

Online Appendix: Supporting Information for  
*Local News, Information, and the Nationalization of U.S. Elections*

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## A.1 Data Sources

- In-State Share of DMA
  - Nielsen DMA boundaries
  - Census Bureau’s Annual Estimates of the Resident Population by county<sup>1</sup>
  - Population data from the 2010 Census for ZIP Code Tabulation Areas<sup>2</sup>
- National rate of TV households subscribing to multichannel video programming distributor
  - Nielsen estimates compiled from FCC Annual Reports on the Status of Competition in the Market for the Delivery of Video Programming<sup>3</sup>
- County-level rate of households subscribing to multichannel video programming distributor
  - SNL Kagan MediaCensus
  - Five-year estimates (2012-2016) on the number of households from the Census Bureau’s American Community Survey county-level summary file<sup>4</sup>
- Local television news coverage of governors and senators
  - The Internet Archive’s TV News Archive<sup>5</sup>
- Survey data on voter knowledge, split-ticket voting, and individual-level characteristics
  - 2012 and 2016 Cooperative Congressional Election Studies<sup>6</sup>
- Precinct-level measure of split-ticket voting
  - 2012 Harvard Election Data Archive<sup>7</sup>

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<sup>1</sup>See <https://www.census.gov/data/tables/2017/demo/popest/counties-total.html#tables>.

<sup>2</sup>Data from the 2010 Census Summary File 1 at the ZCTA level retrieved through American FactFinder, Table P1.

<sup>3</sup>See [https://apps.fcc.gov/edocs\\_public/attachmatch/DA-17-71A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/DA-17-71A1.pdf), [https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-15-41A1\\_Rcd.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-41A1_Rcd.pdf), [https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-07-206A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-07-206A1.pdf), [https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-05-13A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-05-13A1.pdf), [https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-02-338A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-02-338A1.pdf), [https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-01-1A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-01-1A1.pdf), <https://transition.fcc.gov/Bureaus/Cable/Reports/fcc96496.txt>, <https://www.fcc.gov/Bureaus/Cable/Reports/fcc95491.zip>, <https://transition.fcc.gov/Bureaus/Cable/Reports/fcc98335.pdf>, and [https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-12-81A1\\_Rcd.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-12-81A1_Rcd.pdf).

<sup>4</sup>Data retrieved through American FactFinder, Table S1101.

<sup>5</sup>Data retrieved through the GDELT API (<https://blog.gdeltproject.org/gdelt-2-0-television-api-debuts/>).

<sup>6</sup>See <https://cces.gov.harvard.edu/>.

<sup>7</sup>See <https://hdl.handle.net/1902.1/21919>.

- Ballot-level data to assess validity of aggregate measures of split-ticket voting
  - 2016 South Carolina Election Audit<sup>8</sup>
- Airings of political advertisements
  - 2012 Wesleyan Media Project<sup>9</sup>
- County-level data to assess covariate balance
  - County share of the population residing in rural places
    - \* Census Bureau’s County Rural Look-Up Table<sup>10</sup>
  - County-level presidential vote share and turnout rate in 2016
    - \* CQ Voting and Elections Collection<sup>11</sup>
    - \* Five-year estimates (2012-2016) on the citizen voting-age population from the Census Bureau’s American Community Survey county-level summary file<sup>12</sup>
  - Presence of a daily newspaper in the county
    - \* Center for Innovation and Sustainability in Local Media at the University of North Carolina at Chapel Hill<sup>13</sup>
  - All other characteristics are based on five-year estimates (2012-2016) from the Census Bureau’s American Community Survey county-level summary file<sup>14</sup>

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<sup>8</sup>See <https://www.scvotes.org/election-audits-south-carolina>.

<sup>9</sup>See Fowler, Franz, and Ridout (2015) and <http://mediaproject.wesleyan.edu/>.

<sup>10</sup>See [https://www2.census.gov/geo/docs/reference/ua/County\\_Rural\\_Lookup.xlsx](https://www2.census.gov/geo/docs/reference/ua/County_Rural_Lookup.xlsx).

<sup>11</sup>See <https://library.cqpress.com/elections/>.

<sup>12</sup>Data retrieved through American FactFinder, Table B05003.

<sup>13</sup>See <https://www.usnewsdeserts.com/methodology/>.

<sup>14</sup>Data retrieved through American FactFinder.

## A.2 Media Markets: Nielsen Designated Market Areas

The Nielsen Company assigns counties to Designated Market Areas (DMAs) based on the television viewing patterns of residents in each county. In the past, Nielsen exclusively utilized viewer diaries to collect data on viewing patterns (Federal Communications Commission 1999). Nielsen increasingly utilizes electronic measurement methods to collect data on viewing patterns, especially in large markets (Nielsen Company 2014). Nielsen DMAs generally define the boundaries of local markets for stations’ exclusive rights to network and syndicated content (Government Accountability Office 2015). The FCC also uses DMAs to define market areas for mandatory carriage as well as limits on ownership of broadcast stations. Prior to 1999, the FCC used Arbitron’s television market boundaries (Areas of Dominant Influence), but transitioned to Nielsen’s DMA boundaries after Arbitron “ceased its designation and publication of ADI market areas” (Federal Communications Commission 1995).

Designated Market Areas are non-overlapping geographies, which means that each county is assigned to a single DMA. It is important to note that Nielsen only rarely splits counties into multiple DMAs. Of the 3,130 counties / county equivalents assigned to a DMA, 16 are split into multiple markets. In other words, 99.5 percent of all counties are not split. While Nielsen updates boundaries annually based on county viewing patterns, boundaries rarely change over time. Nielsen assigned only 30 counties (less than 1 percent of all counties) to different DMAs in 2008 and 2016. In terms of population, these 30 counties that switched DMAs comprise about 0.1 percent of the U.S. population. Thus, Nielsen reassigns only a minuscule share of viewers to different media markets over time. For all analyses in the paper, I exclude split counties and the counties that experienced recent changes. Due to the rarity of both, results are nearly identical if observations from these few counties are included in the analysis.

The in-state share of DMA measure is calculated using population data at the county and zip code tabulation area level (for the few counties split into multiple DMAs). The measure indicates the proportion of a DMA’s population from a given state:

$$\text{In-State Share of DMA}_{sj} = \frac{P_{sj}}{\sum_{s=1}^S P_{sj}}$$

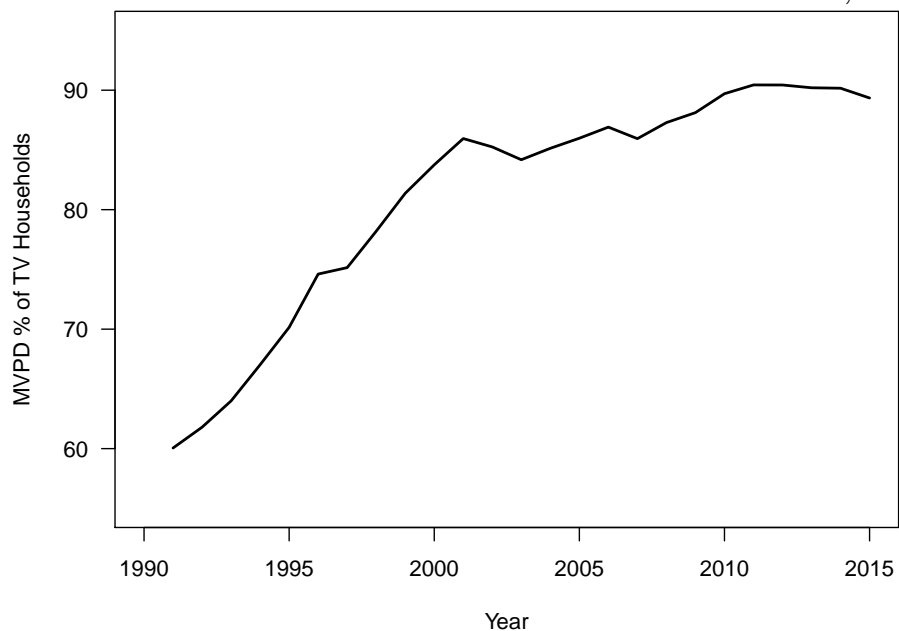
where In-State Share of DMA<sub>sj</sub> indicates the population share of DMA  $j$  from state  $s$  and  $P_{sj}$  indicates the population in the area of overlap between state  $s$  and DMA  $j$ . Thus, the numerator is the population in a given state-DMA (i.e., area of overlap between a state and DMA) and the denominator is the total population in the DMA.

As a result of both contracts between stations and networks as well as FCC rules, Nielsen’s DMA boundaries restrict which stations cable, satellite, and other multichannel video programming distributors (MVPDs) are permitted to carry in their channel lineups. While out-of-market stations are occasionally available over-the-air, the vast majority of television households rely on MVPDs rather than over-the-air signals; since 2011, about 90 percent of television households subscribe to an MVPD (see Figure A1). If, for any reason, residents of out-of-state media markets are less likely

to subscribe to an MVPD than residents of in-state markets, then it is possible that residents of out-of-state-markets have more access and exposure to in-state local news than otherwise thought. Over-the-air access to out-of-market stations likely depends on a number of factors, including the distance from the station or its nearest translator, terrain, buildings and natural barriers (e.g., trees), weather, and reception technology/hardware. I examine whether households residing in out-of-state markets are less likely to subscribe to an MVPD using data from the SNL Kagan MediaCensus.<sup>15</sup>

Figure A2 displays the relationship between the county-level MVPD penetration rate (i.e., the share of households in a county that subscribe to an MVPD) and the in-state share of the DMA to which the county is assigned. The locally weighted regression (LOESS) indicates an extremely flat relationship; there are only negligible differences in subscriber rates across the entire distribution of the in-state share of DMA. The MediaCensus data are not perfect; for instance, a small number of counties have more MVPD subscribers than households in the data. Regardless of how these counties are treated (excluded from the sample, top-coded to have a rate = 1, or allowed to have a rate > 1), the relationship between in-state share of DMA and MVPD penetration rate is unchanged. The results strongly suggest that differences in subscription rates to MVPDs by type of media market (i.e., in-state vs. out-of-state market) are minimal.

