Ledes and Labor: How Local News Affects Union Organizing*

Matthew Johnson
Duke University
& NBER

Sinja Leonelli
NYU Stern

Asa Royal
Harvard Kennedy School

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Abstract

Union organizing has fallen sharply in the United States in recent decades, even as latent demand for unions has appeared consistently high. We show that the decline of local newspapers has contributed to this "representation gap." Newspaper coverage of union elections is highly localized: whether an election receives news coverage is strongly predicted by the number of newspapers headquartered in the county but is unrelated to newspapers in neighboring counties. We find that the local news environment causally affects realized union elections: the entry of Craigslist in a county and the closure of a local newspaper led to 30 and 9 percent fewer union elections in subsequent years, respectively. We consider two mechanisms through which the news environment may influence organizing: the risk of employer interference and beliefs about local support for unions. We find no evidence that weakening local newspapers increased employer interference in elections. Instead, local newspapers propagate organizing: narrowly successful union elections generate more elections nearby, but only where union activity receives news coverage. A simple model in which newspaper decline shuts off this contagion channel alone reproduces the reduced form estimates. Our results highlight the media environment as a key determinant of collective action.

*Johnson: matthew.johnson@duke.edu; Leonelli: sinja.leonelli@stern.nyu.edu; Royal: asa_royal@g.harvard.edu. We thank Marina Silva for outstanding research assistance. We gratefully acknowledge funding support from the Russell Sage Foundation. Seminar and conference participants at Northwestern Kellogg and the Arizone State Empirical Microeconomics Conference provided valuable feedback.

1 Introduction

Labor unions have had substantial effects on the distribution of earnings in the U.S. labor market since the early twentieth century (Beauregard et al., 2025; Card, 1996). However, the frequency with which workers seek to form a union in their workplace–by holding an election–has sharply fallen over the past several decades. Around 1970, there were roughly 3.5 elections annually per 100,000 workers; by 2019, that number had fallen to 0.37 (Figure 1). Some of this decline in union organizing may be due to contemporaneous factors such as rising international trade (Charles et al., 2026), widening inequality (Biasi et al., 2025), and expansions in social insurance (Aizawa et al., 2024a) that may have diminished workers' returns to unionization. However, latent demand for unions over this same period has consistently appeared high (Figure 2): public support for unions has almost never dipped below 50 percent, and over 50% of workers in a 2019 survey reported that they would vote for a union in their workplace if given the opportunity (Kochan et al., 2019). The sources of this so-called "representation gap" between workers' stated preferences for unions and realized organizing efforts are not fully understood (Hertel-Fernandez, 2020).

Two frictions that may impede workers from organizing, even if they want to, are employer interference in the election process and uncertainty about whether one's co-workers would support a drive. Both of these plausibly depend on the local news environment, which has changed dramatically in recent decades. The number of local newspapers per capita in the U.S. has halved since 1970 (Figure 1), and those remaining in operation have experienced reductions in reporting capacity and circulation (Abernathy, 2018). Given that local newspapers have historically served as monitors of employer misconduct, their decline may have diminished employers' reputational risk of interfering in union elections. A second potential role for local news could arise from the strategic complementarities in the organizing process (Naidu, 2022): if workers are more willing to initiate organizing when they believe more of their co-workers would join them, news coverage of successful elections in their community may revise these beliefs upward.

In this paper, we assess whether and why local newspapers affect workers' propensity to organize for labor unions. We combine the universe of NLRB representation elections since 1970 with a new dataset on U.S. newspaper closures, original data collection of whether individual elections received newspaper coverage, and other sources. Using two sources of identifying variation, we find that weakening local newspapers substantially reduces union organizing. We then show that this effect operates primarily through social learning: news coverage propagates successful organizing into further organizing, and a simple model calibrated to this channel alone reproduces our reduced-form estimates.

We first provide descriptive evidence that local newspapers are consequential for the media environment surrounding union organizing. Using a combination of scraping and manual review, we determined whether a 50-percent subset of union elections from 1990 through 2022 received any newspaper coverage. Having at least one newspaper headquartered in the county where an election takes place increases the probability that it receives any news coverage by roughly 50%; having more newspapers further increases this probability, but at a decreasing rate. At the same time, the number of newspapers headquartered in neighboring counties has a precise null effect on news coverage, consistent with the news environment for union activity being highly localized.

Motivated by this descriptive evidence, we next examine the consequences of weakening local newspapers for union organizing. A challenge for this analysis is that myriad economic forces have contributed to the weakening of local news (Cagé, 2016), some of which may have independently altered the environment for union organizing. We use two identification strategies that account for this concern. First, we use the staggered entry of Craigslist across counties as a shock to news production. By creating competition for classified ad revenue, the entry of Craigslist drastically reduced newspapers' resources, leading to decreases in news circulation, journalistic staff, and political coverage (Djourelova et al., 2025; Seamans and Zhu, 2014). At the same time, there is no evidence that Craigslist affected job finding rates or other aspects of labor market functioning (Kroft and Pope, 2014). Second, we use newspaper

closures as a discrete shock to the local news environment (e.g., Gao et al., 2020; Gentzkow et al., 2011; Leonelli, 2022). To this end, we build on prior work to create a new, comprehensive dataset on all newspaper closures in the U.S. since 1970. In our main specification, we use a stacked difference-in-difference model comparing counties with newspaper closures between 1975 and 2010 to bordering counties without newspaper closures in the five years preceding or ten years after the closure. This design accounts for changes in correlated local economic conditions that may trigger newspaper closures (Gentzkow et al., 2011); furthermore, given the localized nature of news coverage for elections, the risk of spillovers is quite low.

Using both designs, we find that the weakening or closing of local newspapers leads to a substantial decrease in union organizing activity. The entry of Craigslist into a county led to roughly 30% fewer elections over the next five years ($p < .01$), and the average newspaper closure in our sample led to 9% fewer union elections over the next ten years ($p < .01$). Additional tests corroborate that these effects are mediated by a change in the news environment for unions, rather than reflecting other contemporaneous forces or secondary effects. First, both the entry of Craigslist and the closure of a newspaper lead to an immediate and persistent drop in newspaper articles in the county about union activity, and this drop is larger than would be predicted based on the reduction in realized elections alone. Second, treatments that constitute a larger shock to the news environment for unions lead to larger effects on union elections. The effect of Craigslist is entirely driven by counties 1) where local newspapers were relatively likely to cover union elections at baseline, and 2) that had any local newspapers at baseline in the first place. Closures of newspapers with high baseline circulation, and which occurred before the introduction of Craigslist and other digital media platforms, had an especially large effect on elections.

Why do local newspapers have such a large effect on union elections? We empirically investigate two potential reasons: retaliation by employers and social learning among workers. Although technically illegal under the National Labor Relations Act, employer interference in the union organizing process is reported to be widespread and increasing over time (Bron-

fenbrenner, 2009). Local newspapers have been shown to serve as effective monitors of local corporate behavior, deterring misconduct acros several domains (Campa, 2018; Heese et al., 2022). However, using a variety of measures and approaches, we find no evidence that the weakening of local newspapers has increased employers' propensity to interfere with the organizing process or to retaliate against organizing workers.

Newspapers may also influence the frequency of elections by affecting workers' perceived returns to organizing. Organizing exhibits strategic complementarity: workers are more likely to take action to organize when they perceive a larger share of their co-workers as supportive of unions (Naidu, 2022). However, because discussing union interest openly at work can risk employer retaliation, workers' beliefs about co-worker support may be biased downward. News stories of successful union campaigns at other workplaces in one's community may lead workers to update these beliefs and, in turn, become more likely to engage in organizing themselves.

To test this idea, we investigate whether successful union elections lead to more elections in the same county over the next few years and examine how the strength of local news environment moderates this effect. Because successful elections may be more likely in more favorable organizing environments, we limit our analysis to relatively election wins and losses. We account for non-random bunching near the 50% vote threshold (Frandsen, 2021) by using a "difference-in-discontinuities" design. We compare 3-year changes in the number of elections in a county following a close win, relative to the 3 prior years, to the analogous 3-year change following a close loss.

A news environment in which union activity receives media attention propagates successful organizing into more organizing. But to what extent can this explain the reduced form effects of newspaper weakening on elections? To assess this magnitude, we simulate a simple model of union elections. We model the number of annual elections in a county as a Poisson random variable with a log likelihood determined by a county random effect, a time trend, and (based on our difference-in-discontinuity estimates above) a function of

winning elections in recent years. We impose that the entry of Craigslist in a county shuts off this contagion term and simulate the time path of elections. This model implies that the arrival of Craigslist leads to roughly 31% fewer elections over the next five years. This model-implied effect of Craigslist is essentially identical to our reduced-form estimated effect of Craigslist entry on elections (31%). That is, newspapers' role in propagating successful elections into more organizing can account for the effects their exit or weakening has on the frequency of new elections.

Our study contributes to two literature streams. First, we contribute to the literature on the causes and consequences of the decline in labor unions. Prior work has shown that industry shifts, competition, social insurance, and wage inequality affects union organizing. (e.g., Ashenfelter and Pencavel, 1969; Ahlquist and Downey, 2023; Charles et al., 2021; Biasi et al., 2025; Aizawa et al., 2024b). We show that the decline in local news has contributed to the decrease in union elections. A paper particularly complementary to ours is Derenoncourt et al. (2026), who also find evidence that informing workers about nearby successful union elections leads them to update their beliefs about co-worker union support and their own stated desire to organize.

Second, we contribute to the literature on the political and economic effects of local news coverage. Prior literature has shown that local news can impact voting behavior, political accountability, and misconduct (e.g., Gentzkow et al., 2011; Johnson, 2020; Gao et al., 2020; Heese et al., 2022). Our paper shows that local newspapers do not just act as monitors, but also that they provide information that helps facilitate local collective action.

2 Institutional Background and Conceptual Framework

2.1 Union Formation in the U.S.

The process of union formation in the U.S. is governed by the 1936 National Labor Relations Act (NLRA). Whereas in some other advanced countries union coverage is often at the

sectoral level (Jäger et al., 2025), the unit of bargaining in the U.S. is the establishment. The process to form a union and secure its recognition requires multiple steps.[1] First, at least 30 percent of the workers in a proposed bargaining unit must sign a card petitioning for an election. Second, the National Labor Relations Board (NLRB) determines eligibility and whether to authorize a secret ballot election. Third, the union and employer both campaign until the election. If either the union or the employer believes the other side is acting in violation of the NLRA, they can issue claims of Unfair Labor Practice (ULPs) with the NLRA. Fourth, if a majority of workers vote in favor of the union, the employer is obligated to bargain with the union. After all of these steps, the union and employer negotiate over a first contract.

This process is often long, uncertain, risky, and requires sustained coordination between workers (Naidu, 2022). It often takes months between the first step of organizing and when an election actually takes place, with extensive organizing during the interim period. However, despite this need for coordination, federal law and other features of the institutional background make it challenging for workers to discuss interests in union organizing with each other. The NLRA technically forbids employers from interfering in the election process, but enforcement is sparse and regulatory fines are small: remedies for ULPs like unlawful firings are limited to reinstatement and back pay, often after substantial delays (Weiler, 1982). Though difficult to measure comprehensively, reports of employer interference in elections are common (Bronfenbrenner, 2000).

2.2 Local Newspapers in the U.S.

Local newspapers have long served as a primary source of information about local firms, governments, and communities. The median newspaper sells more than 80% of its copies in its home county, and—even today—local newspapers continue to produce the majority of original news content in the United States (Abernathy, 2018; Gentzkow et al., 2011).

[1] See (Naidu, 2022) for more details about this process.

Because their readership is concentrated locally, local newspapers have strong incentives to cover local firms and institutions, and they have greater access to local sources such as employees, suppliers, and local government than national outlets (Heese et al., 2022; Miller, 2006). This gives local newspapers an informational advantage that makes them particularly effective at uncovering and disseminating information about local firms and institutions. This unique access to local information makes local newspapers particularly effective monitors of corporate and government conduct (Dyck et al., 2010), with their coverage shown to affect firm behavior, employee behavior, regulatory compliance, regulatory enforcement, and political accountability (Campa, 2018; Gao et al., 2020; Heese and Leonelli, 2026; Heese et al., 2022; Leonelli, 2022).

Despite this central role of local newspapers in the news ecosystem, the local newspaper industry has been in sharp decline for decades (Abernathy, 2018; Cagé, 2016). Myriad forces underlie this decline, including competition for readership arising from new technologies (Gentzkow et al., 2011), competition for ad revenue (Seamans and Zhu, 2014), expansion of national outlets (George and Waldfogel, 2006), corporate consolidation and acquisitions (Ewens et al., 2022), and other factors. Total newspaper circulation peaked in the mid 1980s and has fallen consistently since, accelerating around 2005 (Pew Research Center, 2026). The total number of newspapers has also fallen over this period, leaving several hundred U.S. counties without a single local news source (Abernathy, 2018).

2.3 Framework: Why Would Local Newspapers Affect Union Organizing?

Union organizing in the U.S. requires sustained coordination and effort among co-workers, legal deterrence against employer interference in election campaigns is minimal, and local newspapers are the primary channel that generate news coverage of union activity. These institutional features suggest two reasons that the presence and strength of local newspapers would affect a worker's decision to initiate the organizing process to hold a union election:

by affecting employers' latent willingness to interfere in union elections, and by affecting workers' perceived returns to organizing.

