

# Local Elections Do Not Increase Local News Demand

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## Abstract

Anemic demand for local news has contributed to an industry crisis. We consider whether local elections, which highlight the ability of local television stations and newspapers to provide information that is unavailable from national news outlets, increase local media use. While we show these elections are a time of increased attention to local politics in the news and among the public, we also find local media outlets do not benefit from this when considering behavioral news use measures. Relative to news outlets in cities without an election, local television remains substantively unchanged during local elections. Newspaper website traffic is largely stable, although it falls slightly the month after an election. In both cases these differences are small, even when considering close races and those happening off the federal election cycle. This shows limits on the ability of salient local political events to motivate local news use.

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The rise of cable television and the Internet spurred harmful developments for local media in the United States. This shift allowed the politically interested to consume news from media covering national politics, rather than local outlets (Hopkins, 2018; Hindman, 2018). It also enabled those uninterested in the news to instead seek out entertainment, eroding a captive audience that once existed for local media (Mutz and Martin, 2001; Prior, 2007; Krupnikov and Ryan, 2022).

Anemic demand for local news has contributed to an industry crisis. Local media ownership has consolidated, many local news outlets have closed, and those that remain cover their communities with fewer journalists than before (Martin and McCrain, 2019; Peterson, 2021). In civic terms, the decline of local news has contributed to more partisan, nationalized voting behavior and reduced engagement with local politics (Moskowitz, 2021; Darr, Hitt and Dunaway, 2018; Hayes and Lawless, 2021).

Understanding factors that increase local news consumption is crucial for stabilizing local media outlets. Yet clear obstacles exist. Local news outlets accrue limited economic benefit from the sporadic engagement of “drive-by” news consumers, meaning their success depends on increasing the number of people who habitually consume their coverage (Usher, 2021; Hindman, 2018). At the same time the public’s content preferences, which lead many to avoid local news, appear resistant to change (Prior, 2018).

## **Local Elections as Motivation for Local News Use**

What can increase local news demand? We propose events which shift the public’s attention to topics covered by local news sources might increase local media use. Following work demonstrating elections can reshape news audiences (Archer and Darr, 2022; Kim and Kim, 2021; Archer, 2018), we consider whether local elections increase demand and consumption of local news.

Accounts of political information acquisition suggest several reasons the public may be more willing to consume coverage from local media when local elections are imminent, even for those who are otherwise uninterested in news coverage of local politics. In the lead up to

these elections, voters must decide which candidates to support and information about local politics has more utility for the public’s decision-making than at other times (Downs, 1957). Elections also facilitate horse-race coverage of local politics that adjudicates who leads or trails in the campaign based on recent events, a style the public finds more entertaining than substantive policy news (Iyengar, Norpoth and Hahn, 2004). Finally, the issues raised during local election campaigns may prime the importance of local government, which Hayes and Lawless (2021) show increases the appeal of local news in a survey experiment.

While these accounts tap different motivations for political news use, they all highlight an advantage local media outlets possess over national news organizations during local elections: the ability to provide timely, community-focused information about local politics (Mahone et al., 2019; Hayes and Lawless, 2021; Darr, Hitt and Dunaway, 2021). This leaves local media well positioned to attract anyone motivated to seek out information about local politics by elections happening in their community.

## Data

Understanding of local news use has been limited by data constraints. Survey self-reports of media exposure contain measurement error, are oriented towards national news sources, and are collected too sporadically to assess how events like elections change local media consumption. Some studies consider more concrete aspects of local news choice, such as the public’s interest in specific stories or news sources (Hayes and Lawless, 2021; Peterson and Allamong, 2022). However, it remains unclear whether such evidence generalizes to explaining habitual news consumption over a longer time period, a form of news demand with important economic implications for local media due to their need to appeal to advertisers (Usher, 2021; Hindman, 2018).

Here we consider two behavioral measures of local news use: viewership of local television news and visits to local newspaper websites. Our data on television viewership come from TVEyes, which provides station-program-day level three week averages of Nielsen ratings (the share of a designated market area’s audience watching local television news programs) during

2013-2019.<sup>1</sup> Following previous work on local television, we focus on viewership of local news broadcasts during weekdays (Martin and McCrain, 2019). Our website traffic data comes from the Alliance for Audited media and measures monthly impressions on local newspaper websites from 2015-2021. As this measure is collected by several different web traffic providers depending on the newspaper, we demean and standardize it for each newspaper to understand fluctuations in online local news consumption. Using these indicators we consider how the monthly audience for these news sources changes over time. It is important to note that, beyond the general value of behavioral media use data, these measures matter because they are generated for advertisers and affect a news outlet’s advertising revenue.

We combine these measures of local news use with data on the timing and outcomes of mayoral elections in the cities these news sources cover (Warshaw, de Benedictis-Kessner and Velez, 2022). We see these elections as a likely case for local news consumption to change based on a regularly occurring local political event. This is because these elections focus on an executive office and their results have clear ramifications for the entire community. To ensure it is plausible that news audiences might be altered by the election, we focus on elections in the city a newspaper is located in or the largest community in a television station’s coverage area. Elections in local news outlets with a strong overlap between their audience and relevant political constituencies are the most likely to engage news audiences and are also the types of media shown to affect local political outcomes (e.g., Hopkins and Pettingill, 2018; Moskowitz, 2021). Later we also focus on close elections, those happening off the federal cycle, and partisan elections involving candidates from opposing parties to consider races that may be best suited to motivating interest in local news (e.g., Archer, 2018).

Altogether, we consider a broad set of local news outlets and elections after combining these data sources into a panel. We analyze over 229,000 weeks of local television viewership

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<sup>1</sup>The ratings data are produced by Nielsen’s “live” viewership data, but only reported to TVEyes in the form of these three week averages. Practically, this means we have a station-program’s viewership once every three weeks, and it is an average of that station-program’s viewership over those three weeks. The appendix discusses this measure in further detail.

from 633 television stations in 187 markets. For local newspapers, we consider 9,000 months of newspaper web traffic data from 169 local newspapers. All told, we observe 506 mayoral elections in the markets with news use data (Appendix A).

## Estimation

Both the immediate and near-term impacts of mayoral elections on news use are important to consider, which requires us to estimate the dynamic effects of local elections on news use. This setting also includes a staggered treatment, as mayoral elections happen at different times, and their effects could differ based on timing (Anzia, 2013; de Benedictis-Kessner, 2018).

Recent work establishes these features can lead two-way fixed effects models (TWFE), a common approach to analyzing panel data, to produce biased effect estimates by weighting units differently depending on when a “treatment”, in this case a mayoral election, occurs in them (Goodman-Bacon, 2021). For this reason we follow best practices for studying staggered treatments with potentially time-varying, heterogeneous treatment effects (Sun and Abraham, 2021; Callaway and Sant’Anna, 2021). Specifically, we create a “stacked” estimation dataset, an approach that effectively estimates a standard dynamic TWFE model for each event window (i.e., each month in which a mayoral election occurs, see Baker, Larcker and Wang 2022). This approach addresses recent concerns raised in the literature as it permits dynamic treatment effects, allows for time-varying heterogeneous treatment effects and excludes already-treated units from the control group, generating a clean comparison group for evaluating the influence of local elections on news use. This method is also more statistically efficient than other approaches that address staggered treatment timing.

To implement the stacked approach, we construct treatment cohort groups based on the date on which mayoral elections occurred. For a given election date, all cities with a mayoral election (the treated units) are grouped together with cities that do not have a mayoral election in a given window surrounding that date (the control units). Relative time to treatment indicators are created for the treated units (e.g., one month pre-treatment, one

month post-treatment, etc.)<sup>2</sup>, while control units and the month of the election are set to zero. Finally, each treatment cohort receives a separate dummy variable.