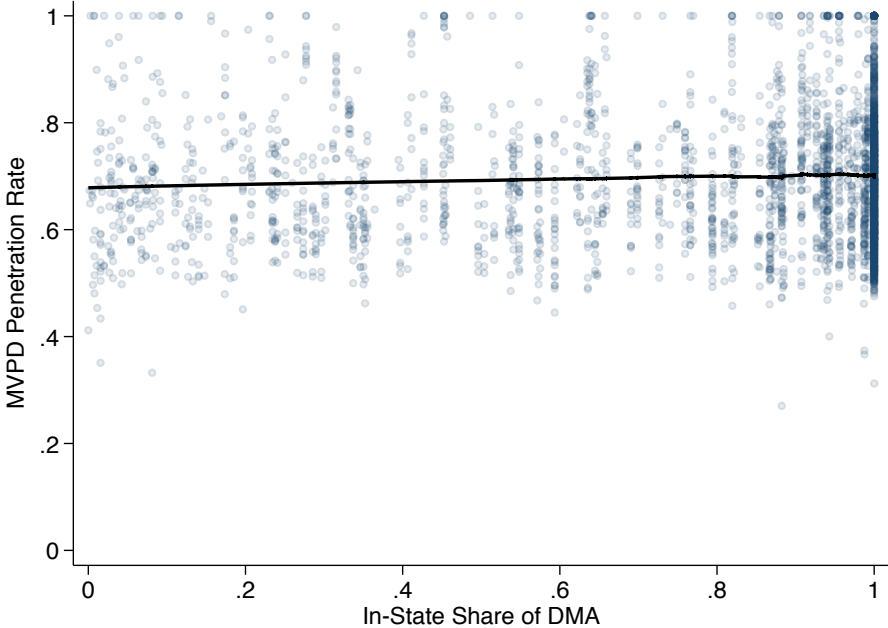
**Figure A1 – Share of TV Households with MVPD Broadcast Service, 1991-2015**



Nielsen estimates compiled from various FCC Annual Reports on the Status of Competition in the Market for the Delivery of Video Programming.

<sup>15</sup>According to SNL Kagan (2012), “MediaCensus, which provides geographic subscriber estimates for the multichannel space, channel lineups and must-have competitive intelligence, is the most accurate and complete information of its kind, carefully constrained to public documents, provider footprints, technical capabilities and other exclusive sources.”

Figure A2 – Share of Households with MVPD Broadcast Service by In-State Share of DMA

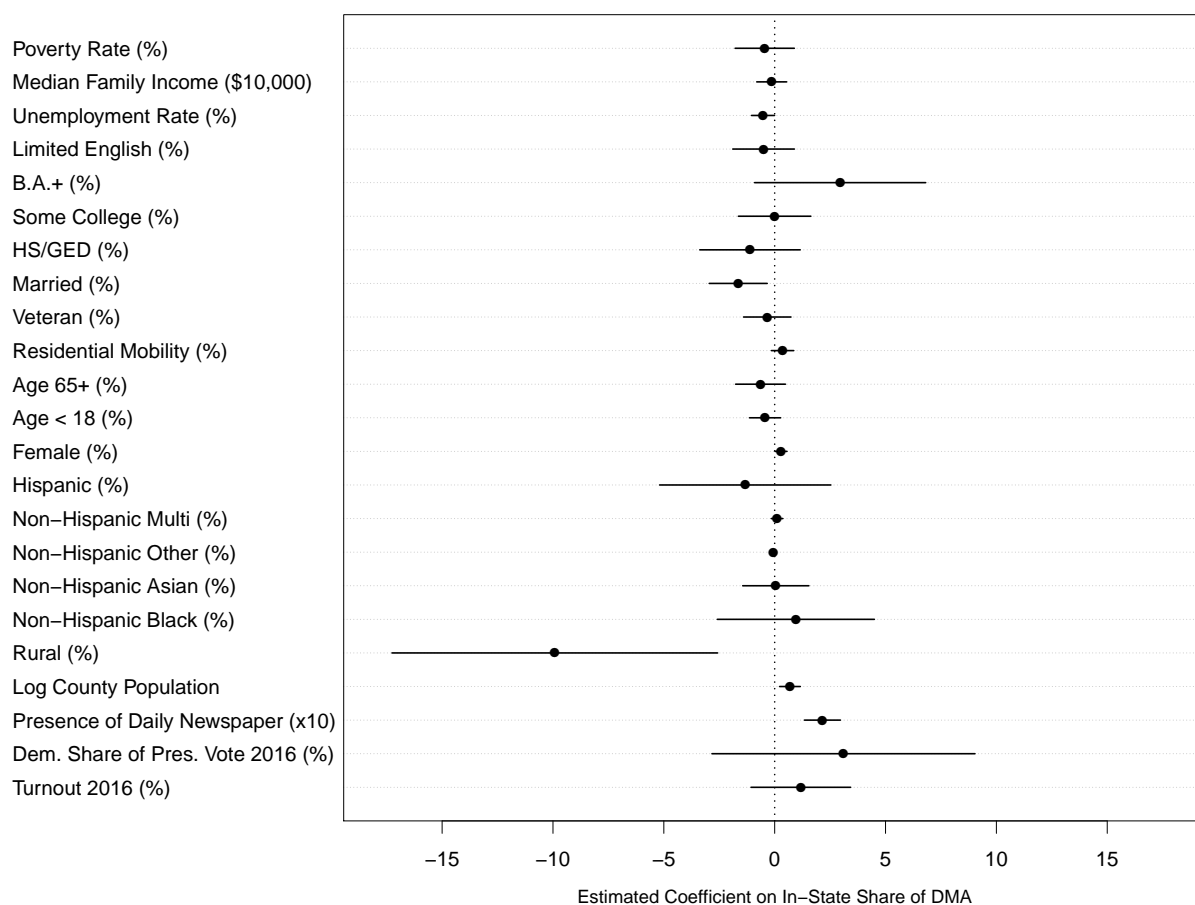


The MVPD penetration rate is calculated based on county-level subscriber data from the SNL Kagan MediaCensus and the number of households from the Census Bureau’s American Community Survey county-level summary file, five-year estimates (2012-2016). The curve is from a locally weighted regression (LOESS).

### A.3 Covariate Balance across In-State Share of DMA

I examine covariate balance across the distribution of the in-state share of DMA to assess the comparability of residents of in-state and out-of-state markets. Because the “treatment” variable (i.e., in-state share of DMA) in this context is continuous and because the comparison is within statewide electoral environments, I regress each county-level covariate on the in-state share of DMA measure and state fixed effects.<sup>16</sup> Figure A3 displays the estimated coefficient on in-state share of DMA for each covariate’s regression. Most of the county-level covariates are measured on the same 0-100 scale (%), which allows for easy comparison across these measures.<sup>17</sup>

**Figure A3 – Estimated Coefficient on In-State Share of DMA (with State FEs)**



If, within states, the populations of counties located in markets with a higher in-state share are meaningfully different from the populations of counties located in markets with a lower in-state share, the estimated coefficient should be of a relatively large size in absolute terms. Instead, what

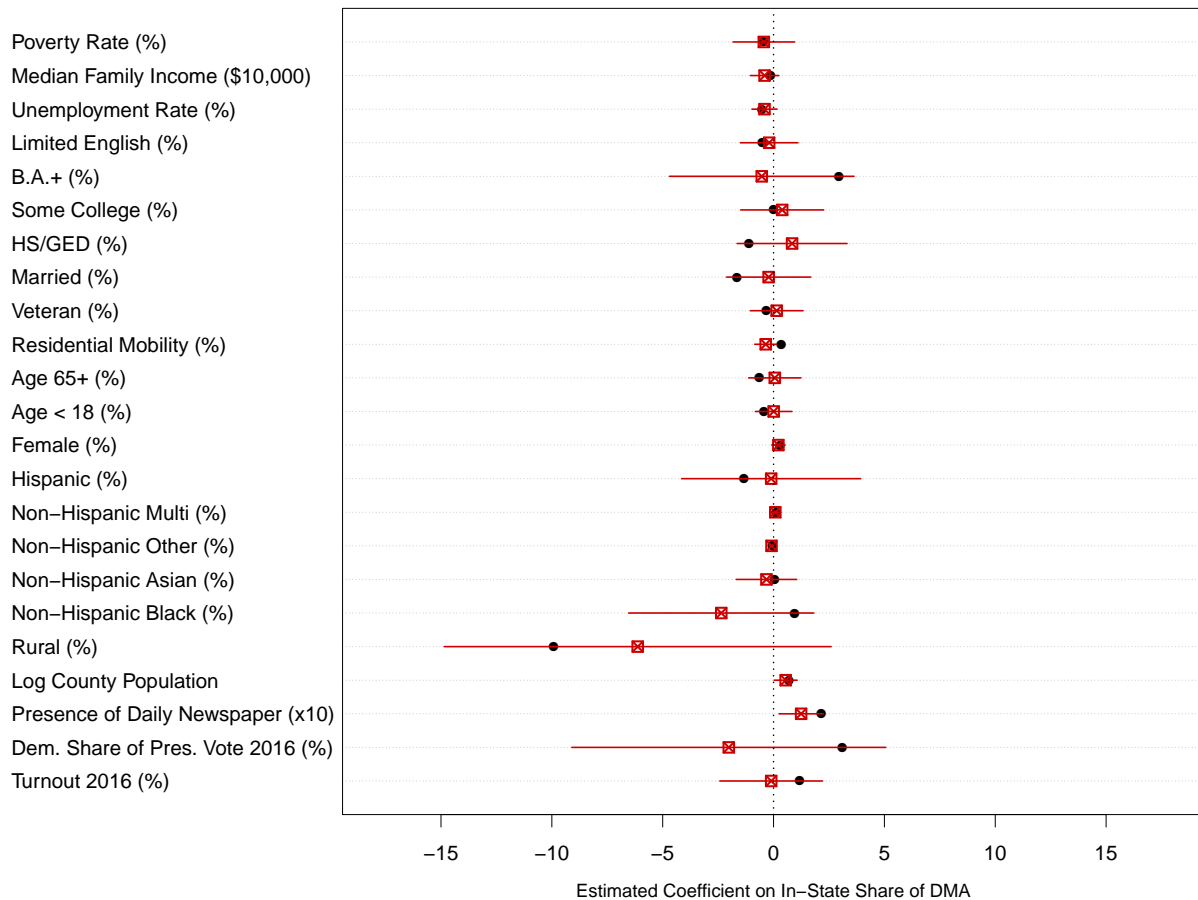
<sup>16</sup>As in the paper, standard errors are clustered by state-DMA. In addition, the analyses are weighted by the county population.

