

# **Who Watches the Watchmen?**

## **Local News and Police Behavior in the United States\***

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November 10, 2020

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### **Abstract**

Do the police respond to media coverage of crime? In this paper, we study how a decline in news coverage of local crime affects municipal police departments in the United States. Exogenous variation in local news is from acquisitions of local TV stations by a large broadcast group, Sinclair. To control for other content changes that might be induced by Sinclair but are not municipality-specific, we implement a triple differences-in-differences design that interacts the timing of the acquisitions with an indicator for whether the municipality is covered by the news at baseline, a proxy for exposure to the local news shock. Using a unique dataset of almost 300,000 newscasts, we show that stations that are acquired by Sinclair decrease their coverage of local crime. This matters for policing: after Sinclair enters a media market, covered municipalities experience 10% lower violent crime clearance rates relative to non-covered municipalities. Finally, we provide evidence to suggest that the effect is consistent with a decrease in the salience of crime in the public opinion.

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# 1 Introduction

Law enforcement is one of the most important functions of U.S. local governments, yet we have a limited understanding of what factors shape the incentive structure of police departments (Owens (2020)). Recent years have seen an increased debate on the extent to which civil society is able to influence the behavior of police officers. In this paper, we investigate a force that might have a role to play in this respect: local media.

Local media, and local news in particular, influence the behavior of public officials through two main channels. First, by providing information to the public, the news facilitates monitoring (Ferraz and Finan (2011), Lim et al. (2015), Snyder Jr and Strömberg (2010)). This is especially true at the local level, where the news garners high levels of trust (Knight Foundation (2018)) and serves as one of the few democratic watchdogs (Rolnik et al. (2019)). Second, what news the media cover influences perceptions of topics that are salient in the political debate (DellaVigna and Kaplan (2007), Martin and Yurukoglu (2017), Mastrorocco and Minale (2018)), potentially affecting the demand for specific policies (Galletta and Ash (2019)).

What makes local news uniquely positioned to influence police behavior, perhaps even above and beyond that of other public officials, is the fact that it focuses on a topic closely intertwined with policing: crime. In local TV news – the focus of our study – crime is the most popular topic, appearing in more than 20% of all local stories. Considering the highly decentralized nature of law enforcement in the United States, we argue that this makes studying the relationship between local news and the police first order.

We study how changes in TV news coverage of local crime impact the behavior of police officers. Our proxy for police behavior are clearance rates, i.e. crimes cleared over total crimes.<sup>1</sup> To get exogenous variation in news content, we exploit the fact that in the last ten years the local TV market has seen a large increase in concentration driven by broadcast groups acquiring high numbers of local TV stations, and that acquisitions are likely to affect content (Stahl (2016)). We focus in particular on the most active group in this sense: Sinclair.

Sinclair acquisitions affect content in two ways. First, Sinclair reduces local news in favor of a national focus (Martin and McCrain (2019)). This gives us variation in news coverage of local crime, which is the change in content we are interested in studying. In addition to this, Sinclair – a right-leaning media group – also makes content more conservative. To control for this, we

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<sup>1</sup>More precisely, clearance rates are defined as total number of crimes cleared by arrest or exceptional means over total number of crimes. A crime is considered cleared if at least one person has been arrested, charged, and turned over for prosecution or if the offender has been identified, but external circumstances prevent an arrest. Clearance rates are highly sensitive to what resources are allocated to investigations and have often been used by economists to study police behavior (see, among others, Mas (2006), Shi (2009), and Premkumar (2020)).

make use of the fact that all households in a media market receive the same television offerings.<sup>2</sup> This means that once Sinclair enters a media market, all municipalities experience its conservative messaging. However, only some municipalities are exposed to the shock in news coverage of local crime.

Our proxy for exposure is the baseline probability that a municipality appears in the news. The intuition is that the decline in local coverage driven by acquisitions should only matter for municipalities that are likely to appear in the news in the first place (i.e. covered municipalities). Instead, municipalities that are never in the news (i.e. non-covered municipalities) should not experience any change and, as a result, function as our control group. More precisely, we define covered municipalities as municipalities mentioned in the news more than the median municipality in 2010.

Our empirical strategy is a triple differences-in-differences design that combines variation from the staggered timing of Sinclair acquisitions with cross-sectional variation across municipalities in whether they are covered by the news at baseline. For this to identify a causal effect, it must be the case that covered and non-covered municipalities are on parallel trends. We provide evidence supporting this assumption using an event study specification that allows the relative effect of Sinclair in covered and non-covered municipalities to vary over time.

We begin by characterizing in detail how Sinclair acquisitions affect coverage of local crime. We do so using a novel dataset of transcripts of almost 9.5 millions stories in 300,000 newscasts. These data allow us track news coverage of 323 stations weekly from 2010 to 2017, which represents a significantly larger time and geographic coverage with respect to previous studies of local TV news content (see, for example, [Moskowitz \(Forthcoming\)](#)).

We use these data to quantify the change in coverage of local crime induced by Sinclair acquisitions. To do so, we identify crime stories using a pattern-based sequence-classification method that identifies a story as being about crime if it contains a "crime bigram." That is, if it contains two word combinations (i.e. bigrams) that are much more likely to appear in crime-related stories of the Metropolitan Desk Section of the New York Times than in non-crime related ones. In addition, we assign stories to municipalities based on mentions of the municipality's name.

We find that ownership matters for content: once acquired by Sinclair, local TV stations decrease news coverage of local crime. In particular, covered municipalities are 2.2 percentage points less likely to be mentioned in a crime story after a station gets acquired by Sinclair compared to non-covered municipalities. The effect is significant at the 1% level and economically important, corresponding to almost 25% of the outcome mean in 2010. Examining the timing of content changes,

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<sup>2</sup>A media market is a region where the population receives the same television and radio station offerings. By definition, each municipality belongs to a specific media market. There are 210 media markets in the United States. [Section 2.1](#) provides further details.

we find a reduction in local crime coverage in the year that immediately follows the acquisition, with the effect increasing over time. Other stations in the same media market do not change their crime coverage after Sinclair entry: the main result is explained by an editorial decision of Sinclair.

How does the change in news coverage of local crime impact policing? We estimate that after Sinclair enters a media market, covered municipalities experience 4.5 percentage points lower violent crime clearance rates relative to non-covered municipalities. The effect is precisely estimated, and corresponds to 10% of the baseline mean. This shows that there is scope for external forces to exert an influence on police behavior, despite the fact that police officers are protected by strong union contracts and civil service laws.

Using an event study specification, we find no difference between covered and non-covered municipalities in the four years before Sinclair enters the media market. The effect appears within the first year after treatment and becomes smaller over time, which is potentially consistent with viewers learning that the signal on local crime that they receive from Sinclair is biased, and adjusting for it based on their own observation or other media sources.

In contrast, property crime clearance rates do not experience a similar decline. This heterogeneity can be explained by the fact that local TV news has a clear violent crime focus. We document this in our data by training a classifier model to identify whether local crime stories are about a violent or a property crime. We show that 75% of the stories are about a violent crime and only 17% are about a property crime, a difference which is even starker if we consider that property crimes are more common by orders of magnitude. Our unique content data underpin one of the most novel contributions of this paper: the ability to characterize in detail the content shock and precisely map content into the real-word outcomes we are interested in studying.

The effect on the violent crime clearance rate is not explained by changes in violent crime rates. However, we find that, after Sinclair entry, covered municipalities have higher property crime rates relative to non-covered municipalities. This can be explained by a decreased incapacitation or deterrence effect due to the lower clearance rates. Finally, we do not find evidence of the decrease in crime coverage affecting police violence, although we cannot draw strong conclusions because of the imprecision of our estimates.

We propose the following explanation for our results. When stories about a municipality's violent crimes are less frequent, crime loses salience in the eyes of local citizens.<sup>3</sup> The police find themselves operating in a political environment where there is less pressure to clear violent crimes. As

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<sup>3</sup>Crime news are one of the most important determinants of salience of crime, more so than actual crime rates (see Ramirez-Alvarez (Forthcoming), Shi et al. (2020) and Velásquez et al. (2020)). In addition, Mastorocco and Minale (2018) show using data from Italy that, when exposed to less crime related news, individuals become less concerned about crime.

a result, they might reallocate their resources away from clearing these crimes in favor of other policing activities. Two pieces of evidence are consistent with this explanation. First, we use data on monthly Google searches containing the terms "crime" and "police" to show that indeed, after Sinclair enters a media market, the salience of these issues decreases. Second, we note that the key audience of local news, individuals over 55 years of age, are also an important interest group for local politics and law enforcement in particular (Goldstein, 2019). Consistent with this, we find that the effect is driven precisely by those municipalities where individuals over 55 years of age constitute a larger share of the population. We interpret this evidence as supporting the idea of a feedback mechanism from salience to police behavior through citizens' and politicians' pressure.

Alternatively, it is possible that the effect might be explained by explicit monitoring of the police. If police officers anticipate a lower probability of appearing in the news if they fail to solve a crime, they might shirk. We find this explanation to be less convincing because the decline in crime reporting is almost entirely driven by stories about crime incidents as opposed to stories that are arrest-related, thus not changing the probability of delays in solving a crime being the subject of a story. The same result also suggests that it is unlikely that perceptions of police are negatively affected by the content change, which makes it unclear why community cooperation with the police should be affected by Sinclair entry.

A long tradition in the economics of media shows that the media influence the behavior of public officials. By providing information on current events, the media performs a monitoring function (Ferraz and Finan (2011), Lim et al. (2015), Snyder Jr and Strömberg (2010)). In addition, media content impacts individuals' beliefs and voting decisions (DellaVigna and Kaplan (2007), Martin and Yurukoglu (2017), Mastrorocco and Minale (2018), Durante et al. (2019)). We contribute to this literature in two ways. First, our extensive content data, which span multiple years and include a large share of TV stations, allow us to precisely document and quantify the content changes and their timing following acquisitions. As a result we can exactly map out how content influences policy. Second, in the discussion of the mechanisms, we provide evidence on how media-induced changes in perceptions may feed back into the behavior of public officials. The two papers that are closest to ours in this respect are Galletta and Ash (2019) and Ash and Poyker (2019), which study how FOX News influences local government spending and judges' sentencing decisions; they also show that the way in which the media influence preferences might have a policy impact. We add to these papers by studying how local TV news content might influence police behavior through crime perceptions.

One of our most policy-relevant findings is that ownership of local TV stations affects content in a way that is consequential for public officials: the trend of increasing concentration, which currently characterizes not only the local TV industry but also other media types such as newspapers

(Hendrickson (2019)), might have tangible externalities (Prat (2018), Stahl (2016)). This questions the use of standard criteria in competition and antitrust regulation of media industries (Rolnik et al. (2019)). Consistent with Martin and McCrain (2019), we confirm that Sinclair acquisitions lead to a crowding out of local news in favor of national stories. We add to this paper by investigating the consequences of this shift for the behavior of police officers.

