# The Minimal Effects of Making Local News Free: Evidence from a Field Experiment

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#### Abstract

The decline of local newspapers has elicited broad concern about citizens' knowledge of and engagement with local politics. As newspapers struggle, many have retreated behind online paywalls—which limit access to political information that is essential for democracy. Does making local news free to access induce its consumption? And, if so, does that consumption produce salutary effects on citizen knowledge, attitudes, and behaviors? I provide evidence from a pre-registered randomized field experiment, which provided a probability-based sample of registered voters with a free digital subscription to a local newspaper for two months during the 2022 general election. The free subscriptions did not meaningfully increase consumption, nor produce meaningful changes in political knowledge, attitudes, or behaviors. Price is only one of several obstacles to news consumption, and disparities in citizen knowledge and engagement with local politics are unlikely to be addressed just by making some local journalism available for free.

**Keywords:** local news; news demand; journalism; local elections; field experiment

Short Title: Minimal Effects of Making Local News Free

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# The Minimal Effects of Making Local News Free: Evidence from a Field Experiment

America's local newspapers are in market failure. Total circulation of daily newspapers in the United States began to decline around 1990, when the average American household subscribed to 0.68 newspapers; by 2020, that average fell to just 0.21 newspapers (Pew Research Center 2023b). Locally-focused newspapers have been especially hard hit, garnering just 0.12 subscriptions per household in 2020 (Pew Research Center 2022). Advertising revenues have shrunk (Pew Research Center 2023b, 2022), resulting in deep cuts to staffing and the mass shuttering of newsrooms across the country (Abernathy 2020; Peterson 2021b; Pew Research Center 2023b). To survive, many newspapers have turned to digital paywalls and online subscription models (Cook 2018; Williams 2016). Evidence to date suggests that these measures have not garnered much revenue for the average paper, despite drawing more online traffic (Chyi and Ng 2020; Pew Research Center 2022).

For the consumer, digital paywalls present a barrier to consuming local news, and thus to information that many scholars consider essential to several key functions of democratic citizenship. Though typically cheaper than their print equivalents, a digital subscription can cost hundreds of dollars per year (Chyi and Ng 2020), averaging around \$120 per year (Cook 2018) as of 2018. Citizens who are unwilling or unable to pay for regular access to a local newspaper—often preferring to consume national news (Hopkins 2018) or simply non-news content (Prior 2007; Toff, Palmer and Nielsen 2023)—risk missing out on critical information that such newspapers provide (Barnhurst and Mutz 1997; Druckman 2005; Gentzkow, Shapiro and Sinkinson 2011; Hamilton 2016; Hayes and Lawless 2021). In an effort to fill these gaps, numerous nonprofits and even state governments have begun funding major initiatives to keep local news alive (Neff and Pickard 2023; Stonbely, Weber and Satullo 2020), including through subsidizing the production of local news. Does making local journalism free to access entice more of the public to consume it? And, if the answer is "yes," is that increased consumption sufficient to improve political knowledge or affect downstream political

attitudes and behaviors?

I address these questions with evidence from a pre-registered, randomized field experiment conducted during the 2022 U.S. general election season that provided a probability-based sample of registered voters with a free digital subscription to a local newspaper for two months. I show that actual uptake of the free subscription was extremely low, at just 3.8 percent of the treatment group. As a secondary intervention, the newspaper also sent the treatment group multiple daily newsletters by email; these newsletters contained some brief news copy and a number of headlines (and links) on current stories published by the paper. Despite strong email-open rates and being sent nearly a hundred newsletters across two months, the treatment group showed only modest recall of these newsletters, and showed no significant differences from the control group in terms of gains to political knowledge, political engagement, trust in media, trust in government, support for democratic norms, or the likelihood of casting a "correct" vote (in the sense that the selected candidate most closely reflects the voter's policy preferences; see Lau and Redlawsk 1997) for several legislative seats in the 2022 general election. The findings suggest that the defining challenge for local newspapers today is not simply how to supply local news amid the collapse of yesterday's business models; rather, it is also how to convince a broader slice of the public to consume local news. For scholars of democracy, the minimal effects of eliminating the price barrier suggests that extant disparities in citizen knowledge of, engagement with, and trust in local institutions are unlikely to be addressed simply by making some local journalism available for free.

# Motivation

The decline of local news has elicited broad scholarly concern because of its implications for the availability of political information. Political information is critical to the formation of private opinion and the expression of public opinion, enabling citizens to engage meaningfully in the democratic process through deliberative, participatory, and electoral means. The

shrinking availability of political information at the local level thus presents a significant concern for democracy. As local newspapers have downsized or disappeared (Abernathy 2020; Peterson 2021b), scholars have documented a commensurate decline in coverage of local politics (Hayes and Lawless 2021; Peterson 2021b), local political knowledge (Hayes and Lawless 2021; Peterson 2021a), engagement in local politics (Gentzkow, Shapiro and Sinkinson 2011; Hayes and Lawless 2021; Rubado and Jennings 2020; Shaker 2014), and electoral accountability mechanisms at the local level (Darr, Hitt and Dunaway 2018; Darr and Harman 2024; Hayes and Lawless 2021; Hopkins and Pettingill 2018; Rubado and Jennings 2020). Simultaneously, shifts in ownership structures amid ongoing consolidation within the news industry (Hindman 2018) contributes to reduced quality of local news coverage (Dunaway 2008, 2011; Ewens, Gupta and Howell 2022) and reduced engagement with what coverage remains (Toff and Mathews 2024). Public perceptions that the quality of local news has fallen (or that it is no longer "local") is potentially important because distrust in news is a strong cross-national predictor of news avoidance (Toff and Kalogeropoulos 2020). Increased distrust of local news in a polarized media environment may further reduce demand for local news among disengaged or moderately engaged citizens (Bennett and Iyengar 2008; Hopkins and Gorton 2024; Ladd 2012; Usher 2021), who could potentially stand to benefit the most from consuming local political information (Zaller 1992).