<sup>17</sup>The only covariates not on this scale are median family income, log population, and presence of a newspaper.

is apparent from the covariate balance plot is negligible differences moving from entirely out-of-state markets to entirely in-state markets. For most covariates, the estimated coefficient on in-state share of DMA is very near to zero, which implies minimal differences in these populations along these dimensions.

As discussed in the paper, the dimensions along which there is evidence of imbalance are the share of the population living in rural places, the log population, the presence of a daily newspaper in the county, and the share of the adult population that is married. Counties located in markets with higher in-state shares tend to be more populous, less rural, have a daily newspaper, and have higher marriage rates (though the magnitude of this difference is modest). It is also apparent (and unsurprising) from examining the geographic distribution of in-state share of DMA (Figure 2 in the paper) that counties in out-of-state markets tend to be located geographically close to neighboring states.

**Figure A4 – Border Counties: Estimated Coefficient on In-State Share of DMA (with State FEs)**

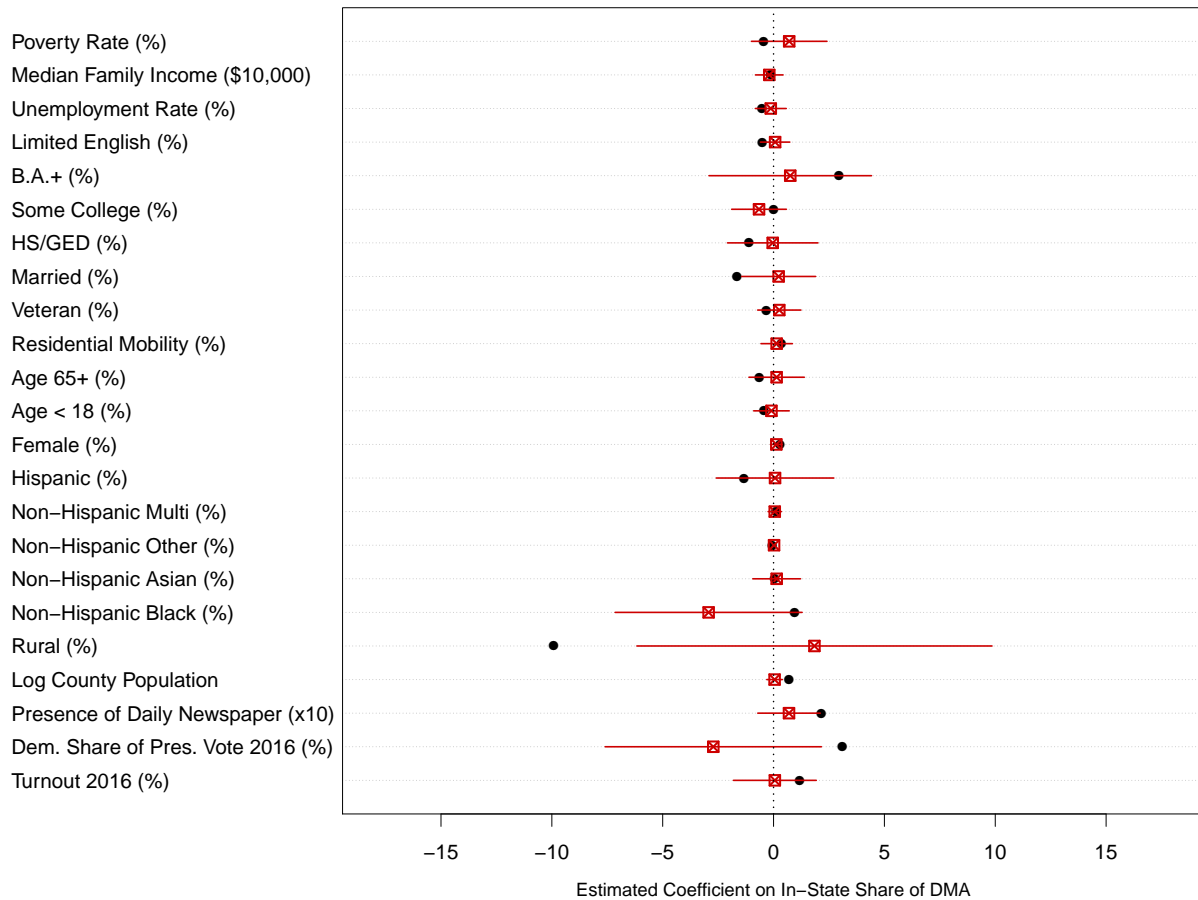


The red box with an “x” indicates the estimated coefficient based on the border counties sub-sample, and the bars indicate the corresponding 95% confidence interval. The black dot indicates the estimated coefficient based on the full sample.



In the paper, I present additional specifications in which I subset the sample to two different sub-samples of geographically proximate residents. The first sub-sample restricts the analysis to residents of counties that are adjacent to another state (i.e., border counties). Some of these border counties are located in media markets predominantly composed of the neighboring state’s residents, and some are located in media markets predominantly composed of in-state residents. In the second geographically proximate sub-sample, I subset the sample to residents of counties located in out-of-state markets (using a threshold of in-state share of DMA < 0.5) as well as residents of counties adjacent to such counties (i.e., counties in out-of-state markets and adjacent counties). I also assess the covariate balance of these sub-samples. Importantly, both geographically proximate sub-samples offer improved balance with respect to the three characteristics for which there is evidence of imbalance in the full sample without compromising balance along other dimensions. The especially strong covariate balance for the geographically proximate sub-samples offers strong evidence for the comparability of residents located in in-state and out-of-state markets within these sub-samples.

**Figure A5 – Adjacent Counties: Estimated Coefficient on In-State Share of DMA (with State FEs)**



The red box with an “x” indicates the estimated coefficient based on the adjacent counties sub-sample, and the bars indicate the corresponding 95% confidence interval. The black dot indicates the estimated coefficient based on the full sample.

## A.4 Measuring Local Television News Coverage

### A.4.1 About the TV News Archive

The Internet Archive’s TV News Archive’s “mission is to build and preserve comprehensive collections of the world’s most important television programming and make them as accessible as possible to researchers and the general public” (Hanamura 2018).<sup>18</sup>

The Internet Archive collects the television content by recording channels through hardware located in each of the markets they are monitoring (third parties mostly own the hardware), the video content and closed captioning data is then transferred, archived, and stored on the Internet Archive’s servers. The process is not without occasional problems: “A lot can go wrong here. Storms can affect reception, packets can be lost or corrupted before they reach our servers. The result can be time shifts or missing content. But most of the time the data winds up sitting comfortably on our hard drives unscathed” (Schultz 2016).

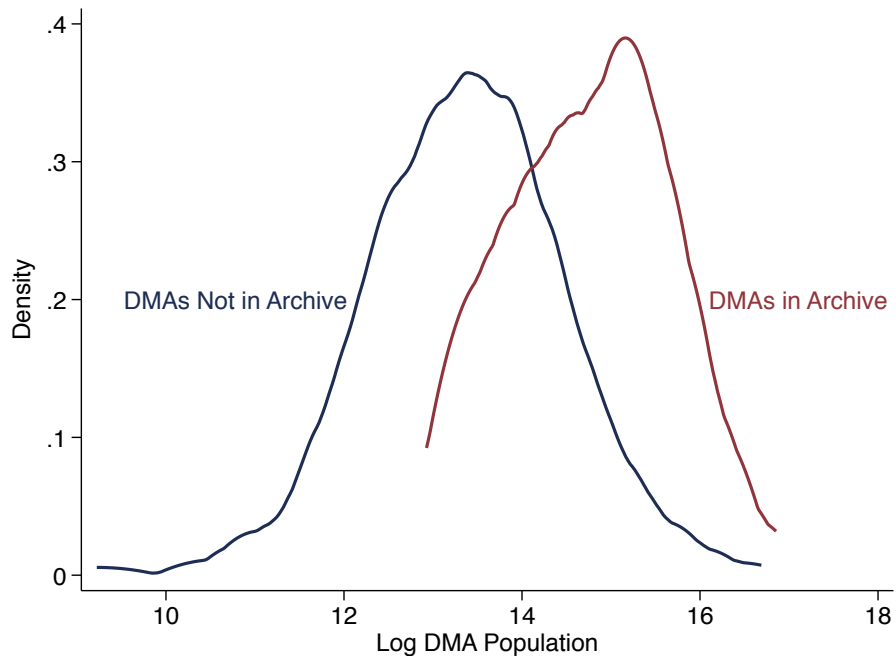
As noted in the paper, 99 stations all of which are affiliated with one of the four major networks are included in the sample. These stations are located in 25 media markets with broad geographic coverage across the country.<sup>19</sup> Nearly all stations affiliated with a major network in these 25 markets are included in the sample. The TV News Archive primarily includes larger, more populous markets (see Figure A6). As a result, the markets included in the archive are not representative of the universe of the 210 DMAs in the United States. While the exclusion of smaller markets means that the archive is not representative with respect to media markets, it is the case (by definition) that many more people reside in these larger, more populous markets than the smaller markets excluded from the archive. In fact, while the sample only includes about 12 percent of markets, the markets included in the sample encompass nearly one-third of the entire U.S. population. Additionally, the median DMA included in the sample has a population of about 2.9 million people; just over half of U.S. residents reside in markets this size or larger. Thus, the analysis of local news coverage based on the transcripts from stations included in the archive is likely very useful for understanding local news coverage for the typical person even if it is not indicative of coverage for the minority of residents living in small markets. While it is impossible to know the patterns in coverage for small markets that are not observed, there is little reason to think that the relationship between the in-state share of the market and the level of coverage of a state’s officeholders should differ markedly across market size.