Finally, we contribute to the growing literature aimed at understanding the determinants of police behavior (see, among others, Ba (2018), Chalfin and Goncalves (2020), Dharmapala et al. (Forthcoming), Grosjean et al. (2020), Mas (2006), McCrary (2007), Stashko (2020)) and the role played by institutional level incentives in particular (Goldstein et al. (2020), Harvey (2020), Makowsky and Stratmann (2009)). To the best of our knowledge, ours is one of the first studies to provide systematic causal evidence on how crime news influences the police. It is particularly interesting to contrast our finding that a reduction in news coverage of local crime decreases clearance rates with the evidence that increases in monitoring following scandals can sometimes have the same effect (Ba and Rivera (2019), Premkumar (2020), Devi and Fryer Jr (2020)). The two results can be rationalized by the attention change being of a very different nature: negative outside pressure following scandals is likely to be very different than increases in crime salience driven by media coverage of crime incidents.

The remainder of the paper proceeds as follows. In the next section we present the background, in Section 3 the data, and in Section 4 the empirical strategy. The main results of the effect of Sinclair on local news are in Section 5, and the results of the effect of Sinclair on police behavior are in Section 6. Section 7 discusses potential mechanisms. Finally, we conclude in Section 8.

## 2 Background

### 2.1 Institutional Setting

A media market, also known as designated market area (or DMA), is a region where the population receives the same television and radio station offerings. Media markets are defined by Nielsen based on households' viewing patterns: a county is assigned to the media market if that media market's stations achieve the highest viewership share (Nielsen (2019)).<sup>4</sup> As a result, media markets are non-overlapping geographies. In each market, we focus on stations that are affiliated to one of the big-four networks (ABC, CBS, FOX, and NBC) as they tend to take up most of the

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<sup>4</sup>Counties can be split across media markets, but this happens rarely in practice. As noted by Moskowitz (Forthcoming), only 16 counties out of 3130 are split across media markets. Similarly, while media markets are redefined by Nielsen every year, only 30 counties changed their media market affiliation between 2008 and 2016.

viewership and be the ones producing local newscasts.<sup>5</sup> In fact, 85% of local TV stations that do so belong to this category (Papper, 2017).

## 2.2 Local TV News

Although its popularity has been declining in recent years, local TV news remains a central source of information for many Americans. In a 2017 Pew Research Center report, 50% of U.S. adults mentioned often getting their news from television, a higher share than those turning to online sources (43%), the radio (25%), or print newspapers (18%) (Gottfried and Shearer, 2017). Among TV sources, news stories airing on local TV stations have larger audiences than those on cable or on national networks (Matsa, 2018).

In addition, the overarching narrative regarding the decline in TV news masks substantial heterogeneity. First, the decrease in viewership has been limited outside top-25 media markets (Wenger and Papper, 2018b). In fact, local TV news still plays an important role in small and medium sized markets, both in terms of viewership and because there tend to be fewer outlets such as newspapers producing original news focusing on the area (Wenger and Papper, 2018a).

Second, the decline has been concentrated in younger demographics, while the core audience of local TV news – those above 50, who constitute 73% of the viewership – has not been affected (Wenger and Papper, 2018a). Considering that local TV news also tends to garner the highest levels of trust from the public (Mitchell et al., 2016), it constitutes an important source that has the potential to shape public information and perceptions.

What is local TV news about? Our novel content data allow us to provide a precise answer to the question. Newscasts of local TV stations include both national and media market-specific stories. As we show in [Figure I Panel \(a\)](#), approximately 30% of stories are specific to the media market, in that they mention at least one same media market municipality with more than 10,000 people. Crime is a prime subject of local TV news: 22% of local stories are crime-related (13% overall).<sup>6</sup>

To have a more complete picture of the breakdown of topics covered in local TV news, we also train an unsupervised LDA model with five topics on the 1.8 million local stories in our content data.<sup>7</sup> In [Figure I Panel \(b\)](#), we show the average topic shares across all local news stories. Again, the most

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<sup>5</sup>Networks are publishers that distribute branded content. Affiliated stations, although under separate ownership, carry the television lineup offered by the network while also producing original content. With few exceptions, each network has a single affiliate by media market.

<sup>6</sup>We discuss in detail the content data and the methodology we use to identify local stories and crime stories in the following section.

<sup>7</sup>[Appendix Figure I](#) shows word clouds with the 50 words that have the highest weight for the five topics, which can be easily identified to be related to crime, events (also possibly a filler topic), politics, weather, and sports.

covered topic is crime (with a topic share of 26%), followed by events (23%), and politics (21%). Weather and sports also appear in local stories, although to a lesser extent. Given the crime focus of TV newscasts, studying the relationship between local news and police departments appears to be first order.

## 2.3 The Sinclair Broadcast Group

Since 2010, the local TV market has seen the emergence of large broadcast groups owning a significant share of local TV stations ([Matsa, 2017](#)). We focus on one of the most active players in the local TV market: the Sinclair Broadcast Group. [Figure II](#) shows the number of local TV stations under Sinclair control monthly from 2010 to 2017. Sinclair expanded from 33 stations in January 2010 to 117 stations in December 2017, which corresponds to about 14% of all big-four affiliates. As shown in [Figure III](#), there have been acquisitions in media markets across the United States, although Sinclair was particularly active in medium-sized media markets.

With respect to other broadcast groups, Sinclair holds a right-leaning political orientation (see, among others, [Kolhatkar \(2018\)](#), [Miho \(2020\)](#), and [Fahri \(2017\)](#)) and it appears to be particularly interested in controlling the messaging of its stations ([Fortin and Bromwich \(2018\)](#)). Importantly, after acquisitions, stations maintain their call sign, network affiliation, and news anchors: it might take time for viewers to realize that content has changed.

Existing research supports the anecdotal evidence. [Martin and McCrain \(2019\)](#) show using a differences-in-differences design that when Sinclair acquired the Bonten Media Group in 2017, the ideological slant of Bonten stations moved to the right. [Miho \(2020\)](#) shows that Sinclair's conservative leaning might have real word effects, with exposure to Sinclair-owned stations increasing the Republican vote share in presidential elections. In addition, [Martin and McCrain \(2019\)](#) also show that Sinclair acquisitions increase national coverage mostly at the expense of local stories. These content changes have limited negative effects on viewership, at least in the short run.

## 2.4 Municipal Police Departments

Law enforcement in the United States is highly decentralized. Municipal police departments are the primary law enforcement agencies in incorporated municipalities: they are responsible for responding to calls for service, investigating crimes, and engaging in patrol within the municipality's boundaries. Municipal police departments are lead by a commissioner or chief that is generally appointed (and removed at will) by the head of the local government. For more details on the functioning of law enforcement agencies in the United States see [Appendix A](#).

### 3 Data and Measurement

This paper combines multiple data sources.

**Station Data.** Our starting sample are 835 full-powered commercial TV stations that are affiliated to one of the big four networks (ABC, CBS, FOX, and NBC).<sup>8</sup> Information on the market served by each station and yearly network affiliation 2010-2017 is from BIA/Kelsey, an advisory firm focusing on the media industry.

**Sinclair Ownership and Control.** Information on Sinclair control is from the group's annual reports to shareholders. In particular, we collect information on the date on which Sinclair took control over the station's programming. When the annual reports do not allow us to determine the exact date of take-over, we recover this information from the BIA/Kelsey data, which include the full transaction history of all stations in the sample.<sup>9</sup> We consider stations to be controlled by Sinclair if they are owned and operated by the Sinclair Broadcast Group, if they are owned and operated by Cunningham Broadcasting, or if Sinclair controls the station's programming through a local marketing agreement.<sup>10</sup> We use Sinclair acquisitions to refer to Sinclair control over the station's content determined by any of these instances, unless otherwise specified.<sup>11</sup>

**Newscast Transcripts.** To study how Sinclair acquisitions affect content, we use transcripts of local TV newscasts from ShadowTV, a media monitoring company. For each station, we have the closed caption transcripts of all evening newscasts (5-9pm) for a randomly selected day per week. The data cover 323 (39%) stations in 112 media markets from 2010 to 2017, for a total of 291,323 newscasts. We segment each transcript into separate stories using an automated procedure based on content similarity across sentences described in detail in [Appendix B](#), which gives us 9.5m separate stories.

We use the segmented transcripts to measure whether a municipality appears in a crime story. We identify crime stories about a municipality using the following procedure:

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<sup>8</sup>As discussed in [Section 2.1](#), this choice is motivated by the fact that these stations tend to have the largest viewer shares and produce their own newscasts.

<sup>9</sup>We use annual reports as our primary source because we are interested in Sinclair control of a station's programming in addition to outright ownership, which the BIA/Kelsey data is limited to. In particular, the BIA/Kelsey data does not report information on local marketing agreements under which Sinclair effectively operates the stations while not owning it.

<sup>10</sup>Sinclair has a controlling interest in Cunningham Broadcasting, although it does not have a majority of voting rights. The strong ties between Sinclair and Cunningham are also evidenced by the fact that as of the end of 2017, the estate of Carolyn C. Smith owned all of the voting stock of the Cunningham Stations. She is the mother of the two controlling shareholders of Sinclair. Under a local marketing agreement, Sinclair operates the station therefore controlling its programming.

<sup>11</sup>The large majority of stations under Sinclair control are owned and operated by Sinclair directly. Allowing for a more comprehensive definition of control sets a different treatment date for around 10 stations out of the 121 that are ever controlled by Sinclair ([Appendix Table I](#), column (1)).

1. We define a story to be local to a given municipality if the name of the municipality appears in it. If multiple municipalities' names appear in the same story, we define the story to be local to all of them.<sup>12</sup> For each station, we search the name of all municipalities with at least 10,000 people according to the 2010 Census that are located in the media market the station belongs to. We exclude smaller municipalities as they are likely to receive a negligible share of overall coverage.
2. We identify whether a story is about crime using a pattern-based sequence-classification method. The method defines a story to be about crime if it contains a bigram that is much more likely to appear in an external crime-related library, as opposed to a non crime-related one, and is similar to the one used by [Hassan et al. \(2019\)](#) to identify firms' exposure to political risk from quarterly earnings calls.

The crime-related training library we consider are articles from the Metropolitan Desk of the New York Times with the tags Crime Statistics, Criminal Offenses, or Law Enforcement 2010-2012, that we download from Factiva. The non crime-related training library is composed of all Metropolitan Desk articles without those tags over the same period. Each library is composed of all adjacent two word combinations (i.e. bigrams) contained in the articles. We focus on bigrams because they tend to convey more information than single words. We remove punctuation and stop words and lemmatize the remaining words using WordNet's lemmatizer. We use articles from the New York Times as they are a readily available, previously tagged corpus, but focus on the Metropolitan Desk to capture language that is appropriate to local news stories.

We define a bigram to be about crime if it is ten times more likely to appear in the crime-related library versus the non crime-related one. Focusing on the relatively frequency of bigrams between the two libraries allows us to filter out common use bigrams (e.g. "New York", "last year") that are likely to appear in the corpus but are not specific to crime. We additionally filter out uncommonly used bigrams that might show up only because of noise by selecting bigrams that appear at least 50 times in the crime library.

