Supporting Information for: "Local Elections Do Not Increase Local News Demand"

Contents

A   Appendix A: Data Sources and Panel Construction

Table A1: Descriptive Statistics: Newspapers, TV Viewership, and Elections

	N	Mean	S.D.
Newspapers			
Newspaper-Months	9,048	56.9	19.6
Website Impressions (millions)	123,258	13.8	29.8
Local Television			
Markets	186	-	-
Stations	683	-	-
Station-Three-Week-Periods	76,551	112	25.9
Monthly Avg. Viewership (HH%)	-	3.9	2.9
Mentions of "mayor*" (2017)	235,035	3.5	1.8
Mayoral Elections			
Total Elections	506	-	-
Elections per Market	-	2.7	1.1
Victory Margin	-	30.4	25.3

Note: This table displays descriptive statistics of the newspaper web traffic, television viewership, and elections data used in our analyses. The subsections below describe the data in greater detail.

A.1   Newspaper Data

To measure how engagement with local newspapers varies over time, we use data from the Alliance for Audited Media (AAM). AAM is an industry organization that collects and certifies information about the reach of media outlets for advertisers. We rely on the monthly impressions (times a page is loaded) for newspaper websites, which we then standardize within newspaper. The raw number of impressions ranges from 48,000 to over 334 million, with a mean of of 13 million and a median of 490,000. The coverage of newspaper traffic is an unbalanced panel from 2015-2021 of 143 unique newspaper websites in 136 different cities. This information is sourced by AAM from several different providers, including ComScore, Adobe Analytics and Google Analytics. We account for this feature of the web traffic data in our analysis by standardizing traffic measures within each newspaper-data source pairing when considering temporal variation of news use.