We then estimate models of the following form:

$$Y_{it} = \gamma_{id} + \lambda_{td} + \sum_{\tau=-l}^{-1} \gamma_{\tau} D_{i\tau} + \sum_{\tau=1}^l \delta_{\tau} D_{i\tau} + \varepsilon_{idt} \quad (1)$$

Where  $Y_{it}$ , our measure of local news news use in market/outlet  $i$  in month  $t$ , is regressed on unit (a newspaper or television station) fixed effects ( $\gamma_i$ ), month fixed effects ( $\lambda_t$ ), and treatment dummies for each pre- and post-treatment window from  $-l$  to  $l$ , excluding 0, which is when the mayoral election occurs. The parameters of interest are the pre-treatment lags  $\gamma$  and post-treatment leads  $\delta$  of time to mayoral election. These estimate the dynamic treatment effects within each treatment cohort relative to untreated units. In the present application these terms reflect whether local media use in communities with an impending mayoral election changes before, during or after the election, relative to a reference group of outlets in communities without an election during that same time period. It is important to note that in this case, unlike many other event study analyses, we do *not* necessarily expect to see these pre-treatment dummies centered around zero. This is because the campaign that occurs in the lead-up to a mayoral election could increase engagement with local news before the election happens, a possibility our dynamic approach can capture.

## Elevated Attention to Local Politics During Elections

Our argument that local elections could increase local news use is based on the assumption they are a time of elevated attention to local politics. Before considering the effects of local elections on media use, we provide evidence for this part of the research design.

To consider variation in the public’s attention to local politics we follow previous work and use city-level Google Trends data on searches for the term “Mayor” in the same cities that

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<sup>2</sup>Because the structure of our ratings data is at the three week interval, we use three week intervals as our basic binning structure. They are then centered around the three week interval that contains the election date. We present 3 three week periods pre- and post-election to match as closely as possible the two month periods of the newspaper results.

later appear in our news use analysis (Hayes and Lawless, 2021; Sinclair and Wray, 2015). This measure captures relative monthly search for this term and in each city is standardized between 0 (lowest) and 100 (highest) interest for the term during the time period under consideration. To consider the media’s attention to local politics, we use transcripts from a sample of the television stations in our news use analysis and count how often the term “Mayor” appears in news broadcasts each month. Our expectation is these indicators of public and media attention to local politics should increase during mayoral elections.

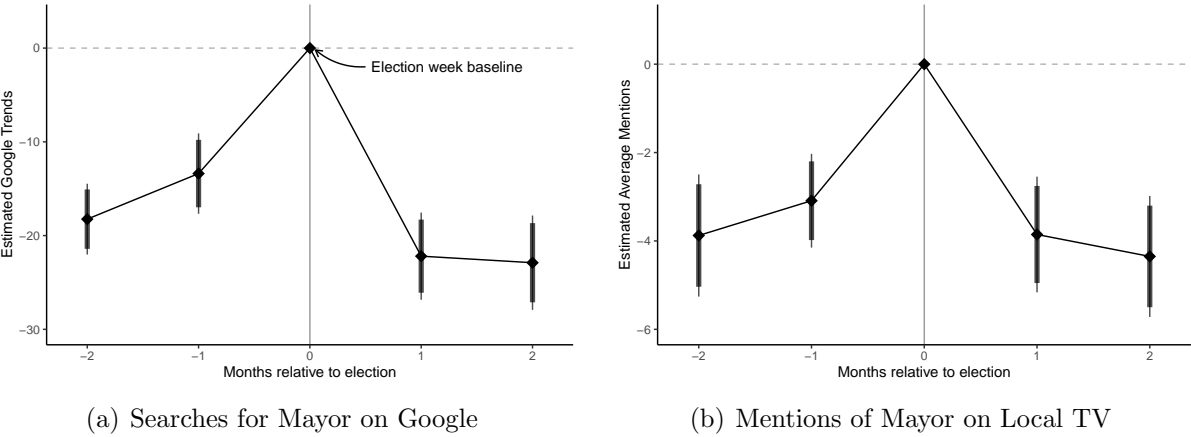


Figure 1: Local Elections and Attention to Local Politics

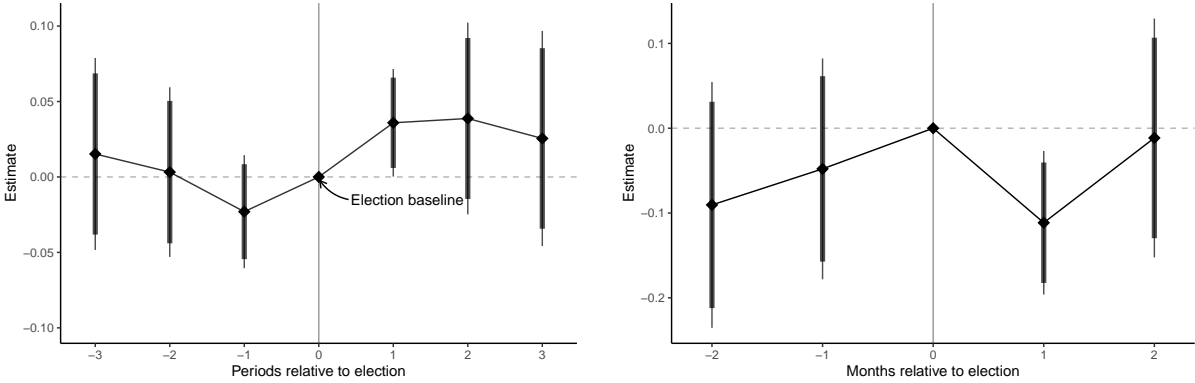
Figure 1 examines how attention to local politics varies in the months before, during and after mayoral elections. This uses the stacked regression approach described in the previous section. The coefficient estimates represent the difference between communities with a mayoral election, relative to those without an election, on the dependent variable. These estimated differences are all relative to the month in which the election occurred ( $t=0$ ), indicating whether this changes based on proximity to the election.

The results displayed in Figure 1 are consistent with our expectations. Compared to the months before and after the elections, there are substantial spikes in public (Figure 1, Panel A) and media (Figure 1, Panel B) attention to local politics the month the election occurs. This is indicated by the negative and statistically significant signs on the coefficients for the

months before and after the election, a pattern that is similar for both outcomes. Compared to the month before the election, relative search for information about the mayor is 15 percentage points higher during the election month. Similarly, there are 4 more mentions of the mayor during newscasts the month of an election, relative to the month before it. Given there are on average 3.4 mentions of the mayor per month in this data, this is a large increase, with an election more than doubling the attention the mayor receives from local television stations compared to the typical month. In both cases the increased attention to local politics declines after the election. Overall, this is consistent with our claim that local elections increase attention to local politics, while also showing this method can successfully recover differences in attention brought about by elections.

## Effects of Local Elections on Local News Use

Does the elevated attention to local politics that occurs during mayoral elections increase local news consumption? To assess this we compare monthly demand for local news at media outlets with an impending local election to media outlets without an election in their community. If the increased salience of local politics that accompanies elections shifts demand for local news, we expect to see higher levels of consumption for the news sources with a local election compared to the others.