We identify 179 crime bigrams following this procedure. [Appendix Figure II](#) shows word clouds for the selected bigrams, where the size of the word is proportional to its relative frequency (Panel (a)) or its overall frequency in the crime-related library (Panel (b)). The bigrams we identify to be about crime are quite general, and make intuitive sense: e.g. "police said", "police officer", "law enforcement". In addition, they do not display an ideologically driven view of crime, which lowers the concern of measurement error systematically varying with Sinclair acquisitions.

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<sup>12</sup>75% of local crime stories mention a single media market municipality, 20% mention two municipalities, and the remaining 5% mention three or more.

We validate the procedure by comparing the classification of local stories (i.e. stories that mention at least one of the municipalities with more than 10,000 people in the media market) that we obtain following this methodology and a content characterization that results from training an unsupervised LDA model with five topics on the same stories (see [Section 2.2](#)). First, going back to [Figure I](#), we see that the share of local stories about crime that we identify with our methodology (22%) is very similar to the overall weight of the crime topic (26%). Second, [Appendix Figure III](#) shows that stories about crime display significantly higher crime topic shares than non-crime stories. Overall, these results indicate that the procedure we follow successfully identifies crime stories.

3. We combine the definitions to create an indicator variable equal to one if a given municipality was mentioned in a crime story by a given station in a given week.

Our starting sample is composed by stations and municipalities with more than 10,000 people located in media markets for which we have content data. We restrict the sample to municipality-station pairs continuously present in the data from 2010 to 2017. In order to maximize sample size in the presence of short gaps, we replace missing observations in spells shorter than two consecutive months using linear interpolation (see [Appendix B](#) for more details), but we show that our findings are robust to leaving these observations as missing in [Section 5.4](#). In addition, we drop municipalities whose name never appears in the content data (14 municipalities). The resulting sample includes 323 stations and 2201 municipalities in 112 media markets.

**Crime and Clearance Data.** Crime and clearance data are from the Uniform Crime Reports (UCRs) published by the Federal Bureau of Investigation (FBI) 2010-2017.<sup>13</sup> UCRs are compiled from returns voluntarily submitted to the FBI by police departments. They report monthly counts of offenses known to the police and counts of offenses cleared for three property crimes (burglary, larceny-theft, and motor vehicle theft) and four violent crimes (murder, rape, robbery, and aggravated assault). We use UCRs to study crime rates, defined as crimes per 1,000 people, and clearance rates, defined as cleared crimes over total crimes.<sup>14</sup>

We aggregate the data at the year level for two reasons. The first has to do with the definition of clearance rates. When there are no offenses over the time period considered, the denominator is zero and the clearance rate is undefined. Aggregating the data at the yearly level allows us to create a balanced sample without sacrificing sample size. Second, there is no perfect correspondence between the crimes that are reported as being cleared in a certain month and the offenses taking place in that month, although the vast majority of arrests happen relatively close to the date of the

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<sup>13</sup>UCR data 2020-2016 are from NACJD [2017](#). UCR data for 2017 are from [Kaplan \(2019b\)](#).

<sup>14</sup>A crime is considered cleared if at least one person has been arrested, charged, and turned over for prosecution or if the offender has been identified, but external circumstances prevent an arrest.

incident. Using the yearly data minimizes this mismatch.

UCR data may contain record errors and need extensive cleaning, as shown by [Evans and Owens \(2007\)](#) and [Maltz and Weiss \(2006\)](#). Following the state of the art in the crime literature (see, among others, [Chalfin and McCrary \(2018\)](#), [Mello \(2019\)](#), [Premkumar \(2020\)](#)), we use a regression-based method to identify and correct record errors, and define crime rates using a smoothed version of the population reported in the UCRs. We describe the data cleaning procedure in detail in [Appendix B](#). Finally, we winsorize crime and clearance rates at the 99% level to minimize the influence of outliers. Nonetheless, we show that our results are robust to the data cleaning procedure in [Section 6.5](#).

Our starting sample is composed by municipalities with more than 10,000 people with a municipal police department. To create a balanced sample, we exclude municipalities that do not continuously report crime data to the FBI and do not have at least one violent and one property crime in every year. In addition, the empirical strategy requires restricting the sample to municipalities located in media markets included in the content data. Our final sample includes 1752 municipalities (see [Appendix B](#) for more details).<sup>15</sup>

**Municipality Characteristics.** Municipality characteristics are from the 2006-2010 American Community Survey ([Manson et al., 2019](#)). We construct the Republican vote share in the 2008 presidential election aggregating precinct level returns to the municipal level. Precinct level returns are from the Harvard Election Data archive ([Anscombe et al., 2014](#)). When these are not available (approximately 10% of the sample), we assign to the municipality the share who voted Republican in the county the municipality is located in. County level returns are from the [MIT Election Data and Science Lab \(2017\)](#).

**Media Market Characteristics.** Media market characteristics from 2010-2017 are from the Census Bureau (demographics), the Bureau of Labor Statistics (unemployment), and the Bureau of Economic Advisers (income per capita). Turnout and Republican vote share in presidential elections are from the [MIT Election Data and Science Lab \(2017\)](#). In all cases, we start from county level data and aggregate them to the media market level.

**Police Violence.** Data on police-involved fatalities are from Fatal Encounters. Fatal Encounters is a crowd-sourced dataset that aims to document all deaths where police are present or involved.<sup>16</sup>

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<sup>15</sup>The sample for the content analysis includes 476 municipalities not in the police behavior analysis. These are municipalities with more than 10,000 people in media markets for which we have content data, but that do not satisfy the conditions to be included in the police behavior analysis (for example, because they might continuously report data to the UCR). We include them in order to maximize power, but show in [Section 5.4](#) that this does not affect our results.

<sup>16</sup>While the data is notoriously challenging to collect and verify, Fatal Encounters aims to provide a comprehensive account of these incidents through "Freedom of Information Act requests to police departments, web-scraping of news sources, paid researchers to run additional searches and data checks from public sources, and aggregation from

We use the data to define an indicator variable equal to one if the police department was involved in at least one death in a given year.

**Police Expenditures and Employment.** Data on police departments' employment are from the UCR's Law Enforcement Officers Killed in Action (LEOKA) files, which report the number of sworn officers and civilian employees as of October of each year ([Kaplan, 2019a](#)). We supplement these data with expenditures and employment from the Annual Survey of State and Local Government Finances and the Census of Governments 2010-2017, which are published by the Census Bureau.

**Google Trends.** To study the effect of Sinclair on salience of crime, we collect data on monthly Google searches containing the terms "crime", "police", "youtube", and "weather" at the media market level using the Google Trends API (see [Appendix B](#) for more details).

### 3.1 Descriptive Statistics

[Appendix Table II](#) columns (1) to (5) show descriptive statistics for the main variables considered in the analysis. Panel A shows that the average municipality was mentioned in 26% of newscasts in 2010, and appeared with a local crime story in 10% of them. Panel B reports the average property and violent crime and clearance rates for the same year, and Panel C reports socio-economic characteristics of these municipalities.

The sample is restricted to municipalities for which we have coverage information, which might raise concerns related to the external validity of our findings. However, [Appendix Figure IV](#) shows that the content sample has good geographic coverage. In addition, [Appendix Table II](#) columns (6) to (10) report descriptive statistics for all municipalities with more than 10,000 people that satisfy the conditions to be included in the police behavior analysis for comparison. The municipalities included in our sample appear to be highly comparable to other municipalities, as is confirmed by the *p*-values reported in column (11).

## 4 Empirical Strategy

The objective of this paper is to study how TV news coverage of a municipality's crime impacts police behavior, that we proxy using clearance rates. The major challenge to answering this question is finding a shock to news coverage of local crime that is exogenous to clearance rates. We address

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multiple other sources" ([Premkumar \(2020\)](#)). It is considered to be the most comprehensive dataset of police-involved fatalities. The database can be accessed [here](#).

this issue by exploiting a supply driven change in local TV news coverage. That is, we exploit a change in content that is explained by acquisitions of local TV stations by a large broadcast group, Sinclair.

[Figure II](#) and [Figure III](#) show that Sinclair acquisitions are staggered across space and time, which suggests we could use a difference-in-differences design to study their effect. However, this would not allow us to identify the treatment of interest. This is because the shock to news content induced by Sinclair is twofold. First, when Sinclair acquires a station, newscasts increase their national focus to the detriment of local coverage (*effect #1*). This gives us variation in news coverage of local crime, which is the change in content we are interested in identifying. But in addition to this, because Sinclair is a right-leaning media group, acquisitions make content more conservative (*effect #2*), which might also affect the way in which crime and police are discussed. For example, Sinclair is notorious for imposing on its stations must-run segments that include law and order features such as the "Terrorism Alert Desk," which provides frequent updates on terrorism-related news ([Hill, 2015](#)).

To disentangle the two effects on content, we make use of the fact that media markets are regions where households receive the same TV station offerings. This means that all municipalities in media markets where Sinclair enters experience its conservative messaging. However, not all municipalities are exposed to a change in the probability of appearing in the news with a crime story. Our empirical strategy is a triple differences-in-differences design that combines variation from the staggered timing of Sinclair acquisitions with cross-sectional variation across municipalities in whether they are covered by the news at baseline, our proxy for exposure to the local news shock.<sup>17</sup> This design allows us to capture solely the effect of variation in news coverage of local crime and control for any changes in content that all municipalities in the media market are exposed to, including *effect #2*. The identification assumption is that covered and non-covered municipalities are on parallel trends.

The intuition for using whether a municipality is covered by the news at baseline as a proxy for exposure to the local news shock is the following. If Sinclair acquisitions decrease local news coverage, municipalities often in the news at baseline (i.e. covered municipalities) would bear the brunt of the decline. Instead, municipalities that are never in the news in the first place (i.e. non-covered municipalities) are also not going to be covered after Sinclair acquires a stations. They do not experience any change, and therefore function as our control group. [Appendix Figure V](#) provides a visual representation of our intuition, based on the fact that crime reporting is principally

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<sup>17</sup>Nonetheless, we also always estimate separate differences-in-differences designs for covered and non-covered municipalities to understand what effect is driving the result. It is especially interesting to do so when we are considering clearance rates, as the effect of Sinclair acquisitions on non-covered municipalities is informative on how conservative content affects police behavior.

a function of a municipality's violent crime rate. The graphs are unconditional binned scatter plots of the relationship between a municipality's violent crime rate and the share of weeks in a year in which the same municipality is in the news with a local crime story, separately for years before and after the Sinclair acquisition. The sample is restricted to stations ever acquired by Sinclair. Panel (a) shows the relationship for non-covered municipalities: the probability of being in the news with a crime story is at very low levels both before and after the acquisition. For covered municipalities (Panel (b)), higher violent crime rates are always correlated with a higher probability of being in the news with a crime story, but for every level of violent crime, crime reporting is lower after Sinclair acquires the station.