Figure A1 displays the over time variation in the standardized impressions, with bars representing the interquartile range. Figure A2 displays the trends in newspaper traffic, split by off cycle and on cycle elections, relative to the timing of an election.
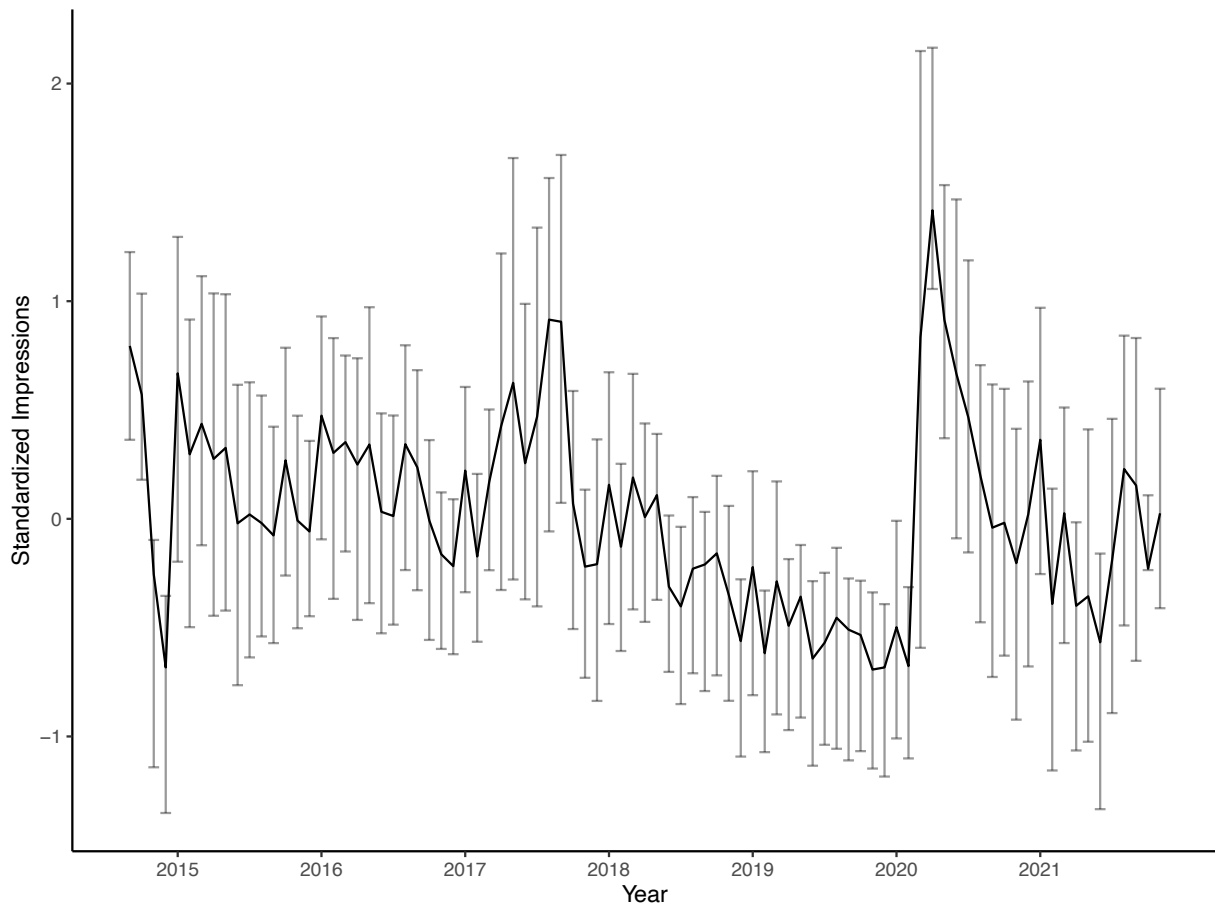
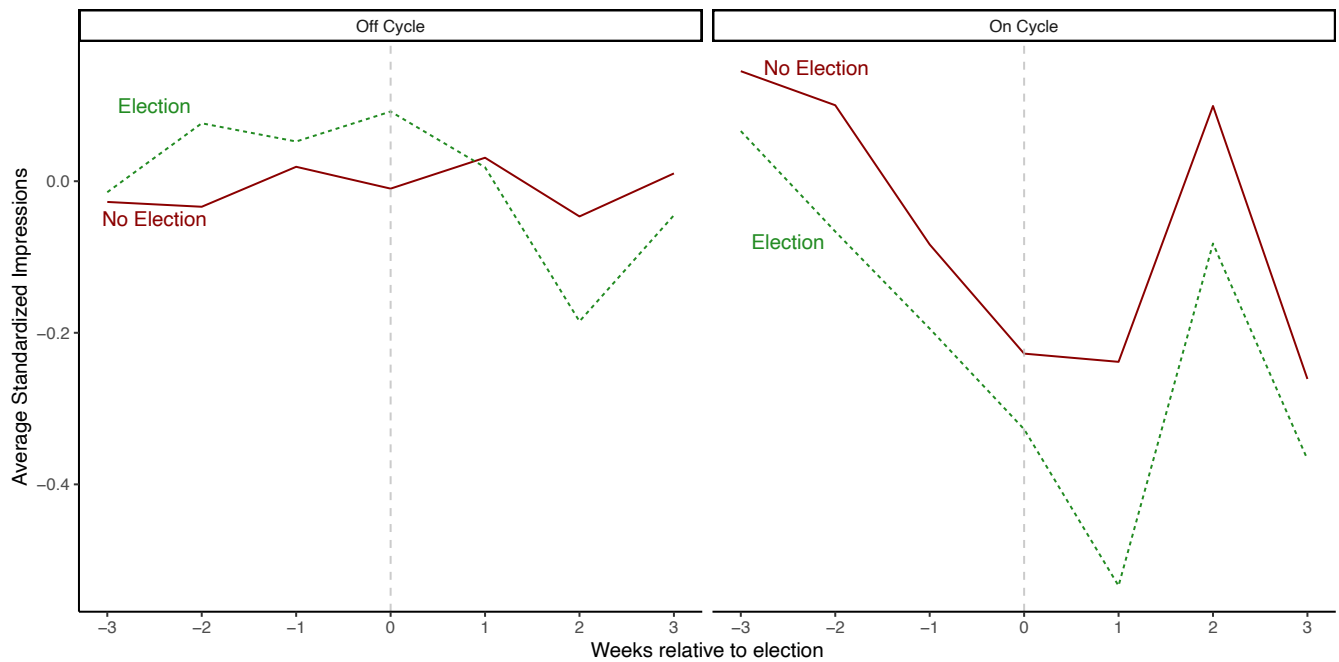Figure A1: Newspaper Website Traffic By Year