Despite these challenges, local newspapers continue to serve as valuable providers of local political information (Druckman 2005; Hamilton 2016; Hayes and Lawless 2021; Trexler and Mullin 2024), even for citizens with little interest in politics (Peterson 2021a). Newspapers are particularly essential as "keystone" sources of local news information (Nielsen 2015), typically providing political coverage in more depth across a wider geographic area and a broader range of issues than television counterparts, which instead typically focus on a single large city and prioritize episodic reporting on breaking news or "soft news" infotainment (Adams 1980; Rosenstiel et al. 2011; Yanich 2013). In today's political environment, newspapers at all levels also constitute key institutions for combating political misinformation,

restoring confidence in American elections, and bolstering support for core democratic norms (Peterson, McGregor and Block 2025; Jang and Kreiss 2024).

Much current scholarly attention on local news either documents the consequences of declining availability, or explores new models for funding local journalism. While these are critically important endeavors, "build it and they will come" is not a safe bet in the current media environment. From one perspective, making local news less expensive and easier to access could potentially broaden readership, tempering the relationship between community wealth and local news consumption that has deepened because few people today are willing to pay for local news (Usher 2021). But from an alternative perspective, making local news less expensive or even free may ultimately reduce its perceived value among potential readers—and thus may have little effect or even a negative influence on overall consumption. Other potential obstacles to consumption might include "news will find me" attitudes (Gil de Zúñiga and Diehl 2019; Toff and Nielsen 2018) and outright news avoidance (Skovsgaard and Andersen 2020; Toff, Palmer and Nielsen 2023) among moderate- or low-interest segments of the public, as well as ingrained consumption habits (Lee and Delli Carpini 2010; Groot Kormelink 2023) and preferences for national politics content (Hopkins 2018) among those who are most interested in political news.

In a recent study conducted in Pennsylvania, Hopkins and Gorton (2024) test the effect of making local news free to access on a non-probability sample that exhibits high political engagement, and find that this intervention does not increase local news consumption among these respondents. I replicate this null finding with an independent study conducted using a different news outlet in a different state. Importantly, I do so with a probability-based sampling design, rather than recruiting from a (non-probability) online volunteer panel. While Hopkins and Gorton's null finding is significant on its own, it is possible that highly-engaged panel respondents' latent interest in a local paper is crowded out by regular consumption of other political news sources (particularly national politics content), thus driving the null result. The present study's probability-based sampling design provides a more representa-

tive sample, avoiding bias from self-selection into the sampling frame (i.e., joining an online respondent panel) thanks to a sampling frame (the state-maintained voter rolls) that closely overlaps the target population (registered voters in Chatham County). This allows me to recruit more respondents into the study who are less politically engaged on average at baseline, offering a stronger test of the intervention's effects across the broad spectrum of political engagement in the target population. The null findings from both Hopkins and Gorton and the present study thus complement each other to provide greater confidence that this specific intervention (free digital access) is not an effective means of broadly increasing local news readership, or of reducing gaps in knowledge and engagement in local politics. Accordingly, workaround solutions to local newspapers' current funding challenges (such as through public or philanthropic funding in lieu of generating subscription revenue) are not likely to succeed in meeting these aims either.

In addition to testing the price lever's direct effects on local news consumption across a broad spectrum of political engagement, I employ a secondary intervention of emailed newsletters as a stronger treatment to test potential downstream effects on knowledge, attitudes, and behaviors.<sup>3</sup> The newsletters each contain some news copy from the local newspaper, a collection of recent headlines, and links for accessing the full articles. By sending newsletters directly to voters' inboxes, where they may already be accustomed to receiving other information, these newsletters potentially reduce the individual effort required to

<sup>&</sup>lt;sup>1</sup>Of course, probability-based sampling does not eliminate bias from other sources, including self-selection into participating in the study itself.

<sup>&</sup>lt;sup>2</sup>The findings of both studies also echo the work of (Gerber, Karlan and Bergan 2009), who tested the effect of providing free *print* subscriptions to local newspapers in an era before digital subscriptions became commonplace, and found mostly null effects on political knowledge, attitudes, and voter turnout.