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<sup>18</sup>Sources of funding for the archive include the John S. and James L. Knight Foundation, Democracy Fund, Rita Allen Foundation, among others.

<sup>19</sup>The 25 markets included in the sample are Boston, MA; Cedar Rapids, IA; Charlotte, NC; Cincinnati, OH; Cleveland, OH; Colorado Springs, CO; Columbia, SC; Denver, CO; Des Moines-Ames, IA; Greenville, NC; Las Vegas, NV; Miami-Ft. Lauderdale, FL; Milwaukee, WI; New York, NY; Norfolk, VA; Orlando, FL; Philadelphia, PA; Phoenix, AZ; Raleigh, NC; Reno, NV; Roanoke-Lynchburg, VA; San Francisco, CA; Sioux City, IA; Tampa, FL; and Washington, DC.

Figure A6 – Population Distribution of DMAs in the TV News Archive



The media markets included in the TV News Archive tend to be more populous than those media markets that are not included in the archive.

I access the data through the GDELT API, which splits the content into 15-second clips.<sup>20</sup> I pull from the API the number of 15-second clips that match the search term(s) as well as the total number of non-entertainment 15-second clips stored in the archive by station and by day.<sup>21</sup> My specific search query for governors is:

*“last name”* AND context:“governor”

And, similarly, my search query for senators is:

*“last name”* AND context:“senator”

The context operator searches for the context term (e.g., “governor”) in the 15-second clips that immediately precede and follow. For instance, if the search is for Governor John Kasich (“Kasich AND context:“governor”), a given 15-second clip that includes the word “Kasich” but not the word “governor” only counts as a mention if the 15-second clip that immediately precedes the given clip contains the word “governor” or the 15-second clip that follows the given clip contains the word “governor.” If a 15-second clip contains both “Kasich” and “governor,” it counts as a mention. If one 15-second clip includes the word “Kasich” multiple times, it only counts as one mention. Results are similar if I search for the term, “Governor *last name*,” rather than utilize the context operator.

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<sup>20</sup>See here: <https://blog.gdeltproject.org/gdelt-2-0-television-api-debuts/>.

<sup>21</sup>While closed captioning text from sitcoms and purely entertainment shows is not included in the archive, the archive is not restricted to local newscasts. For instance, it can include national newscasts, talk shows, and other types of non-entertainment shows.

I search for mentions of each governor (senator) for each station located in a market that overlaps with that governor’s (senator’s) state. So, for instance, I search for mentions of (former) New Jersey Governor Chris Christie for stations in the New York and Philadelphia markets, but I do not search for mentions of Christie for stations in, for instance, the Charlotte market.

#### A.4.2 In-State Share of DMA & Local News Coverage

The unit of analysis is a station-officeholder dyad.<sup>22</sup> The outcome, as described above, is the number of 15-second clips aired on station  $i$  that mention officeholder  $j$  per hour of non-entertainment coverage on station  $i$ . I examine the relationship between the level of news coverage devoted to officeholder  $j$  by station  $i$  and the population share of station  $i$ ’s market from officeholder  $j$ ’s state. I estimate several models including the simple bivariate relationship, station fixed effects, and officeholder fixed effects; all models are estimated separately for senators and governors.

Across a variety of specifications, the population share of the media market from the officeholder’s state has significant and substantively meaningful effects on local news coverage of senators (see Table A1) and governors (see Table A2). A governor is expected to receive about 1.3-1.6 additional mentions per hour of non-entertainment coverage from a station in an entirely in-state market relative to a station in an out-of-state market with a minuscule share of residents/viewers from that governor’s state.<sup>23</sup> The equivalent quantity for a senator is about 0.3-0.6 additional mentions per hour of non-entertainment coverage. Because the research design employed in this study compares residents living within the same state and year across different media markets, the most relevant estimates are those from specifications (5) and (6) with officeholder fixed effects. These specifications leverage variation *within* an officeholder; that is, variation in the coverage about a particular officeholder across stations from media markets with varying in-state population shares. The estimates from the officeholder fixed effects specifications imply that the residents of in-state markets have access to vastly greater local television news coverage of their state’s officeholders than residents of out-of-state media markets.

One potential concern is that the mentions in the closed captioning transcripts are from campaign advertisements rather than news coverage. However, the vast majority of political ads do not include closed captions: “Closed captions are required for most U.S. TV programs, but not for advertisements. Shockingly, most political ads are not captioned” (Schultz 2016). Nevertheless, to remedy this potential problem, in specifications (2) and (4) in Tables A1-A2, I condition on whether the senator/governor was seeking reelection or another office during 2016. Additionally, in specification (6) in the same tables, I exclude from the sample observations for officeholders who were presidential or vice presidential candidates during 2016, as their news coverage may have been driven primarily by their candidacies for national office and not their role as senators/governors.

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<sup>22</sup>As mentioned above, I only include dyads for which the officeholder’s state has non-zero population overlap with the station’s market.

<sup>23</sup>In this context, an *entirely in-state market* means that the station is in a market whose entire population resides in the governor’s state.

These specifications help to rule out the idea that the observed relationship between in-state share of DMA and mentions in closed captioning transcripts is driven by campaign ads rather than local news coverage.

**Table A1** – Local News Coverage of Senators

	(1)	(2)	(3)	(4)	(5)	(6)
In-State Share of DMA	0.648*	0.492*	0.245	0.338*	0.499*	0.519*
	(0.222)	(0.181)	(0.157)	(0.149)	(0.214)	(0.234)
Seeking Reelection		0.779*		0.817*		
		(0.259)		(0.283)		
Pres/VP Candidate		1.217*		1.211*		
		(0.448)		(0.467)		
Constant	0.097	-0.145	0.311*	-0.073	0.176	0.053
	(0.091)	(0.092)	(0.073)	(0.128)	(0.111)	(0.119)
Station Fixed Effects	No	No	Yes	Yes	No	No
Senator Fixed Effects	No	No	No	No	Yes	Yes
Excludes Pres/VP Candidates	No	No	No	No	No	Yes
Observations	370	370	370	370	370	341
Clusters	46	46	46	46	46	46

Robust standard errors clustered by state-DMA in parentheses. \*  $p < 0.05$ .

Dependent variable is the number of 15-second clips that mention a senator per hour of non-entertainment content.

**Table A2** – Local News Coverage of Governors

	(1)	(2)	(3)	(4)	(5)	(6)
In-State Share of DMA	1.338*	1.334*	1.599*	1.540*	1.479*	1.645*
	(0.248)	(0.247)	(0.434)	(0.392)	(0.346)	(0.331)
Seeking Reelection		0.168		0.300		
		(0.423)		(0.318)		
Seeking Senate		0.460*		0.537*		
		(0.063)		(0.128)		
Pres/VP Candidate		1.233*		1.417*		
		(0.477)		(0.608)		
Constant	0.200	0.022	0.061	-0.124	0.125	-0.112
	(0.103)	(0.081)	(0.217)	(0.196)	(0.180)	(0.164)
Station Fixed Effects	No	No	Yes	Yes	No	No
Governor Fixed Effects	No	No	No	No	Yes	Yes
Excludes Pres/VP Candidates	No	No	No	No	No	Yes
Observations	185	185	185	185	185	162
Clusters	46	46	46	46	46	40

Robust standard errors clustered by state-DMA in parentheses. \*  $p < 0.05$ .

Dependent variable is the number of 15-second clips that mention a governor per hour of non-entertainment content.

## A.5 Individual-Level Results

### A.5.1 About the CCES

I use data from the 2012 and 2016 Cooperative Congressional Election Studies (CCES). The CCES is a large, national, stratified-sample survey conducted by YouGov/Polimetrix. YouGov/Polimetrix constructs the sample using sample-matching methods, and the sample is nationally representative of U.S. adults with appropriate survey weights (Ansolabehere and Schaffner 2013; Ansolabehere, Schaffner, and Luks 2017). The sample size for 2012 is about 55,000 respondents, and the sample size for 2016 is about 65,000 respondents. Importantly for this study, “the state-level samples are sufficiently large as to measure with a reasonable degree of precision the distribution of voters’ preferences within most states” (Ansolabehere and Schaffner 2013). Given the study’s focus on the nationalization of elections and split-ticket voting, I utilize data from the CCES for presidential years only.<sup>24</sup>

Based on the recommendation of Ansolabehere, Schaffner, and Luks (2017), for all specifications using data from the pre-election survey (these are specifications assessing voter knowledge), I weight the sample using “commonweight\_vv,” and for all specifications using data from the post-election survey (these are the split-ticket specifications), I weight the sample using “commonweight\_vv\_post.” In addition, for the split-ticket voting specifications, I restrict the analysis to validated voters (Ansolabehere and Hersh 2012). However, in Table A10, I present results without restricting to validated voters (this specification includes all respondents who self-reported that they participated even if their turnout is not validated), and the results are similar.