Figure A2: Monthly Newspaper Traffic Relative to Election

A.2 Television Data

Our television viewership data comes from TVEyes, an independent data provider that acquires local television broadcasts and market level Nielsen viewership for individual programs.[1] Nielsen does not report its "live" viewership data to TVEyes. Instead, it reports a station-program-day three week average, delayed three weeks. These numbers are created from their live viewership totals, but are delayed to alleviate the ability to directly backwards engineer the live totals (for which Nielsen charges clients separately). In other words, for a given program on a given day, the TVEyes Nielsen ratings represent a three week average of viewership of that same program-day from three weeks ago. Practically, this means if we take the Nielsen data every three weeks, and appropriately lag it three weeks, we can construct three week averages of station-program-day viewership, which is what we use in our analyses ($n = 220,029$).

This panel is also unbalanced as some stations remove their news broadcasts. Figure A3 displays descriptives of this measure, and Figure A4 demonstrates the strong degree of seasonality in television viewership. The left panel shows weekly viewership with the solid line representing the sample average and the bars representing the interquartile range. The right panel displays the sample density of monthly average viewership (used in most analyses).

We also measure the usage of the word **mayor*** (including "mayoral") in local news transcripts in 2017, using the replication data from Martin and McCrain (2019)martinmccrain19. The transcripts used in Martin and McCrain also come from TVEyes and include weekday news broadcasts for all stations in the country. This dataset includes 20,091 station-day broadcasts. On average, stations mention "mayor" in their broadcasts 3.5 times a month.

A.3 Elections Data

Our analyses focus on the mayoral elections of the largest city within each media market (DMA). For most cities, we rely on the election dataset provided by Warshaw et al.(Warshaw, de Benedictis-Kessner and Velez, 2022). For cities not in this dataset we manually collected information about the most recent election. For both sets of data, we further collect the exact date of the election in each city. This process resulted in 506 mayoral elections with an average of 2.7 elections per media market. Figure A5 displays the geographic dispersion of the cities for the largest cities within media markets. Figures A6 displays the timing of elections in the sample, highlighting those that are on- versus off-cycle. Figure A7 displays the trends in the mentions of "mayor*" relative to the timing of elections.

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[1]TVEyes is used elsewhere in political science and economics for content and viewership of local television broadcasts.(Mastrorocco and Minale, 2018; Martin and McCrain, 2019)
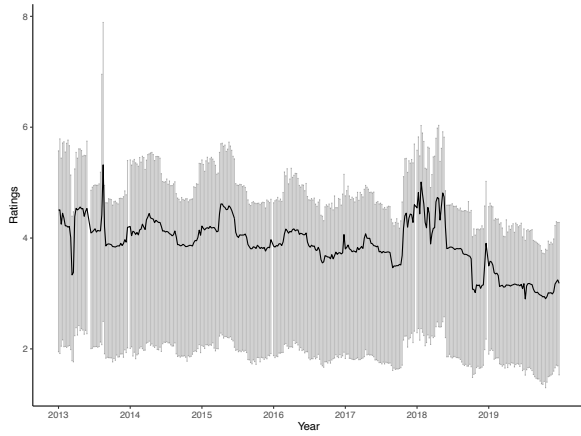
(a) Weekly TV Viewership
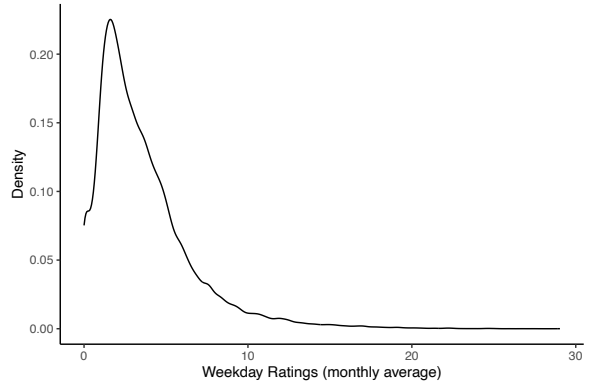
(b) Distribution of Viewership