First, the presence of newspapers could deter employers from interfering with union elections. As described above, local newspapers have a comparative advantage as monitors for corporate misconduct and unsavory employer behavior. Especially given the weak enforcement of the NLRA and limited financial penalties from charges of Unfair Labor Practices, employers might be more reluctant to interfere in elections when doing so risks negative publicity in the news. In a similar vein, the threat of publicity for violating labor standards leads to substantial increase in compliance (Johnson, 2020). The closure or weakening of local newspapers reduces the threat of such publicity, reducing the expected costs of violating the NLRA and interfering in union campaigns. This change in incentive might increase the latent threat of employer interference and retaliation, making workers more reluctant to initiate the organizing process.

Second, news coverage of local union elections and other union activity can provide a signal to local non-unionized employees about the returns to organizing. Union organizing exhibits strategic complementarity: workers' willingness to initiate organizing efforts is higher when they perceive a larger share of their co-workers to be supportive of unionization (Naidu, 2022). However, talking openly about union preferences and interest in organizing is risky: employers may initiate anti-union tactics or retaliate against organizing workers upon learning of organizing efforts (Bronfenbrenner, 2000; Logan, 2006). Because workers tend not to discuss their preferences on organizing, and (perhaps as a result) over time workers observe no organizing taking place, it is plausible that workers' beliefs about their co-workers' support for union organizing is biased downward.

Learning about a successful union campaign in one's community may signal that local support for unionization is high, leading workers to revise their beliefs upward. Such a revision raises the expected returns from organizing and thus may encourage more workers to initiate their own organizing for an election. The primary way that workers could learn

of a successful union campaign in their community is through news coverage of it, which given the institutional features of the U.S. news landscape would be mediated by local newspapers. If such social learning indeed matters for workers' organizing decision, then newspaper coverage of successful union elections may facilitate a "ripple effect" of successful organizing into more local elections.

3 Data on Union Elections and Local Newspapers

Union Elections: We obtain data on all closed union representation cases filed with the NLRB from 1965-2022 that had at least one associated union election. We compile this data from three sources: 1) an AFL-maintained list of all 1965-1999 NLRB representation cases; 2) an archive of case data from the NLRB's 1999-2010 case tracking system; 3) the NLRB's live case tracking system, which provides data on union elections from 2010 onward.

For each case, these data contain the case filing/closing date, the election date(s), the number of votes for and against the union(s), the number of challenged ballots, the total number of employees eligible to vote, the employer establishment locations involved, the employee bargaining units involved, and the unions involved.

We take multiple steps to assign each representation case to counties. When a case includes the county of the associated establishment(s), we default to using it. Some of our data do not include establishment counties but include either establishment ZIP codes or establishment cities and states. When ZIP codes are available, we crosswalk ZIP codes to counties using ZIP-county crosswalk files from the US Department of Housing & Urban Development. When only employer cities are available, we measure the geographic overlap between cities and counties using their respective geographic outlines and assign fractional case counts to counties that overlap cities where establishment elections took place based on the proportion of the overlap.[2]

We assign each case to counties based on the fraction of employer establishments in the

[2]We obtain city shapefile polygons from OpenStreetMap and county shapefile polygons from the Census.

case that belong to the respective counties. For example, if a representation case involves two establishments in both Durham County, North Carolina and one establishment in Orange County, North Carolina, we assign 0.67 representation cases to Durham County and 0.33 representation cases to Orange County.

For secondary analysis, we also obtain ULP claims from the NLRB from 1999 through 2022. These are cases filed by either employees or employers to inform the NLRB of actions deemed unlawful under the NLRA, such as bargaining in bad faith/refusal to bargain, or intimidating/retaliating against employees who engage in union activities.

We aggregate both the union election cases and ULP cases to the county-year level.

Data on Local Newspapers: We collect data on newspapers with daily publishing frequency starting in 1970. We combine existing data from the United States Newspaper Panel (USNP) (Gentzkow et al., 2014), Gao et al. (2020), and Abernathy (2018), with data that we manually collected from Editor & Publisher Yearbooks. For data sources that do not include the county in which a given newspaper operates, we assign the newspaper to a county based on the city where it is located. We reconcile any differences between the data sources manually.[3] From these sources, we construct a dataset containing the count of local newspapers by county and year. We record a newspaper closure when there is a net decrease in the number of local daily newspapers for a given county-year. For each closing newspaper, we collect data on its circulation prior to closure. We obtain circulation data from USNP where available, and manually collect circulation figures from the Editor and Publisher Yearbook for newspapers not covered by USNP. For each closing newspaper, we use the circulation figure from the single year closest to but preceding the closure, going back up to four years if necessary. In counties with multiple simultaneous closures, we average circulation across the closing newspapers.

[3]Following prior work, we record a newspaper closure when a newspaper (1) ceases to exist, (2) merges and leaves the county, or (3) decreases its publishing frequency to fewer than four times a week. Fan (2013) shows that mergers lead to decreased news content and increased prices. In addition, frequency changes are often accompanied by downsizing, which leads to a decrease in local coverage (Gao et al., 2020).

4 (When) Are Union Elections Newsworthy?

Before examining the causal effect of local newspapers on union organizing, an important antecedent question is whether local newspapers actually covered union organizing. On one hand, given that most newspapers' readership was concentrated within the county in which they were headquartered (Gentzkow et al., 2011), the proximity, potential for conflict, and material impact of union elections would make them presumably newsworthy for local papers (Kaniss, 1991). At the same time, many papers have cut their labor reporting staff in recent decades (Martin, 2019), so this coverage may have been uneven or sporadic.

To empirically investigate the frequency with which union elecetions received news coverage, we scrape news articles for a random subset of 50% of the union elections from 1990-2022 using two sources, newspapers.com and NewsBank. We searched for articles using the keywords "NLRB", "election", "union", and variations of the establishment name, and we restricted the search to newspapers in the same state and the months between the opening and closing of the union election case. However, including words like "election" and "union" can create false positive hits, especially when newspapers are searched by the page, which can include multiple articles with varying topics. Therefore, research assistants manually reviewed the news articles found for each union election case to ensure that we remove false positives. On average, we find news coverage for about 8% of union elections.[4]

We begin by exploring whether election or county characteristics predict the likelihood of news coverage using an OLS regression. The dependent variable is a binary indicator equal to one if the union election received news coverage, and we include year fixed effects in the regression. The results are displayed in Table 1. The first set of independent variables is at the election level and includes *log(Eligible Voters)*, *log(Ballot Challenges)*, *log(Case*

[4]Note that this is likely a lower bound estimate. While we include variations of the establishment name in our search to be as comprehensive as possible, newspapers may still refer to the establishment differently. In this case, we would not be able to pick up the news coverage. To gauge the extent of such false negatives, research assistants manually searched for news coverage for a random subset of 100 elections for which we initially did not find coverage, finding news coverage for 3 percent of them. We thus expect that the "true" rate of news coverage is $0.08 * 1 + 0.92 * .03 = 10.8\%$.

Length), and *Union Victory*, which capture the number of eligible voters, the number of ballot challenges, the case length in days, and whether the union won, respectively. Each of these variables positively predicts news coverage, consistent with elections being newsworthy when they entail conflict and have a larger material impact (Kaniss, 1991). The second set of independent variables is at the county level: we include *log(Population)* which captures the population of the county where the union election is held and *Urban* which is a binary indicatory that equals 1 if the county falls into a Metropolitan Statistical Area (MSA). The likelihood that a union election receives news coverage decreases with county-level population and (conditional on population) is higher for urban counties.

Lastly, we include variables related to newspaper presence. Union elections are substantially more likely to get news coverage if there are any newspapers headquartered in the county. The coefficient on *Number of Newspapers in the Focal County* is positive and highly significant. However, and consistent with the newsworthiness of union elections declining with distance, the presence of local newspapers in the counties that border the county where the election took place has no effect on the likelihood of news coverage: the coefficient on the *Average Number of Newspapers in Neighboring Counties* is a precise null.

In Column 2, we allow for non-linear effects of newspaper presence. Relative to the omitted category of having zero newspapers in the county, having at least one newspaper in the county raises the probability of news coverage by nearly 50% (3.6 percentage points relative to a sample mean of 8%). The likelihood of coverage rises moderately for counties with 2 to 4 or with 5 or more papers, but the increase is more muted.

Table 1 establishes that local newspapers were an important determinant of whether union elections received news coverage. Differences in the presence of local news, combined with differences in newspaper and county characteristics that may have also led to differences in the propensity of newspapers to cover elections, may have led to large geographic dispersion in the probability that union elections would receive news coverage. We descriptively examine such heterogeneity by re-estimating a regression similar to Column 1 of Table 1

but excluding the variables related to newspaper presence and including state fixed effects. Figure OA10 shows how union election news coverage varies by state, using California as the omitted category. The states with the highest share of union elections covered are Vermont, South Carolina, and North Carolina while the states with the lowest share of union elections covered are New Jersey, Mississippi, and Arkansas (as well as Washington DC). Overall, the state fixed effects do not follow a simple geographic or politically partisan pattern, but rather highlight that the extent to which union elections receive news coverage varies substantially across space.

5 Empirical Strategies to Estimate the Effect of Local News on Union Organizing

Local newspapers were instrumental in determining whether labor union activity received news coverage. Did this have any material consequence on the organizing process itself? Has the decline in local news since the 1970s had any effect on the frequency of union organizing? This is a challenging question to answer, as concurrent factors over this period may have jointly contributed to a weakening environment for local news and labor unions. We employ two identification strategies to isolate the causal effect of a weakening local news environment on union organizing: (i) the staggered rollout of Craigslist across counties, and (ii) newspaper closures.

5.1 Strategy #1: Craigslist Entry

Our first identification strategy exploits the staggered entry of Craigslist across U.S. counties between 1995 and 2010 as a shock to local news production. Craigslist is the world's largest online platform for classified ads, and its entry into local markets created direct competition for classified ad revenue, which accounted for approximately 30% of newspapers' total revenues in 2000 (Djourelova et al., 2025). By taking away this revenue source, Craigslist's

entry led local newspapers to reduce newsroom staff, circulation, and local political coverage (Djourelova et al., 2025; Seamans and Zhu, 2014),. At the same time, there is no evidence that Craigslist affected job finding rates or other aspects of local labor market functioning (Kroft and Pope, 2014).

We obtain data on the timing of Craigslist's entry into local markets from Djourelova et al. (2025). For each Craigslist website, the entry date is either directly available from Craigslist's expansion page or assigned based on the first snapshot recorded by the Internet Archive Wayback Machine. To define the area served by each website, Djourelova et al. (ibid.) assign the county or counties corresponding to the location in the website's URL.[5]

Using the staggered entry of Craigslist across counties for an identification strategy rests on the timing of Craigslist entry being unrelated to other factors that may have independently affected union organizing. Djourelova et al. (ibid.) document that, conditional on log population and the number of local Internet service providers, the timing of Craigslist entry is uncorrelated with local newspaper characteristics, including circulation, staffing, and classified ad reliance. This pattern is consistent with Craigslist's expansion being driven by market demographics and internet availability rather than strategic considerations related to local newspaper or labor market conditions. We follow Djourelova et al. (ibid.) and control for log population and the number of Internet service providers throughout. We use within-county variation in the timing of Craigslist entry:

$$Y_{c,t} = \alpha_c + \tau_t + \beta * PostCraigslist_{c,t} + \Gamma X_{c,t} + \varepsilon_{c,t},$$

where the subscript c represents a county and t represents a year. The outcome variable is the number of union elections at the county-year level and $PostCraigslist_{c,t}$ is an indicator that equals one for county c in the year after the entry of a local Craigslist website. $X_{c,t}$ includes the natural log of county population and number of Internet Service Providers

[5]For example, chicago.craigslist.org is assigned to Cook and DuPage counties, while westernmass.craigslist.org is assigned to Hampden, Hampshire, Worcester, Berkshire, and Franklin counties.

(ISPs), the two variables that Djourelova et al. (2025) show predict the timing of Craigslist entry. α_c represents county fixed effects and τ_t represents year fixed effects. We include both never-treated and not-yet-treated counties as the control group and estimate the model using the heterogeneity-robust estimator of De Chaisemartin and D'Haultfœuille (2020) to account for potential treatment effect heterogeneity in staggered adoption settings. We cluster standard errors at the county level.

The summary statistics for this identification strategy are displayed in Table 3. In this sample, the average county-year has 0.71 union elections. Roughly 36% of the sample are treated counties (i.e., counties where Craigslist entered during our sample period).

5.2 Strategy #2: Newspaper Closures

Our second identification strategy leverages newspaper closures as discrete shocks to the local news environment. Since the late nineteenth century, the entry and exit of newspapers in a county has led to large, discrete changes to news readership, especially when few or no other newspapers are present (Gentzkow et al., 2011).

The central threat with using newspaper closures as an identification strategy is that unobserved local shocks (such as a regional economic downtown or a shift in the composition of local employment) could simultaneously depress newspaper profitability (raising the risk of closure) and alter the environment for union organizing.

We address this concern using the economics of newspapers' exit decision and our evidence on the geographic scope of the news market for union organizing. A newspaper's profitability is a state variable that is a function of cumulative shocks over many prior periods, but the decision to close a newspaper is a discrete, irreversible decision. As discussed in Gentzkow et al. (ibid.), this closure decision can be modeled as a decision rule triggered when its profitability crosses a critical threshold. As a consequence, contemporaneous shocks to profitability should explain little of the variance of whether closure occurs in a given period. That is, closures are unlikely to be accompanied by large unobserved shocks that, to the

extent that shocks to newspaper profitability also affect union organizing, would also affect the frequency of union elections.

Still, this model of the exit decision implies that newspaper exits may be preceded by downward trends in profitability, which could in theory be caused by factors also affecting union organizing. To account for these patterns, we compare counties with newspaper closures to bordering counties without newspaper closures. Because neighboring counties are exposed to common economic conditions, this comparison group should hold constant these factors associated with profitability (Leonelli, 2022).[6] We also assess pre-trends in our outcomes of interest to gauge the extent to which these concerns confound our results.