The basic control variables from the CCES used in the analysis include family income, gender, race/ethnicity, education, age, and marital status. The partisan/ideological control variables include strength of partisanship and the strength of ideology. CCES respondents are provided with response options for all of these questions. To allow for non-linear relationships, I utilize indicator variables for each of the response options with one omitted reference category.<sup>25</sup> For variables with more than two response options, the variables are defined as follows:

- **family income** – <\$10,000, \$10,000-\$19,999, \$20,000-\$29,999, \$30,000-\$39,999, \$40,000-\$49,999, \$50,000-\$59,999, \$60,000-\$69,999, \$70,000-\$79,999, \$80,000-\$99,999, \$100,000-\$119,000, \$120,000-\$149,999, \$150,000+, and prefer not to say

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<sup>24</sup>I do not include the 2008 CCES, as the sampling weights do not appear to be comparable to the weights from 2012 and 2016. Both the 2012 and 2016 CCES include separate weights for the pre- and post-sample and weights constructed before and after vote validation. For 2008, only one set of common content weights are available. In addition, weights for 2008 appear to be trimmed differently than weights for subsequent years. Finally, as Grimmer et al. (2018) point out, the match rates to Catalist for vote the validation change substantially after 2008. Nevertheless, including the 2008 CCES in the pooled sample does not appear to alter the results meaningfully.

<sup>25</sup>Some response options are combined to ensure comparability across years or in cases in which there are very few responses to a particular option.

- **race/ethnicity** – white, Black, Hispanic, Asian, multiple races selected, and “other”
- **education** – less than high school, high school graduate, some college, two-year college degree, four-year college degree, and post-graduate degree
- **age** – 18-25, 26-30, 31-35, 36-40, 41-45, 46-50, 51-55, 56-60, 61-65, 66-75, and 76+
- **marital status** – single, married, domestic partner, separated, divorced, and widowed
- **opposite party incumbent** – the partisanship of the incumbent senator/governor is the “opposite” party of the voter’s choice for president
- **strength of partisanship** – non-leaning independents or not sure, independents leaning towards parties, weak partisans, and strong partisans
- **strength of ideology** – middle of the road or not sure, somewhat liberal/conservative, liberal/conservative, and very liberal/conservative

### A.5.2 Voter Knowledge

For party recall, the question wording is as follows: “Please indicate whether you’ve heard of this person and if so which party he or she is affiliated with...” If an individual responds, “never heard of person,” “not sure,” or with the wrong party, then the individual is *not* considered to have party recall knowledge. If the individual responds with the correct party, then the individual has party recall knowledge.

For the ability to make an evaluation measure, the question wording is as follows: “Do you approve of the way each is doing their job...” If the individual responds with “not sure,” then the individual is not able to make an evaluation. If the individual responds, “strongly approve,” “somewhat approve,” “somewhat disapprove,” or “strongly disapprove,” then the individual is able to make an evaluation.

Finally, for the ability to place on an ideological scale measure, the question wording is as follows: “How would you rate each of the following individuals and groups?” If the individual responds with “not sure,” then the individual is unable to place the official/candidate on an ideological scale. If the individual responds, “very liberal,” “liberal,” “somewhat liberal,” “middle of the road,” “somewhat conservative,” “conservative,” or “very conservative,” then the individual is able to make an ideological placement.

For senators, a knowledge variable is coded = 0 if the respondent has knowledge of neither senator (e.g., lacks party recall of both senators), = 0.5 if the respondent has knowledge of only one senator (e.g., correctly recalls the party of only one senator), = 1 if the respondent has knowledge of both senators (e.g., recalls the parties of both senators). Results are nearly identical if the knowledge measures are based on knowledge of each senator separately rather than the combined knowledge. For governors, a knowledge variable is coded = 0 if the respondent does not have knowledge of the governor (e.g., is unable to recall the governor’s party) and = 1 if the respondent has knowledge of the governor (e.g., is able to recall the governor’s party correctly).



Tables A3-A5 demonstrate that residents of in-state markets are able to recall the party, evaluate, and place their senators and governor on an ideological scale at significantly higher rates. Specification (2) from all three tables is displayed in Table 1 in the main text. The expanded set of results from these three tables shows that the estimated effect of exposure to relevant local news coverage on knowledge is not sensitive to model specification. Across all three specifications for each measure of knowledge, the estimated coefficient is remarkably stable.

**Table A3** – Voter Knowledge: Party Recall of Senators & Governors

	Senator			Governor		
	(1)	(2)	(3)	(4)	(5)	(6)
In-State Share of DMA	0.096*	0.088*	0.086*	0.113*	0.106*	0.104*
	(0.014)	(0.012)	(0.012)	(0.014)	(0.012)	(0.012)
State-Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Basic Controls	No	Yes	Yes	No	Yes	Yes
Partisan/Ideology Controls	No	No	Yes	No	No	Yes
Observations	111,846	111,517	110,014	112,225	111,894	110,383
Clusters	333	333	333	333	333	333

Robust standard errors clustered by state-DMA in parentheses. \*  $p < 0.05$ .

For senators, the dependent variable is coded =1 if the individual can recall both senators' parties, =0.5 for recall of one senator's party, and =0 for recall of neither senators' parties. For governor, the dependent variable is coded =1 if the individual can recall the governor's party and =0 if the individual cannot recall the party. Basic control variables include family income, gender, race, education, age, and marital status. Partisan/ideological controls include strength of partisanship and strength of ideology.

**Table A4** – Voter Knowledge: Ability to Evaluate Senators & Governors

	Senator			Governor		
	(1)	(2)	(3)	(4)	(5)	(6)
In-State Share of DMA	0.089*	0.085*	0.085*	0.037*	0.035*	0.034*
	(0.013)	(0.012)	(0.012)	(0.008)	(0.007)	(0.007)
State-Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Basic Controls	No	Yes	Yes	No	Yes	Yes
Partisan/Ideology Controls	No	No	Yes	No	No	Yes
Observations	112,087	111,765	110,269	112,655	112,324	110,794
Clusters	333	333	333	333	333	333

Robust standard errors clustered by state-DMA in parentheses. \*  $p < 0.05$ .

For senators, the dependent variable is coded =1 if the individual makes an evaluation for both senators, =0.5 if the individual is able to evaluate one senator, and =0 if the individual is unable to evaluate either senator. For governor, the dependent variable is coded =1 if the individual can make an evaluation of the governor and =0 if the individual cannot evaluate the governor. Basic control variables include family income, gender, race, education, age, and marital status. Partisan/ideological controls include strength of partisanship and strength of ideology.

**Table A5** – Voter Knowledge: Ideological Placement of Senators & Governors

	Senator			Governor		
	(1)	(2)	(3)	(4)	(5)	(6)
In-State Share of DMA	0.081*	0.076*	0.074*	0.075*	0.069*	0.068*
	(0.014)	(0.012)	(0.012)	(0.014)	(0.012)	(0.012)
State-Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Basic Controls	No	Yes	Yes	No	Yes	Yes
Partisan/Ideology Controls	No	No	Yes	No	No	Yes
Observations	110,914	110,594	109,201	111,759	111,435	110,094
Clusters	333	333	333	333	333	333

Robust standard errors clustered by state-DMA in parentheses. \*  $p < 0.05$ .

For senators, the dependent variable is coded =1 if the individual can place both senators on an ideological scale, =0.5 if the individual is able to place one senator, and =0 if the individual is unable to place either senator. For governor, the dependent variable is coded =1 if the individual can place the governor on an ideological scale and =0 if the individual cannot place the governor. Basic control variables include family income, gender, race, education, age, and marital status. Partisan/ideological controls include strength of partisanship and strength of ideology.

## Alternative Knowledge Measure for Ideological Placement

As noted in the paper, the standard for knowledge for both the ability to evaluate and ability to make an ideological scale measures are relatively low. Respondents simply need to provide a substantive response to these questions (i.e., any response other than “not sure”). Unfortunately, it is difficult to assess whether a respondent makes a “correct” evaluation and ideological placement of a given officeholder on the basis of their substantive responses. In the case of officeholder evaluation, whether a respondent arrives at a “correct” evaluation is the result of an extremely complex interplay between a respondent’s preferences and an officeholder’s actions, statements, positions, values, etc. Given that it is not possible to observe and measure these things satisfactorily, it is also not possible to assess the quality of respondents’ evaluations. In the case of ideological placement of the officeholder, the primary difficulty is that the ideological space in which the respondent is placing the officeholder is not the same ideological space as available measures of the officeholder’s ideological position (e.g., NOMINATE), which would be used to assess whether the respondent’s placement is correct. In other words, a given respondent’s ideological placement on a 7-point scale does not map directly onto the ideological space characterized by, for example, NOMINATE.