Figure A3: Local TV Viewership

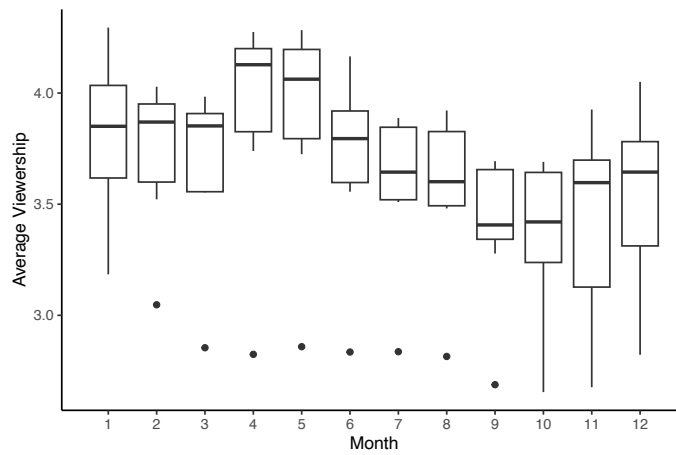Figure A4: Monthly Average Television Viewership
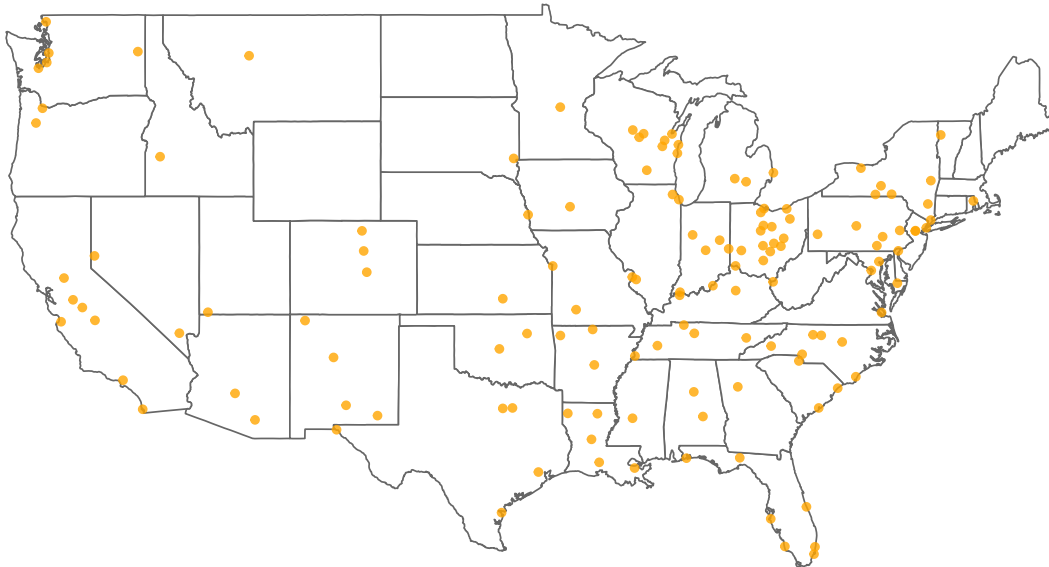
Figure A5: Map of Mayoral Elections