A potential issue with using bordering counties as a comparison group is spillovers: newspaper closures in one county may affect union organizing in bordering counties. However, the institutional features of the local news market suggest that such spillovers are likely minimal. Gentzkow et al. (2011) document that the median newspaper sells more than 80% of its copies in its home county and that coverage focuses predominantly on local happenings, consistent with news being a highly local product. Our evidence in Section 4 corroborates this point for our specific setting, as the number of newspapers in bordering counties has no effect on news coverage of union elections. Thus, a newspaper closure in one county is unlikely to affect news coverage of union activity in a neighboring county, limiting the potential for spillovers.

We use a stacked difference-in-difference design (Cengiz et al., 2019; Gormley and Matsa, 2011) to alleviate concerns about heterogeneous treatment effects and the resulting negative weights in TWFE models (Barrios, 2021; Goodman-Bacon, 2021). For each newspaper closure, we construct a block that includes a 15-year panel comprising the five years before and ten years after the closure for the county in which the newspaper was located and all

[6]Leonelli (2022) employs a similar Border-County design and finds no difference in economic indicators such as population, employment, or income between treatment and control counties.

bordering counties without newspaper closures. Formally, we estimate the regression:

$$Y_{c,t} = \beta_1 * Closure_{c,b,t} + \alpha_{c,b} + \alpha_{b,t} + \alpha_{u(c),t} + \Gamma X_{c,t} + \varepsilon_{c,t},$$

where the outcome variable is the number of union elections in county c in year t. *Closure* is an indicator variable equal to one in the years after a newspaper has closed in county c. We include county-by-block ($\alpha_{c,b}$) and year-by-block ($\tau_{b,t}$) fixed effects, as well as urban-by-year fixed effects to control for potential differences in trends between urban and rural counties. $X_{c,t}$ includes the percent of workers in manufacturing and the natural log of county population. We employ a pseudo-Poisson maximum likelihood (PPML) specification to accommodate the count nature and non-normal distribution of the outcome (Cohn et al., 2022).

Newspaper closures have a smaller effect on the local news environment the more other newspapers that serve the market (Gentzkow et al., 2011). We follow Gao et al. (2020) and restrict our sample to closures in counties with at most three daily newspapers prior to the closure. Further, we restrict our sample to closures between 1970 and 2010 to ensure sufficient pre- and post-closure data coverage for all closures in the sample. Of the 685 newspaper closures in this sample, these restrictions leave us with 397 that constitute our main estimation sample.

The summary statistics for this identification strategy are displayed in Table 2. In this sample, the average county-year has 2.29 union elections and 15% of the sample are treated counties (i.e., counties with newspaper closures).

6 The Effect of Local Newspapers on Union Organizing

The presence of local newspapers determines whether union elections receive news coverage (Section 4). Does their presence affect the probability that union organizing takes place? In this section, we present evidence that it does.

6.1 Effects of Newspaper Weakening or Closures on Union Elections

We first describe our estimates using the Craigslist identification strategy in combination with the heterogeneity-robust DiD estimator from De Chaisemartin and D'Haultfœuille (2020), described in Section 5.1. Panel A of Figure 3 displays the event study estimates of the effect of Craigslist entry on the number of union elections. The coefficients in the years prior to Craigslist entry are all close to zero with no evidence of pre-trends. The coefficient turns negative the year of entry, indicating fewer union elections, and grows in magnitude over time. Table 5, Column (1) reports corresponding regression results. We find that Craigslist entry leads to 0.42 fewer union elections per treated county, accumulated over an average of 3.05 post-treatment years, relative to a pre-entry mean of 1.31 union elections, representing a 32% decline.This magnitude translates to approximately 466 fewer elections across the 1,110 treated counties over the post-treatment period.

Next, we turn to our second identification strategy, comparing changes in union elections in counties that experience a newspaper closure to bordering counties without a closure, as described in Section 5.2. Panel B of Figure 3 plots the event study estimates. There is no evidence of pre-trends in the years prior to the newspaper closure. The coefficients turn negative in the year after the closure, indicating that union elections begin declining. Table 4, Column (1) displays the corresponding regression results. We find that newspaper closures reduce union elections by approximately 8.5% per county-year, on average over the ten post-closure years ($\hat{\beta} = -.089, exp(-.089) - 1 = -0.085; p < .01$). Given a pre-closure mean of 5.50 union elections in treated counties, this corresponds to approximately 0.48 fewer union elections per county-year. Across the 397 closures in our sample, this amounts to over 10,000 fewer union elections in treated counties over the 10-year post-closure period.

These two estimation strategies, which use different sources of identifying variation and different sample periods, tell a consistent story: a negative shock to the local news environment leads to a large and sustained decline in union organizing.

6.2 Robustness Checks on Main Estimates

Our estimated effects of newspaper weakening on union elections are unchanged under a range of defensible adjustments to our regression models.

Our baseline specification in the Craigslist design used the De Chaisemartin and D'Haultfœuille (2020) difference-in-difference estimator with the number of union elections as the dependent variable and not-yet-treated counties as the control group. The estimated effect of Craigslist entry is similar when we use this same estimator but use a broader measure of entry to surrounding counties or if we include never treated counties in the control group (Table OA9). We also manually estimated a stacked difference-in-difference regression in which each block includes treatment counties with the same Craigslist entry year and control counties comprising never-treated and those not-yet-treated as of the block's focal year. Panel B of Table OA9 report regression estimates. The estimated effects are quite similar to our baseline estimates.

Our baseline specification for the closure design used a stacked difference-in-difference PPML estimator using bordering counties as the control group. Our results are unchanged altering the control variables, weights, or including an exposure variable for employment (Table OA10).

6.3 Did Newspaper Weakening Actually Affect the News Environment for Union Organizing?

Either of the mechanisms discussed in Section 2 through which newspaper weakening or closures could affect union elections is mediated through changes in the probability that individuals are exposed to news coverage of union activity. Prior work provides indirect evidence that would support this mediation: Djourelova et al. (2025) show that Craigslist entry led newspapers to cut newsroom staff and reduce coverage of local politics, while Gentzkow et al. (2011) show that newspaper closures (and entries) lead to discrete changes

in news readership.

To measure changes in the news environment, for all counties from 1970 to 2020 we collect data from newspapers.com on annual counts of various categories of articles published by newspapers headquartered in that county. Along with the count of total articles, we collect the count of articles covering union elections by searching for "[("NLRB" OR "National Labor Relations Board") AND "union" AND "election"]". The search returned non-zero counts for 38,356 county-years, and 41% of counties have at least one year with non-zero news article counts. We exclude counties with no news articles for the entire time period for this analysis. In total, we found over 1 billion articles and over 220,000 union election articles. After the exclusion of no-coverage counties, the median (mean) number of news articles in a county-year is 1,692 (15,632) for overall articles and 0 (3.33) for news articles about union elections.

We then estimate whether our two shocks (Craigslist and newspaper closure) leads to changes in the total number of articles as well as articles about union elections, following the specifications described in Sections 5.1 and 5.2. One challenge to interpreting the latter of these is that there may be fewer articles about unions simply because fewer elections are taking place (which Section 6.1 showed to be the case. To isolate changes in the likelihood that union activity receives news coverage, we compare the change in actual articles to the change in "shadow" articles that would be predicted based on the number of elections alone.[7]

Figure 4 Panels A and B show the change in all news articles and union election articles, respectively, using the Craigslist design. Similarly, Figure 4 Panels C and D show the same outcomes using the closure design. Both strategies show a decrease in overall news articles and articles covering union elections after the newspaper event. Table 6 Panel A shows that total articles decrease by about 10% and union election articles decrease by about 12%,

[7]Using county-years unaffected by treatment (Craigslist or newspaper closure), we estimate how many union election articles one additional election generates (roughly 0.07 in the Craigslist design and 0.10 in the border-county design). We multiply that rate by the change in elections relative to the county's own pre-period average, and add the result to the raw article count. What is left is the change in coverage per election, net of the decline that fewer elections alone would produce.

though the estimate is noisy and not significant at conventional levels. Using the border-county design, the decrease in the number of articles overall is not statistically significant (Figure 4 Panel C shows an initial significant decrease that levels out over time), but the number of union election articles decreases by 14%.

Overall, both shocks reduce the amount of union coverage available to workers in the affected county, and this decrease is beyond a mechanical consequence of there being fewer union elections to cover.

6.4 Heterogeneous Effects by Size of Shock to the News Environment

Section 6.1 showed that weakening or closing of local newspapers led to fewer union elections, and Section 6.3 showed these events also led to less news coverage of union activity. To ensure that the effects on union elections are in fact mediated by changes in the news environment for union activity, and not other unobserved factors correlated with weakened newspapers, we utilize variation in the news environment for heterogeneity tests. We should see stronger effects on elections in locations in which the shock (whether Craigslist entry or a newspaper closure) constituted a larger change to the news landscape for union activity.

We begin with two cross-sectional tests using the Craigslist design. First, we examine whether the effect of Craigslist on union elections is stronger in counties that had at least one newspaper in the year before Craigslist entry (the average county had 0.25 newspapers before Craigslist entry). If the effect on union elections stems from changes in the news landscape, we should see significantly weaker effects when there were no newspapers to begin with. The results are displayed in Table 5, Columns (2) and (3) as well as Figure 5 Panel A. The effect on elections is concentrated in counties with a newspaper headquartered in the county in the year before Craigslist entry.[8]

[8]Note that the estimates on the percentage change relative to the pre-entry mean are similar for the specifications, driven by very low coverage rates in counties without newspapers.

Second, we examine whether the effect depends on whether union elections tented to get news coverage in the county before Craigslist entry. We measure the share of the county's union elections in the five years before Craigslist entry that received newspaper coverage, conditional on the county having a newspaper in that window. This share is zero for a majority of counties, so we split treated counties into those with any pre-entry coverage of union elections (232 counties) and those with none (391 counties). The results are displayed in Table 5, Columns (4) and (5) as well as Figure 5 Panel B. Craigslist entry has a stronger effect in counties with historically higher union election news coverage, with an average total effect of -29.71% compared to -0.30% in counties without such coverage. The two estimates are significantly different from each other.

Next, we present cross-sectional results for the Border-County identification strategy in Table 4. First, we examine whether the effect is stronger for closures occurring before 1996, when alternative news sources like the internet were more limited and well before Craigslist entered most markets. The median closure year in our sample is 1991 and 65% of closures take place before 1996. The results in Column (2) show that the effect is concentrated in pre-1996 closures, with an average decrease of 10%.[9] The dynamic effects are shown in Figure 5 Panel C.

Second, we examine whether the effect is stronger for newspapers with high pre-closure circulation, as closures of wider-reaching newspapers represent a larger loss to news readership. *High Circulation* is an indicator variable that equals one if the closing newspaper had above 75th percentile circulation in the years before closure, approximately 28,000 daily copies. Consistent with this, Column (4) 12% decrease in union elections following the closure of a high-circulation newspaper. The dynamic effects are shown in Figure 5 Panel D.

Overall, the heterogeneity analyses corroborate that the effects on union elections identified in Section 6.1 are due to changes in the local news environment rather than other contemporaneous forces. We display the coefficient plots for the heterogeneity analyses in

[9]The effect is calculated as $(e^{(0.014-0.121)} - 1) \times 100 =$ -10.15%.

Figure 5.

6.5 Which Types of Union Elections do Newspapers Affect?

We next explore whether the effect of weakening news landscapes is concentrated in particular types of union elections. For example, elections with lower levels of worker support or fewer eligible voters may be more likely to drop out of the organizing process when the news environment weakens.

We present results using both identification strategies in Table 7 Panels A and B, comparing union elections along three dimensions. First, we split elections by outcome, comparing successful elections, defined as more than 50% of votes cast in favor of the union, to unsuccessful ones. Second, we examine heterogeneity in worker support, splitting elections into low support (vote share at or below the 25th percentile, corresponding to 36% of votes cast for the union), close elections (vote share between 40% and 60%), and high support (vote share of 80% or above). Third, we split elections by size using the median number of eligible voters as the threshold, which is 24 eligible voters in our sample.

Across all three dimensions and both identification strategies, we find that weakening news landscapes reduce union elections broadly. The negative effects are not concentrated in a particular type of election, suggesting that the decline in union organizing reflects a general dampening of organizing activity rather than the elimination of small or marginal elections alone.

7 Why Does Union Organizing Depend on Local Newspapers?

Section 2 proposed two mechanisms through which local newspapers might affect union organizing: affecting the latent probability that employers would interfere in the election process, and facilitating social learning about successful organizing that affects workers' own

expected returns from organizing.

7.1 Does Weakening Local News Increase Employer Interference in Union Organizing?

As described above, the weakening of local newspapers may increase employers' latent willingness to interfere in union elections. Measuring this latent willingness poses numerous challenges. For one, employers have many available tactics to (legally and illegally) interfere in union elections (Freeman and Kleiner, 1990), some of which may be unobservable. Furthermore, any *realized* interference in elections is only observed conditional on workers initiating the election process. Workplaces in which the latent probability of retaliation is highest may not initiate elections in the first place. Moreover, even conditional on an election taking place, workers may fear that filing a ULP claim may itself trigger employer retaliation. Each of these factors create a form of selection bias in observed measures of employer interference.