(a) Effect of Local Elections on TV Viewership (b) Effect of Local Elections on Newspaper Traffic

Figure 2: TV Viewership and Newspaper Traffic Event Studies



Figure 2 shows the paired event studies for local television stations (Figure 2, Panel A) and local newspapers (Figure 2, Panel B), using the same approach as in the previous section. The coefficients reflect the difference in the size of the monthly audience of local news outlets with an impending mayoral election, relative to sources in communities without a mayoral election in the months before and after the election takes place. In Panel A, coefficients are interpreted relative to the the three week period containing the election, such that a positive (negative) coefficient indicates higher (lower) viewership relative to when the election occurred. In Panel B, coefficients are interpreted relative to the month in which the election occurs.<sup>3</sup> Thus, if local news use gradually increased leading up to the election, and then dropped immediately after, the pre-election coefficients would be negative and approach zero, while the post-treatment coefficients would return to negative values.

We first discuss the estimates for local television viewership and newspaper website traffic in the months before the election. Here, there are not detectable differences in local news use between the election and non-election local news sources. The coefficients for local television small and centered around zero, indicating viewership is stagnant in the run up to the election. Immediately following the election, there is a small short-lived increase in ratings that quickly dissipates in the second post-election three week period. In contrast, the point estimates for newspaper web traffic are negative, indicating lower levels of web traffic in the months before the election compared to the month of the election. However, in both cases these estimated differences are substantively small (roughly .04 ratings points for television and .1 standard deviations for newspapers) and do not reach statistical significance. Considering the dynamics of news use, the coefficients do not illustrate a change in the trajectory of news use leading up to the election. This indicates the presence of an upcoming mayoral election does not generate increased local news use in the lead-up to the election, a perhaps unsurprising pattern given our earlier evidence of a sudden shift in attention to local politics during the month of the election that is not preceded by a period of increase

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<sup>3</sup>Our TV viewership data allows a weekly-level aggregation while the newspaper traffic data is only available at the monthly level.

beforehand.

We now turn to the post-election time period. For local television, the post-election coefficients are again positive, indicating higher viewership during this period than when the election occurred. The magnitude of these estimates is largely similar to those from before the election, although in this case the positive estimate from two months after the election does reach statistical significance. In sum, the findings here indicate that the presence of a local election harms viewership of local television stations, showing they do not benefit, in terms of news use, from the increased attention to local politics that is present during this time period. Indeed, when jointly considering the monthly estimates from before and after the election, this indicates a statistically significant decline in local television viewership due to the election (-.04, 95% CI [-.08,-.01]). While this difference is not large—it represents only a .01 standard deviation shift in television news use—we conclusively rule out any election-related viewership benefits for local television stations.

For local newspapers, the post-election time period differs somewhat. Here the coefficient for the month after the election is negative and statistically significant, indicating a .1 standard deviation decline in website impressions for newspapers in communities with a mayoral election compared to those without one. This difference dissipates over time and the two groups of newspapers are no longer distinguishable after the first post-election month. This evidence does not show any sustained increase in local newspaper use due to a local election. In a more qualified sense there is evidence that local newspaper web traffic may increase during the month in which a mayoral election takes place, as estimates from both the month before and after the election are negative compared to this reference point. However, we note that the increase from the month before the election to the month of the election is not itself statistically significant. In any case, as with local television, there is not evidence that local newspapers receive either sizeable or long term benefits in the size of their audience in the wake of local elections in the communities they cover.

We can rule out large benefits for local media outlets from the increased attention to local

politics that occurs during local elections, a finding that runs counter to our expectations that the presence of local elections would increase local news use. Local television viewership suffers during the election when compared to the time period before and after it. While the post-election decline in local newspaper web traffic is more in line with an account in which the presence of an election elevates local news use, we see no indication the election month itself is a time of elevated local news consumption compared to previous months and, ultimately, differences between the election and non-election communities dissipate by two months after it takes place. Here we note that this general pattern persists when we probe its robustness in several ways, including an alternative estimation approach (Appendix A).

## Heterogeneity by Election Context

The preceding analysis shows limited evidence that local elections increase local news audiences. However, it includes different types of elections, some with features that could dampen any motivation for the public to consume local news. We now consider heterogeneity based around institutional and contextual variation in local elections.

One potential source of heterogeneity is whether the election occurs on or off the federal election cycle. Given the American public's greater interest in national politics, any role local elections have in motivating the local media use may be attenuated if they co-occur with more engaging elections for Congress or the Presidency (Hopkins, 2018). For this reason we separate out mayoral elections that happen alongside federal elections (47% of the elections in our sample) from off-cycle elections at different times (53% of the sample) and which may be better positioned to shift local news demand.

Another feature we consider is whether or not the election is competitive. Many mayoral elections consist of a clearly favored candidate winning office in a relatively uncontested fashion, with the results largely determined at an earlier stage of the electoral process (e.g., Keele et al., 2017). These races seem unlikely to stimulate demand for local news. For this reason we separately assess the effects of local elections on news use between cities with competitive mayoral elections (decided by 10 points or less, 27% of our sample) and

uncompetitive elections decided by more than this this margin (73% of our sample).

We begin by considering this election-related heterogeneity for local television. The left panel of Figure 3 separates the event study for off-cycle elections, shown in blue, and on-cycle elections, with point estimates shown in red. Here differences are in the anticipated direction as television stations covering off-cycle elections experience an increase in viewership following the election of 0.05 rating points in month one. However, this effect size is substantively small at 0.06 within-channel standard deviations – effectively a precise difference only slightly larger than zero. Ratings quickly begin to decrease in the second period and become undifferentiated from zero. Elections that coincide with state-wide and federal elections see no increase in viewership post-election.

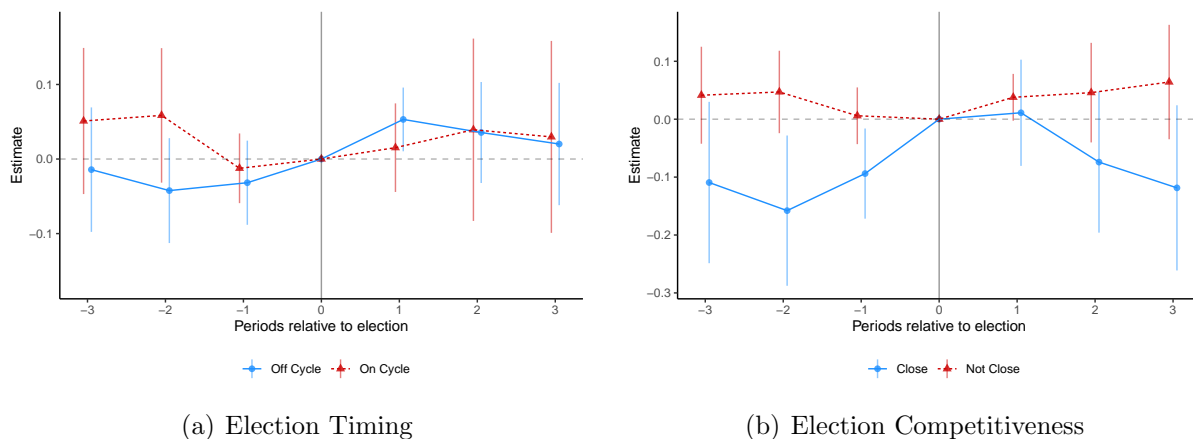


Figure 3: TV Event Studies by Election Type

The right panel of Figure 3 considers competitive elections, with point estimates in blue, and non-competitive elections, with point estimates in red. In close elections see some evidence of a small election run-up effect, with ratings peaking during the period of the election and the period immediately after. Relative to normal monthly variation in channel viewership these coefficients are small – roughly 10% of a standard deviation – and are better interpreted as precise zeros. For noncompetitive elections, viewership remains remarkably stable throughout the time period, indicating no election-related increase in viewership.