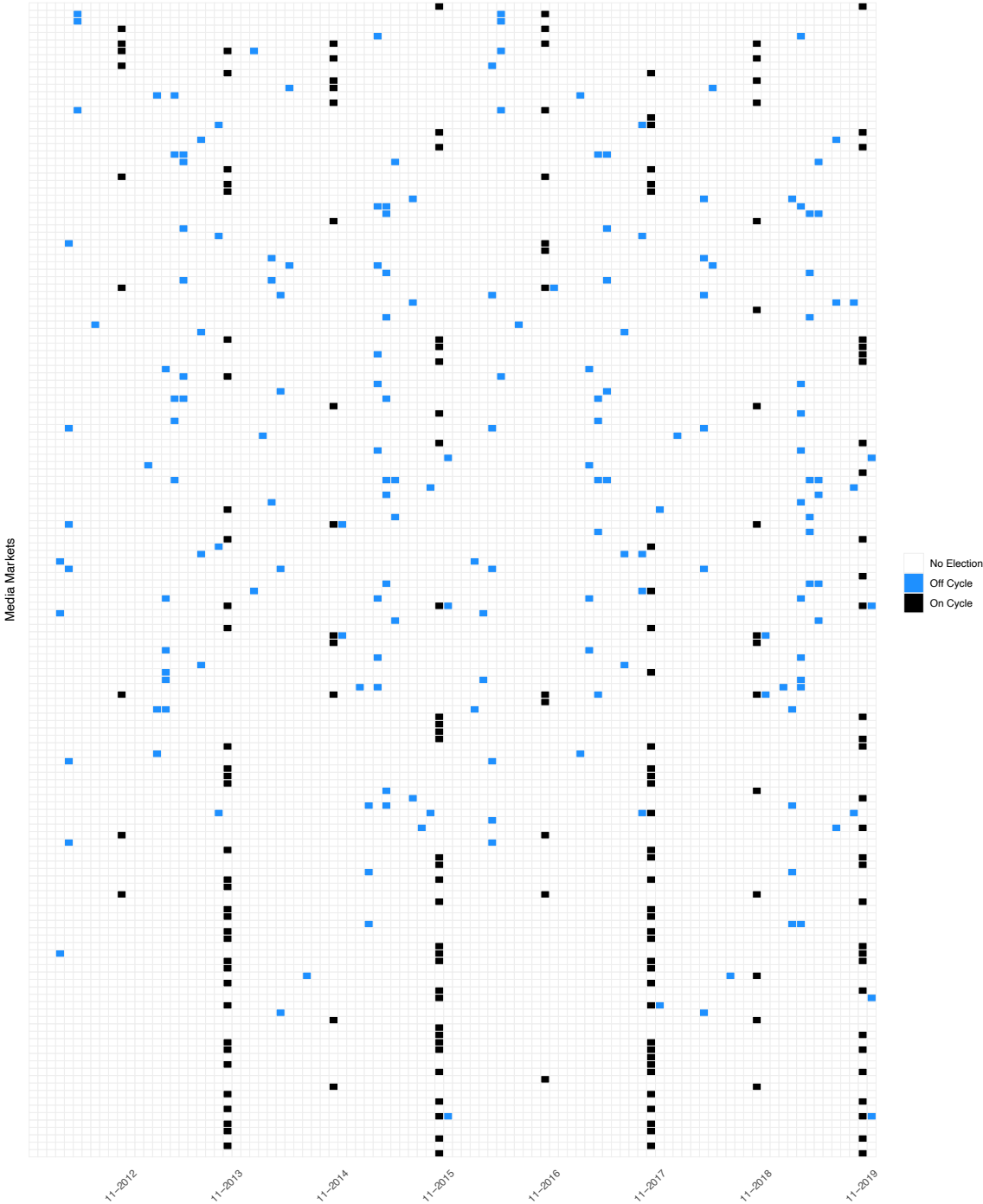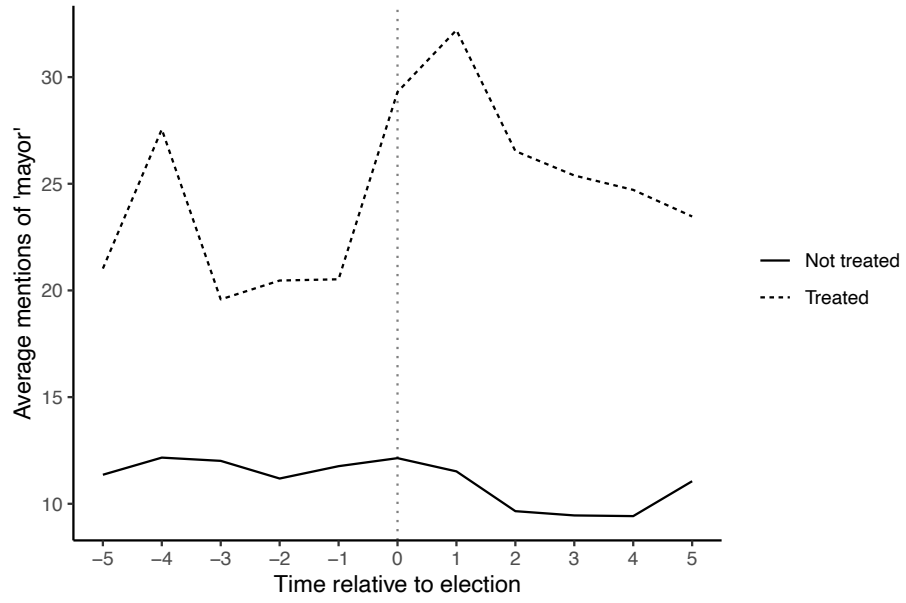Figure A6: Timing of Mayoral Elections within Media Markets