With these challenges in mind, we consider multiple measures of employers' interference in the election process. Our first measure is based on ULP claims by employees, which are available from 1999 through 2022. To account for the potential selection bias in claims filing, we use the percent of ULP claims that are upheld by the NLRB, in the spirit of the threshold model by Dahl and Knepper (2026). We also create an analogous measure considering only ULP cases that are not related to union elections to reduce any cross-contamination from the main effect on union elections. In addition, we use the average case length of elections that take place, as longer case lengths (the time lapse between the petition to hold an election and the election itself) is often indicative of employers' engaging in delay tactics (Wang and Young, 2023). Lastly we use measures of the average number of challenged ballots as well as the percent of elections with challenges ballots that take place.

The results are displayed in Table 8 Panels A and B for both identification strategies. We do not find a discernible effect of weakened news landscapes on any of the measures of

employer retaliation discussed above.

7.2 Do Local Newspapers Propagate Winning Elections into More Organizing?

As we described above, newspapers may facilitate social learning about local support for unionization, facilitating "ripple effects" of successful elections into more organizing. A challenge to testing this mechanism empirically is that successful union elections are more likely to take place in counties with favorable environments for organizing.

In light of these factors, we employ a differences-in-discontinuities design, where we compare the *change* in the number of union elections in a given county in the years before and after a union election (i.e. the "difference") in which the vote share is above 50% versus in which the vote share is less than 50% (the "discontinuity"). Given evidence of non-random bunching just below the 50% threshold (Frandsen, 2021), suggesting employer interference in close elections, we exclude observations with vote shares between 48% and 52%.

Formally, for focal election i in county c taking place in month t, we estimate

$$\underbrace{\Delta\text{Elections}_{i,c,t}^{+36,-36}}_{\substack{\#\text{ elections in county } c \\ \text{(next 3–39 months)} \\ -\text{ (prior 3–39 months)}}} = f(\text{VoteShare}_i - 0.5) + \beta\mathbf{1}(\text{VoteShare}_i \geq 0.5) + \boldsymbol{\gamma}'\mathbf{X}_{c,t} + \varepsilon_{i,c,t} \qquad (1)$$

β represents the extent to which successful elections create a "ripple effect" leading to more elections in the county. We hypothesize that this ripple effect, if relevant, will be larger in areas in which union activity is more likely to receive newspaper coverage. To capture this heterogeneity, we split the sample into counties in which the share of elections over the period 1990–2004 that received newspaper coverage was above or below the sample median.

In our baseline specification, we include focal elections from 1975 through 2016, and $\mathbf{X}_{c,t}$ includes controls for the log of county-level population, the share of county-level employment in manufacturing, and year fixed effects. We use the *rdrobust* package (**Calonico˙2017**) to

select the bandwidth around the cutoff, to obtain point estimates and standard errors, and to select bins in the plots that visualize the discontinuity.

Figure 7a shows the LATE estimate of (barely) successful union elections on future organizing in the county for the entire sample. There is no clear evidence of a discontinuous change in future elections around the threshold. However, in Figure 7b we only include counties with high news coverage of union elections and see a strong discontinuity at the threshold. In this subsample, (barely) successful union elections lead to roughly 2 more union elections—a 25% increase— in the same county over the subsequent three years, relative to unsuccessful elections ($\hat{\beta} = 1.84, p = .07$).In contrast, there is no discernible effect of successful elections on future organizing in counties in which news coverage of elections is essentially non-existent (Figure 7c).

7.3 Assessing the Explanatory Power of the Mechanisms

Local newspapers facilitate a ripple effect of successful union organizing campaigns into more elections. This "ripple effect" is consistent with models of social learning in which learning of a successful union drive in one's community raises one's expected returns to organizing.

But to what extent can this relationship explain our estimated effect of newspaper weakening on union elections in Section 6.1? To answer this question, we consider a simple model of union organizing. We model the number of elections for county c and year t as $N_{c,t} \sim \text{Poisson}(\lambda_{c,t})$, with

$$\log(\lambda_{c,t}) = \alpha + \beta_1 \log(\text{pop}_{c,t}) + \underbrace{\beta_2 t}_{\substack{\text{time} \\ \text{trend}}} + \underbrace{u_c}_{\substack{\text{county} \\ \text{random} \\ \text{effect}}} + (1 - CL_{c,t}) * \underbrace{(\sum_{\ell=1}^{3} \gamma_\ell W_{c,t-\ell})}_{\substack{\text{contagion} \\ effect}} \tag{2}$$

where $W_{c,t} \sim \text{Binomial}(N_{c,t}, p)$ is number of winning elections, and p is the (exogenous) probability that an election is successful. That is, the log likelihood is a function of a constant, a county random effect (u_c), a time trend t, log population, and a function of prior

winning elections. γ reflects the extent to which recent successful elections lead to more elections today.

The term $(1-CL_{c,t})$ means that the "ripple effect" of prior wins is shut off when Craigslist enters a county, consistent with the evidence that the entry of Craigslist substantially reduced local newspapers' coverage of labor and political issues in the area.

We simulate the path of elections under Equation 2 and compare it to the path of elections under a version of Equation 2 in which $CL_{c,t}$ does not shut off the ripple effect of prior wins. We compute the gap in the number of elections in a county under the two scenarios as a measure of the consequence of shutting off the ripple effect dynamics.

We estimate $\alpha, \beta_1, \beta_2, u_c$ via a random effects Poisson model and take p from data. We plug in plug in γ_ℓ based on the difference-in-discontinuities estimate reported in Figure 7b.[10] We simulate the model 500 times to obtain point estimates and confidence intervals.

Figure 8 reports the results implied from this model. The arrival of Craigslist leads to an immediate drop in elections that grows over time. Remarkably, the overall implied loss in elections–31%–is essentially identical to our reduced form estimated effect of Craigslist on elections reported in Figure 3 Panel A.

That is, this simple model implies that the negative effect of the arrival of Craigslist on union organizing can be entirely explained by its dilution of the "social learning" dynamics of successful elections.

8 Conclusion

In this paper we examine the relationship between local news and union organizing. In the first part of the paper we show that news coverage of union elections varies significantly based on locality and the characteristics of the union election. For example, successful and larger union elections are more likely to receive news coverage.

[10]Specifically, the point estimate in the regression corresponding to Figure 7b implies that a successful union election leads to 28% more elections over the next three years. Based on this, we use $\gamma_l = log(1.28)/3 = 0.08$

In the second part of the paper we establish the relationship of local news and union organizing by employing two identification strategies. First, we focus on Craigslist entries as they had a significant negative impact on the local news landscape. Second, we employ a stacked DiD design, comparing counties with newspaper closures to bordering counties without newspaper closures. In both cases, we find that a decrease in the local news leads to a decrease in union elections.

We find that this effect is stronger for counties where union elections are covered more often, when less alternative news dissemination is available, and when the decrease in local news is more significant (i.e., a newspaper with high circulation closes).

Our mechanism tests reveal that union elections have a "ripple" effect, where successful union elections lead to more subsequent union elections, but only when there is high news coverage of union elections. Contrary, we do not find that changes in the news landscape affect employers' likelihood of interfering with union elections.

Our study helps address the disparity between steady (and high) preferences for union organizing and the decrease in union organizing. In particular we show that the decline in local news has contributed to the decline in organizing.

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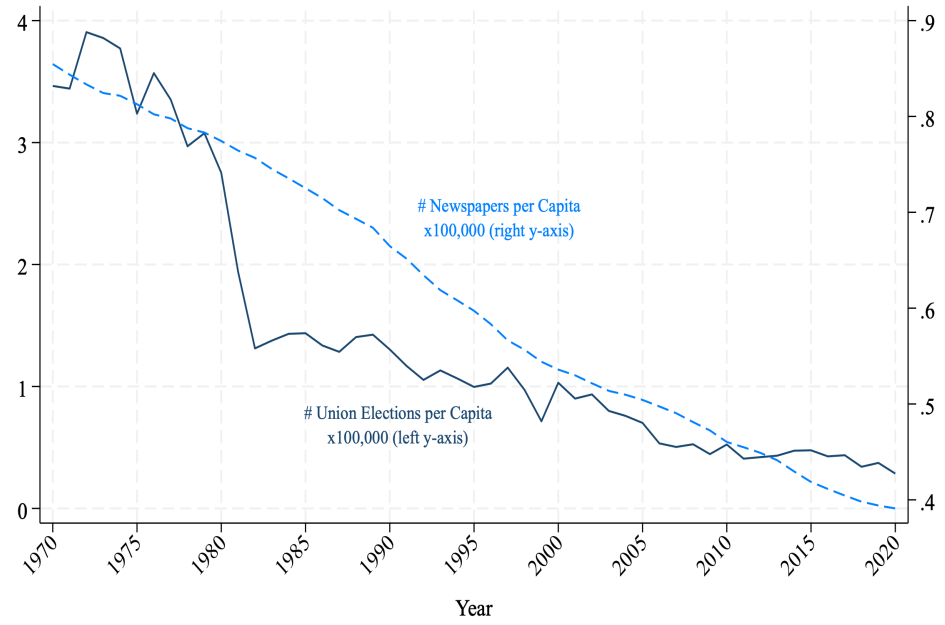
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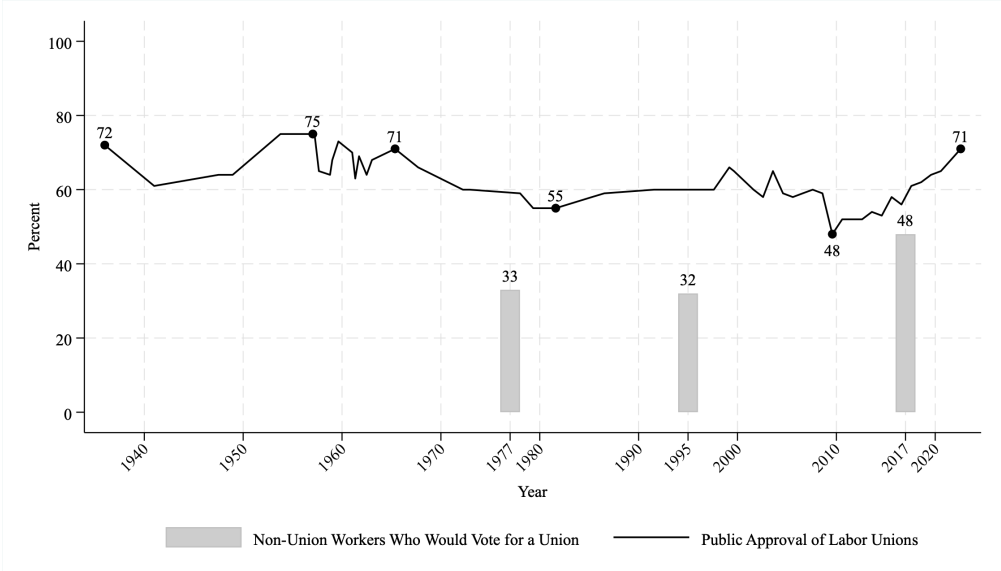
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Figure 1: Number of Union Elections



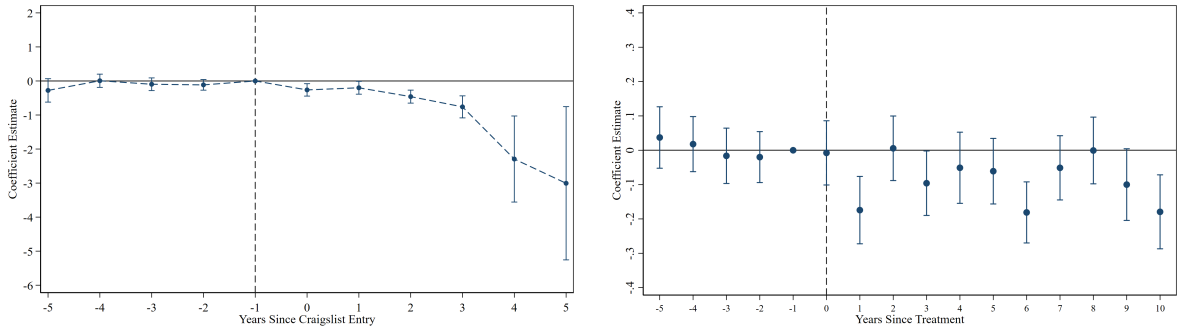
Notes: This figure plots the number of petitions for union representation elections filed with the NLRB per 100,000 people (left axis) and the number of daily newspapers per 100,000 people (right axis), from 1970 to 2022. Union election data are obtained from the NLRB. Newspaper data are obtained from the Editor & Publisher Yearbook, USNP, Gao et al. (2020), and Abernathy (2018). The number of elections for 1982 was imputed using archived NLRB reports because of anomalously low coverage in our source dataset.

Figure 2: Public Approval of Labor Unions



Notes: This figure displays the percentage of U.S. respondents who approve of labor unions, based on annual Gallup polls (see here).