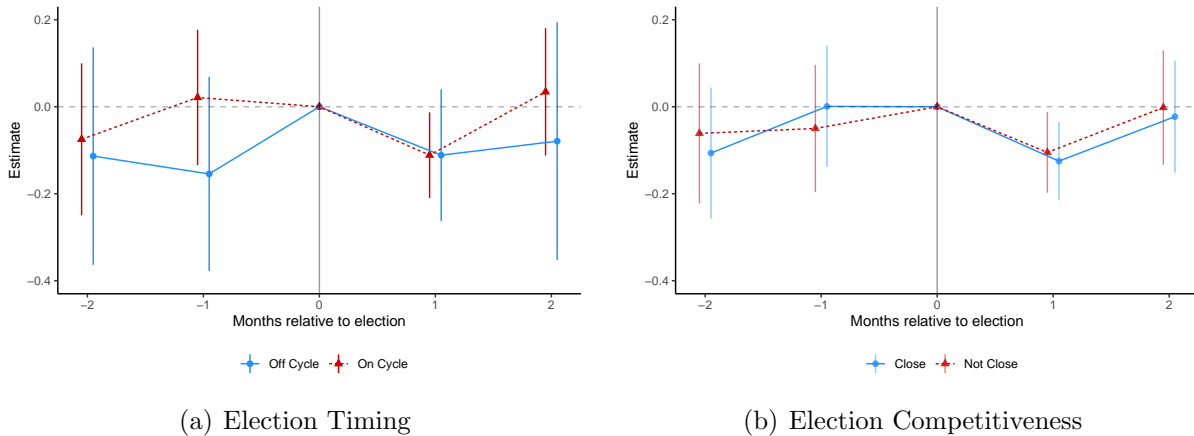


Figure 4: Newspaper Event Studies by Election Type

We now turn to examine the same sources of heterogeneity for local newspapers. Here the implications of the pooled results are not much changed when considering potential sources of heterogeneity. For both election timing and competitiveness, the one month post-election point estimates remain negative, rather than positive, indicating a roughly .1 standard deviation decline in web traffic following the mayoral election that is of similar magnitude across the different timing of elections or degrees of competitiveness. Like in the pooled newspaper results, the one month pre-election point estimates are also negative, though not statistically significant. This again offers suggestive evidence of an election-month boost in web traffic for local newspapers in communities with mayoral elections compared to those without one. In general, however, there is not any additional support for an increase in attention to local newspapers following an election when considering likely cases like off-cycle elections or those that are particularly close.

As a final source of heterogeneity we further subset the analysis to close elections that also involve candidates from opposing political parties, as past work finds partisanship to be a moderator how news audiences respond to elections (e.g., Archer 2018). Here the results resemble the results for close election as a whole and do not reveal any larger or more durable increase in local media use for these partisan, close elections (see Appendix

Figure A10). Altogether, even evaluating the subsets of elections with features that could be particularly engaging for audiences does not reveal sizeable shifts in local news consumption.

## Implications For Local News Demand

We show mayoral elections are a time of elevated attention to local politics, but this increased attention is insufficient to elevate local television viewership or traffic to local newspaper websites. In contrast to our expectations, this suggests a stable audience for local political news, with few people motivated to opt in to local news use due to elections.<sup>4</sup> This evidence has several important implications for local news demand.

Efforts by elected officials, policy advocates, and journalists aimed at increasing attention to local politics by local media have many goals beyond changing the public’s demand for local news. Our findings, however, indicate that some of the most important and salient local political events – mayoral elections – do not increase the local news audience’s size. While it is certainly possible other political events may increase the local news audience, our results suggest a need for pessimism on this possibility. Even among the promising scenario of highly contested and salient elections, we find precise null effects on increasing audience sizes. These results align with recent field experiments which find that another promising shift for increasing news use, reducing the costs of local news subscriptions, also has limited effects on local media demand (Hopkins and Gorton, ND; Trexler, 2023).

Given evidence on the limits of politics at increasing local news use, future efforts might apply a similar logic to the one used here, that local news outlets will be advantaged when public attention focuses on events that do not receive national media coverage, but instead consider non-political situations. Here we suggest local crises in which community information is particularly valuable (e.g., the COVID-19 pandemic, natural disasters) or non-political events (e.g., sporting events) as alternatives that could have a larger role than politics in shaping local media engagement and inform efforts to durably shift local news use habits.

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<sup>4</sup>It is possible the composition of the audience changes but the overall size remains stable. Nonetheless, as advertisers typically care about viewership/readership, the implications are the same.

## Discussion and Conclusion

Beyond the implications for local news demand, several other aspects of our findings merit discussion. First is our finding that the cyclical response to local elections observed for news coverage and web search that does not extend to local media consumption. A tentative explanation for the divergence between web search trends and the behavioral measures of TV viewership and newspaper web traffic is that the short-lived increase in attention to local politics from its ordinarily low baseline induced by elections is sufficient to move the more responsive Google trends measure, but is insufficient to meaningfully increase overall traffic and viewership (of which political news coverage is only one component). More work is required to explain this disconnect as it holds important implications for the durability of local newspaper business models.

This disconnect raises another potential puzzle: why does local television coverage of mayors increase leading up to an election if it does not generate increased viewership? One possibility is that this approach is aimed at satisfying the existing group of habitual local news consumers who turn to these outlets for community information (increasing viewership on the intensive margin), rather than at increasing the size of the news audience (the extensive margin). Journalists also subscribe to a strong norm about the importance of informing the public (Weaver et al., 2007), which may motivate political coverage even when it does not offer clear economic benefits.

Our results also aid in understanding who is affected by local news coverage. The lack of an uptick in media engagement prior to local elections suggests that when local news does affect political outcomes (e.g., Hayes and Lawless, 2021; Hopkins and Pettingill, 2018), it does so by influencing a core group of habitual local media consumers rather than through reaching a larger group of those only intermittently interested in politics.

A final point concerns the normative implications of these findings. Whether through editorial policy shifts, regulatory change, or grantmaking, many reforms aimed at supporting local media seek to increase investments in local political reporting and the attention these

news sources devote to local politics. These efforts are motivated by a general view of local media as an important public good and evidence that among the mass public local media can contribute to beneficial outcomes such as engagement with local politics and reduced polarization (e.g., Hayes and Lawless, 2021; Darr, Hitt and Dunaway, 2021; Moskowitz, 2021). Like some other recent work on local media (Hopkins and Gorton, ND; Hayes and Lawless, 2021), we center audience demand for local news in this analysis because achieving these goals requires ensuring local news outlets are economically viable and that their coverage reaches a broad audience. Our findings here show the increased focus on local politics brought about by a local elections does not expand the audience for local news. This null result informs ongoing discussion about local media by showing the twin goals of increasing the capacity of local news sources to cover local politics and growing the size of the audience for these same news sources may require distinct approaches aimed at separately addressing each of these individual goals.