Despite this important limitation, it is possible to examine the extent to which residents of in-state markets tend to make more reasonable seeming ideological placements of their senators. It is worth emphasizing that this analysis is making a strong assumption about an identical and direct mapping between all respondents’ 7-point ideological scale and the ideological space characterized by NOMINATE. For this analysis, I only examine the ideological placements of senators with a NOMINATE score that is less than  $-0.3$  or greater than  $0.3$ . The hope is that the ideological positions of senators with non-moderate ideological positions should be less ambiguous for respondents. Ideological placements of senators with a NOMINATE score in the interval  $[-0.3, 0.3]$  are excluded from the analysis. If the senator’s roll-call score is  $< -0.3$  and the respondent indicates that the senator is “very liberal,” “liberal,” or “somewhat liberal,” the respondent is considered to have made a correct ideological placement. Similarly, if the senator’s roll-call score is  $> 0.3$  and the respondent indicates that the senator is “very conservative,” “conservative,” or “somewhat conservative,” the respondent is also considered to have made a correct ideological placement. If the respondent responds with “not sure,” “middle of the road,” or an ideological placement on the opposite side of the scale, the individual is considered to have made an incorrect ideological placement. Requiring that respondents merely be in the “neighborhood” of the senator’s NOMINATE score should—at least to a limited extent—lessen concerns about the mapping from the respondents’ 7-point ideological scale to NOMINATE’s ideological space.

This test is indeed somewhat more challenging for respondents, as the overall knowledge rate is about 0.65 (compared to a rate of about 0.73 for ability to make an ideological placement). Table A6 displays the results of this analysis. Across the three specifications, the estimated coefficient indicates that residents of an entirely in-state market are about 9-10 percentage points more likely to provide a “correct” ideological placement of their senator relative to residents of an entirely

out-of-state-market. The magnitude of these estimates is modestly larger than the estimates for the less stringent knowledge test of being able to make an ideological placement (this equivalent quantity is 7-8 percentage points; see Table A5).

**Table A6** – Voter Knowledge: “Correct” Ideological Placement of Senators

	(1)	(2)	(3)
In-State Share of DMA	0.103*	0.095*	0.094*
	(0.016)	(0.014)	(0.014)
State-Year Fixed Effects	Yes	Yes	Yes
Basic Controls	No	Yes	Yes
Partisan/Ideology Controls	No	No	Yes
Observations	76,682	76,463	75,489
Clusters	315	315	315

Robust standard errors clustered by state-DMA in parentheses. \*  $p < 0.05$ .

The sample is restricted to ideological placements of senators with a NOMINATE score  $< -0.3$  or  $> 0.3$ . The dependent variable is coded =1 if the individual provides a correct ideological placement both senators, =0.5 if the individual provides a correct placement of one out of two senators, and =0 if the individual is not able to provide a correct placement for either senator. For respondents that only have one senator in the analysis due to the sample restriction, the dependent variable is coded =1 if the individual provides a correct placement and =0 if the individual fails to provide a correct placement. Basic control variables include family income, gender, race, education, age, and marital status. Partisan/ideological controls include strength of partisanship and strength of ideology.

### A.5.3 Split-Ticket Voting: Additional Specifications

#### Geographically Proximate Sub-Samples

As described in the paper (see the section entitled, “Robustness Checks”), I restrict the sample to subsets of geographically proximate residents. These sub-samples help ensure that residents of out-of-state markets and in-state markets are comparable to one another. Table A7 displays the results from multiple specifications based on the sub-sample of border counties, and Table A8 shows the results for multiple specifications based on the sub-sample of counties in out-of-state markets and counties adjacent to such counties.

**Table A7** – Split-Ticket Voting Border Counties: President-Senator & President-Governor

	Senator			Governor		
	(1)	(2)	(3)	(4)	(5)	(6)
In-State Share of DMA	0.025 (0.013)	0.024 (0.013)	0.017 (0.013)	0.059* (0.029)	0.063* (0.031)	0.047 (0.030)
State-Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Basic Controls	No	Yes	Yes	No	Yes	Yes
Partisan/Ideology Controls	No	No	Yes	No	No	Yes
Observations	14,580	14,539	14,350	3,625	3,616	3,566
Clusters	265	265	265	58	58	58

Robust standard errors clustered by state-DMA in parentheses. \*  $p < 0.05$ .

Sample restricted to residents of counties adjacent to another state.

Dependent variable is coded =1 if an individual votes for the Democrat (Republican) for president and Republican (Democrat) for senator/governor. Basic control variables include family income, gender, race, education, age, and marital status. Partisan/ideological controls include opposite-party incumbent, strength of partisanship, and strength of ideology.

**Table A8** – Out-of-State Counties & Adjacent Counties: President-Senator & President-Governor Split-Ticket Voting

	Senator			Governor		
	(1)	(2)	(3)	(4)	(5)	(6)
In-State Share of DMA	0.040*	0.039*	0.030	0.042	0.042	0.034
	(0.016)	(0.016)	(0.016)	(0.022)	(0.025)	(0.023)
State-Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Basic Controls	No	Yes	Yes	No	Yes	Yes
Partisan/Ideology Controls	No	No	Yes	No	No	Yes
Observations	6,201	6,182	6,090	1,939	1,937	1,908
Clusters	207	207	207	49	49	49

Robust standard errors clustered by state-DMA in parentheses. \*  $p < 0.05$ .

Dependent variable is coded =1 if an individual votes for the Democrat (Republican) for president and Republican (Democrat) for senator/governor. Sample restricted to residents of counties in which in-state share is less than 0.5 or residents of counties adjacent to such a county. Basic control variables include family income, gender, race, education, age, and marital status. Partisan/ideological controls include opposite-party incumbent, strength of partisanship, and strength of ideology.

## Dichotomous In-State Measure

While the approximately linear relationship in Figure 3 in the paper provides an empirical justification for using a continuous measure of in-state share of DMA, in Table A9, I present results based on a dichotomous version of this measure. As noted in the paper, the indicator is coded = 1 if the in-state share of DMA  $\geq 0.5$  and coded = 0 if the in-state share of DMA  $< 0.5$ . The estimates based on the dichotomous measure are remarkably similar in terms of magnitude to the estimates based on the continuous measure.

**Table A9** – Split-Ticket Voting: President-Senator & President-Governor

	Senator			Governor		
	(1)	(2)	(3)	(4)	(5)	(6)
In-State DMA Indicator	0.019*	0.021*	0.019*	0.044*	0.047*	0.043*
	(0.007)	(0.007)	(0.008)	(0.016)	(0.016)	(0.018)
State-Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Basic Controls	No	Yes	Yes	No	Yes	Yes
Partisan/Ideology Controls	No	No	Yes	No	No	Yes
Observations	37,504	37,398	36,962	8,281	8,259	8,156
Clusters	319	319	319	66	66	66

Robust standard errors clustered by state-DMA in parentheses. \*  $p < 0.05$ .

Dependent variable is coded =1 if an individual votes for the Democrat (Republican) for president and Republican (Democrat) for senator/governor. Basic control variables include family income, gender, race, education, age, and marital status. Partisan/ideological controls include opposite-party incumbent, strength of partisanship, and strength of ideology.

### Inclusion of Non-Validated Voters

For the main results in the paper, I restrict the sample to validated voters (Ansolabehere and Hersh 2012). Nevertheless, results are not particularly sensitive to this decision. Table A10 contains results for a sample that does not impose the restriction. The sample includes all respondents who self-report participating even if their turnout is not validated.

**Table A10** – Split-Ticket Voting Including Non-Validated Voters

	Senator			Governor		
	(1)	(2)	(3)	(4)	(5)	(6)
In-State Share of DMA	0.032*	0.034*	0.032*	0.033*	0.035*	0.031*
	(0.009)	(0.008)	(0.008)	(0.015)	(0.016)	(0.015)
State-Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Basic Controls	No	Yes	Yes	No	Yes	Yes
Partisan/Ideology Controls	No	No	Yes	No	No	Yes
Observations	49,844	49,696	49,083	10,798	10,769	10,629
Clusters	320	320	320	66	66	66

Robust standard errors clustered by state-DMA in parentheses. \*  $p < 0.05$ .

Dependent variable is coded =1 if an individual votes for the Democrat (Republican) for president and Republican (Democrat) for senator/governor. Basic control variables include family income, gender, race, education, age, and marital status. Partisan/ideological controls include opposite-party incumbent, strength of partisanship, and strength of ideology.



#### A.5.4 Exclusion of Residents of the Washington, DC Media Market

The Washington, DC media market is a peculiar media market in that it is centered in a city/district that lacks a governor and representation in the U.S. Senate. Moreover, many of the residents of this market work directly for the federal government or for firms engaged in work on behalf of the federal government. Due to these unique features, it would be unsurprising if DC stations strongly focused their coverage on the federal government rather than officeholders in surrounding states, in particular Virginia and Maryland.

The Washington, DC market is quite large with about 6.4 million residents, about 9 percent of which reside in DC, 45 percent in Virginia, 41 percent in Maryland, 4 percent in West Virginia, and < 1 percent in Pennsylvania (Fulton County is the only Pennsylvania county located in this market). Despite the unique features of the DC market, the patterns in local news coverage of governors and senators for the four stations in that market are not too dissimilar to the patterns of coverage for officeholders in other markets (see Table A11). In other words, officeholders from Virginia and Maryland receive considerably more coverage from these stations than do officeholders from West Virginia and Pennsylvania, which is consistent with the state’s population share of the market driving coverage. Nevertheless, to remedy any remaining concerns about the peculiarity of the DC market, Table A12 displays results excluding all residents of this market from the sample. The estimated coefficients based on this sample excluding residents of the DC media market are nearly identical to the estimated coefficients based on the full sample in Table 4 in the paper.

**Table A11** – Local News Coverage in the DC Market

	Ave. Mentions per Hour		In-State
	Governor	Senator	Share of DMA
Virginia	0.337	0.212	0.453
Maryland	0.477	0.079	0.411
West Virginia	0.001	0.005	0.040
Pennsylvania	0.006	0.016	0.002

Average mentions per hour indicates the average number of 15-second clips that mention a state’s governor/senators per hour of non-entertainment coverage. For example, a senator from Virginia on average received 0.212 mentions per hour from a station in the DC market.