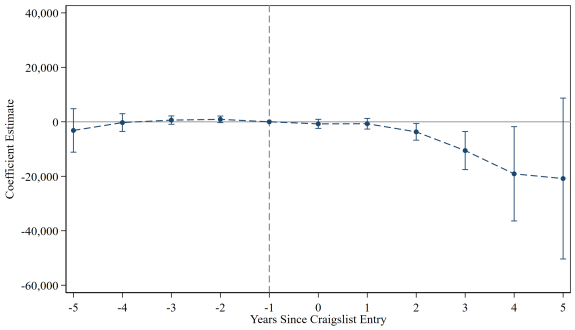
Figure 3: The Effect of Weakening or Closure Of Local Newspapers on Union Elections



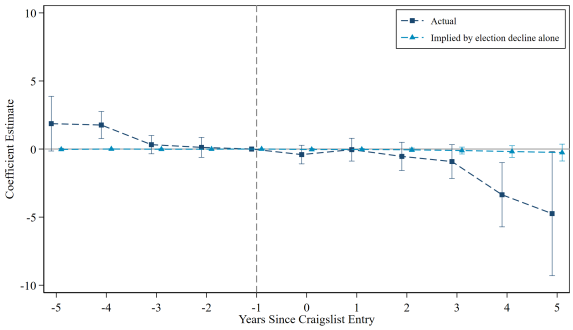
(a) Craigslist Entry (b) Newspaper Closure

Notes: Panel A plots the dynamic treatment effect of Craigslist entry on the number of union elections at the county-year level, estimated using the heterogeneity-robust difference-in-differences estimator of De Chaisemartin and D'Haultfœuille (2020) as shown in Table 5 Column (1). The specification includes county and year fixed effects and controls for the natural log of county population and the number of Internet service providers. Year 0 denotes the year of Craigslist entry. Panel B plots the dynamic treatment effect of newspaper closures on the number of union elections at the county-year level, estimated using a stacked pseudo-Poisson maximum likelihood specification as shown in Table 4 Column (1). The specification includes county-by-cohort and year-by-cohort fixed effects, urban-by-year fixed effects, and controls for the percent of workers in manufacturing and the natural log of county population. Year 0 denotes the year of the newspaper closure and the year prior is the omitted baseline period. Both panels display 95% confidence intervals, with standard errors clustered at the county level.

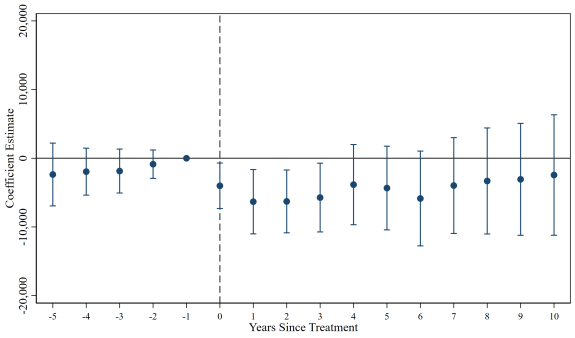
Figure 4: The News Environment After Craigslist Entry and Newspaper Closures



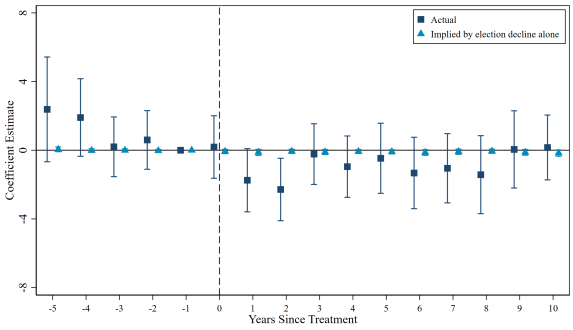
(a) Total Articles, Craigslist



(b) Union Election Articles, Craigslist



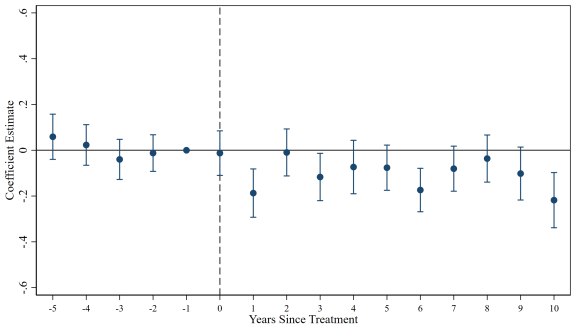
(c) Total Articles, Closures



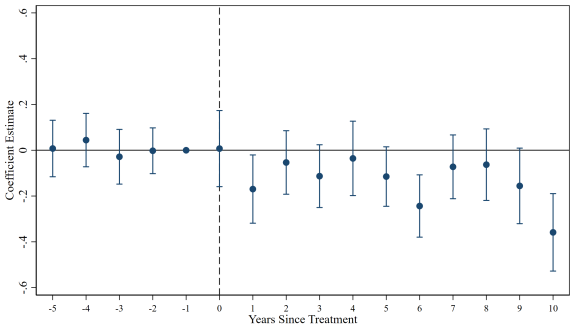
(d) Union Election Articles, Closures

Notes: Notes: This figure plots dynamic treatment effects on newspaper articles. Panels A and B use the Craigslist design, estimated with the heterogeneity-robust difference-in-differences estimator of De Chaisemartin and D'Haultfœuille (2020) as shown in Table 6 Panel A. Controls include the natural log of county population and the number of Internet service providers. Panels C and D use the border-county stacked design, estimated by ordinary least squares as shown in Table 6 Panel B. Controls include the percent of workers in manufacturing and the natural log of county population. Panels A and C plot the effect on the total number of articles published in a county-year. Panels B and D plot the effect on the number of articles covering union elections. In Panels B and D the second series plots the decline that fewer NLRB elections alone would produce, obtained by scaling the estimated effect on the number of elections by the coverage rate per election. Counties for which newspapers.com returned no articles in any year are excluded. All panels display 95% confidence intervals, with standard errors clustered at the county level.

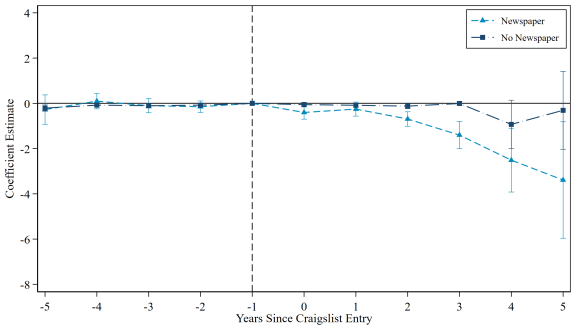
Figure 5: Dynamic Plots for Cross-Sectional Results



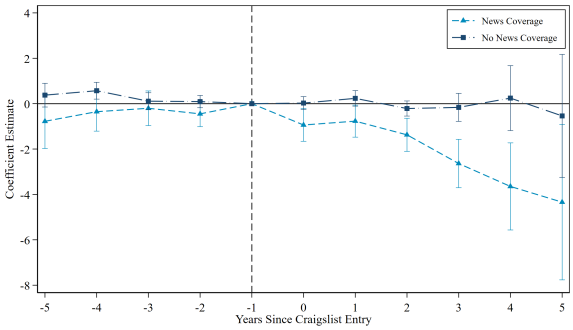
(a) Closures: pre-1996 Closure



(b) Closures: High Circulation Paper



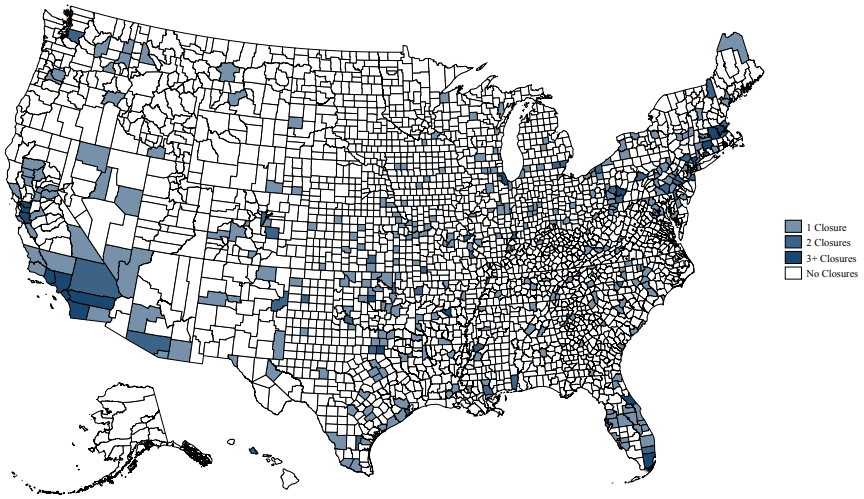
(c) Craigslist: (No) Newspaper before Entry



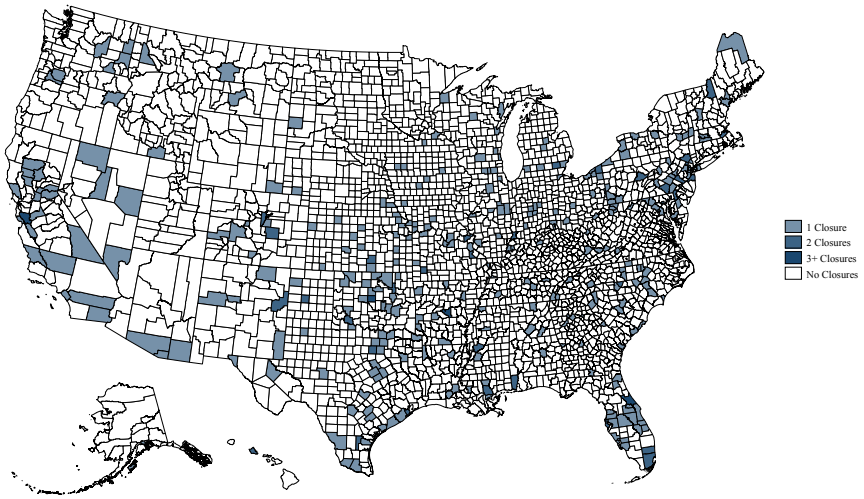
(d) Craigslist: (No) Prior News Coverage of Unions

Notes: This figure plots dynamic treatment effects for four cross-sectional heterogeneity analyses. Panels A and B plot dynamic treatment effects from the border-county stacked pseudo-Poisson maximum likelihood specification. Panel A plots the triple interaction effect *Closure* × *Post* × *Closure Pre 1996* (Table 4 Column (2)). Panel B, plots the triple interaction effect *Closure* × *Post* × *High Circulation* (Table 4 Column (3)). Panel C plots effects separately for counties with and without a newspaper headquartered in the county in the year before Craigslist entry, as shown in Table 5 Columns (2) and (3).Panel D plots effects separately for counties with and without any newspaper coverage of union elections in the five years before Craigslist entry, as shown in Table 5 Columns (4) and (5). All panels display 95% confidence intervals, with standard errors clustered at the county level.

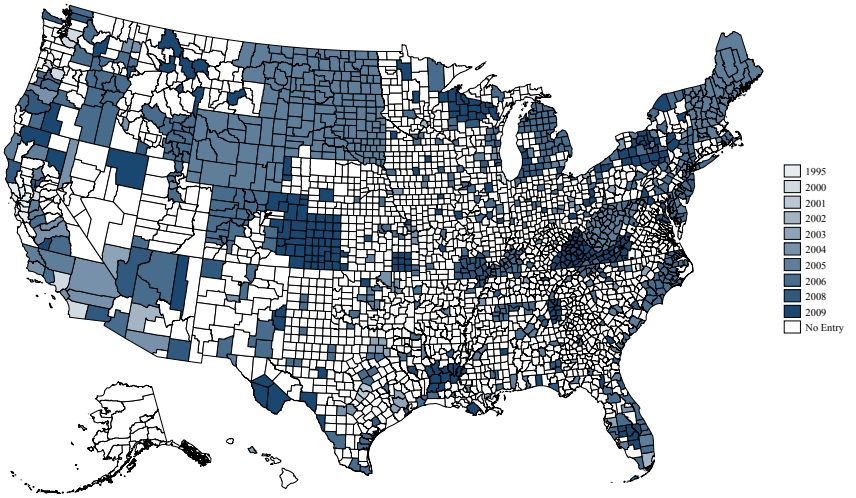
Figure 6: Mapping Newspaper Closures and Craigslist Entry



(a) All Newspaper Closures (1970-2010)

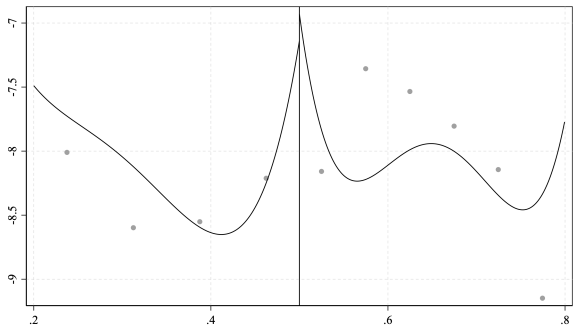


(b) Impactful Newspaper Closures (1970-2010)

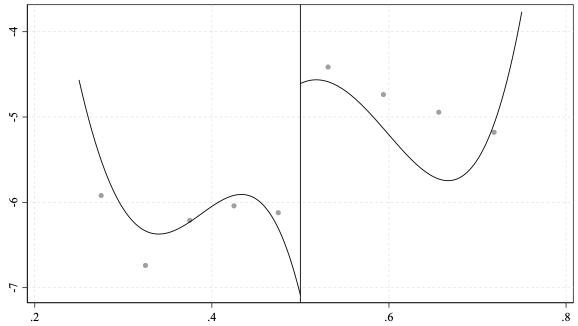


(c) Craigslist Entry Year

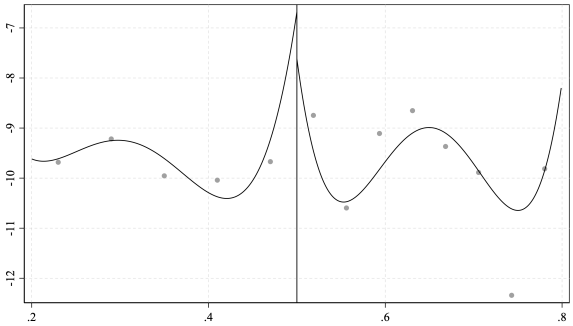
Figure 7: The Ripple Effect of Union Elections
Number of (Differenced) Elections in Same County, 3–39 Months Later