## References

- Anzia, Sarah. 2013. *Timing and Turnout: How Off-Cycle Elections Favor Organized Groups*. University of Chicago Press.
- Archer, Allison M. 2018. “Political Advantage, Political Disadvantage, and Demand for Partisan News.” *Journal of Politics* 35(3):353–370.
- Archer, Allison M.N. and Joshua Darr. 2022. “Gubernatorial Elections Change Demand for Local Newspapers.” *American Politics Research* 50(1):52–66.
- Baker, Andrew C, David F Larcker and Charles CY Wang. 2022. “How much should we trust staggered difference-in-differences estimates?” *Journal of Financial Economics* 144(2):370–395.
- Callaway, Brantly and Pedro HC Sant’Anna. 2021. “Difference-in-differences with multiple time periods.” *Journal of Econometrics* 225(2):200–230.
- Darr, Joshua, Matthew Hitt and Johanna Dunaway. 2018. “Newspaper Closures Polarize Voting Behavior.” *Journal of Communication* 68(6):1007–1028.
- Darr, Joshua P., Matthew P. Hitt and Johanna L. Dunaway. 2021. *Home Style Opinion: How Local Newspapers Can Slow Polarization*. Cambridge University Press.
- de Benedictis-Kessner, Justin. 2018. “Off-Cycle and Out of Office: Election timing and the Incumbency Advantage.” *Journal of Politics* 80(1):119–132.
- Downs, Anthony. 1957. *An Economic Theory of Democracy*. Harper & Row.
- Goodman-Bacon, Andrew. 2021. “Difference-in-differences with variation in treatment timing.” *Journal of Econometrics* 225(2):254–277.
- Hayes, Danny and Jennifer Lawless. 2021. *News Hole: The Demise of Local Journalism and Political Engagement*. Cambridge University Press.
- Hindman, Matthew. 2018. *The Internet Trap: How the Digital Economy Builds Monopolies and Undermines Democracy*. Princeton University Press.
- Hopkins, Daniel J. 2018. *The Increasingly United States: How and Why American Political Behavior Nationalized*. University of Chicago Press.
- Hopkins, Daniel J. and Lindsay M. Pettingill. 2018. “Retrospective Voting in Big-City US Mayoral Elections.” *Political Science Research and Methods* 6(4):697–714.

- Hopkins, Daniel J. and Tori Gorton. ND. “Unsubscribed and Undemanding: Partisanship and the Minimal Effects of a Field Experiment Encouraging Local News Consumption.” *American Journal of Political Science* Forthcoming.
- Iyengar, Shanto, Helmut Norpoth and Kyu Hahn. 2004. “Consumer Demand for Election News: The Horserace Sells.” *Journal of Politics* 66(1):151–175.
- Keele, Luke, Paru Shah, Ismail White and Kristine Kay. 2017. “Black Candidates and Black Turnout: A Study of Viability in Louisiana Mayoral Elections.” *Journal of Politics* 79(3):780–791.
- Kim, Jin Woo and Eunji Kim. 2021. “Temporal Selective Exposure: How Partisans Choose When to Follow Politics.” *Political Behavior* 43(4):1663–1683.
- Krupnikov, Yanna and John Barry Ryan. 2022. *The Other Divide: Polarization and Disengagement in American Politics*. Cambridge University Press.
- Mahone, Jessica, Qun Wang, Philip Napoli, Matthew Weber and Katie McCollough. 2019. “Who’s Producing Local Journalism?” DeWitt Wallace Center for Media and Democracy, Duke University.
- Martin, Gregory and Josh McCrain. 2019. “Local News and National Politics.” *American Political Science Review* 113(2):372–384.
- Mastrorocco, Nicola and Luigi Minale. 2018. “News media and crime perceptions: Evidence from a natural experiment.” *Journal of Public Economics* 165:230–255.
- Moskowitz, Daniel. 2021. “Local News, Information, and the Nationalization of US Elections.” *American Political Science Review* 115(1):114–129.
- Mutz, Diana and Paul S. Martin. 2001. “Facilitating Communication Across Lines of Political Difference: The Role of Mass Media.” *American Political Science Review* 95(1):97–114.
- Peterson, Erik. 2021. “Paper Cuts: How Reporting Resources Affect Political News Coverage.” *American Journal of Political Science* 65(2):443–459.
- Peterson, Erik and Maxwell Allamong. 2022. “The Influence of Unknown Media on Public Opinion: Evidence from Local and Foreign News Sources.” *American Political Science Review* 116(2):719–733.
- Prior, Markus. 2007. *Post-Broadcast Democracy: How media choice increases inequality in political involvement and polarizes elections*. Cambridge University Press.

- Prior, Markus. 2018. *Hooked: How politics captures people's interest*. Cambridge University Press.
- Sinclair, Betsy and Michael Wray. 2015. "Googling the Top Two: Information Search in California's Top Two Primary." *California Journal of Politics and Policy* 7(1):1–12.
- Sun, Liyang and Sarah Abraham. 2021. "Estimating dynamic treatment effects in event studies with heterogeneous treatment effects." *Journal of Econometrics* 225(2):175–199.
- Trexler, Andrew. 2023. "The Minimal Effects of Making Local News Free." *Working Paper* . <https://osf.io/8x46u>.
- Usher, Nikki. 2021. *News for the Rich, White and Blue: How Place and Power Distort American Journalism*. Columbia University Press.
- Warshaw, Christopher, Justin de Benedictis-Kessner and Yamil Velez. 2022. "Local Representation in the United States: A New Comprehensive Dataset of Elections."
- Weaver, David H., Randal A. Beam, Bonnie J. Brownlee, Paul S. Voakes and G. Cleveland Wilhoit. 2007. *The American Journalist in the 21st Century*. Lawrence Erlbaum Associates.

**Supporting Information for: “Local Elections  
Do Not Increase Local News Demand”**

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# A Appendix A: Data Sources and Panel Construction

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

	N	Mean	S.D.
<b>Newspapers</b>			
Newspaper-Months	9,048	56.9	19.6
Website Impressions (millions)	123,258	13.8	29.8
<b>Local Television</b>			
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
<b>Mayoral Elections</b>			
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 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