**Table A12** – Split-Ticket Voting: Excluding Residents of the DC Media Market

	Senator			Governor		
	(1)	(2)	(3)	(4)	(5)	(6)
In-State Share of DMA	0.022*	0.024*	0.021*	0.037	0.043*	0.037
	(0.011)	(0.010)	(0.010)	(0.020)	(0.021)	(0.023)
State-Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Basic Controls	No	Yes	Yes	No	Yes	Yes
Partisan/Ideology Controls	No	No	Yes	No	No	Yes
Observations	36,714	36,611	36,190	8,239	8,217	8,115
Clusters	315	315	315	65	65	65

Robust standard errors clustered by state-DMA in parentheses. \*  $p < 0.05$ .

Dependent variable is coded =1 if an individual votes for the Democrat (Republican) for president and Republican (Democrat) for senator/governor. Basic control variables include family income, gender, race, education, age, and marital status. Partisan/ideological controls include opposite-party incumbent, strength of partisanship, and strength of ideology.

### A.5.5 Newspapers and Television Media Markets

As reported in Section A.3, individuals who reside in in-state media markets are more likely to have access to a local newspaper as proxied by the presence of a daily newspaper in the county. This imbalance presents a threat to inference, as it is possible that the relationship between residence in an in-state market and split-ticket voting is due to newspaper exposure rather than television news exposure. It is worth pointing out, however, that this imbalance is largely remedied by the geographically proximate sub-samples. Thus, the results from these sub-sample imply that exposure to relevant local television news is the primary mechanism at play rather than local newspaper exposure. In this section, I also present analyses in which I control for the presence of a daily newspaper in a voter’s county as an additional robustness check. Table A13 contains the results from specifications that control for the presence of a newspaper in a voter’s county. For each of the six specifications, the estimated coefficient on in-state share of DMA is of very similar magnitude to the equivalent specification from Table 4 in the paper. These results provide strong evidence that exposure to relevant television news is the primary mechanism.

**Table A13** – Split-Ticket Voting: Inclusion of Control for Newspaper Presence

	Senator			Governor		
	(1)	(2)	(3)	(4)	(5)	(6)
In-State Share of DMA	0.023*	0.023*	0.021*	0.040*	0.046*	0.040
	(0.010)	(0.009)	(0.009)	(0.020)	(0.020)	(0.022)
Presence of Newspaper	0.008	0.009	0.009	-0.008	-0.008	-0.005
	(0.006)	(0.006)	(0.005)	(0.011)	(0.011)	(0.011)
State-Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Basic Controls	No	Yes	Yes	No	Yes	Yes
Partisan/Ideology Controls	No	No	Yes	No	No	Yes
Observations	37,504	37,398	36,962	8,281	8,259	8,156
Clusters	319	319	319	66	66	66

Robust standard errors clustered by state-DMA in parentheses. \*  $p < 0.05$ .

Dependent variable is coded =1 if an individual votes for the Democrat (Republican) for president and Republican (Democrat) for senator/governor. Basic control variables include family income, gender, race, education, age, and marital status. Partisan/ideological controls include opposite-party incumbent, strength of partisanship, and strength of ideology.

I also examine the extent to which access to a local newspaper offsets the informational disadvantage for individuals residing in an out-of-state media market. For this analysis, I restrict the sample to individuals to residing in a county in which the in-state share of DMA is less than 50 percent. Table A14 displays the results. Across the three knowledge measures for both senators and governors, the estimated coefficient on the presence of a daily newspaper is very near to zero and not significant. These results strongly suggest that the presence of a daily newspaper does not offset the news deficit from residing in an out-of-state media market. One possible explanation for the null findings is that local newspapers reach relatively few voters due to their relatively low

circulation in recent years. In addition, these local newspapers may not provide high levels of coverage of their state’s governor and senators (i.e., a state officeholder and federal officeholders) due to their resource constraints.

**Table A14** – Voter Knowledge & Newspaper Presence

	Senator			Governor		
	(1) Recall	(2) Eval.	(3) Ideo.	(4) Recall	(5) Eval.	(6) Ideo.
In-State Share of DMA	0.149*	0.161*	0.156*	0.136*	0.108*	0.225*
	(0.068)	(0.060)	(0.068)	(0.060)	(0.039)	(0.066)
Presence of Newspaper	0.002	-0.000	-0.001	0.001	-0.013	-0.010
	(0.010)	(0.014)	(0.017)	(0.012)	(0.010)	(0.013)
Overall Knowledge Rate	0.636	0.747	0.691	0.731	0.891	0.771
State-Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Basic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	13,848	13,866	13,728	13,900	13,952	13,844
Clusters	128	128	128	128	128	128

Robust standard errors clustered by state-DMA in parentheses. \*  $p < 0.05$ .

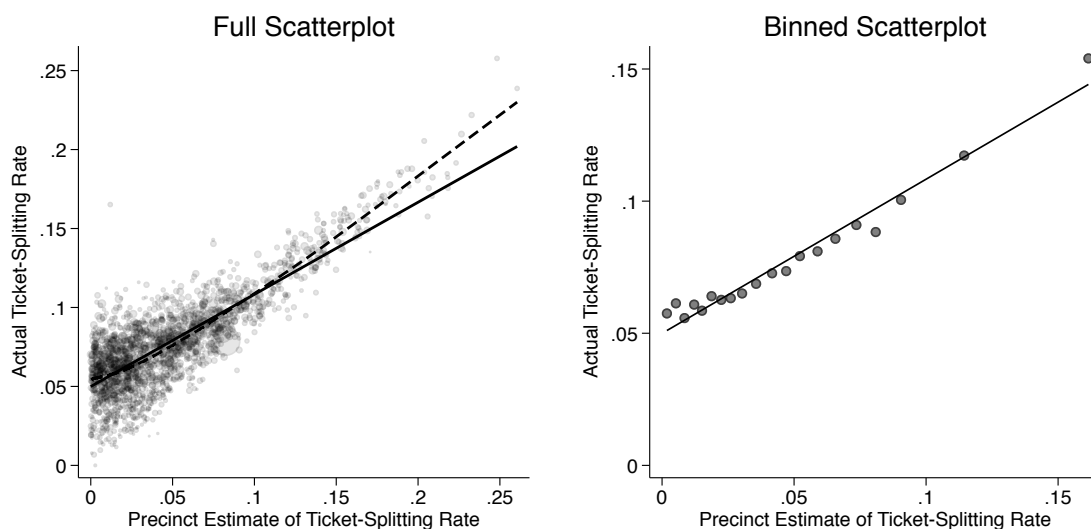
The sample is restricted to individuals residing in counties located in out-of-state DMAs.

The dependent variable is whether the individual can recall the party of the senator/governor in specifications (1) and (4), whether the individual is able to evaluate the senator/governor in specifications (2) and (5), and whether the individual is able to place the senator/governor on an ideological scale in specifications (3) and (6). Basic control variables include family income, gender, race, education, age, and marital status.

## A.6 Precinct-Level Results

As mentioned in the paper, split-ticket voting is an individual-level phenomenon that cannot be directly observed at any aggregate level. It is worth noting that this is not a standard ecological inference problem. Voting precincts are nested within counties, which are assigned to media markets. Consequently, the explanatory variable of interest (in-state share of DMA) does not vary within county (or precinct) and, thus, can be observed correctly at the precinct level. However, the outcome variable—split-ticket voting—cannot be observed at the precinct level, so I must use a proxy measure. Thus, the use of any aggregate-level proxy measure requires careful consideration. For governor and senator elections, respectively, I consider the use of the following aggregate proxy measure of split-ticket voting:  $|V_G - V_P|$  and  $|V_S - V_P|$ , where  $V_G$  is the Democratic share of the two-party vote in the gubernatorial election,  $V_S$  is the Democratic share of the two-party vote in the senatorial election, and  $V_P$  is the Democratic share of the two-party vote in the presidential election. The primary issue with this proxy is that it is biased downward, as voters who split their tickets in opposite directions within a geography cancel each other out. Take a simplified example. Suppose there is a precinct with 100 voters in which 10 voters cast a split ticket. If 8 voters cast a Democrat-Republican (president-senator) split ticket, and 2 voters cast a Republican-Democrat split ticket, then the precinct-level measure of split-ticket voting is 6 percent even though the actual rate is 10 percent.

Figure A7 – Actual Ticket-Splitting Rate vs. Precinct-Level Measure



These plots demonstrate the validity of using precinct-level estimates of split-ticket voting. The relationship between the precinct estimate and the actual rate is positive and very strong. The precinct estimate is biased downward overall and, thus, tends to understate the level ticket splitting. The solid line is estimated using OLS, and the dashed curve is estimated from a locally weighted regression (LOESS).

I provide evidence for the validity of the aggregate approach to analyzing split-ticket voting, using ballot-level data from the 2016 South Carolina Election Audit. The South Carolina Election Audit is a rare source of ballot-level data. Using this unique data set, I am able to observe the actual rate of split-ticket voting within each precinct, and I can aggregate the ballot-level

data up to the precinct level and calculate the precinct-level measure of ticket splitting for each precinct. Figure A7 plots the relationship between the actual rate of split-ticket voting on the vertical axis, and the proxy measure that one would observe from precinct-level election returns on the horizontal axis. As is clear from the figure (as well as the corresponding Table A15), the relationship between the precinct-level measure and the actual rate of split-ticket voting is positive, strong, and approximately linear. As is also clear, the precinct-level measure is biased downward (evidenced by most observations being located above where the 45-degree line would be).

**Table A15** – South Carolina Ballot Data

	(1)	(2)
Precinct Estimated Rate	0.618*	0.583*
	(0.009)	(0.009)
Constant	0.047*	0.050*
	(0.001)	(0.001)
Weighted	No	Yes
Observations	2,067	2,067

Standard errors in parentheses. \*  $p < 0.05$ .