We define a municipality as covered in the following way. First, we calculate the share of weeks a municipality is mentioned in the news in our baseline year, 2010. If we have data for multiple stations in the same media market, we assign to each municipality the median share of weeks a municipality is mentioned in the news across the different stations. Finally, we define an indicator variable equal to 1 if the municipality is in the news more than the median municipality in 2010, and 0 otherwise. As [Appendix Figure VI](#) shows, using data from media markets that never experience Sinclair entry, the measure is persistent across years, showing that the likelihood of being in the news can be seen as a fixed characteristic of a municipality and mean reversion is unlikely to explain our results.

[Appendix Figure VII](#) shows that covered and non-covered municipalities differ on a number of characteristics. To ensure that the effect is not confounded by other municipality attributes but is truly driven by exposure, our baseline specification includes interactions between Sinclair acquisitions and baseline socio-economic characteristics of the municipalities. This implies that the effect is going to be driven by those idiosyncratic traits other than the observable ones that make one municipality more likely to be in the news than another. Given that covered and non-covered municipalities are especially different in population size, we check whether our results survive restricting the analysis to medium sized municipalities between 10,000 and 50,000 people.

Finally, it is important to note that the presence of a control group has the additional advantage of allowing us to control for demographic or economic trends at the media market level that might induce Sinclair to acquire some stations before others. While [Appendix Table III](#) shows no change in media markets' socio-economic characteristics following Sinclair entry, the fact that our design allows us to control for observable and unobservable trends strengthens the credibility of the results.<sup>18</sup>

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<sup>18</sup>Even if we control for media market level trends in observable and unobservable characteristics, we might still worry of Sinclair acquisitions being driven by differential trends in covered relative to non-covered municipalities. This is unlikely to explain our findings as the result is unchanged if we focus on instances when Sinclair acquires a station by buying a smaller broadcast group. Given that in such instances stations come as a bundle, acquisitions are

## 5 Effect of Sinclair Control on Coverage of Local Crime

### 5.1 Specification

We estimate the effect of a Sinclair acquisition on the probability that covered municipalities are mentioned in a crime story compared to non-covered municipalities using the following baseline specification:

$$y_{mst} = \beta Sinclair_{st} * Covered_m + Sinclair_{st} * X'_{m2010} \gamma + \delta_{st} + \delta_{ct} + \delta_{sm} + \epsilon_{mst} \quad (1)$$

where  $y_{mst}$  is an indicator variable equal to 1 if municipality  $m$  was mentioned in a crime story by station  $s$  in week  $t$ ,  $Sinclair_{st}$  is an indicator variable equal to one after a station is acquired by Sinclair,  $Covered_m$  is an indicator variable equal to one if a municipality is likely to be in the news at baseline,  $X_{m2010}$  are baseline municipality characteristics,  $\delta_{st}$  are station by week fixed effects,  $\delta_{ct}$  are covered status by week fixed effects, and  $\delta_{sm}$  are municipality by station fixed effects.<sup>19</sup>

Each municipality is associated with one media market, but there can be multiple stations that belong to the media market covering the municipality. Given that the outcome is station and municipality specific, the cross-sectional unit of analysis is the municipality-station pair. More precisely, we estimate the regression on a municipality-station pair by week balanced panel that only includes pairs where the station and the municipality belong to the same media market. Standard errors are clustered at the media market level.

The station by week fixed effects ( $\delta_{st}$ ) control non-parametrically for station specific shocks in content that are common to all municipalities, while covered status by week fixed effects ( $\delta_{ct}$ ) allow the two different types of municipalities to be on different trends. Finally, municipality by station ( $\delta_{sm}$ ) fixed effects control for station specific level differences across municipalities, including level differences explained by non-time-varying measurement error due to how stories are assigned to municipalities.<sup>20</sup>

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unlikely to be driven by specific media market conditions.

<sup>19</sup>In particular,  $X_{m2010}$  includes the following variables: population, share male, share male between 15 and 30, share white, share black, share over 55, share Hispanic, share with 2 years of college, median income, share of population below the poverty rate, share unemployed, municipality area, and Republican vote share in the 2008 presidential election. Population, median income, and area are in logs.

<sup>20</sup>We assign a story to a municipality if the municipality's name is mentioned in the story. This might give rise both to false positives (e.g. mentions of "Paris, France" might be counted for "Paris, TX") and false negatives (e.g. neighborhoods might be mentioned instead of municipalities, or unusual municipality names might be more likely to be misspelled in the close captioned text). We can account for these differences using the municipality by station fixed effects as long as they are stable over time. We believe this to be a reasonable assumption in this setting. For example, we might worry that Sinclair's increased focus on national news might increase the probability of false positives for municipalities that have the same name as nationally relevant places. However, to the extent that these municipalities

We provide evidence supporting the parallel trends assumption by estimating an event study version of the baseline specification that allows the effect to vary over time. In particular, we estimate the following specification:

$$y_{mst} = \sum_{y=1}^{T_{min}} \beta_y * Pre_{t-y,s} * Covered_m + \sum_{y=0}^{T_{max}} \gamma_y * Post_{t+y,s} * Covered_m + \delta_{st} + \delta_{ct} + \delta_{ms} + \epsilon_{mdt} \quad (2)$$

where variables are defined as above. To reduce noise, we constrain the effect to be constant by year since treatment.

## 5.2 Main Results

[Table I](#) shows the effect of Sinclair acquiring a station on its local crime coverage of covered versus non-covered municipalities. In particular, the table reports the coefficient on the interaction between an indicator variable for the station being under Sinclair control and an indicator variable for the municipality being covered at baseline, estimated from equation (1). Column (1) reports the estimates from a specification that only controls for the fixed effects, while column (2) additionally includes the interaction between Sinclair and socio-economic characteristics of the municipality at baseline (equation (1)).

We find that a Sinclair acquisition decreases the probability that the station reports a local crime story about covered municipalities by 2.2 percentage points compared to municipalities that were not likely to be in the news at baseline. The effect is significant at the 1% level. The magnitude of the effect is large, corresponding to almost 25% of the baseline mean. The coefficient is smaller in size but similar in magnitude, corresponding to 29% of the baseline mean, if we exclude municipalities with more than 50,000 people to increase the comparability of the sample (column (3)). This is an important test as one of the main differences between covered and non-covered municipalities is precisely population.

**Event Study.** The identification assumption is that, absent treatment, the probability of covered municipalities being in the news with a local crime story would have evolved similarly to that of non-covered municipalities. We provide evidence supporting this assumption by estimating an event study specification that allows the effect of Sinclair control to vary by time since treatment. [Figure IV](#) reports the  $\beta_y$  and  $\gamma_y$  coefficient estimates from equation (2), together with 95% confidence intervals. The figure shows no difference between covered and non-covered municipalities

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are more likely to be covered in the first place, the effect should go in the opposite direction to our findings.

in the four years leading up to the station coming under Sinclair control. Immediately after Sinclair acquires the station, covered municipalities become less likely than non-covered municipalities to appear in the news with a crime story. The effect becomes larger over time, almost tripling by year three.

**Same Media Market Stations.** Our result might still reflect an underlying change in a municipality's crime prevalence or demand for crime stories. To examine this, we replicate our baseline model but focus our attention on the local crime coverage of stations that are in the same media market as stations that are acquired by Sinclair, but are not themselves bought by the group. In [Appendix Figure VIII](#), we report the same  $\beta_y$  and  $\gamma_y$  coefficient estimates from equation (2), together with similarly defined leads and lags for same media market stations that are not directly controlled by Sinclair. In the four years leading up to Sinclair entry, there is no difference in how Sinclair and non-Sinclair stations report about crime in covered relative to non-covered municipalities. Once Sinclair enters the media market, we only see a decrease in local crime coverage by Sinclair stations. [Table I](#) column (4) confirms the result: a test of equality of the effect of Sinclair entry on Sinclair and non-Sinclair stations shows that the effect is indeed statistically different ( $p$ -value = 0.017).

This evidence supports the interpretation that decreasing local crime coverage is an editorial decision on the part of Sinclair stations. It is also interesting to note that this shows limited spillovers of Sinclair's change in content to other outlets in the media market: other stations do not appear to be responding to what Sinclair is doing, at least as far local crime coverage is concerned. This signals that there might be demand for local news stories, which is in line with stations acquired by Sinclair potentially experiencing a decline in viewership ([Martin and McCrain \(2019\)](#)). Nonetheless, decreasing local news might still be an optimal strategy for Sinclair if economies of scale from jointly operating a large number of stations outweigh the potential decline in advertising revenues due to smaller viewership.

**Differences-in-Differences Decomposition.** We justify the triple differences-in-differences design using the intuition that municipalities with a low baseline probability of being in the news should not experience a change in their local crime coverage, while covered municipalities should bear the brunt of the decline. To explore whether this is the case, we estimate a differences-in-differences specification that only exploits variation coming from the staggered timing of Sinclair acquisitions, separately for non-covered and covered municipalities. As we hypothesize, [Appendix Table IV](#) shows that after Sinclair acquires a station, there is no change in the probability that non-covered municipalities appear in the news with a crime story (columns (1) and (2)). Instead, Sinclair entry implies a large decline in the probability of being mentioned in the news with a crime story for covered municipalities (columns (3) and (4)).

### 5.3 Additional Findings

**Other Types of Local News.** In light of the results in [Table I](#), it is natural to ask to what extent the decline in local coverage is specific to crime news. In [Appendix Table V](#), we show that local news decreases across the board, but the effect is larger for stories about crime. Sinclair acquisitions lower the probability that a station reports a story about covered municipalities relative to non-covered municipalities by 3.9 percentage points or 16% of the baseline mean (column (1)). However, the effect is much larger in magnitude for crime compared to non-crime stories more generally (25% versus 11%). Overall, we interpret this result as providing supporting evidence that the effects on police behavior that we identify are going to be related to the change in local coverage of crime, and not result from decreased coverage of other non-crime events.

**Overall Crime Coverage.** How is non-local crime coverage affected by Sinclair acquisitions? We address this question in [Appendix Table VI](#), where we estimate a differences-in-differences specification at the station level. The main outcome is the share of stories that are about crime in a month (column (1)), which we further decompose into stories about crime that are local (column (2)) or non-local (column (3)). The table shows a negative effect of Sinclair acquisitions on the overall share of stories about crime, which is entirely explained by a decline in local crime stories. Importantly, coverage of non-local crime stories does not appear to be affected by Sinclair: non-covered municipalities are exposed to the same level of non-local crime news both before and after acquisitions.<sup>21</sup>

**Heterogeneity by Political Leaning of the Municipality.** Since Sinclair is a conservative media group, we might worry that the decline in coverage could be influenced by political considerations. To explore this possibility, in [Appendix Table VIII](#), we estimate the main specification separately for municipalities with different political leanings. In particular, we split the sample by whether the municipality's Republican vote share was above the median (column (1)) or below the median (column (2)) in the 2008 presidential election. The coefficient is the same across the two subsamples ( $p\text{-value}=0.956$ ), which suggests a limited scope for strategic coverage decisions based on the political leaning of the municipalities.<sup>22</sup>

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<sup>21</sup>Given that Sinclair is a conservative media group, it might be surprising to not see an increase in the volume of non-local crime stories. However, we show in [Appendix Table VII](#) that while the volume of non-local crime coverage is constant, the way in which crime and police are covered is not.