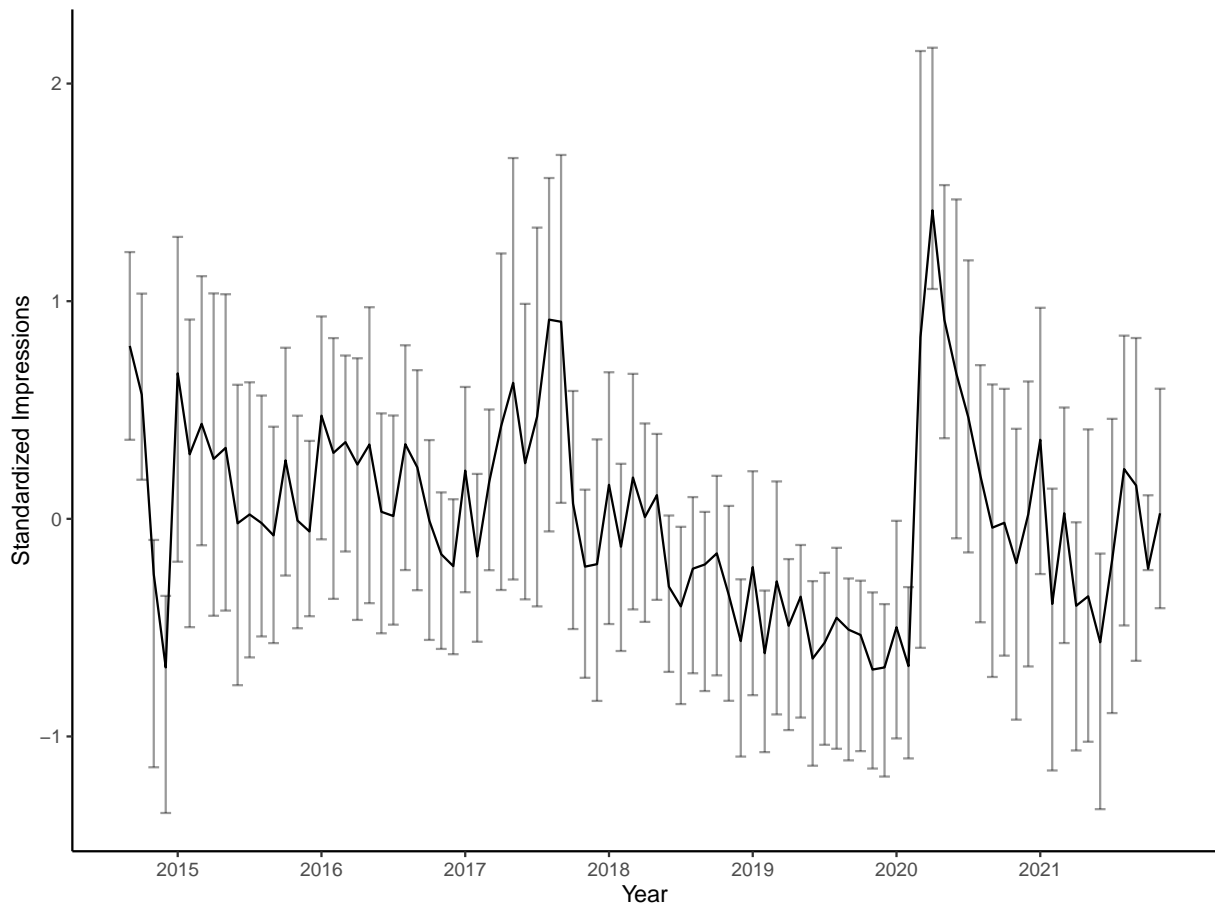
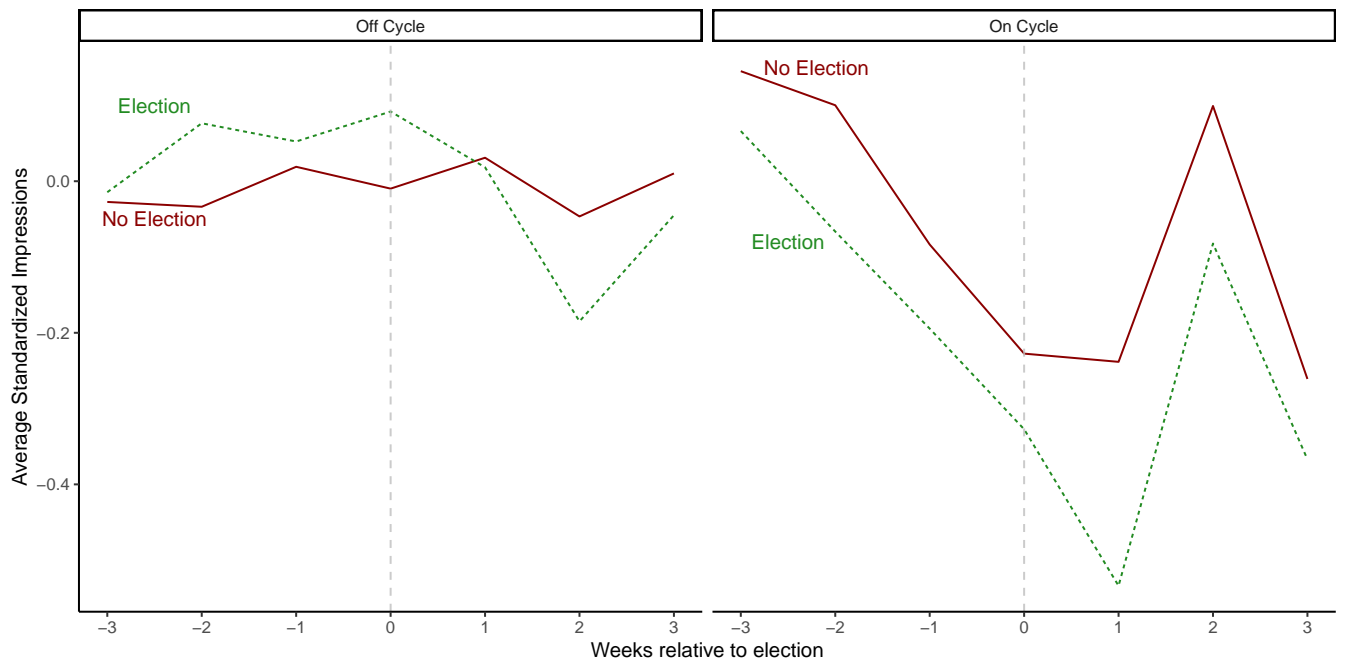


Figure A2: Monthly Newspaper Traffic Relative to Election





## 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.<sup>1</sup> 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).

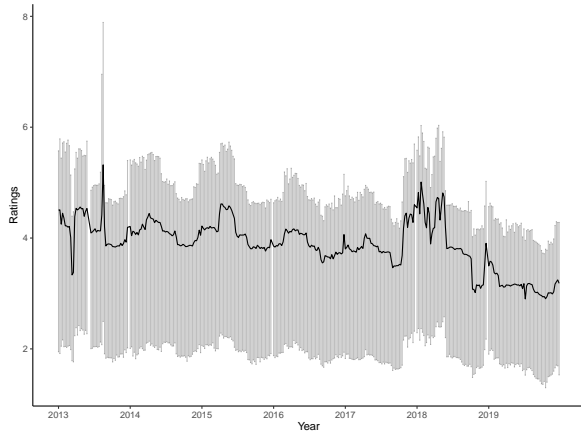
We also measure the usage of the word **mayor\*** (including “mayoral”) in local news transcripts in 2017, using the replication data from Martin and McCrain (2019)martinmccrain19. The transcripts used in Martin and McCrain also come from TVEyes and include weekday news broadcasts for all stations in 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

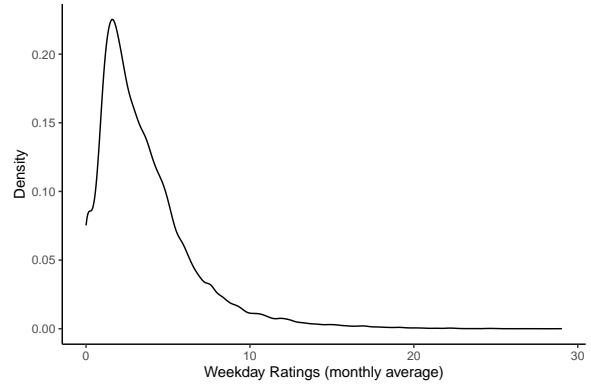
Our analyses focus on the mayoral elections of the largest city within each media market (DMA). For most cities, we rely on the election dataset provided by Warshaw et al.(Warshaw, de Benedictis-Kessner and Velez, 2022). For cities not in this dataset we manually collected information about the most 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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<sup>1</sup>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