(a) Overall Sample



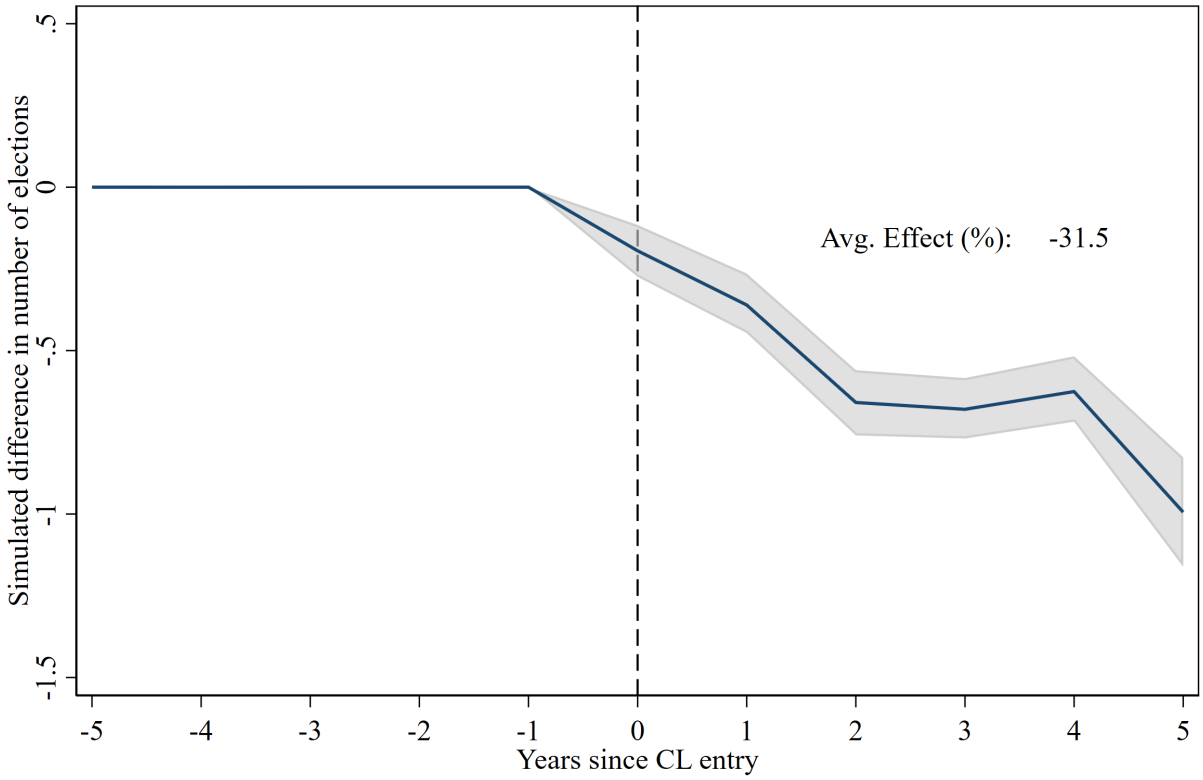
(b) High News Coverage Counties



(c) Low News Coverage Counties

Notes: This figure displays the results of a "donut" differences-in-discontinuities, estimating whether there is a discontinuity at the 50% vote-share in subsequent union elections after a union election in the same county. The difference in subsequent union elections is measures over a three year pre- and post-period, omitting the three months around the focal union election. In addition, the specification omits union elections with vote shares between 48% and 52%. The sample is restricted to union elections with at least 20 votes and we include controls for the % of workers in manuffiacturing as well as Log(Population). "High (Low) News Coverage Counties" are counties in which the share of union elections in the county 1990–2004 that received news coverage was above (below) the sample median.

Figure 8: The Simulated Effect of Craigslist Entry on Union Elections Under A Model of Social Learning



Notes: This figure displays the simulated effect of Craigslist entry on the number of union elections, based on the model described in Equation 2. The outcome is the simulated difference in the number of elections per county between the scenario in which Craigslist entry shuts off the contagion term and the counterfactual in which it does not. The model is simulated 500 times. The solid line shows the point estimate and the shaded region shows the 95% confidence interval.

Table 1: Correlates of Newspaper Coverage of Union Elections

Dependent variable:	(1)	(2)	(3)	(4)
Election Covered by Newspaper	Internal	Internal	USNP	USNP
Log(Eligible Voters)	0.037***	0.037***	0.038***	0.038***
	(0.002)	(0.002)	(0.002)	(0.002)
Log(Ballot Challenges)	0.019***	0.019***	0.017***	0.017***
	(0.003)	(0.003)	(0.003)	(0.003)
Log(Case Length (Days))	0.023***	0.024***	0.025***	0.025***
	(0.003)	(0.003)	(0.003)	(0.003)
Union Victory	0.031***	0.031***	0.028***	0.028***
	(0.003)	(0.003)	(0.004)	(0.004)
Log(Population)	-0.019***	-0.020***	-0.018***	-0.018***
	(0.002)	(0.002)	(0.002)	(0.002)
Urban	0.027***	0.021***	0.028***	0.027***
	(0.007)	(0.007)	(0.008)	(0.008)
Pct. Manufacturing	0.018	0.025	0.043**	0.047**
	(0.019)	(0.019)	(0.021)	(0.021)
Number of Newspapers in Focal County	0.003***			
	(0.001)			
Avg. Newspapers in Neighboring Counties	-0.001	0.001	-0.004**	-0.003
	(0.002)	(0.002)	(0.002)	(0.002)
One Newspaper in County		0.037***	0.022***	
		(0.005)	(0.005)	
Two to Four Newspapers in County		0.040***	0.045***	
		(0.005)	(0.006)	
Five or More Newspapers in County		0.046***	0.033***	
		(0.007)	(0.008)	
Low Total Circulation				0.024***
				(0.006)
Medium Total Circulation				0.034***
				(0.006)
High Total Circulation				0.034***
				(0.006)
Fixed Effects:				
Year FE	Yes	Yes	Yes	Yes
Robust SE	Yes	Yes	Yes	Yes
Dependent Variable:				
Mean of Dep. Var.	0.068	0.068	0.069	0.069
Used Observations	25,937	26,061	19,886	19,886
R-squared	0.070	0.072	0.072	0.071

Table 2: Descriptive Statistics for Border County Identification Strategy

	Obs	Mean	SD	Min	P10	P25	P50	P75	P90	Max
Main Outcome										
# Elections	43,314	2.29	6.67	0.00	0.00	0.00	0.00	2.00	6.00	132.00
Controls										
Urban	43,314	0.60	0.49	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Pct. Manufacturing	43,314	0.21	0.16	0.00	0.04	0.09	0.18	0.30	0.43	5.00
Population	43,314	198,747.52	460,689.31	780.00	9,260.00	19,567.00	51,205.00	181,468.00	530,012.00	10,105,708.00
Cross-Sections										
Avg. Circulation	41,968	30,020.11	74,918.95	300.00	2,320.00	3,561.00	7,412.00	26,443.00	53,473.00	762,639.00
High Circulation	41,968	0.24	0.43	0.00	0.00	0.00	0.00	0.00	1.00	1.00
Closure Year	6,327	1,991.68	10.43	1,971.00	1,978.00	1,984.00	1,991.00	2,000.00	2,007.00	2,010.00
Closure Pre 1996	43,314	0.65	0.48	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Employer Interference										
Pct. ULP Cases Upheld	19,625	0.40	0.30	0.00	0.00	0.20	0.39	0.53	1.00	1.00
Pct. Non-Election ULP Cases Upheld	8,655	0.38	0.30	0.00	0.00	0.17	0.36	0.51	0.99	1.00
Avg. Case Length (Days)	18,066	103.50	172.17	0.00	40.24	50.29	64.29	100.79	176.50	6,292.00
Avg. Challenged Ballots	18,066	1.74	5.86	0.00	0.00	0.00	0.67	2.00	4.00	307.00
Pct. Elections w/ Challenged Ballots	18,066	0.52	0.40	0.00	0.00	0.00	0.50	1.00	1.00	1.00

Notes: This table provides descriptive statistics for the analyses using the border-county identification strategy. The unit of observation is the county-year. *# Elections* is the number of union elections filed with the NLRB at the county-year level. *Closure* equals one for counties with a newspaper closure and zero for bordering control counties. *Post* equals one for years at or after the newspaper closure. *Urban* equals one if the county falls within a Metropolitan Statistical Area. *Pct. Manufacturing* is the share of county-level employment in manufacturing. *Population* is the county population. *Avg. Circulation* is the average daily circulation of the closing newspaper in the year closest to but preceding the closure, going back up to four years; in counties with multiple simultaneous closures, this is averaged across closing newspapers. *High Circulation* equals one if the closing newspaper had above 75th percentile circulation. *Closure Year* is the year of the newspaper closure. *Closure Pre 1996* equals one for newspaper closures occurring before 1996. Election characteristic and employer interference variables are defined as in Table 3. Union election and ULP data are obtained from the NLRB. Newspaper data are obtained from the Editor & Publisher Yearbook, USNP, Gao et al. (2020), and Abernathy (2018). Control variable data are obtained from the QCEW, Census, and BLS.

Table 3: Descriptive Statistics for Craigslist Identification Strategy

	Obs	Mean	SD	Min	P10	P25	P50	P75	P90	Max
Main Outcome										
# Elections	34,689	1.36	4.50	0.00	0.00	0.00	0.00	1.00	3.02	106.00
Controls										
Population	34,689	180,181.44	477,885.98	468.00	4,834.00	14,503.00	49,402.00	149,068.00	444,181.00	10105708.00
# ISPs	34,689	9.46	11.39	-15.05	0.00	0.00	5.65	14.47	25.35	89.81
Cross-Sections										
# Newspapers Before Craigslist	34,348	0.73	0.90	0.00	0.00	0.00	1.00	1.00	2.00	12.00
Pct. Elections Covered	18,352	0.11	0.16	0.00	0.00	0.00	0.05	0.15	0.29	1.00
Employer Interference										
Pct. ULP Cases Upheld	19,575	0.45	0.31	0.00	0.00	0.23	0.43	0.62	1.00	1.00
Pct. Non-Election ULP Cases Upheld	14,007	0.41	0.31	0.00	0.00	0.18	0.39	0.58	1.00	1.00
Avg. Case Length (Days)	11,823	95.10	151.69	10.00	37.00	47.00	56.00	86.63	164.00	4,186.00
Avg. Challenged Ballots	11,823	2.00	6.57	0.00	0.00	0.00	0.75	2.00	4.32	257.50
Pct. Elections w/ Challenged Ballots	11,823	0.57	0.42	0.00	0.00	0.01	0.53	1.00	1.00	1.00

Notes: This table provides descriptive statistics for the analyses using the Craigslist identification strategy. The unit of observation is the county-year. *# Elections* is the number of union elections filed with the NLRB at the county-year level. *Population* is the county population. *# ISPs* is the number of Internet service providers in the county, following Djourelova et al. (2025). *# Newspapers Before Craigslist* is the number of daily newspapers headquartered in the county in the year before Craigslist entry. *Pct. Elections Covered* is the share of union elections in the county from 1990 to 2000 that received newspaper coverage, conditional on at least one election having taken place. *# Successful (Non-Successful) Elections* is the number of union elections in which the union received more (no more) than 50% of votes cast. *# Close Elections* is the number of elections with a vote share between 40% and 60%. *# High-Support (Low-Support) Elections* is the number of elections with a union vote share of 80% or above (at or below the 25th percentile, corresponding to 36%). *# Elections w/ High (Low) Eligible Voters* splits elections at the median number of eligible voters, which is 24. *Pct. ULP Cases Upheld* is the share of Unfair Labor Practice claims filed by employees that are upheld by the NLRB. *Pct. Non-Election ULP Cases Upheld* is the analogous measure restricted to ULP cases not related to union elections. *Avg. Case Length (Days)* is the average number of days between the petition to hold an election and the election itself. *Avg. Challenged Ballots* is the average number of challenged ballots per election. *Pct. Elections w/ Challenged Ballots* is the share of elections with at least one challenged ballot. Union election and ULP data are obtained from the NLRB. Newspaper data are obtained from the Editor & Publisher Yearbook, USNP, Gao et al. (2020), and Abernathy (2018). Control variable data are obtained from the Census and the Federal Communications Commission.

Table 4: Regression Results using the Border-County Identification Strategy

Dependent Variable: *# Elections*	(1)	(2)	(3)
Closure × *Post*	-0.089***	0.014	-0.040
	(0.023)	(0.055)	(0.033)
Closure × *Post* × *Closure Pre 1996*		-0.121**	
		(0.060)	
Closure × *Post* × *High Circulation*			-0.087*
			(0.047)
Controls	Yes	Yes	Yes
Fixed Effects:			
Stack-County FE	Yes	Yes	Yes
Stack-Year FE	Yes	Yes	Yes
Urban-Year FE	Yes	Yes	Yes
Cluster	County	County	County
Avg. # Elections Treat & Pre	5.495	5.495	5.596
Avg. Cross-Section Variable		0.687	0.292
Observations	43,314	43,314	42,096
Used Observations	32,099	32,099	31,164
Pseudo R-squared	0.756	0.756	0.756

Notes: This table reports coefficient estimates from stacked pseudo-Poisson maximum likelihood regressions. The dependent variable is the number of union elections at the county-year level. *Closure* equals one for counties with a newspaper closure and zero for bordering control counties. *Post* equals one for years at or after the newspaper closure. Column (1) reports the baseline estimate. In Column (2), *Closure* × *Post* is interacted with *Closure Pre 1996*, an indicator for newspaper closures occurring before 1996, when alternative news sources were more limited. In Column (3), *Closure* × *Post* is interacted with *High Circulation*, an indicator for closing newspapers with above 75th percentile pre-closure circulation. All specifications include county-by-cohort and year-by-cohort fixed effects, urban-by-year fixed effects, and controls for the percent of workers in manufacturing and the natural log of county population. The dataset is stacked by closure event, with each cohort covering five years before and ten years after the closure. *Avg. # Elections Treat & Pre* shows the mean of the dependent variable for treatment observations before the newspaper closure. Standard errors are clustered at the county level and t-statistics are reported in parentheses. All variables are defined in the notes to Tables 3 and 2. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels (two-tailed), respectively.