Figure A7: Mentions of 'mayor' in Local TV Transcripts

A.4 Additional Results

This section includes additional results and robustness checks mentioned in the manuscript. First, we examine heterogeneity in the results of the effect of mayoral elections on television viewership based on the population of the city in which the election is held. Some media markets include multiple metropolitan areas, whereas others include one major metropolitan area, thus there is variation in proportion of the market's population that resides in the largest city in the market (the elections we focus on). Figure A8 displays event study results when splitting a sample by the population of the largest city based on quartiles. The results show little difference from the aggregated results presented in the manuscript; however, reassuringly they do *not* show that the cities with the smallest populations as a proportion of the market's populations experience an increase in viewership following elections.

We investigate a similar source of heterogeneity based on the distance of a station from the largest city in the market. The idea is that stations that are outside of the largest city in a market are less likely to cover elections in that city, and thus it would be concerning if we found a viewership increase for those stations. Figure A9 shows results by splitting the sample as above or below the mean distance of a station to the largest city. Again, there is no pattern in these results that would suggest a spurious relationship between viewership and election timing.
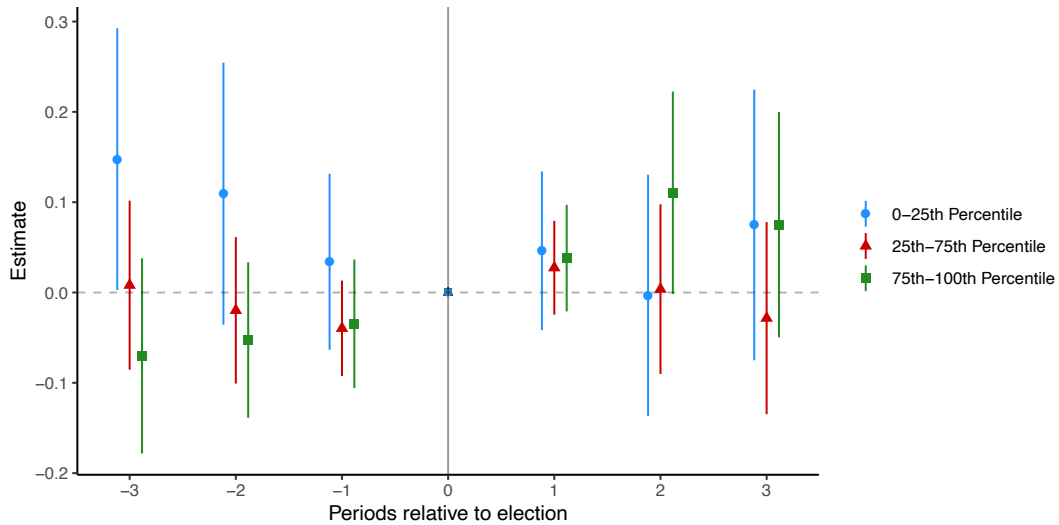

Figure A8: Mayoral Elections Event Study: By Population of City

Note:

Next, table A4 displays results of a simplified event study regression of mentions of 'mayor' and election timing. Because this panel does not have staggered treatments (i.e., each city only has one election), it is possible to run this simplified model. This model shows
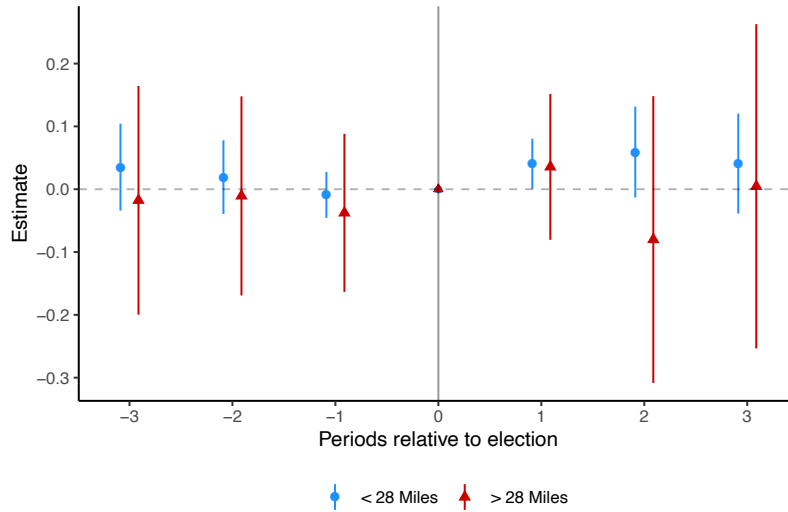
Figure A9: Mayoral Elections Event Study: By Station Distance from City with Election

Note:

a similar result to the primary mentions event study in the manuscript: mentions of 'mayor' are higher during election week and the month after, and there is not much of a pre-trend.

Finally, we run regressions on the stacked dataset of television viewership to simplify the interpretation of the event study results. To further demonstrate this pattern, we run a simpler model on the stacked dataset that includes a dummy variable for three three-week periods preceeding or proceeding the election – in effect, pooling together the months surrounding election week. We find a positive but not statistically significant effect on viewership in these weeks. The coefficient is substantively very small and should be interpreted as a rather precisely estimated zero.

Table A2: Mentions of 'mayor' in Local News Transcripts

	Mentions of 'mayor' (1)
Election week	18.82***
	(3.993)
Month after election	1.813
	(1.609)
Month before election	6.702**
	(2.980)
Observations	19,784
R^2	0.51645
Within R^2	0.02382
Station fixed effects	✓
Week fixed effects	✓

Table A3: Viewership relative to surrounding two months

	Viewership (1)
Months surrounding election week	0.0150
	(0.0194)
Observations	341,433
Station-Dataset fixed effects	✓
Week-Dataset fixed effects	✓

A.5 Tables of results from manuscript figures

This section presents the main results from the manuscript figures (Figures 1, 2, 3, 4). The figures plot the coefficient estimates and confidence intervals from these tables. The estimation strategy is described in the manuscript.

Table A4: Mentions of 'mayor' in Local News Transcripts

	Mentions of 'mayor' (1)
Month -2	-3.877***
	(0.7052)
Month -1	-3.090***
	(0.5412)
Month 1	-3.854***
	(0.6680)
Month 2	-4.350***
	(0.6987)
Observations	14,889
R^2	0.67921
Within R^2	0.04127
Station-dataset fixed effects	✓
Week-dataset fixed effects	✓

Table A5: Google Trends Relative to Election Week

	Google Trends (1)
Month -2	-18.24***
	(1.927)
Month -1	-13.39***
	(2.188)
Month 1	-22.20***
	(2.372)
Month 2	-22.89***
	(2.568)
Observations	12,628
R^2	0.66086
Within R^2	0.05130
Outlet-dataset fixed effects	✓
Month-Year-dataset fixed effects	✓