<sup>22</sup>In [Appendix Figure IX](#) we additionally show that the change in coverage of local crime is not heterogeneous based on municipality characteristics.

## 5.4 Robustness of the Effect of Sinclair on Coverage of Local Crime

Appendix Table IX shows that the effect of Sinclair acquisitions on news coverage of local crime is robust to a number of concerns. Column (1) reports the baseline estimates for reference.

**Robustness to Data Cleaning and Sample.** We begin by showing that the choices we make when cleaning the content data and defining the outcome do not matter for the effect on the probability that a municipality appears in the news with a crime story. First, columns (2) and (3) show that the result is not affected if we identify crime stories using bigrams that are less (more) distinctively about crime, i.e. bigrams that are five (twenty) times more likely to appear in the crime-related versus the non crime-related library. In addition, not replacing missing observations using linear interpolation as described in Appendix B (column (4)) or segmenting newscasts using a fixed number of tokens (column (5)) leaves the result unchanged. Similarly, restricting the sample to the same set of municipalities included in the analysis of clearance rates does not impact the result (column (6)).

**Robustness to Treatment Definition.** Columns (7) to (9) show robustness to using alternative definitions of Sinclair control. In the baseline analysis, we consider a station to be controlled by Sinclair in all months after acquisition, independently of whether Sinclair retains ownership of the station or not. Column (7) shows that dropping the three stations that were divested by Sinclair in the 2010 to 2017 period does not make a difference. Focusing on stations directly owned and operated by Sinclair also does not affect the result (column (8)). Finally, we show that the result is unchanged if we only include markets that Sinclair entered as part of a group acquisition (column (9)), where endogenous acquisitions are less likely to be a concern.

## 6 Effect of Sinclair Control on Police Behavior

### 6.1 How Should the Decline in News Coverage of Local Crime Influence Police Behavior?

In the previous section, we documented that when a local TV station is acquired by Sinclair, covered municipalities become less likely to appear in the news with a local crime story compared to non-covered municipalities. While from Sinclair's point of view cutting local coverage may simply be a way to lower costs, this decline may have tangible implications. In particular, we are interested in understanding the effect of the decline in news coverage of local crime on police behavior.

We study in particular clearance rates. Crime clearances are highly sensitive to what resources are allocated to investigations. For example, [Blanes i Vidal and Kirchmaier \(2017\)](#) show that increases in the response time to crime calls have a negative effect on the probability that a crime is cleared. In addition, [Cook et al. \(2019\)](#) show that the involvement of a specialized detective squad also increases the probability that a crime getting is cleared in the medium run. As a result, clearance rates have often been used by economists to study police behavior (see, among others, [Mas \(2006\)](#), [Shi \(2009\)](#), and [Premkumar \(2020\)](#)). They are especially interesting in our setting as they allow us to consider whether the types of crimes that get prioritized by police departments are affected by news coverage.

Not all crime types are equally likely to be reported in local news. This is important to the extent that we should expect arrest rates of different crimes to respond differently, depending on how important local news coverage is for them. We explore this heterogeneity in our content data by developing a classifier model to identify whether local crime stories are about a violent crime or a property crime, which we describe in detail in [Appendix C](#). [Figure V Panel \(a\)](#) reports the share of crime stories that are about violent crimes (i.e. murder, assault, rape, and robbery) and the share of stories that are about property crimes (i.e. burglary, theft, and motor vehicle theft). Local crime news has a clear violent crime focus: 75% of local crime stories are about a violent crime, while only 17% of crimes stories are about a property crime.

The difference in reporting across crime types is even sharper if we consider the fact that violent crimes are relatively rare, while property crimes are more common by orders of magnitude. In [Figure V Panel \(b\)](#) we normalize the number of crime stories of a given type that were reported about a municipality in 2010 by the number of offenses of the same type for the same municipality. There are approximately 0.145 stories for each violent crime. Instead, property crimes, at 0.003 stories per offense, receive negligible news coverage.<sup>23</sup> This evidence guides our analysis of police behavior. Given that property crimes appear to be significantly less important than violent crimes for local news, we expect the decline in local crime coverage to be less relevant for them: the main outcome of interest for our analysis is the violent crime clearance rate.<sup>24</sup>

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<sup>23</sup>It is important to note that, given that we only have transcripts for a random sample of days and multiple stories can cover the same crime, these numbers do not precisely correspond to the probability that a given crime appears in the news, although they are likely to be positively related.

<sup>24</sup>We use our classifier model to also estimate the direct effect of Sinclair acquisitions on local coverage of violent and property crimes. [Appendix Table X](#) shows that after Sinclair acquires a station, covered municipalities are 1.8 percentage points (27% of the baseline mean) less likely to appear in the news with a story about a violent crime and 0.4 percentage points (30% of the baseline mean) less likely to appear in the news with a story about a property crime. The effect is almost 4.5 times larger for violent crimes than it is for property crimes, although the decline in coverage is proportionally similar across crime types. However, because of the substantially lower probability of property crimes appearing in the news in the first place, we expect the change in content to be less consequential for property crimes rather than for violent crimes, which confirms the interpretation proposed in the main text.

## 6.2 Specification

We estimate the relative effect of Sinclair entry on violent crime clearance rates of covered municipalities with respect to non-covered municipalities using the following baseline specification:

$$y_{mdt} = \beta Sinclair_{dt} * Covered_m + Sinclair_{dt} * X'_{m2010} \gamma + \delta_{dt} + \delta_{ct} + \delta_m + \epsilon_{mdt} \quad (3)$$

where  $y_{mdt}$  is the violent crime clearance rate in municipality  $m$  in media market  $d$  in year  $t$ ,  $Sinclair_{dt}$  is an indicator variable equal to one after a media market experiences Sinclair entry,  $Covered_m$  is an indicator variable equal to one if a municipality is likely to be in the news at baseline,  $X_{m2010}$  are baseline municipality characteristics,  $\delta_{dt}$  are media market by year fixed effects,  $\delta_{ct}$  are covered status by year fixed effects, and  $\delta_m$  are municipality fixed effects.<sup>25</sup> The regression is estimated on a yearly balanced panel 2010-2017 that includes 1752 municipalities. Standard errors are clustered at the media market level.

The media market by year fixed effects ( $\delta_{dt}$ ) control non-parametrically for media market level shocks. This includes any non municipality-specific change in content that is associated with Sinclair entering a media market, such as increased conservative slant. In addition, these fixed effects allow us to take into account media market specific trends in demographics that might correlate with Sinclair entry. Covered status by year fixed effects ( $\delta_{ct}$ ) allow covered and non-covered municipalities to be affected by different shocks over time, while municipalities fixed effects ( $\delta_m$ ) allow for level differences across municipalities.<sup>26</sup>

We consider a media market to be treated in a given year if Sinclair owns one of the media market's stations in January of that year. This implies that the year of treatment is the first year in which Sinclair is continuously present in the media market. This is reasonable because 87% of the stations in our sample are acquired by Sinclair in the second half of the year (58% in the last trimester), which means that partially treated years only see a Sinclair presence for a couple of months. Nonetheless, we ensure that the results are robust to this decision in [Section 6.5](#).

As before, we also estimate an event study specification that allows the relative effect of Sinclair

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<sup>25</sup>Because of restrictions on ownership imposed by the Federal Communications Commission, each owner generally controls one station by media market. Acquiring a new station usually implies entering a new media market.

<sup>26</sup>Given that each municipality is associated with one media market, the inclusion of municipality fixed effects makes controlling for covered status by media market fixed effects, as is customary in triple differences-in-differences specification, redundant.

entry to vary over time. In particular, we estimate the following specification:

$$y_{mdt} = \sum_{y=1}^{T_{min}} \beta_y * Pre_{t-y,d} * Covered_m + \sum_{y=0}^{T_{max}} \gamma_y * Post_{t+y,d} * Covered_m + \delta_{dt} + \delta_{ct} + \delta_m + \epsilon_{mdt} \quad (4)$$

where all variables are defined as above.

### 6.3 Main Results

[Table II](#) shows the effect of Sinclair entry into a media market on the violent crime clearance rate of covered versus non-covered municipalities. The table reports the coefficient on the interaction between an indicator variable for Sinclair presence in the media market and an indicator variable for whether the municipality is covered at baseline. Column (1) reports the estimates from a specification that only controls for the fixed effects, while column (2) additionally includes the interaction between Sinclair and socio-economic characteristics of the municipality at baseline (equation (3)).

After Sinclair enters a media market, the violent crime clearance rate is 4.5 percentage points lower in covered than in non-covered municipalities. The effect is significant at the 1% level, and sizable in economic magnitude, corresponding to 10% of the baseline mean. Restricting the sample to municipalities with fewer than 50,000 people does not affect the result (column (3)), and neither does controlling for crime rates and population, two factors that we might worry influence violent crime clearance rates but that we do not include in the main specification because they are potentially endogenous to the treatment (column (4)). [Table II](#) shows that news coverage of local crime matters for policing. When violent crime is less covered by local news, police departments respond by changing the type of crimes they prioritize and decrease the resources allocated to clear these types of crime.<sup>27</sup>

**Event Study.** The identifying assumption is that, had Sinclair not entered the media market, the violent crime clearance rate of covered and non-covered municipalities would have evolved similarly. We provide evidence supporting this parallel trends assumption by estimating an event study specification that allows the effect of Sinclair entry in a media market to vary by time since treatment. [Figure VI](#) reports the  $\beta_y$  and  $\gamma_y$  coefficient estimates from equation (4), together with 95%

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<sup>27</sup>We are unable to follow clearances through the criminal justice system, and know whether they lead to a conviction or an acquittal. As a result, we cannot make inference relative to the quality of the clearances themselves, which limits our ability to draw efficiency or welfare conclusions from our analysis. According to theories of "de-policing" ([Owens \(2019\)](#)), it is possible that decreasing arrest rates might be socially optimal.

confidence intervals. The figure shows no difference between covered and non-covered municipalities in the four years leading up to Sinclair's entry into the media market.<sup>28</sup>

The effect is fully realized in the first year in which Sinclair is present, but the gap between covered and non-covered municipalities seems to be shrinking after that. This is consistent with viewers learning that the signal on local crime that they receive from Sinclair is biased, and adjusting for it based on their own observation or other media sources. To the extent that the change in content is driven by a supply-side shock that might be opaque to viewers ([DellaVigna and Kaplan \(2007\)](#)), it is not surprising to see a short-run effect that tapers: it takes time for viewers to learn about Sinclair's biased coverage and adjust accordingly.