<sup>&</sup>lt;sup>3</sup>This intervention again complements the design of Hopkins and Gorton (2024) in Pennsylvania, which employed a secondary intervention of promoted messages on Facebook. Email and social media are both prominent means by which consumers can encounter news information beyond direct access to news outlets (Pew Research Center 2023 a).

access, consume, and process local news information. Further, the repeated nature of this secondary intervention might increase the visibility of the free subscription in daily life, encouraging greater use (Groot Kormelink 2023). In combination, these twin interventions provide a strong test not only of whether a local news subsidy can improve consumption, but also its impact on a wide array of downstream features of effective democratic participation that are theorized in the extant literature. Specifically, I test whether making a major local newspaper free to access:

**H1:** ...increases news consumption.

**H2:** ...increases political knowledge.

**H3:** ...increases political engagement.

**H4:** ...increases institutional trust.

**H5:** ...increases support for democratic norms.

**H6:** ...increases the likelihood of casting a "correct" vote.

# Experimental Design

In the fall of 2022, I conducted a pre-registered, randomized field experiment to measure the effects of making a digital subscription to a prominent local daily newspaper completely free.<sup>4</sup> The experiment was conducted using an address-based probability sample of registered voters in Chatham County, North Carolina, which is located within the Raleigh-Durham-Cary Combined Statistical Area (designated by the U.S. Office of Management and Budget) and has strong economic ties to the Research Triangle metro area (anchored by Raleigh, Durham, and Chapel Hill), with nearly as much of its resident workforce commuting to these areas (40.3 percent) as commuting within Chatham itself or working from home (44.4 percent; U.S. Census 2023).<sup>5</sup> The Triangle area is served by *The News & Observer*, a Raleigh-

<sup>&</sup>lt;sup>4</sup>This study was approved by the Institutional Review Board of Duke University under protocol #2023-0005. I affirm that this research adhered to the Principles and Guidelines on Human Subjects Research of the American Political Science Association. Pre-registration materials for the study are available here.

<sup>&</sup>lt;sup>5</sup>In comparison, just 2.2 percent of Chatham's resident workforce commutes to Greensboro and Guilford County, another metropolitan area to its northwest.

based regional daily newspaper that boasts the state's largest weekday circulation. The News & Observer provides local news coverage for the state capital (Raleigh) as well as many of the surrounding communities, including Apex, Cary, Chapel Hill, Durham, Garner, Pittsboro (the county seat for Chatham), and Wake Forest. The newspaper serves as a premier news source of subnational political information in North Carolina; in addition to its local-focused coverage, The News & Observer provides original daily coverage of the state legislature, state government, statewide elections, and related public policy. The News & Observer conducts occasional investigative reporting on these and related topics, often partnering with The Charlotte Observer, the state's other major regional daily newspaper (based in the Charlotte metro area), to share reporting resources for these stories. During the study period, The News & Observer provided original coverage of local events within Chatham County (such as state-incentivized investments in new manufacturing facilities), elections specific to Chatham (such as state and federal legislative elections), and a wide range ongoing political and public policy debates that affected Chatham residents, making it a valuable source of political information for voters in the county.  $^6$  The News  $\ensuremath{\mathcal{C}}$  Observer maintained a relatively strict paywall during the study period, limiting non-subscribers to accessing just one free article every 45 days before encountering the paywall, whereas subscribers could access the full range of the paper's content.<sup>7</sup>

The study proceeded in three stages. Figure 1 summarizes the study timeline. In the 

GIN Appendix B, I provide additional information on the purposive selection of Chatham County registered voters as the target population for this study.

<sup>7</sup>This policy would generally allow non-subscribers, such as study participants in the control condition, to access at most two free articles during the entire study period—which would satisfy only a very low level of latent demand for the newspaper's reporting. That said, using alternate web browsers or IP addresses, or accessing the newspaper's website via promotional ads (such as those deployed on Facebook or Instagram), may have allowed some individuals (in either treatment condition) to access some additional content before encountering a paywall.

first stage, I drew a random sample of 10,000 registered voters from the state-maintained Chatham County voter file. In September 2022, I mailed a letter to each voter's recorded address inviting them to enroll in the study by completing an online survey, through which I obtained pre-treatment measures of some outcome variables, baseline political attitudes, and additional demographic information. The study invitation letters were mailed on September 1<sup>st</sup> and the survey was closed on September 26<sup>th</sup>. Each invitation letter included a \$1 pre-incentive to participate. Additionally, those who completed the survey were provided an opportunity to win one of twenty \$50 gift cards by submitting a valid email at the end of the survey; obtaining this email was important because it would be used to deliver the (ostensibly-unrelated) digital subscriptions for those randomly assigned to treatment. The survey garnered 1,156 valid responses (RR3 response rate of 11.6 percent), including 992 respondents (85.9 percent of completed interviews) who provided an email address. I collaborated with The News & Observer to identify current subscribers from among these 992 respondents; 69 such individuals were identified as current subscribers<sup>8</sup> and excluded from the experimental component of the study, for which 923 respondents were eligible. Of these 923, 500 respondents were assigned to the treatment condition by simple random assignment (with unequal probabilities that slightly favored treatment, p(treatment)  $\approx 0.542$ ), with the

<sup>9</sup>To take full advantage of the 500 subscriptions the newspaper agreed to provide, the probability of an individual's assignment to treatment was  $p = \frac{500}{923}$ . By sheer happenstance, this procedure assigned exactly 500 subjects to treatment.

<sup>&</sup>lt;sup>8</sup>This constitutes 6.96 percent of respondents who provided an email address, indicating a meaningful baseline of interest in *The News & Observer*'s coverage among Chatham County's registered voters. That said, excluding these respondents means that the experiment is conducted with respondents who are (in expectation) less interested in *The News & Observer*'s coverage. For some respondents, this may derive in part from preferences for coverage even more localized to Chatham County (such as the coverage provided by several small weekly publications based within the county), potentially blunting the perceived utility of free subscriptions to *The News & Observer*.

remaining 423 assigned to control.

