 (0.13)	6.95 (0.44)
With Out-of-State Media	7.36 (0.29)	7.96 (0.36)	5.38 (0.80)
Difference	0.03	-1.08	<i>1.57</i>
F	0.01	8.08	2.93
n	11,110	8,094	3,016
Bold = significant at the 0.01 level <i>Italics</i> = significant at the 0.1 level			

Table B.6: OLS Estimates of Incumbency Advantage by TV Spending Per Capita for 1970 & 1972				
	Least Expensive Tercile	Middle Tercile	Most Expensive Tercile	All Data
With In-State Media	12.04 (0.73)	3.64 (2.37)	8.09 (1.30)	5.81 (0.23)
With Out-of-State Media	<i>15.60</i> (6.92)	<i>8.15</i> (3.81)	10.47 (3.17)	5.79 (0.89)
Difference	-3.56	-4.51	-2.38	0.02
F	0.26	2.86	0.50	0.00
n	1,296	1,295	1,201	3,870
Bold = significant at the 0.01 level <i>Italics</i> = significant at the 0.1 level				

Table B.7: OLS Estimates of Incumbency Advantage By Competitiveness of Race, 1956 – 1995					
	Competitiveness Category				
	Low	Medium		High	All
<i>1956 -1965</i>					
With In-State Media	-0.65 (0.21)	3.75 (0.22)		3.11 (0.70)	3.15 (0.12)
With Out-of-State Media	<i>-0.65</i> (0.36)	4.80 (0.51)		2.27 (2.06)	3.50 (0.24)
Difference	0.01	-1.05		1.05	-0.35
F	0.00	4.13		0.15	1.79
n	2,216	3,003		2,961	8,180
<i>1966 -1975</i>					
With In-State Media	2.55 (0.57)	2.21 (0.23)		7.26 (0.76)	4.30 (0.14)
With Out-of-State Media	1.58 (1.42)	3.39 (0.52)		5.78 (0.93)	3.81 (0.31)
Difference	0.97	-1.18		1.48	0.49
F	0.43	4.48		4.01	2.17
n	2,026	4,115		1,696	7,837
	Low	Med1	Med2	High	All
<i>1976 -1985</i>					
With In-State Media	2.30 (0.85)	3.13 (0.52)	4.97 (0.66)	0.12 (0.94)	5.31 (0.16)
With Out-of-State Media	1.46 (1.26)	2.68 (0.75)	2.73 (1.60)	6.09 (2.49)	5.60 (0.36)
Difference	0.84	0.45	-2.24	-5.97	-0.29
F	0.61	0.42	1.77	4.81	0.62
n	1,154	2,489	2,187	1,587	7,417
<i>1986 -1995</i>					
With In-State Media		2.93 (0.49)	5.82 (0.14)	22.96 (1.86)	7.76 (0.21)
With Out-of-State Media	Not Enough Data	3.25 (0.63)	8.37 (0.43)	21.73 (1.10)	5.66 (0.54)
Difference		-0.32	-2.55	1.23	2.10
F		0.19	0.36	0.67	13.39
n		1,907	1,173	1,353	4,799
Bold = significant at the 0.01 level <i>Italics</i> = significant at the 0.1 level					