Table 5: Regression Results using the Craigslist Identification Strategy

Dependent Variable:	(1)	(2)	(3)	(4)	(5)
# Elections	Overall	Newspaper	No Newspaper	News Coverage	No News Coverage
Craigslist Entry	-0.485***	-0.743***	-0.084**	-1.585***	-0.004
	(0.106)	(0.175)	(0.039)	(0.368)	(0.155)
Difference (bootstrap SE):		-0.659 (0.176)		-1.581 (0.401)	
Controls	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Avg. Pre Effect	-0.120	-0.108	-0.118	-0.446	0.286
Avg. Effect (%)	-31.938	-28.765	-33.799	-29.712	-0.300
Used Observations	15,529	8,560	4,375	3,168	3,910

Notes: This table reports coefficient estimates from difference-in-differences regressions estimated using the heterogeneity-robust estimator of De Chaisemartin and D'Haultfœuille (2020). The dependent variable is the number of union elections at the county-year level. *Craigslist Entry* captures the average cumulative effect of Craigslist entry on union elections over the post-treatment period. *Avg. Pre Effect* reports the average pre-treatment placebo effect across the pre-treatment horizons, which serves as a test of parallel pre-trends; values close to zero indicate no evidence of differential pre-trends. *Avg. Effect (%)* converts the average cumulative effect to a percentage change relative to the pre-entry mean. Column (1) reports the baseline estimate for all treated counties. In Columns (2) and (3), treated counties are split based on whether a newspaper was headquartered in the county in the year before Craigslist entry (*Newspaper* vs. *No Newspaper*); control counties are not restricted. In Columns (4) and (5), treated counties are split based on whether any of the county's union elections in the five years before Craigslist entry received newspaper coverage (*News Coverage* vs. *No News Coverage*), conditional on the county having a newspaper in that window; control counties are not restricted.All specifications include county and year fixed effects and control for the natural log of county population and the number of Internet service providers. Standard errors are clustered at the county level and t-statistics are reported in parentheses. All variables are defined in the notes to Tables 3 and 2. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels (two-tailed), respectively.

Table 6: Effects of Weakened Newspapers on the News Environment

Panel A: Craigslist Entry

	(1)	(2)
Dependent Variable:	*# Articles*	*Net # Union Election Articles*
Craigslist Entry	-4,244.210**	-0.630
	(1,845.371)	(0.406)
Controls	Yes	Yes
County FE	Yes	Yes
Year FE	Yes	Yes
Avg. Pre Effect	-479.291	1.032
Avg. Effect (%)	-10.630	-12.819
Used Observations	6,583	6,583

Panel B: Newspaper Closures

	(1)	(2)
Dependent Variable:	*# Articles*	*Net # Union Election Articles*
Closure × *Post*	-2,707.908	-1.694**
	(3,015.583)	(0.686)
Controls	Yes	Yes
Fixed Effects:		
Stack-County FE	Yes	Yes
Stack-Year FE	Yes	Yes
Urban-Year FE	Yes	Yes
Cluster	County	County
Avg. Articles Treat & Pre	67,454.988	12.034
Observations	15,936	15,936
Adj. R-squared	0.8910	0.6410

Notes: This table reports coefficient estimates from difference-in-differences regressions of newspaper coverage on the weakening of the local news environment. The dependent variable in Column (1), *# Articles*, is the total number of articles published in a county-year available at newspapers.com. The dependent variable in Column (2), *Net # Union Election Articles*, is the number of articles covering union elections, identified by searching for [("NLRB" OR "National Labor Relations Board") AND "union" AND "election"], net of the coverage that the decline in NLRB elections alone would predict. Counties for which newspapers.com returned no articles in any year are excluded. Panel A uses the Craigslist identification strategy with the heterogeneity-robust estimator of De Chaisemartin and D'Haultfœuille (2020). *Craigslist Entry* captures the average cumulative effect of Craigslist entry over the post-treatment period. The sample is restricted to counties that eventually receive Craigslist, so that identification comes from variation in the timing of entry. *Avg. Pre Effect* reports the average pre-treatment placebo effect across the pre-treatment horizons, which serves as a test of parallel pre-trends; values close to zero indicate no evidence of differential pre-trends. *Avg. Effect (%)* converts the average cumulative effect to a percentage change relative to the pre-entry mean. All specifications in Panel A include county and year fixed effects and control for the natural log of county population and the number of Internet service providers. Panel B uses the border-county stacked specification, estimated by ordinary least squares (OLS). *Closure* equals one for counties with a newspaper closure and zero for bordering control counties, and *Post* equals one for years at or after the newspaper closure. The dataset is stacked by closure event, with each cohort covering five years before and ten years after the closure. All specifications in Panel B include county-by-cohort and year-by-cohort fixed effects, urban-by-year fixed effects, and controls for the percent of workers in manufacturing and the natural log of county population. *Avg. Articles Treat & Pre* shows the mean of the dependent variable for treatment observations before the newspaper closure. Standard errors are clustered at the county level and reported in parentheses. All variables are defined in the notes to Tables 3 and 2. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels (two-tailed), respectively.

Table 7: Effects of Changing News Landscapes by Election Characteristics

Panel A: Craigslist Entry

Dependent Variable:	(1) *# Successful Elections*	(2) *# Non-Successful Elections*	(3) *# High-Support Elections*	(4) *# Close Elections*	(5) *# Low-Support Elections*	(6) *Elections w/ Many Eligible Voters*	(7) *Elections w/ Few Eligible Voters*
Craigslist Entry	-0.154**	-0.204***	-0.087***	-0.060	-0.099***	-0.223***	-0.137**
	(0.050)	(0.035)	(0.022)	(0.039)	(0.024)	(0.042)	(0.043)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Avg. Pre Effect	-0.051	0.010	0.015	-0.057	0.033	-0.047	0.004
Avg. Effect (%)	-0.185	-0.299	-0.228	-0.167	-0.243	-0.277	-0.193
Used Observations	58,986	58,986	58,986	58,986	58,986	58,986	58,986

Panel B: Newspaper Closures

Dependent Variable:	(1) *# Successful Elections*	(2) *# Non-Successful Elections*	(3) *# High-Support Elections*	(4) *# Close Elections*	(5) *# Low-Support Elections*	(6) *Elections w/ Many Eligible Voters*	(7) *Elections w/ Few Eligible Voters*
Closure × *Post*	-0.077**	-0.108***	-0.121**	-0.082*	-0.124***	-0.067*	-0.109***
	(0.029)	(0.032)	(0.042)	(0.037)	(0.033)	(0.029)	(0.030)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stack-County FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stack-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Urban-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster	County	County	County	County	County	County	County
Avg. Dependent Variable Treat & Pre	3.422	2.880	1.909	1.765	2.076	2.961	3.372
Used Observations	26,795	27,021	19,433	22,306	22,580	28,349	25,237
Pseudo R-squared	0.687	0.629	0.590	0.527	0.561	0.642	0.679

Notes: This table reports coefficient estimates from difference-in-differences regressions examining whether the effect of weakening news landscapes is concentrated in particular types of union elections. Panel A uses the border-county stacked pseudo-Poisson maximum likelihood specification. Difference-in-coefficients tests indicate that the estimated effects are not statistically different across outcome pairs. The p-values are 0.440 for successful versus non-successful elections (Columns (1) and (2)), 0.472 for high-support versus close elections (Columns (3) and (4)), 0.959 for high-support versus low-support elections (Columns (3) and (5)), 0.310 for close versus low-support elections (Columns (4) and (5)), and 0.260 for elections with many versus few eligible voters (Columns (6) and (7)). Panel B uses the Craigslist identification strategy with the heterogeneity-robust estimator of De Chaisemartin and D'Haultfœuille (2020). In both panels, the dependent variable varies by column. *Avg. Dependent Variable Treat & Pre* shows the mean of the dependent variable for treatment observations before the newspaper closure. Standard errors are clustered at the county level and t-statistics are reported in parentheses. All variables are defined in the notes to Tables 2 and 3. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels (two-tailed), respectively.

Table 8: Effects of Weakening Newspapers on Employer Interference

Panel A: Craigslist Entry

Dependent Variable:	(1) *Pct. ULP Cases Upheld*	(2) *Pct. Non-Election ULP Cases Upheld*	(3) *Avg. Case Length (Days)*	(4) *Avg. Challenged Ballots*	(5) *Pct. Elections w/ Challenged Ballots*
Craigslist Entry	-0.008	0.001	-1.672	-0.114	-0.038
	(0.014)	(0.014)	(7.990)	(0.315)	(0.024)
Controls	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Avg. Pre Effect	-0.002	-0.008	-15.890	-0.104	-0.037
Avg. Effect (%)	-0.019	0.003	-0.016	-0.053	-0.090
Used Observations	18,388	13,851	9,877	9,877	9,877

Panel B: Newspaper Closures

Dependent Variable:	(1) *Pct. ULP Cases Upheld*	(2) *Pct. Non-Election ULP Cases Upheld*	(3) *Avg. Case Length (Days)*	(4) *Avg. Challenged Ballots*	(5) *Pct. Elections w/ Challenged Ballots*
Closure × *Post*	0.016	-0.009	0.010	0.074	-0.025
	(0.026)	(0.049)	(0.035)	(0.068)	(0.024)
Controls	Yes	Yes	Yes	Yes	Yes
Stack-County FE	Yes	Yes	Yes	Yes	Yes
Stack-Year FE	Yes	Yes	Yes	Yes	Yes
Urban-Year FE	Yes	Yes	Yes	Yes	Yes
Cluster	County	County	County	County	County
Avg. Dependent Variable Treat & Pre	0.378	0.363	105.195	2.206	0.565
Used Observations	18,608	8,008	16,574	13,839	15,640
Pseudo R-squared	0.061	0.065	0.627	0.456	0.100

Notes: This table reports coefficient estimates from difference-in-differences regressions examining whether weakening news landscapes affect employer interference in union elections. Panel A uses the border-county stacked pseudo-Poisson maximum likelihood specification. Panel B uses the Craigslist identification strategy with the heterogeneity-robust estimator of De Chaisemartin and D'Haultfœuille (2020). In both panels, the dependent variable varies by column. *Avg. Dependent Variable Treat & Pre* shows the mean of the dependent variable for treatment observations before the newspaper closure. Standard errors are clustered at the county level and reported in parentheses. All variables are defined in the notes to Tables 3 and 2. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels (two-tailed).

Online Appendix for:

Ledes and Labor: How Local News Affects Union Organizing

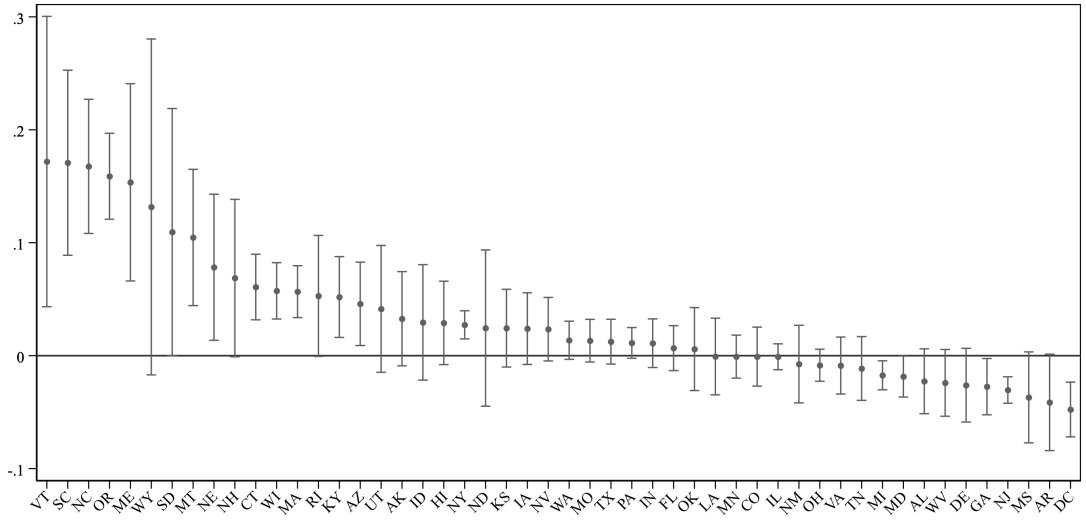
Matthew Johnson
Duke University
& NBER

Sinja Leonelli
NYU Stern

Asa Royal
Harvard Kennedy School

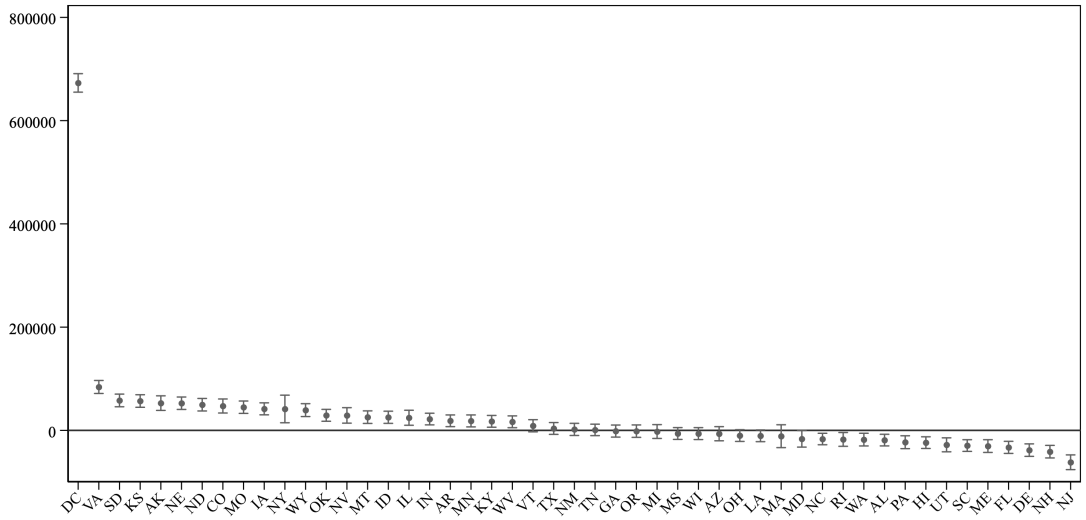
August 20, 2026

Figure OA9: Geographic Variation in News Coverage of Union Elections



Notes: This figure displays state fixed effect estimates from an OLS regression of a binary indicator for whether a union election received newspaper coverage on election-level and county-level characteristics and state fixed effects, omitting California as the baseline. The sample includes a randomly selected 50% subset of union elections from 1990 to 2022. The figure displays coefficient estimates and 90% confidence intervals.