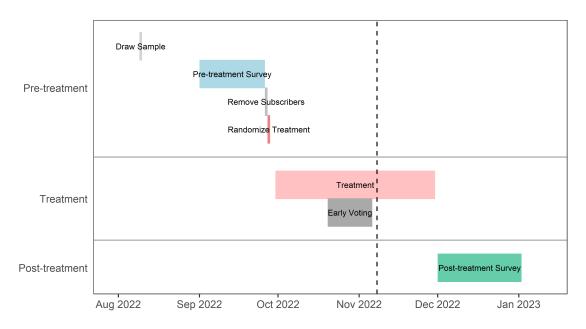


Figure 1: Figure depicts the study timeline. The dashed line indicates Election Day for the 2022 general election.

In the second stage, beginning September 30<sup>th</sup>, treated respondents received an ostensibly-unrelated email from *The News & Observer* informing them that they had been "selected to receive a free two-month digital subscription" to the paper as part of a special program intended to better serve the local area.<sup>10</sup> The connection between the survey and the free subscription was not disclosed to participants, and the study was not mentioned in any email sent by *The News & Observer*. The email provided login information for activating the free subscription and stressed that there were no financial obligations whatsoever associated with using the subscription.<sup>11</sup> Subsequent emails reminding the treated participants of their free subscription were sent approximately weekly throughout the treatment period. The free subscriptions continued through November 30<sup>th</sup>, at which point *The News & Observer* offered treated respondents the option (but no obligation) of continuing with a paid subscription.

In anticipation of limited subscription uptake (e.g., Hopkins and Gorton 2024), I at-

<sup>&</sup>lt;sup>10</sup>An example of this notification email is provided in Appendix B.5.

<sup>&</sup>lt;sup>11</sup>The approximate value of a subscription over this period was \$32.

tempted to increase the visibility of the subscriptions (Groot Kormelink 2023) and further reduce barriers to consumption through a stronger secondary treatment: direct delivery of news content to the treatment group via email. In addition to the subscription reminder emails, The News & Observer sent regular newsletters to the treatment group's inboxes, starting October 7<sup>th</sup>). These included two daily newsletters (morning and evening) that covered a range of local news topics, plus a state politics newsletter (roughly twice weekly) and a "breaking news" newsletter (occasional). Each newsletter typically included a few short paragraphs of news copy and a set of recent headlines with links to the associated articles. Even if a treated respondent chose not to activate their free subscription, they might have nevertheless regularly encountered local news content through their email inbox.

In the final stage of the study, the 1,156 pre-treatment survey respondents were mailed an invitation to complete an online follow-up survey, which measured post-treatment outcomes. This second mailed invitation also included a \$1 pre-incentive with the letter. As further incentive to complete the follow-up survey, participants could again win one of twenty \$50 gift cards by submitting a valid email at the end of the survey. These invitations were mailed on December 1<sup>st</sup> and the survey closed on January 2<sup>nd</sup> 2023. The post-treatment survey garnered 554 valid responses (47.9 percent completed re-interview rate), including 247 completed responses from participants in the treatment group and 194 from participants in the control group.<sup>12</sup> After dropping two observations for failing multiple pre-registered quality checks, a final n = 439 observations remained for analysis.

Appendix Table B.1.1 shows the sample demographics alongside known characteristics of Chatham County's registered voters. Overall, the sample is older, more white, higher income, and more educated than the target population. Respondents also include slightly more Democrats and slightly fewer Republicans than reflected in the voter file, but approximately the same percentage of voters unaffiliated with either party.

<sup>&</sup>lt;sup>12</sup>Given that 500 were assigned to treatment and 423 to control, the re-interview rates are similar across conditions, at 49.4 percent for treated respondents and 45.9 percent for control respondents.

Political interest varied substantially across the sample. For example, when asked about how often the respondent follows government and politics, the mean response was 3.5 on a 5-point scale (between "about half the time" and "most of the time"); this mean response is very comparable to the national mean response of 3.6 on a nearly-identical question fielded on the American National Election Studies (ANES) 2020 Time Series Study. Accordingly, the sample was certainly not dominated by existing subscribers to newspapers: a majority of the sample (51.0 percent) reported paying \$0 for newspapers in a typical month (including both print and online content).

As shown in Table B.2.1, the randomization procedure resulted in balance between treatment and control on pre-treatment dimensions of age, gender, race, income, partisanship, ideology, political interest, and news consumption, with only a modest lean with respect to education (slightly higher in the treatment condition, p = 0.074). Additional details about the study procedures, sample composition, and survey questionnaires are provided in Appendix B.

To assess the impact of making local news free, I measured changes in six different sets of

#### **Outcome Measures**

outcomes: news consumption, political knowledge, political engagement, institutional trust, support for democratic norms, and "correct" voting. I measure news consumption with two self-reported assessments: weekly news consumption and reading a newspaper online. I 

13 Information regarding the ANES data and methodology is available at <a href="https://electionstudies.org">https://electionstudies.org</a>. In the Chatham study, I measure attention to politics at national, state, and local levels separately and average across levels, whereas the ANES fields a single general question. In the Chatham sample, mean attention was similar to the overall measure for state politics (3.5), slightly higher for national politics (4.1), and slightly lower for local politics (2.9). For comparison, Hopkins and Gorton (2024) use a single measure of political interest that ranges from 1 to 4, and the mean response in their non-probability sample is 3.8—near the very top of the scale.