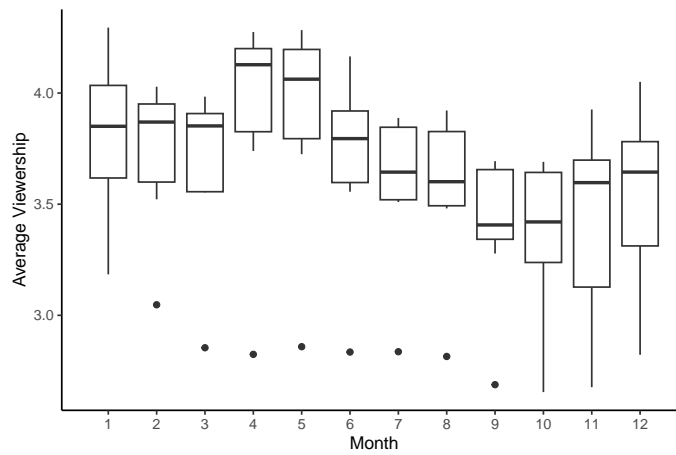


Figure A5: Map of Mayoral Elections

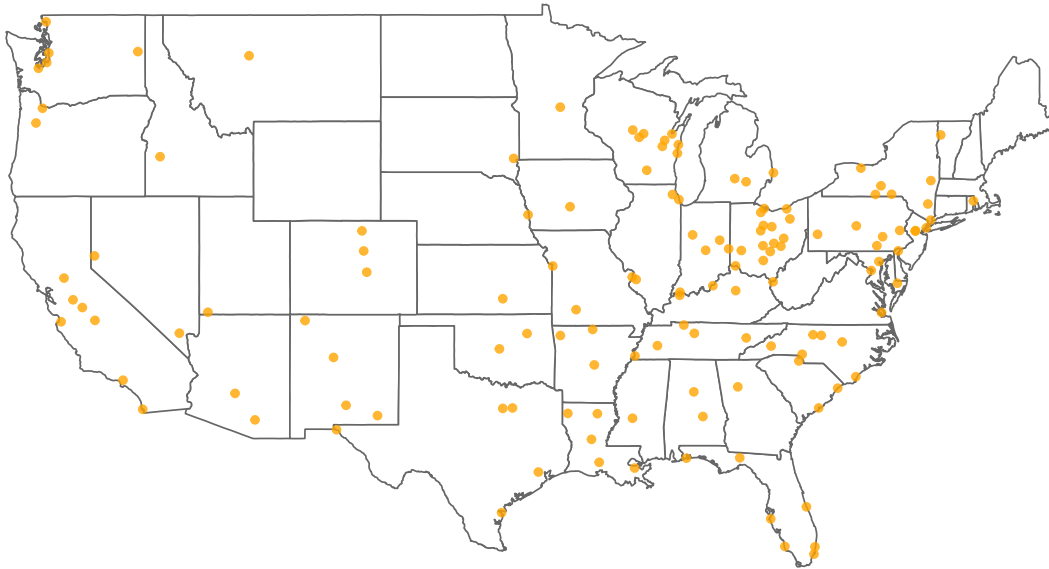


Figure A6: Timing of Mayoral Elections within Media Markets

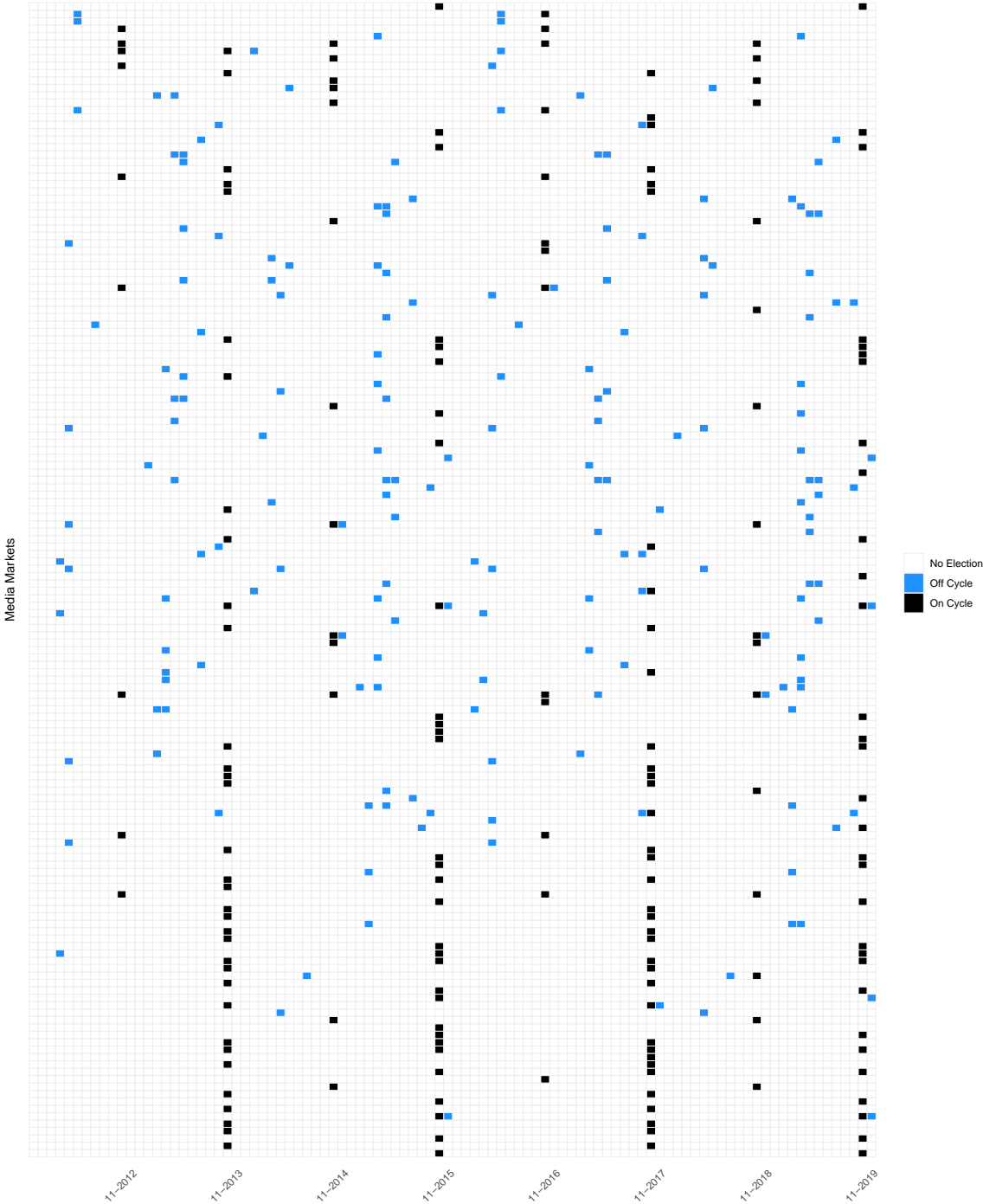
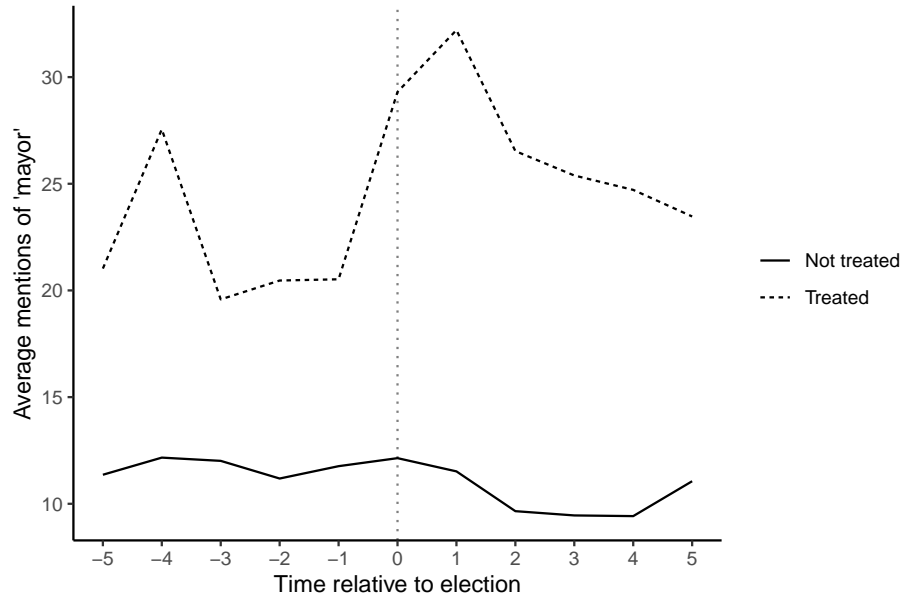