Figure OA10: Geographic Variation in Total Circulation of Newspapers



Notes: This figure displays state fixed effect estimates from an OLS regression of total newspaper circulation on county-level characteristics (*Log(Population)* and *Urban* county indicator) and state fixed effects, omitting California as the baseline. The sample includes data from 1972 to 2004. The figure displays coefficient estimates and 90% confidence intervals.

Table OA9: Craigslist Identification Strategy: Robustness

Panel A. Sample Selection Robustness

Dependent Variable:	(1)	(2)
# Elections	Broad Entry Definition	Exclude Never Treated
Craigslist Entry	-0.296***	-0.485***
	(0.046)	(0.106)
Controls	Yes	Yes
Fixed Effects:		
County FE	Yes	Yes
Year FE	Yes	Yes
Avg. Pre Effect	-0.050	-0.120
Avg. Effect (%)	-22.398	-31.938
Used Observations	57,922	15,529

Panel B. Methodology Robustness

Dependent Variable:	(1)	(2)	(3)
# Elections	PPML	OLS Unrestricted	OLS Restricted to PPML Sample
Craigslist Entry × *Post*	-0.137*	-0.284***	-0.292***
	(0.071)	(0.036)	(0.051)
Fixed Effects:			
Stack FE	No	No	No
Stack-Year FE	Yes	Yes	Yes
Stack-County FE	Yes	Yes	Yes
Stack-Year-Population FE	Yes	Yes	Yes
Stack-Year-ISPs FE	Yes	Yes	Yes
Stack-Year-Urban FE	No	No	No
Cluster	County	County	County
Weights	Stack Treat-Control	Stack Treat-Control	Stack Treat-Control
Avg. # Elections Treat & Pre	2.096	1.590	2.096
Used Observations	177,072	283,504	177,072
Pseudo R-sq. / R-sq.	0.605	0.807	0.807

Notes: This table reports robustness checks for the Craigslist Identification Strategy. Panel A reports coefficient estimates from difference-in-differences regressions estimated using the heterogeneity-robust estimator of De Chaisemartin and D'Haultfœuille (2020). The dependent variable is the number of union elections at the county-year level. *Craigslist Entry* captures the average cumulative effect of Craigslist entry on union elections over the post-treatment period. *Avg. Pre Effect* reports the average pre-treatment placebo effect across the pre-treatment horizons, which serves as a test of parallel pre-trends; values close to zero indicate no evidence of differential pre-trends. *Avg. Effect (%)* converts the average cumulative effect to a percentage change relative to the pre-entry mean. Column (1) defines treatment using a broad measure of Craigslist market entry, while Column (2) restricts the sample to counties eventually treated by Craigslist entry. anel B replicates the analysis using stacked difference-in-differences method. Column (1) reports Poisson pseudo-maximum likelihood (PPML) estimates, Column (2) reports OLS on the full estimation sample, and Column (3) reports OLS estimates restricted to the PPML estimation sample. *Avg. # Elections Treat & Pre* shows the mean of the dependent variable for treatment observations before the newspaper closure. Standard errors are clustered at the county level and t-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels (two-tailed), respectively.

Table OA10: Border-County Identification Strategy: Robustness

Panel A. Sample Selection Robustness

Dependent Variable:	(1)	(2)	(3)
# Elections	All Closures	Treated Once	Within State
Closure × Post	-0.033*	-0.058**	-0.043*
	(0.019)	(0.029)	(0.026)
Controls	Yes	Yes	Yes
Fixed Effects:			
Stack FE	No	No	No
Stack-County FE	Yes	Yes	Yes
Stack-Year FE	Yes	Yes	Yes
Urban-Year FE	Yes	Yes	Yes
Cluster	County	County	County
Avg. # Elections Treat & Pre	13.248	5.051	4.926
Used Observations	41,280	23,598	391,908
Pseudo R-squared	0.846	0.708	0.743

Panel B. Regression Specification Robustness

Dependent Variable:					
# Elections	(1)	(2)	(3)	(4)	(5)
Closure × Post	-0.087***	-0.089***	-0.084***	-0.092***	-0.091**
	(0.024)	(0.023)	(0.024)	(0.024)	(0.043)
Pct. Manufacturing	0.829***	0.621**	0.438	0.654**	0.482
	(0.293)	(0.289)	(0.294)	(0.292)	(0.404)
Log(Establishments)	0.525***				
	(0.099)				
Log(Population)		0.797***			0.857***
		(0.132)			(0.191)
Log(Employment)			0.355***		
			(0.074)		
Fixed Effects:					
Stack FE	No	No	No	No	No
Stack-County FE	Yes	Yes	Yes	Yes	Yes
Stack-Year FE	Yes	Yes	Yes	Yes	Yes
Urban-Year FE	Yes	Yes	Yes	Yes	Yes
Cluster	County	County	County	County	County
Exposure	None	None	None	*Employment*	None
Weights	None	None	None	None	*Population*
Avg. # Elections Treat & Pre	5.415	5.495	5.541	5.541	5.495
Used Observations	32,096	32,099	32,260	32,260	32,099
Pseudo R-squared	0.755	0.756	0.756	0.756	0.821

Notes: This table reports coefficient estimates from stacked pseudo-Poisson maximum likelihood regressions. The dependent variable is the number of union elections at the county-year level. *Closure* equals one for counties with a newspaper closure and zero for bordering control counties. *Post* equals one for years at or after the newspaper closure. Panel A presents sample selection robustness checks. Column (1) includes all newspaper closures rather than restricting the sample to impactful closures, while maintaining the remaining sample selection criteria. Column (2) restricts the sample to counties with a single closure event over the pre- and post-treatment periods. Column (3) uses counties within the same state, rather than bordering counties, as the control group. Panel B presents robustness checks for the main Border-County Identification Strategy specification using alternative sets of control variables (Columns (1)–(3)) and alternative exposure and weighting definitions (Columns (4) and (5)). *Avg. # Elections Treat & Pre* shows the mean of the dependent variable for treatment observations before the newspaper closure. Standard errors are clustered at the county level and t-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels (two-tailed), respectively.

Table OA11: Border-County Identification Strategy: Additional Tests of Employer Interference Mechanism

Panel A. State-Level Anti-Retaliation Laws

Dependent Variable: *# Elections*	(1)	(2)	(3)
Closure × *Post*	-0.089**	-0.093***	-0.083**
	(0.036)	(0.028)	(0.037)
Closure × *Post* × *Anti-Retaliation Protection*	0.000		
	(0.048)		
Closure × *Post* × *Good-Faith Exception*		-0.001	
		(0.047)	
Closure × *Post* × *Anti-Retaliation Protection or Good-Faith Exception*			-0.010
			(0.048)
Controls	Yes	Yes	Yes
Fixed Effects:			
Stack-County FE	Yes	Yes	Yes
Stack-Year FE	Yes	Yes	Yes
Urban-Year FE	Yes	Yes	Yes
Cluster	County	County	County
Avg. # Elections Treat & Pre	5.495	5.325	5.495
Avg. Cross-Section Variable	0.398	0.112	0.415
Used Observations	32,099	31,961	32,099
Pseudo R-squared	0.756	0.754	0.756

Panel B. County Political Alignment & State Right-to-Work Regulation

Dependent Variable:	(1) Dem.	(2) Rep.	(3) Purple	(4) Dem.	(5) Rep.	(6) Right-to-Work	(7) Non-Right-to-Work
# Elections	County	County	County	Plurality Party	Plurality Party	State	State
Closure × *Post*	-0.216***	-0.071	-0.092	-0.113**	-0.044	-0.032	-0.105***
	(0.065)	(0.047)	(0.066)	(0.056)	(0.037)	(0.055)	(0.026)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fixed Effects:							
Stack-County FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stack-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Urban-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster	County	County	County	County	County	County	County
Avg. # Elections Treat & Pre	9.396	3.770	5.667	7.743	4.081	2.630	7.296
Used Observations	4,628	13,300	6,652	8,341	19,166	10,720	20,738
Pseudo R-squared	0.751	0.679	0.699	0.777	0.681	0.648	0.760

Notes: This table reports coefficient estimates from stacked pseudo-Poisson maximum likelihood regressions. The dependent variable is the number of union elections at the county-year level. *Closure* equals one for counties with a newspaper closure and zero for bordering control counties. *Post* equals one for years at or after the newspaper closure. Panel A, Column (1) *Closure* × *Post* is interacted with *Anti-Retaliation Protection*, an indicator for the presence of state-level anti-retaliation laws, which can grant protections to workers who report violations and the size of potential fines imposed on retaliating employers. In Column (2), *Closure* × *Post* is interacted with *Good-Faith Exception*, an indicator for whether (as of 1999) a state had passed the good faith exception to at-will employment.The good-faith exception is one of three "wrongful discharge laws" adopted through court decisions that put limits on employers' ability to fire at-will workers. In Column (3), *Closure* × *Post* is interacted with *Anti-Retaliation Protection or Good-Faith Exception*, an indicator for the presence of at least one of these state-level laws. https://www.journals.uchicago.edu/doi/epdf/10.1086/732302. Panel B reports estimates separately by county political affiliation and Right-To-Work regulation. Column (1) includes county-years in which the Democratic Party's vote share exceeds the Republican Party's vote share by at least 10 percentage points. Column (2) is defined analogously for Republican-leaning counties. Column (3) includes county-years with vote shares falling between these thresholds. Column (4) includes county-years in which the Democratic Party received the largest vote share. Column (5) is defined analogously for the Republican Party. Columns (6) and (7) report estimates for counties located in states with and without Right-to-Work laws in place prior to the closure event, respectively. Difference-in-coefficients tests indicate that the estimated effects are statistically different between Democratic and Purple counties (Columns (1) and (3)), with a p-value of 0.023. By contrast, the estimated effects are not statistically different between Republican and Purple counties (Columns (2) and (3)), Democratic- versus Republican-plurality counties (Columns (4) and (5)), or counties located in states with versus without Right-to-Work laws prior to the closure event (Columns (6) and (7)), with corresponding p-values of 0.316, 0.359, and 0.178, respectively.*Avg. # Elections Treat & Pre* shows the mean of the dependent variable for treatment observations before the newspaper closure. Standard errors are clustered at the county level and t-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels (two-tailed), respectively.

Table OA12: Border-County Identification Strategy: High-Circulation Definition

Dependent Variable: *# Elections*	(1)	(2)	(3)	(4)	(5)	(6)
Closure × Post	-0.040	-0.013	-0.047*	-0.035	0.225	-0.073***
	(0.033)	(0.052)	(0.026)	(0.033)	(0.192)	(0.025)
Baseline: Closure × Post × 75% Percentile Avg. Circulation	-0.087*					
	(0.047)					
Closure × Post × 50% Percentile Avg. Circulation		-0.095				
		(0.058)				
Closure × Post × 90% Percentile Avg. Circulation			-0.136**			
			(0.058)			
Closure × Post × 75% Percentile USNP County-Year Avg. Circulation				-0.093**		
				(0.047)		
Closure × Post × Log(Avg. Circulation)					-0.030	
					(0.019)	
Closure × Post × 75% Percentile Avg. Circulation Per Capita						-0.083
						(0.071)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fixed Effects:						
Stack-County FE	Yes	Yes	Yes	Yes	Yes	Yes
Stack-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Urban-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Cluster	County	County	County	County	County	County
Avg. # Elections Treat & Pre	5.596	5.596	5.596	5.603	5.596	5.596
Used Observations	31,164	31,164	31,164	31,099	31,164	31,164
Pseudo R-squared	0.756	0.756	0.756	0.756	0.756	0.756

Notes: This table reports robustness checks for alternative definitions of the *High Circulation* indicator. Columns (1) and (2) use circulation values for newspaper closures included in the main analysis and define high circulation using the 50th and 90th percentiles, respectively. Columns (3) and (4) apply the same approach using *Per Capita Average Circulation*. Column (5) uses *Log(Average Circulation)*. Columns (6) and (7) use circulation values from USNP for all newspapers. For newspaper closures occurring after 2004, circulation values are extrapolated using the linear circulation trend of newspaper closures. *Avg. # Elections Treat & Pre* shows the mean of the dependent variable for treatment observations before the newspaper closure. Standard errors are clustered at the county level and t-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels (two-tailed), respectively.