measure political knowledge with a 10-item battery of objective knowledge items, including both national and subnational politics items. I measure political engagement with a 6-item battery on interest in politics and political campaigns at three levels of government, <sup>14</sup> a validated measure of turnout, and a 7-item battery of non-voting engagement behaviors. I measure institutional trust with a 3-item battery on confidence in the media, a 2-item battery on trust in government, a 4-item battery on political self-efficacy (including both internal and external dimensions of self-efficacy), and two variables on trust in American elections. I measure democratic norms with a 5-item battery on support for core democratic principles. Finally, I measure "correct" voting with self-reported votes for four local legislative seats, following a procedure similar to Lau and Redlawsk (1997). As pre-registered, for most multiitem outcome variables I combine individual items into additive indices. Most outcomes are measured in both the pre-treatment and post-treatment surveys, enabling analysis of withinsubject change over time. The political engagement and voting outcomes are the exceptions; these were measured only post-treatment and are analyzed between-subjects. All outcomes are rescaled to vary between 0 and 1 for ease of comparison. Appendix B provides further details on outcome measures, including pre-registered coding procedures, exclusion criteria, construction of indices, procedure for estimating "correct" votes, and the exact question wording and response scales for each outcome.

## Results

I first review the efficacy of the intervention at inducing actual uptake of the treatment—that is, the consumption of local news coverage. I then discuss the effects on citizen knowledge, political engagement, political attitudes, and "correct" voting behavior.

<sup>&</sup>lt;sup>14</sup>In particular, an increase in self-reported interest in local and state politics could indicate increased desirability (and perhaps perceived value) of news coverage of those topics.

#### Uptake and Compliance

This study is motivated by the possibility that making local news free to consume could induce salutary effects on political knowledge, participation, and democratic attitudes. For the most part, this logically requires that the intervention first increase actual consumption of local news, as expected by H1. My first finding is that subscription uptake was extremely low. Of the 500 participants assigned to treatment, only 19 ever activated their subscription by logging in with the provided information—this amounts to just 3.8 percent of the treatment group. 15 Only 12 of these individuals accessed actual news content at least once (2.4 percent of treated respondents) and only five did so 10 times or more during the two-month treatment (1.0 percent). This low uptake was not simply a function of failing to reach treated respondents: email open rates for the free subscription notifications ranged from 51.5 percent to 64.4 percent over the study period. Rather, the low uptake reflects significant disinterest, or perhaps even negative reactance to the daily newsletters: 130 treated respondents (26.0) percent) asked not to be contacted by the paper, either by clicking "unsubscribe" at the bottom of an email or by replying to that effect. Many others likely ignored or simply deleted the emails. Among the narrow slice that did activate their free subscription, the treatment did not induce continuing consumption: only one treated respondent opted to begin a paid subscription to The News  $\mathcal{E}$  Observer at the conclusion of the study.

The post-treatment survey included a question that assessed the efficacy of the secondary treatment intervention (the emailed newsletters). <sup>16</sup> Specifically, I asked respondents to identify which news organizations they had received emailed newsletters from in the past month, from among a list of 12 news outlets. These included *The News & Observer* and several other North Carolina outlets, as well as several major national newspapers. About half (45.7 percent) of the treated respondents recalled receiving newsletters from *The News & Observer*, indicating moderate penetration across the treatment group. <sup>17</sup>

<sup>&</sup>lt;sup>15</sup>This uptake rate is on par with another recent study of news subsidies; see Hopkins and Gorton (2024).

<sup>&</sup>lt;sup>16</sup>Analysis of this question was not pre-registered.

 $<sup>^{17}\</sup>mathrm{A}$  notable minority of the control group (12.4 percent) also reported the receiving newsletters from

I formally test H1 by estimating the intent-to-treat (ITT) effect of the intervention on consumption outcomes. I estimate the ITT by regressing these outcomes on a binary indicator for treatment assignment. Despite some uptake of the secondary intervention shown by the newsletter recall, I find no evidence that the treatment encouraged respondents to consume news more regularly throughout the week or to consume their news via an online newspaper (such as *The News & Observer*). Figure 2 shows the estimated ITT effects on these two consumption outcomes, both of which are quite close to zero. The treatment did increase recall of receiving newsletters from *The News & Observer*—but this does not necessarily translate to actual consumption of that news information.

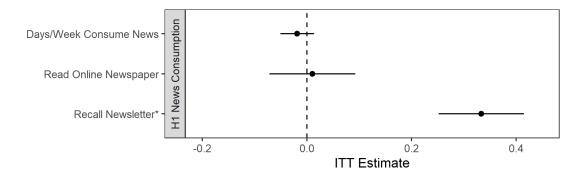


Figure 2: Figure displays the estimated ITT effect of the free subscription on each outcome. The error bars indicate 95 percent confidence intervals. All outcomes use the full experimental sample (n=439). The analysis of newsletter recall was not pre-registered. For full results, see Appendix Table A.1.1.

#### Minimal Effects on Knowledge, Attitudes, and Behaviors

Given the minimal subscription uptake, the potential for the intervention to affect political knowledge, attitudes, or behaviors derives primarily from incidental engagement with the The News & Observer. Some of these may have been existing subscribers that our procedure did not successfully identify prior to randomization. Others may have received some newsletters from another person or organization via a classic two-step flow (Katz and Lazarsfeld 1955).