**Property Crime Clearance Rates.** If the police are responding to news coverage of local crime as we hypothesize, the clearance rate of crimes that are minimally covered by the news, such as property crimes, should not be affected by Sinclair entry. [Table III](#) shows that the property crime clearance rate is not differentially affected by Sinclair acquisitions in covered as opposed to non-covered municipalities. The coefficients are small and not statistically significant. This shows that the change in clearance rates is specifically related to how Sinclair influences news content, and does not depend on some other factors affecting clearance rates across the board.<sup>29</sup>

**Crime Rates.** A potential concern is that the change in the violent crime clearance rate might be explained by an increase in violent crimes, and not by a response of police officers to the changing media environment. [Appendix Table XI](#) suggests that this is not the case. The table reports the effect of Sinclair entry on the violent crime rate of covered municipalities relative to non-covered municipalities, for all violent crimes (column (1)) and separately by type of crime (column (2) to column (5)). Reassuringly, we do not find any statistically significant difference in the violent crime rate of covered and non-covered municipalities after Sinclair enters a media market. Even if we take the positive coefficient on the violent crime rate at face value, the magnitude of the effect (2.1%) is too small to explain the decline in the violent crime clearance rate. The same is true if we use as outcomes indicator variables equal to one if the municipality reports at least one crime of the specified type (Panel B).

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<sup>28</sup>The paper focuses on the 2010-2017 period because it is the period for which we have collected the content data. Given that only a handful of municipalities are treated after 2015, the maximum number of pre-periods we can estimate is four as we do not sufficient observations to identify periods before than. However, UCR data is easily available before 2010. As a result we also estimate the event study specification on 2009-2017 data, which allows us to both include one additional pre-period and to estimate the other pre-period dummies using a larger sample of municipalities. [Appendix Figure X](#), which shows the resulting event study graph, confirms the evidence in support of the identification assumption: covered and non-covered municipalities appear to be on comparable trajectories in the five years preceding Sinclair entry.

<sup>29</sup>To the extent that, as we discuss below, the volume of property crimes increases in covered versus non-covered municipalities, constant property crime clearance rates are potentially consistent with resources being reallocated from clearing violent to clearing property crimes.

Appendix Table XII looks instead at property crime rates. Column (1) shows that Sinclair entry is associated with 5.4% higher property crime rates in covered municipalities relative to non-covered ones. The effect is significant at the 1% level. This result can be explained by a decreased incapacitation or deterrence effect due to the lower clearance rates. Alternatively, the positive effect on property crime rates might be due to a reduction in overall police performance in covered relative to non-covered municipalities, which would be consistent with a decrease in monitoring induced by lower crime news coverage. Finally, it is possible that individuals who commit property crimes are directly affected by the decline in crime content of local news (see [Dahl and DellaVigna \(2009\)](#) and [Lindo et al. \(2019\)](#)). Given that the local news audience tends to be above 55, we believe that this explanation has a limited role in this setting.<sup>30</sup>

**Differences-in-Differences Decomposition.** Appendix Table XIII reports coefficient estimates from a differences-in-differences specification that only exploits variation from the staggered timing of Sinclair acquisitions, separately for non-covered (columns (1) and (2)) and covered municipalities (columns (3) and (4)). After Sinclair enters a media market, non-covered municipalities experience an increase in their violent crime clearance rate. This is consistent with Sinclair having a direct effect on police behavior, which is not surprising since Sinclair's conservative messaging might build support for tough-on-crime policies.<sup>31</sup>

Instead, covered municipalities do not experience a change in the violent crime clearance rate. As we discussed in [Section 4](#), non-covered municipalities provide us with the counterfactual of how clearance rates would have evolved in covered municipalities following Sinclair entry, had there been no decrease in their probability of appearing in the news with a local crime story. If the news coverage of local crime had not changed, the violent crime clearance rate of covered municipalities would have increased after Sinclair entry. Instead, the decline in crime coverage that is specific to

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<sup>30</sup>It is important to note that our findings on crime rates refer to crimes that the public reports to the police, so changes in crime reporting behavior might be potentially conflated with changes in crimes. Given that our results on crime rates are quite stable across crime types, we believe that our results are unlikely to be purely explained by a differential reporting behavior on part of the public. In particular, violent crimes such as murders and assaults are less likely to be under-reported, so we are not concerned that the null effect on violent crime rates is masking a different dynamic. Similarly, to the extent that under-reporting is less likely for crimes that involve insured goods such as burglaries and vehicle thefts (as insurance companies often would not honor theft claims without a police report), we do not believe that changes in reporting behavior can explain our findings. Under-reporting is less concerning for our results on clearance rates, as the police can only investigate crimes that are known to them. While it is true that there is potential for manipulation in clearance statistics, for manipulation to fully explain the result it would need to be systematic and at quite a large scale, which we believe is implausible.

<sup>31</sup>The idea that conservative content might impact the criminal justice system has recently been explored by [Ash and Poyker \(2019\)](#), which finds that exposure to Fox News Channel induces judges to impose harsher criminal sentences. Consistent with this explanation, we show in [Appendix Table VII](#) that, although the volume of non-local crime- and police-related stories is constant after Sinclair acquisitions (columns (1) and (2)), the way in which crime and police are covered is not. In particular, the table shows that Sinclair stations are less likely to mention police misconduct (column (3)) and more likely to talk about crimes related to immigration (column (4)) and drugs (column (5)).

covered municipalities fully undoes the effect.

## 6.4 Additional Findings

**Heterogeneity by Type of Crime and Municipal Characteristics.** Not all violent crimes are the same, and we might wonder whether the effect of Sinclair entry on clearance rates is heterogeneous by crime type. In [Appendix Table XIV](#), we show that the decline in the violent crime clearance rate appears to be driven by the clearance rates of robberies and rapes. Another important source of heterogeneity arises from municipal characteristics. In [Appendix Figure XI](#) we find that the main effect on the violent crime clearance rate is quite consistent across different municipality types.

**Police Violence.** Does the reduced news coverage of local crime also affect the probability that officers are involved in episodes of police violence? In [Appendix Table XV](#) we address this question using data from Fatal Encounters. We find limited evidence supporting the idea of news coverage of crime stories influencing police violence. The large confidence intervals suggest however that, given that officer-involved fatalities are rare events, we might not have sufficient power to detect an effect.

**Municipal Police Spending.** It is possible for the main result to be explained by covered municipalities having lower police spending as opposed to non-covered municipalities after Sinclair entry. [Appendix Table XVI](#) shows that this is not the case: after Sinclair entry, covered and non-covered municipalities have similar police expenditures and employment per capita.

## 6.5 Robustness of the Effect of Sinclair on Clearance Rates

[Appendix Table XVII](#) shows that the effect of Sinclair entry on the violent crime clearance rate is robust to a number of potential concerns. Column (1) reports the baseline estimate for reference.

**Robustness to Data Cleaning.** We begin by showing that the result is not sensitive to the data cleaning procedure. First, in column (2) we show that not winsorizing the outcome only minimally impacts the estimates. In addition, column (3) shows that the result is virtually unchanged if we do not replace record errors using the regression-based procedure described in [Appendix B](#).

**Robustness to Treatment Definition.** We also show that using alternative definitions of Sinclair control does not affect the result. The estimates are robust to dropping media markets where Sinclair divested a station (column (4)), considering only media markets where Sinclair directly owns and operates a station (column (5)), or defining partially treated years as treated (column (6)). Finally, we consider the possibility that Sinclair acquisitions might correlate with trends in covered

relative to non-covered municipalities. In column (7), we show that this is unlikely to explain our results: the coefficient is unchanged when we only consider markets that Sinclair entered as part of multi-station deals, where acquisitions are less likely to be driven by specific media market conditions.

## 6.6 Robustness to Heterogeneous Effects in TWFE Models

Recent work in the econometrics literature has highlighted that two-way fixed effects (TWFE) regressions (i.e. regressions that control for group and time fixed effects) recover a weighted average of the average treatment effect in each group and time period ([de Chaisemartin and D'Haultfœuille \(2020\)](#)). This is problematic because weights can be negative, which means that if treatment effects are heterogeneous, the TWFE estimates might be biased. No formal extension of these concepts to higher dimensional fixed effect models, such as the ones we use in this paper, is available at the moment.

Nonetheless, we provide three pieces of evidence consistent with the effect on the violent crime clearance rate being robust to concerns related to heterogeneous treatment effects. First, we note that issues with negative weights are most severe when the majority of units in the sample are treated at some point. The fact that we have a large number of media markets that never experience Sinclair entry suggests that negative weights might have more limited relevance in our setting.

Second, we apply the machinery introduced by [de Chaisemartin and D'Haultfœuille \(2020\)](#) to the differences-in-differences specifications that underlie our triple differences-in-differences estimates.<sup>32</sup> [Appendix Table XVIII](#) reports results using the robust estimator proposed in their paper, while the corresponding event study graphs are shown in [Appendix Figure XII](#). Reassuringly, the robust estimation shows treatment effects that are very similar to the baseline estimates from the differences-in-differences specifications. Given that the estimates that underlie our main effects are robust to allowing for treatment effects to be heterogeneous, we are confident in our triple differences-in-differences as well.

Finally, we show that our results are robust to artificially eliminating variation from the staggered timing of Sinclair acquisitions. This is important to the extent that the issue of negative weights in staggered designs arises in part from using earlier treated units as control for later treated units ([Goodman-Bacon \(2019\)](#)). We eliminate variation from staggered timing by running regressions including only media markets that are either never treated or that are acquired at specific points

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<sup>32</sup>[Appendix Table IV](#) and [Appendix Table XII](#) show that the triple differences-in-differences estimates for both of our main outcomes can be separated in differences-in-differences estimates from specifications that only exploit variation in the staggered timing of Sinclair acquisitions for covered and non-covered municipalities.

in time.<sup>33</sup> Appendix Table XIX shows that out of the four years we consider, three reproduce a negative coefficient. The magnitude of the effect is larger in two of them and not significant in one, but larger standard errors produce confidence intervals consistent with the main point estimate. Instead, we do not find a similar effect if we focus on media markets entered in 2015 only.

## 7 Mechanisms

How does the decline in local crime coverage affect clearance rates? The explanation that we propose is that when stories about a municipality's violent crimes are less frequent, perceptions change. Crime become less salient in the public opinion and the police find themselves operating in a political environment where there is less pressure to clear violent crimes. As a result, the police might have incentives to reallocate their resources away from clearing these crimes in favor of other policing activities. In this section, we provide two pieces of evidence supporting this mechanism but also discuss alternative explanations such as monitoring of police officers on part of the media and community cooperation in solving crimes.

**Salience of Crime.** To support the idea that the decline in crime content impacts perceptions, we investigate whether general interest about crime and police activities changes after Sinclair acquisitions. Ideally, we would want to test the effect of Sinclair on crime and police perceptions directly. The main challenge to doing so is finding highly localized but nationally representative data on perceptions over time. We address this issue by using data on Google searches as a proxy for overall interest in the topic.

In particular, we collect data on monthly Google searches containing the terms "crime" and "police" (see Appendix B for more details). Because the Google trends data are not consistently available below the media market level, we run a differences-in-differences model exploiting the staggered entry of Sinclair across media markets. The outcome variable is the monthly volume of searches, and it is expressed in logarithms. The sample is restricted to media markets for which the volume searches for crime and police are always available.

Table IV shows that, when Sinclair enters a media market, the volume of searches containing the keywords crime and police decreases by 4%. The effect is not explained by a generalized decline in searches, as shown by placebo regressions looking at monthly searches for popular keywords such as "weather" and "youtube." These results suggest that the decrease in local crime stories triggers a change in public interest for precisely those topics that are now less present in local

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<sup>33</sup>We perform a separate estimation for all years in which Sinclair entered more than three media markets.

news. Importantly, this is the opposite direction to what one would expect based on actual crime rates that are, if anything, higher after Sinclair enters a media market.