The dependent variable is the actual rate of split-ticket voting in each precinct based on ballot-level data from South Carolina in 2016. The independent variable is the aggregate estimated rate of ticket splitting for precincts. Weights are based on the number of two-party votes cast for president.

Using data from the 2012 Harvard Election Data Archive (HEDA), I examine the relationship between the precinct-level estimate of split-ticket voting and the in-state share of DMA. For 2012, HEDA contains precinct-level election returns from 20 states with senator elections and 8 states with governor elections. Table A16 displays the results from this analysis. While the estimated coefficient is not a readily interpretable quantity (due to bias in the aggregated measure of ticket splitting), the positive sign on the coefficient provides further, strong evidence of a relationship between split-ticket voting and in-state share of DMA.

**Table A16** – Precinct-Level Analyses, 2012

	Senator		Governor	
	(1)	(2)	(3)	(4)
In-State Share of DMA	0.016 (0.010)	0.015* (0.006)	0.039* (0.012)	0.031* (0.009)
Weighted	No	Yes	No	Yes
State FEs	Yes	Yes	Yes	Yes
Observations	37,560	37,560	11,141	11,141
Clusters	115	115	42	42

Robust standard errors clustered by state-DMA in parentheses. \*  $p < 0.05$ .

The dependent variable is the absolute value of the difference between the Democratic share of the two-party vote for president and the Democratic share of the two-party vote for senate/governor. Precinct weights are based on the number of two-party votes cast for president.

## A.7 Campaign Advertisements

I use data from the 2012 Wesleyan Media Project (WMP) on television advertisement airings across all media markets in the U.S. (Fowler, Franz, and Ridout 2015). Kantar Media’s Campaign Media Analysis Group (CMAG) tracks airings of each advertisement, including the station, DMA, date, time, and television program.<sup>26</sup> WMP then codes each ad based on its content and the funding source (candidate, party, or interest group).

Using the WMP 2012 data, I calculate the number of ads aired for each senator and governor race in each market. In other words, an observation is an electoral contest-DMA. Because there is at most a single governor and single senator race in each state in 2012, the measure is the number of governor/senator ads aired in each state-DMA. I include all general-election ads aired, including those sponsored by candidates, parties, coordinated groups, and outside groups.<sup>27</sup> Based on Table A17 and Figure A8, it is apparent that campaigns and other entities air more ads as the state comprises a larger share of the DMA’s population. As a result, residents of predominantly in-state markets likely view far more ads than residents of predominantly out-of-state markets. Campaign ads are, thus, a potential alternative explanation for the results in the paper. However, in the paper (see the section entitled, “Is It Local News Coverage or Campaign Advertisements?”), I present evidence that local news coverage, not television ads, indeed primarily accounts for the paper’s results.

**Table A17** – Relevant Campaign Television Ads Aired, 2012

	Senator		Governor	
	(1)	(2)	(3)	(4)
State’s Share of DMA	4381.580*	5662.484*	4437.896*	4285.558*
	(778.422)	(626.538)	(671.469)	(569.721)
Constant	106.183	-716.508	88.511	171.847
	(585.921)	(459.093)	(452.237)	(373.375)
State FEs	No	Yes	No	Yes
Observations	224	224	70	70

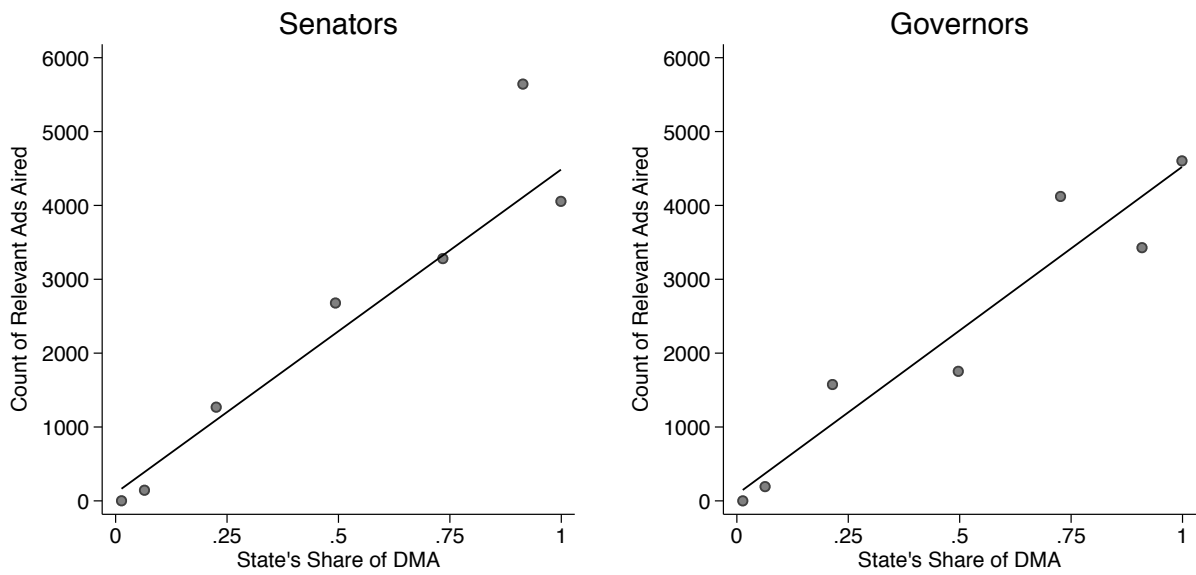
\*  $p < 0.05$ . An observation is a state-DMA. The dependent variable is the count of senator/governor ads aired in the state-DMA.

<sup>26</sup> “CMAG gathers such data by using a market-based tracking system, deploying ‘Ad Detectors’ in each media market in the U.S. In addition to all local advertising activity, these detectors track advertisements on the major national networks, as well as national cable networks” (Fowler, Franz, and Ridout 2015).

<sup>27</sup>I exclude the very few ads that purportedly aired in markets that lack any population overlap with the state of the electoral contest.



Figure A8 – Political Ad Airings in 2012 by In-State Share of DMA



Residents of in-state markets receive greater exposure to campaign advertising on television. Each point corresponds to a local mean. The regression line is estimated using OLS.

## A.8 Is Increased Exposure to Cable News the Mechanism?

The theoretical mechanism presented in the paper maintains that voters residing in out-of-state markets have lower exposure to relevant local news coverage, which results in less knowledge about down-ballot candidates and reduces voters' ability to make an assessment of down-ballot offices separate from their assessment at the top of the ticket. In other words, the link between residence in an out-of-state media market and the lower probability of split-ticket voting is hypothesized to be due to lower exposure to relevant local television news. However, a plausible alternative mechanism is that voters residing in out-of-state markets increase their consumption of cable news perhaps because the local news coverage available is less relevant to them. If individuals in out-of-state markets are substituting into cable news and out of local news, it could be that greater exposure to cable news is the channel through which the relationship between residence in an out-of-state market and decreased split-ticket voting operates (rather than lower exposure to relevant local television news).

I examine the relationship between in-state share of DMA and consumption of national cable news channels (specifically, Fox News, MSNBC, and CNN) as well as local television news. I use data from SimmonsLOCAL in 2016 to examine patterns in consumption of television news. Simmons is a commercial data vendor that collects information on consumer behavior, including media consumption, primarily through surveys. Martin and Yurukoglu (2017) also use Simmons data (among other data sources) in their study examining the effect of cable news on vote choice. The Simmons data acquired for this analysis are at the county-level, and I take the same empirical approach to other analyses in the paper.<sup>28</sup>

Table A18 reports the estimated coefficient on in-state share of DMA from the regression for each of the four dependent variables, which indicate the percentage of the county that reported consuming a given news source in the past week. Based on these results, there is evidence that individuals residing in in-state markets are slightly more likely to report watching local television news in the past week relative to residents of out-of-state markets. However, the magnitude of the relationship is very modest—counties located in entirely in-state markets have local news consumption rates that are about 1.4 percentage points higher than counties in entirely out-of-state markets. While the size of the estimate is quite small, it would not be too surprising if viewers opted out of consuming local coverage that is less relevant to them.

Importantly, the results from these analyses do not indicate that individuals in out-of-state markets are substituting into national cable news. The estimated coefficient on in-state share of DMA is very near to zero for the Fox News, MSNBC, and CNN specifications; the largest

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<sup>28</sup>The empirical setup is:  $\mathbb{E}[Y_{cs}] = \lambda_s + \phi \cdot p_{cs}$ , where  $Y_{cs}$  indicates the percentage of county  $c$  located in state  $s$  that reports watching {local news, Fox News, MSNBC, CNN} in the past seven days (note that the dependent variable is measured on a 0-100 scale). In other words, the outcome is the percentage of the county that watched a given source of news in the past week (a separate specification is run for each source of news as the dependent variable). Because the data are only for a single year, the specifications include state fixed effects rather than state-year fixed effects.

estimated coefficient implies a difference in reported consumption of about 0.2 percentage points between counties in entirely in-state markets and counties in entirely out-of-state markets. In other words, the evidence suggests there is essentially no difference in reported consumption of cables news between residents of in-state and out-of-state markets. These results provide strong evidence suggesting that differential exposure to cable news is not the causal mechanism in operation.

**Table A18** – Reported Consumption of Local & Cable Television News

	Local	Fox News	MSNBC	CNN
	(1)	(2)	(3)	(4)
In-State Share of DMA	1.419*	0.024	0.205	0.104
	(0.718)	(0.328)	(0.268)	(0.557)
State Fixed Effects	Yes	Yes	Yes	Yes
Observations	3,077	3,077	3,077	3,077
Clusters	336	336	336	336

Robust standard errors clustered by state-DMA in parentheses. \*  $p < 0.05$ .

Dependent variable is the percentage of a county that reports watching a given source of television news. Counties are weighted by population.

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