<sup>18</sup>The days per week consuming news and reading an online newspaper outcome variables are first-differences (post-treatment minus pre-treatment). In the Appendix, I provide covariate-adjusted analyses that control for several pre-treatment demographic characteristics. The results are substantively identical.

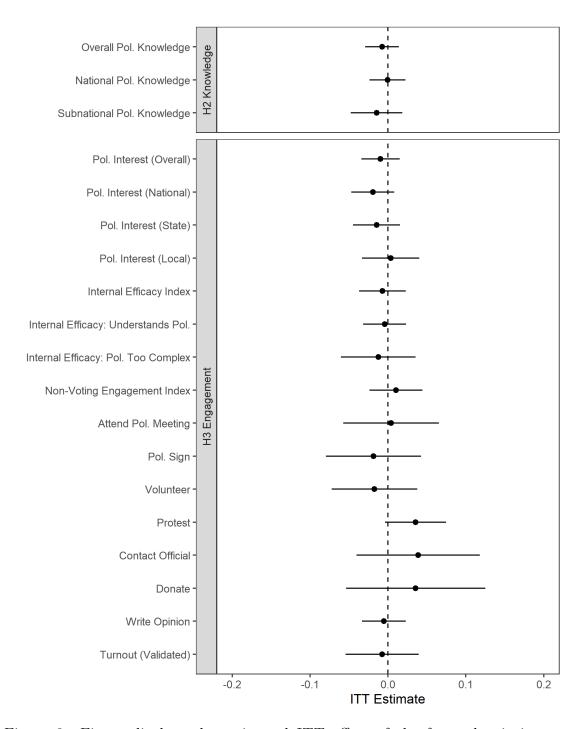


Figure 3: Figure displays the estimated ITT effect of the free subscription on each outcome. The error bars indicate 95 percent confidence intervals. Note that outcomes for H2 (knowledge) use a restricted subset of the sample (n=382); all other outcomes use the full experimental sample (n=439). For full results, see Appendix Tables A.1.1, A.1.2, and A.1.3.

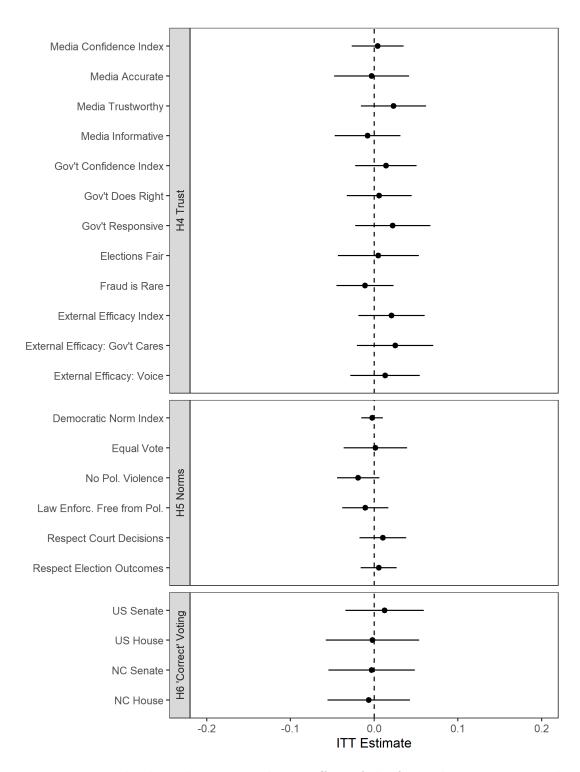


Figure 4: Figure displays the estimated ITT effect of the free subscription on each outcome. The error bars indicate 95 percent confidence intervals. All outcomes use the full experimental sample (n=439). For full results, see Appendix Tables A.1.4, A.1.5, A.1.6, and A.1.7.

newsletters rather than from regularly accessing the subscription. I again estimate the ITT effects to test whether the intervention increased political knowledge (H2), political engagement (H3), trust in institutions (H4), support for democratic norms (H5), or the probability of voting "correctly" (H6). Most outcome variables are calculated as first-differences (post-treatment minus pre-treatment), with the exception of the engagement behaviors, turnout, and "correct" voting outcomes. I find no evidence of meaningful change on these variables that can be attributed to the intervention. Figure 3 and Figure 4 neatly summarize the universally null ITT estimates; the corresponding regression tables are available in Appendix Tables A.1.1 through A.1.7. In Appendix Tables A.3.1 through A.3.7, I report the results of covariate-adjusted analyses that control for several pre-treatment demographic characteristics as well as partisanship and ideology; the results of these analyses are not substantively different.

To underscore the "minimal effects" of the intervention, I conduct three additional analyses. First, I rescale each outcome variable to show the standardized size of the ITT effect on that outcome (Cohen's d; see Cohen 1988). Appendix Figures A.2.1, A.2.2, and A.2.3 depict these effect sizes graphically, showing that they rarely rarely exceed 0.10, and the 95 percent confidence interval always crosses the zero line. Further, for most outcome variables, this study provides sufficient statistical power to effectively rule out any ITT effect larger than a conventionally "small" effect (i.e., 0.20 standard deviations Cohen 1988).