Figure A7: Mentions of 'mayor' in Local TV Transcripts



## 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.

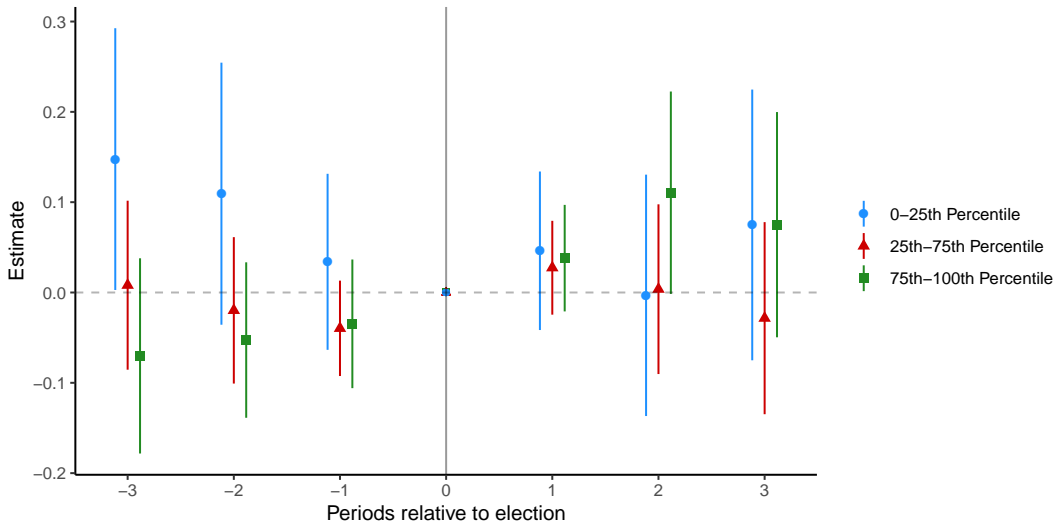


Figure A8: Mayoral Elections Event Study: By Population of City

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

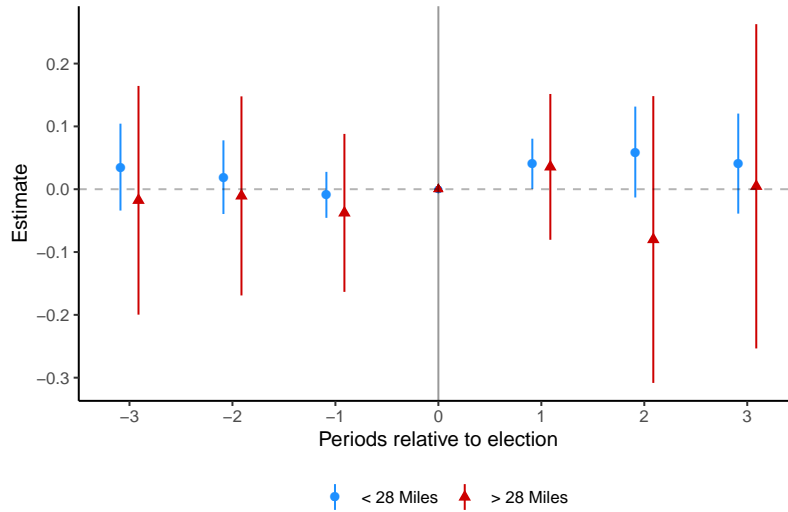


Figure A9: Mayoral Elections Event Study: By Station Distance from City with Election

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 preceding 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 <sup>2</sup>	0.51645
Within R <sup>2</sup>	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 <sup>2</sup>	0.67921
Within R <sup>2</sup>	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 <sup>2</sup>	0.66086
Within R <sup>2</sup>	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 (0.0739)	-0.1135 (0.1275)	-0.0749 (0.0891)	-0.1064 (0.0767)	-0.0613 (0.0821)
Month -1	-0.0480 (0.0664)	-0.1544 (0.1138)	0.0213 (0.0794)	0.0008 (0.0712)	-0.0499 (0.0747)
Month 1	-0.1115*** (0.0432)	-0.1113 (0.0772)	-0.1112** (0.0502)	-0.1249*** (0.0459)	-0.1050** (0.0472)
Month 2	-0.0115 (0.0719)	-0.0791 (0.1394)	0.0343 (0.0746)	-0.0227 (0.0656)	-0.0019 (0.0669)
Observations	20,001	16,595	3,406	9,161	9,664
R <sup>2</sup>	0.67806	0.68093	0.65804	0.68815	0.67415
Within R <sup>2</sup>	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 (0.0325)	-0.0142 (0.0426)	0.0510 (0.0500)	-0.1094 (0.0711)	0.0414 (0.0427)
Period = -2	0.0032 (0.0287)	-0.0423 (0.0359)	0.0585 (0.0460)	-0.1579** (0.0662)	0.0470 (0.0363)
Period = -1	-0.0230 (0.0191)	-0.0318 (0.0288)	-0.0124 (0.0238)	-0.0939** (0.0397)	0.0059 (0.0250)
Period = 1	0.0359** (0.0182)	0.0531** (0.0218)	0.0152 (0.0303)	0.0111 (0.0468)	0.0378* (0.0206)
Period = 2	0.0387 (0.0324)	0.0356 (0.0346)	0.0393 (0.0624)	-0.0741 (0.0621)	0.0459 (0.0439)
Period = 3	0.0255 (0.0364)	0.0202 (0.0418)	0.0297 (0.0657)	-0.1186 (0.0728)	0.0642 (0.0504)
Observations	341,433	309,799	31,634	98,405	220,720
R <sup>2</sup>	0.95726	0.95734	0.95623	0.95811	0.95901
Within R <sup>2</sup>	$2.26 \times 10^{-5}$	$3.59 \times 10^{-5}$	0.00017	0.00016	$2.19 \times 10^{-5}$
Station-dataset fixed effects	✓	✓	✓	✓	✓
Week-dataset fixed effects	✓	✓	✓	✓	✓
Model	Full Sample	Off Cycle	On Cycle	Close Elections	Not Close Elections

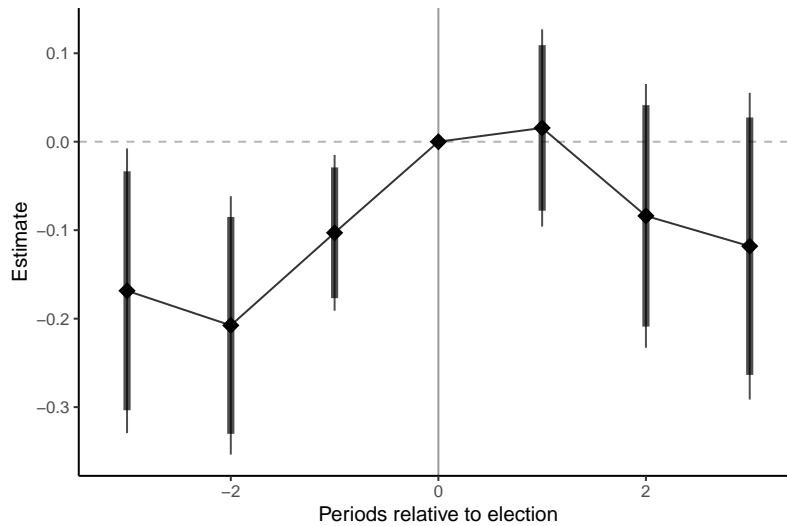


Figure A10: Mayoral Elections Event Study: Close, Two-Party Elections

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.