Table A6: Newspaper Impressions Relative to Election Month

	Impressions				
	(1)	(2)	(3)	(4)	(5)
Month -2	-0.0905	-0.1135	-0.0749	-0.1064	-0.0613
	(0.0739)	(0.1275)	(0.0891)	(0.0767)	(0.0821)
Month -1	-0.0480	-0.1544	0.0213	0.0008	-0.0499
	(0.0664)	(0.1138)	(0.0794)	(0.0712)	(0.0747)
Month 1	-0.1115***	-0.1113	-0.1112**	-0.1249***	-0.1050**
	(0.0432)	(0.0772)	(0.0502)	(0.0459)	(0.0472)
Month 2	-0.0115	-0.0791	0.0343	-0.0227	-0.0019
	(0.0719)	(0.1394)	(0.0746)	(0.0656)	(0.0669)
Observations	20,001	16,595	3,406	9,161	9,664
R^2	0.67806	0.68093	0.65804	0.68815	0.67415
Within R^2	0.00026	0.00018	0.00160	0.00068	0.00035
Outlet-dataset fixed effects	✓	✓	✓	✓	✓
Month-Year-dataset fixed effects	✓	✓	✓	✓	✓
Model	Full Sample	Off Cycle	On Cycle	Close Elections	Not Close Elections

Table A7: TV Viewership Relative to Election Week

| | Viewership | | | | |
	(1)	(2)	(3)	(4)	(5)
Period = -3	0.0152	-0.0142	0.0510	-0.1094	0.0414
	(0.0325)	(0.0426)	(0.0500)	(0.0711)	(0.0427)
Period = -2	0.0032	-0.0423	0.0585	-0.1579**	0.0470
	(0.0287)	(0.0359)	(0.0460)	(0.0662)	(0.0363)
Period = -1	-0.0230	-0.0318	-0.0124	-0.0939**	0.0059
	(0.0191)	(0.0288)	(0.0238)	(0.0397)	(0.0250)
Period = 1	0.0359**	0.0531**	0.0152	0.0111	0.0378*
	(0.0182)	(0.0218)	(0.0303)	(0.0468)	(0.0206)
Period = 2	0.0387	0.0356	0.0393	-0.0741	0.0459
	(0.0324)	(0.0346)	(0.0624)	(0.0621)	(0.0439)
Period = 3	0.0255	0.0202	0.0297	-0.1186	0.0642
	(0.0364)	(0.0418)	(0.0657)	(0.0728)	(0.0504)
Observations	341,433	309,799	31,634	98,405	220,720
R^2	0.95726	0.95734	0.95623	0.95811	0.95901
Within R^2	2.26×10^{-5}	3.59×10^{-5}	0.00017	0.00016	2.19×10^{-5}
Station-dataset fixed effects	✓	✓	✓	✓	✓
Week-dataset fixed effects	✓	✓	✓	✓	✓
Model	Full Sample	Off Cycle	On Cycle	Close Elections	Not Close Elections
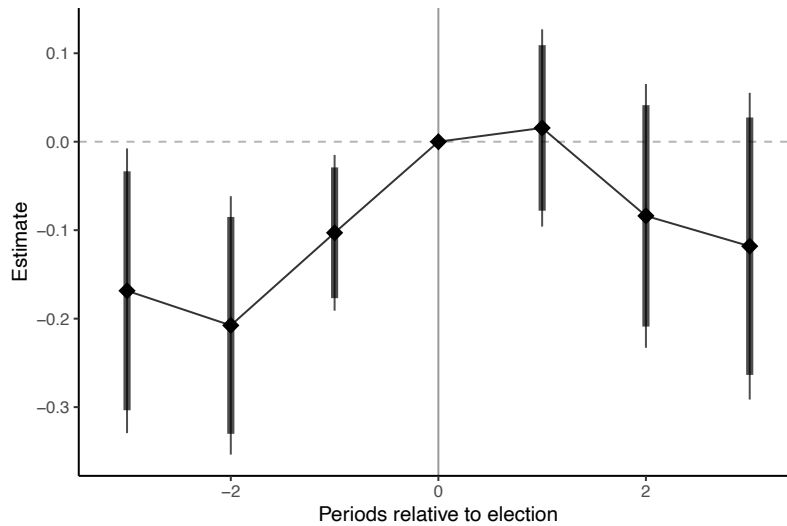
Figure A10: Mayoral Elections Event Study: Close, Two-Party Elections

Note: This figure plots coefficients from a version of Model 4 in Table A7, however with an additional subsetting to elections with Democrats and Republicans as the top two finishers.