Second, I consider whether the intervention caused a very small but fairly consistent increase across outcomes. To do so, I supplement the pre-registered analyses with a hierarchical linear model, stacking the sample to provide respondent-item observations (n = 14,122).<sup>19</sup> The model estimates a fixed effect of treatment assignment, plus a random inter
19 That is, each observation represents a single respondent's value on a single outcome variable, such that each respondent thus contributes many observations. To avoid double-counting outcomes, I exclude indices

of other outcome variables and use observations of their individual components instead. Stacking the sample

in this way substantially increases statistical power for finding an overall effect.

cept for each outcome variable for H2 through H6, and clusters the standard errors at the respondent level. In this model, the treatment fixed effect can be understood as the typical ITT effect on any outcome variable, holding constant item-level random intercepts (means) for each particular outcome. This model estimates the effect of treatment to be extremely small (0.0024, or just 0.24 percent of the common scale) and far from significant (s.e. 0.0040, F = 0.361). A second hierarchical model that also estimates random slopes (unique effects of treatment on each outcome variable) is essentially identical; the fixed effect of treatment is estimated to be 0.0024 (s.e. 0.0040, F = 0.369), and the random slopes account for just 0.0003 percent of the total variance. Across a wide range of political aptitudes, attitudes, and behaviors, providing free access to a major local newspaper had no discernible effect.<sup>20</sup>

Third, I consider potential effects on compliers—that is, those who at least would have recalled receiving the emailed newsletters if assigned to treatment, suggesting some minimal level of uptake. Because baseline uptake was low, the ITT estimand necessarily includes many observations where the "intent-to-treat" never became realized "treatment." I therefore adopt an instrumental variables approach to supplement the pre-registered ITT analyses by estimating the complier-average causal effect (CACE) on the same outcomes. I use a two-stage least squares (2SLS) regression to first estimate the effect of treatment assignment on newsletter recall (as a measure of treatment exposure), and then estimate the effect of the instrumented (predicted) recall on each outcome variable. This procedure approximates a comparison between those who accepted treatment when assigned, and those who would have accepted treatment if assigned. Appendix Tables A.4.1 through A.4.7 report the results. I find no significant effect on consumption habits, nor on political knowledge, attitudes, engagement, or voting behavior, with the lone possible exception of slight increases in protest participation (estimate 0.106, p = 0.080).<sup>21</sup> Even among compliers, the effects of treatment

<sup>&</sup>lt;sup>20</sup>These two hierarchical linear models are reported in Appendix Table A.5.1.

<sup>&</sup>lt;sup>21</sup>Given the large number of outcomes measured, this single marginally significant effects unsurprisingly fails to survive a multiple-comparisons correction.

are quite minimal.

### Discussion

In this study, I sought to evaluate whether making a local newspaper free to access could encourage consumption of local political information, and thus produce salutary effects on citizens' political knowledge, behaviors, and attitudes. I find that making local news free accomplished none of these things. Moreover, even pushing local political information to people more proactively (i.e., via emailed newsletters) does not appear to produce meaningful improvements in political knowledge, engagement, or attitudes.

The most immediate implication of this study is that while the price of local news may be a *sufficient* barrier to consuming local political information (for many people), it is not the barrier that keeps them from doing so. Making local news free does not foster consumption, at least not by itself. The failed promise of the price lever matters because consumption is often the public good that is consequential to the democratic functions of the free press, especially during major election seasons when the media's normative importance in democratic society is especially acute. Even democratic mechanisms that depend less on mass consumption, such as the constraints placed on policymakers' actions because they fear that wrongdoing will receive negative news coverage (e.g., Mullin and Hansen 2023), are difficult to sustain theoretically if readership continues to dwindle to narrower and narrower audiences.

In fact, narrowing audiences could pull local news further and further away from its normative purpose, through multiple self-reinforcing mechanisms. The slow tightening of economic constraints that eventually shutters a newsroom, as fewer and fewer people are willing to pay for a product that steadily diminishes in both scope and quality, is well documented in the literature (e.g., Abernathy 2020; Chyi and Tenenboim 2019; Hayes and Lawless 2021; Peterson 2021b; Usher 2021). But a narrowing audience may also affect surviving outlets' substantive choices about how and what news to cover, decisions through which

newspapers chase the interests of an increasingly thin demographic (Hersh 2020; Krupnikov and Ryan 2022; Usher 2021; Trexler 2024a) of their few remaining readers. Even if these strategies enable a newspaper to survive, the stories and styles of coverage that appeal to town hall politicos are not necessarily made either accessible or useful to occasional and incidental readers, who might otherwise benefit from learning the underlying news information (Trexler 2024b).

Many scholars, policymakers, philanthropists, and concerned members of the public want local journalism to survive (and thrive) through the current crisis, and indeed many argue that the functioning of democracy depends on it. This interest has led to numerous concerted efforts to rescue local news from the jaws of market failure, including through both private and public mechanisms for funding local journalism (Neff and Pickard 2023; Stonbely, Weber and Satullo 2020). While useful for relieving the current dire economic pressures on local news, the findings presented here (and in similar work, e.g. Gerber, Karlan and Bergan 2009; Hopkins and Gorton 2024) indicate that such approaches can only go so far in helping the press live up to its democratic ideal. To try to overcome the consumption hurdle, local newsrooms are also experimenting with approaches to journalism that can help build connections with their audiences; so far, such approaches show some promise for growing the subscriber base, but crucially not for improving actual consumption of local news (Stroud and Van Duyn 2023). In other words, donating to keep a newspaper running is not the same thing as subscribing, and even subscribing is not the same thing as reading. For local newspapers to fulfill their normative role in local democracy, they need readers.