**Political Feedback.** Perceptions become reality within the political arena. If the change in news coverage of local crime makes it less salient in the public opinion, politicians should react to it. We believe this feedback mechanism to be particularly credible in this setting given that the individuals whose opinion is likely to be influenced by local news are exactly the ones whose opinions are likely to matter for local politics: those over 55.<sup>34,35</sup>

[Appendix Figure XIII](#) shows descriptive evidence supporting this statement. Using the 2010 Cooperative Congressional Election Study ([Anscombehere, 2012](#)), we show that individuals over 55 are 25% more likely to watch local TV news and 50% more likely to attend local political meetings compared to younger individuals. This is important to the extent that it highlights how perceptions of specific crime issues might be reflected in police behavior through the pressure of public opinion in the absence of elections. In addition, [Goldstein \(2019\)](#) shows that people over 55 are an especially important interest group for local politics when it comes to crime and policing.

Consistent with this argument, [Table V](#) shows that the effect on the violent crime clearance rate appears to be driven by cities with a larger share of population above 55 ( $p$ -value = 0.166), even though the change in content is exactly the same across the two groups of municipalities. While the difference in the effect is not statistically significant, we interpret this as potential evidence that a change in public opinion operating through a political feedback mechanism might be behind the main effect on clearance rates.

**Direct Media Monitoring.** An alternative explanation is that there could be a decrease in direct media monitoring of the police. If police officers anticipate a low probability of being covered in the news for failing to solve crimes, they might shirk the amount of effort they allocate to this activity. To explore whether this is likely to be the case, we use our content data to separately identify stories about crime incidents and about arrests. In particular, we define stories to be about arrests if they contain crime bigrams related to arrests or prosecutions (e.g. "police arrested" or "murder charge") or include the string "arrest" (this would also capture words such as "arrested",

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<sup>34</sup>Police department chiefs are generally appointed (and removed at will) by the head of local government, which implies that their incentives tend to align with those of the municipality's administration ([Owens \(2020\)](#)). Consistent with this idea, recent papers have shown that political incentives affect law enforcement ([Goldstein et al. \(2020\)](#), [Harris et al. \(2020\)](#), and [Magazinnik \(2018\)](#)). In addition, managerial directives can have important effects on police behavior, supporting the idea that pressure coming from the top might influence the effort allocation of police officers ([Ba and Rivera, 2019](#); [Goldstein et al., 2020](#); [Mummolo, 2018](#)).

<sup>35</sup>The following quote, included in a case study on how politics influence police in an American city by [Davies \(2007\)](#), highlights the mechanism we have in mind: "The following case study results show [...] substantial impact of the city council on homicide investigations and, ultimately, on case clearances. [...] The media was seen as the catalyst for formal actions by other components of the authorizing environment to improve the murder clearance rate. The media shaped public opinion about the quality of public safety".

"arrests"); all other stories are about crime.

In Table VI, we separately report the effect of a Sinclair acquisition on the relative probability that covered and non-covered municipalities appear in the news with different types of crime stories. The decline in crime reporting appears to be almost entirely driven by stories about crime incidents (column (1)), whereas stories about arrests experience a much smaller decline, which is also not statistically significant (column (2)). These results do not support direct media monitoring through stories about police clearances being the main explanation for the results, although we cannot exclude the possibility that police officers are updating their overall probability of being the subject of reporting based on the decline in crime coverage.

**Community Cooperation.** It is also possible for the effect on clearance rates to be driven by decreased community cooperation with the police. Community cooperation is generally considered to be important for successful policing and crime investigations, and it has been shown to decrease after high-profile cases of police misconduct that negatively impact perceptions of police (Desmond et al., 2016). It is unclear why the change in content that we document should have direct negative effects on the public's perception of the police: if anything, people are seeing fewer stories about crimes and a similar number of stories about arrests, so they should perceive the police as being equally effective.<sup>36</sup>

Having said this, we might still worry that independently of what the public thinks of the police, people might be less likely to spontaneously provide useful information to solve crimes if they do not hear about the crime incidents on TV. Unfortunately, there is limited data on the importance of tips for solving crimes, but our understanding is that the phenomenon is quantitatively limited.<sup>37</sup> Overall, while we cannot exclude this alternative story, we believe that it would only be able to explain a small fraction of the effect.

## 8 Conclusion

In this paper, we study the effect of a shock in news coverage of crime on municipal police departments in the United States. The source of variation in local news content that we exploit is

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<sup>36</sup>Instead, we would interpret a change in the effectiveness of the police coming from the relative decline in clearance rates to be downstream from the effect on police effort, and we do not see it as a threat to our interpretation.

<sup>37</sup>A piece of evidence that supports this interpretation comes from the evaluation of a tip solicitation program, Crimestoppers, that uses data for the year 2000 in the United Kingdom. According to this rare evaluation of the program, only 11% of calls resulted in actionable intelligence; in addition, most calls are for minor offenses such as drug crimes that are not included in our analysis, and overall only "30 calls were received which led to an arrest or change in relation to murder, 25 in relation to attempted murder, and 28 in relation to sexual assault" (Gresham et al., 2003).

the acquisition of local TV stations by the Sinclair Broadcast Group. In particular, our empirical strategy combines variation in the staggered timing of acquisitions with cross-sectional variation in exposure to the local news shock in a triple differences-in-differences design.

Ownership matters for content: once acquired by Sinclair, TV stations decrease news coverage of local crime. We document this by exploiting a unique dataset of transcripts of local TV newscasts of 323 stations 2010-2017. We find a very significant and sizable effect: relative to non-covered municipalities, covered municipalities exhibit a reduction in the probability of appearing in the news with a crime story of about 25% of the outcome mean in 2010.

How does police behavior change in response to the decline in news coverage of local crime? We find that after Sinclair enters a media market, covered municipalities exhibit lower violent crime clearance rates relative to non-covered municipalities. The effect is significant at the 1% level and corresponds to a decrease to 10% of the baseline mean. We do not find any effect for property crime clearance rates, which is consistent with local TV news having a violent crime focus.

To explain these results, we argue that when violent crime appears less frequently in the news, the salience of crime in the public opinion decreases. The police find themselves operating in a political environment where there is less pressure to clear violent crimes, and they reallocate resources away from clearing these crimes in favor of other police activities, because of an overall decrease in crime salience.

To conclude, this paper shows that shocks to local media content driven by acquisitions can affect the behavior of the police. Overall, this suggests that the increase in ownership concentration currently characterizing the local TV market in the United States might have important consequences for local institutions.

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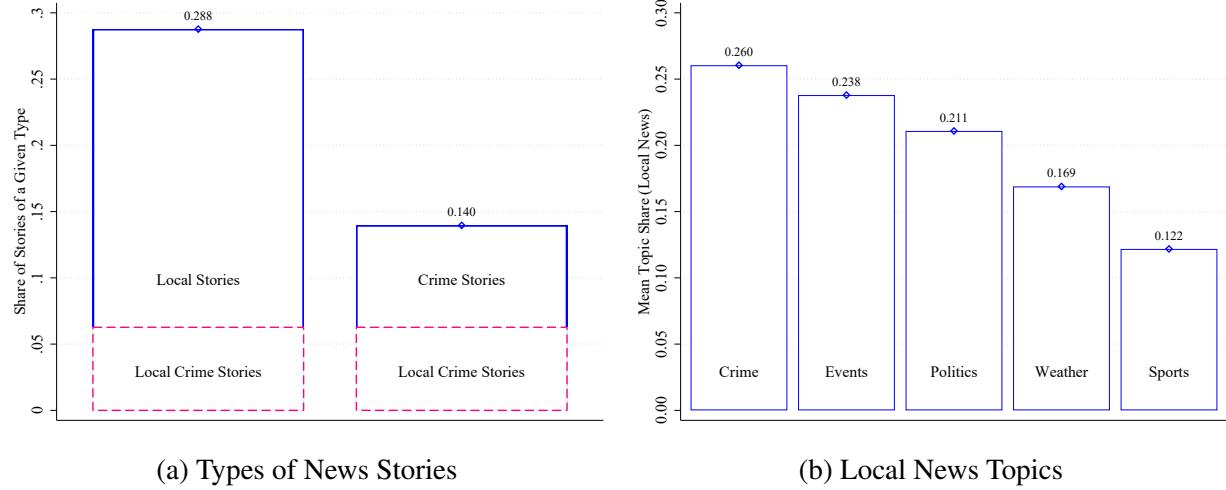
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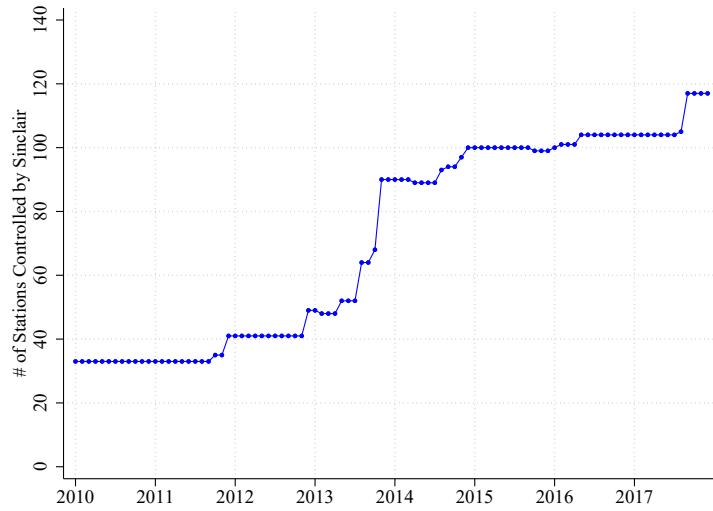
# Figures

**Figure I: Local TV News Content**



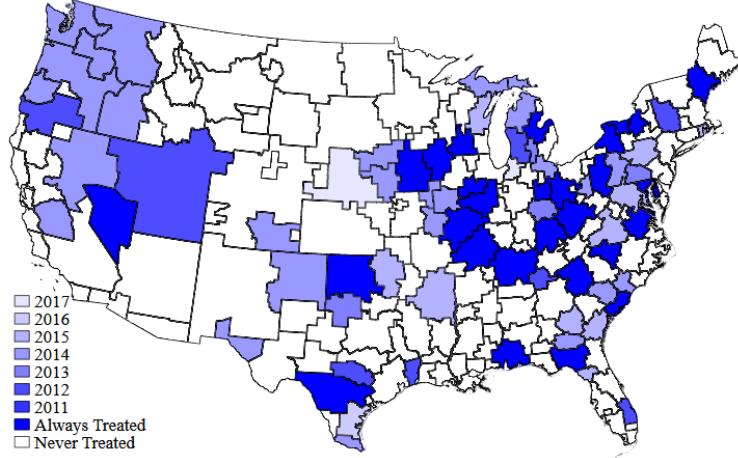
Notes: This figure describes local TV news content. Panel (a) shows the share of stories that are local, that are about crime, and both local and about crime. A story is local if it mentions at least one of the municipalities with more than 10,000 people in the media market. A story is about crime if it contains a "crime bigram" (i.e. a bigram that is much more likely to appear in crime-related stories than in non-crime related ones of the Metropolitan Desk Section of the New York Times). For more details, see Section 3. Panel (b) shows the mean topic share from an unsupervised LDA topic model trained on local stories. In both graphs, the sample is restricted to media markets that never experienced Sinclair entry.