Three particular wrinkles from the results are worth discussing here. First, despite the probability-based sampling design, differential non-response to the study invitation produced a sample that was more politically participatory than the target population. Although the sample exhibits plausibly representative levels of overall political *interest* compared to national benchmarks, study respondents *voted* at high rates in the 2022 general election. Voter turnout for the election (validated with the state voter file) was 93.4 percent among

the full experimental sample—much higher than the 66.0 percent turnout rate for Chatham County as a whole. This high rate is driven primarily from self-selection into the study: the random draw of 10,000 voters from the sampling frame turned out at a rate of 63.9 percent, but 88.8 percent of respondents to the pre-treatment survey voted, and 93.3 percent of the post-treatment survey respondents voted. This pattern further underscores that those who could benefit the most from local news are especially difficult to reach, while the minimal effects that I find hold true for voters that already participate in politics to at least some degree.

Second, as shown in Appendix Table A.1.1, I observe some modest overall gains in political knowledge during the study, to the tune of answering approximately one-third of an additional question correctly (primarily on state politics questions). I stress that this increase was not a function of the intervention under study. Respondents in both the control and treatment group improved their knowledge of politics (or perhaps simply its recall) during the height of the 2022 election season, potentially due to increased salience of politics or from consuming sources of news that are not related to the digital access treatment. Indeed, I find high rates of "correct" voting among the sample regardless of treatment—ranging from 92.0 to 94.2 percent. These rates exceed those that Lau et al. (2014) find for any of 69 head-of-state elections held in 33 advanced democracies between 1996 and 2006, underscoring the relative paucity of low-participation voters in the sample (and perhaps the polarization of modern U.S. politics, which makes party-cue and other heuristics-based voting more "accurate"; see Popkin 1991), and again suggesting that these participants were able to gather useful information from elsewhere. 23

<sup>&</sup>lt;sup>22</sup>For both members of the control group and those in the treatment group that chose not to use their free subscription, this could also include accessing some limited *News & Observer* content before encountering a paywall, including one or two full articles but also headlines freely accessible on the newspaper's website and similar content posted to the newspaper's social media accounts.

<sup>&</sup>lt;sup>23</sup>Note, however, that some respondents declined to specify their candidate selections for some offices in the post-treatment survey, ranging from 6.2 percent missingness for U.S. Senate to 26.0 percent for North

Importantly, "elsewhere" in this setting need not include accessing local news directly at all: recent evidence suggests that local news outlets generally do not gain increased viewership or online traffic even during municipal elections, exactly the periods when national news is unlikely to provide a useful substitute (McCrain and Peterson 2023). During general elections in which contests for national, state, and local offices are held simultaneously, consumers likely have even stronger incentives to substitute towards non-local sources for their information needs. Yet local newspapers tend to serve as "keystone" institutions (Nielsen 2015) that contribute the bulk of the original news reporting on local issues that is subsequently picked up by other news outlets (Radcliffe and Ali 2017; Pew Research Center 2010). Individuals more attentive to local news reporting may also subsequently communicate information to family, friends, colleagues, and strangers in a multi-step information flow (Katz and Lazarsfeld 1955). Local government and elected officials continue to pay some attention to press coverage, even as broader readership has declined, and what information gets published continues to influence their behavior in government (Mullin and Hansen 2023). Thus the outright absence of local newspapers is likely to have a variety of deleterious downstream effects on politics (Darr, Hitt and Dunaway 2018; Rubado and Jennings 2020; Shaker 2014) even if those same newspapers previously received little traffic before shutting their doors.

Finally, I also observe small gains in government trust, external efficacy, and confidence in media between the two survey waves, each on the order of a five percent increase on their respective scale (see Tables A.1.4 and A.1.5 in the Appendix). None of these were a function of the intervention either. The increases in government trust and external efficacy perhaps derived from perceptions of the election outcome; while Democrats made a stronger showing than expected in federal races, North Carolina Republicans nearly captured a veto-proof majority in the state legislature. Both parties thus had something to celebrate, and Appendix Table A.3.5 shows that members of both parties showed gains on these two variables. In Carolina State Senate. These omissions cannot be assumed to reflect missingness at random. This likely artificially inflates the observed rate of "correct" voting in the sample.

contrast, the average gains in media trust are concentrated among liberals, perhaps due to continuing criticisms of the media leveled by conservative leaders during and after the election. In any case, the broadly null effects of the experiment indicate a minimal role for price-based interventions in local news access to subsequently shape these attitudes.

Overall, this study paints a relatively bleak picture for the future of local news. Despite the significant economic challenges that local newspapers face, somehow solving all of those problems would still leave untouched the greater difficulty of convincing the mass public to actually read what they produce. Interventions that can break down other barriers accumulated habits of non-consumption, limited visibility of local news, digital frictions on access, even mass perceptions of who local news is written for—are necessary complements for overcoming that second hurdle. Without increasing readership, and particularly among citizens who express a low to moderate interest in politics, broad declines and disparities in knowledge, attitudes, and behaviors in local politics are likely to persist. Meeting people halfway by getting local news to places where they already expect to consume information (e.g., via email or social media) appears to show some limited promise for improving local news exposure, but remains insufficient for meaningfully improving democratic outcomes that we care about (Hopkins and Gorton 2024). Practitioners and scholars alike must continue to experiment with interventions and approaches that can meaningfully alter the public's news habits, encourage citizens to prioritize local news in their media diets, and promote a sustainable link between local news production and its consumption.

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