**Figure II: Number of Stations Controlled by Sinclair 2010-2017**



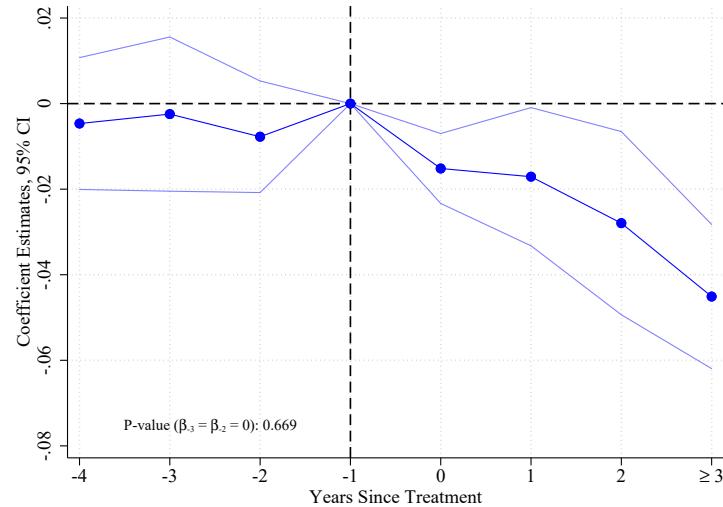
Notes: This figure shows the number of big-four affiliate stations controlled by Sinclair in each month from January 2010 to December 2017. A station is considered controlled by Sinclair if it is owned and operated by the Sinclair Broadcast Group, if it is owned and operated by Cunningham Broadcasting, or if Sinclair controls programming through a local marketing agreement.

**Figure III:** Map of Media Markets Experiencing Sinclair Entry 2010-2017



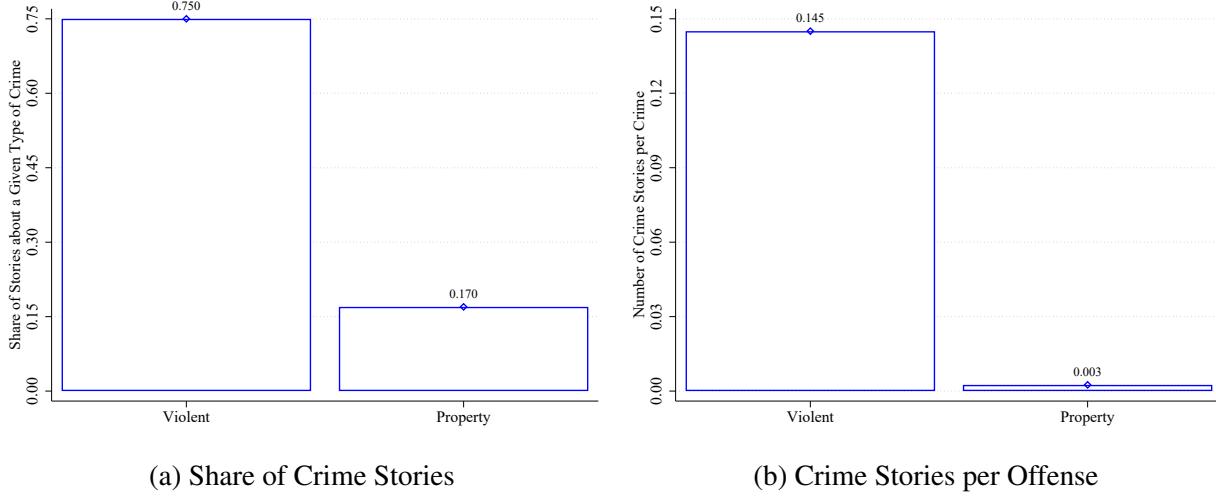
Notes: This map shows year of Sinclair entry across media markets in the United States. Lighter colors correspond to later entry. Never treated are media markets that never experience Sinclair entry; always treated are media markets that have at least one station controlled by Sinclair at the beginning of the period of interest (January 2010). There were no additional stations that were acquired in 2010.

**Figure IV:** Effect of Sinclair Control on the Probability of Having a Local Crime Story, by Year since Treatment



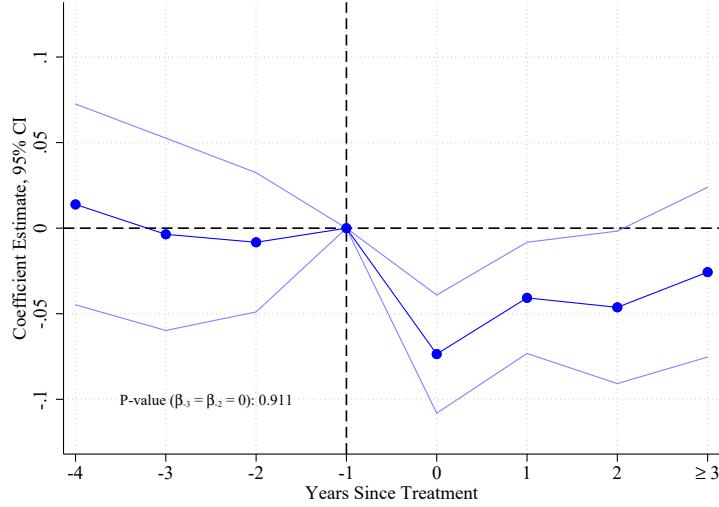
Notes: This figure shows the effect of Sinclair control on the probability that a station reports local crime stories about covered municipalities relative to non-covered municipalities, by year since treatment. We report coefficient estimates and 95% confidence intervals from a regression of an indicator variable for the station reporting a local crime story about the municipality on the interaction between indicator variables for years since Sinclair control and an indicator variable for whether the municipality is covered at baseline, station by week fixed effects, covered status by week fixed effects, and station by municipality fixed effects (equation (2)). The omitted category is T-1. Standard errors are clustered at the media market level. The dataset is a municipality-station pair by week panel. There are multiple stations in each media market covering the same municipalities, and the municipality-station pair is the cross-sectional unit of interest. Treatment is defined at the monthly level, but the effect is constrained to be the same by year since treatment. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010.

**Figure V: Local Crime News of Violent and Property Crimes**



Notes: This figure shows what crimes are covered in local TV news. Panel (a) shows the average share of a municipality's crime stories that are about violent crimes (i.e. murder, assault, rape, and robbery) and property crimes (i.e. burglary, theft, and motor vehicle theft). Panel (b) shows the average number of crime stories per reported offense across municipalities. Note that this does not exactly correspond to the probability that a crime of a given type appears in the news because we have information on news coverage only for one randomly selected day per week. In both graphs, the sample is restricted to 2010 and to media market that never experience Sinclair entry.

**Figure VI: Effect of Sinclair Entry on the Violent Crime Clearance Rate, by Year since Treatment**



Notes: This figure shows the effect of Sinclair entry on the violent crime clearance rate of covered municipalities relative to non-covered municipalities, by year since treatment. We report coefficient estimates and 95% confidence intervals from a regression of the municipality's violent crime clearance rate on the interaction between indicator variables for years since Sinclair entry and an indicator variable for whether the municipality is covered at baseline, media market by year fixed effects, covered status by year fixed effects, and municipality fixed effects (equation (5)). The omitted category is T-1. Standard errors are clustered at the media market level. The dataset is a municipality by year panel. Treatment is defined at the yearly level. A media market is considered treated in a given year if Sinclair was present in the market in the January of that year. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010. Clearance rates are defined as total number of crimes cleared by arrest or exceptional means over total number of crimes, winsorized at the 99% level.

# Tables

**Table I:** Effect of Sinclair Control on the Probability of Having a Local Crime Story

Dependent Variable	Had Local Crime Story			
	(1)	(2)	(3)	(4)
Sinclair * Covered	-0.024*** (0.007)	-0.022*** (0.006)	-0.014*** (0.005)	-0.023*** (0.006)
Non-Sinclair Stations in Sinclair				-0.005 (0.005)
Media Market * Covered				
Observations	3065194	3065194	2334112	3065194
Clusters	112	112	109	112
Municipalities	2201	2201	1673	2201
Stations	323	323	319	323
Outcome Mean in 2010	0.089	0.089	0.048	0.089
P-value Sinclair = Other				.017
Station by Week FE	X	X	X	X
Covered by Week FE	X	X	X	X
Station by Municipality FE	X	X	X	X
Sinclair * Controls		X	X	X
Restricts Sample 10k-50k			X	

Notes: This table shows the effect of Sinclair control on the probability that a station reports local crime stories about covered municipalities relative to non-covered municipalities. We regress an indicator variable for the station reporting a local crime story about the municipality on the interaction between an indicator variable for the station being under Sinclair control and an indicator variable for whether the municipality is covered at baseline, station by week fixed effects, covered status by week fixed effects, and station by municipality fixed effects. Column (2) additionally includes the interaction between an indicator variable for the station being under Sinclair control and baseline municipality characteristics (equation (1)). The characteristics included are log population, share male, share male between 15 and 30, share over 55, share white, share black, share Hispanic, share with 2 years of college, log median income, share of population below the poverty rate, share unemployed, log municipality area, and Republican vote share in the 2008 presidential election. Column (3) restricts the sample to municipalities with fewer than 50,000 people. Finally, column (4) also includes the interaction between an indicator variable for being in the same media market as a station under Sinclair control and an indicator variable for whether the municipality is covered at baseline. The *p*-value reported in column (4) is from a test of the difference between the effect of Sinclair entry on the station controlled by Sinclair and other stations in the same media market. Standard errors are clustered at the media market level. The dataset is a municipality-station pair by week panel. There are multiple stations in each media market covering the same municipalities, and the municipality-station pair is the cross-sectional unit of interest. Treatment is defined at the monthly level. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010.

**Table II:** Effect of Sinclair Entry on the Violent Crime Clearance Rate

Dependent Variable	Violent Crime Clearance Rate			
	(1)	(2)	(3)	(4)
Sinclair * Covered	-0.046*** (0.016)	-0.045*** (0.017)	-0.043** (0.020)	-0.043** (0.017)
Observations	14016	14016	10384	14016
Clusters	111	111	107	111
Municipalities	1752	1752	1298	1752
Outcome Mean in 2010	0.463	0.463	0.469	0.463
Media Market by Year FE	X	X	X	X
Covered by Year FE	X	X	X	X
Municipality FE	X	X	X	X
Sinclair * Controls		X	X	X
Restricts Sample 10k-50k			X	
Controls for Crime Rates and Population				X

Notes: This table shows the effect of Sinclair entry on the violent crime clearance rate of covered municipalities relative to non-covered municipalities. We regress the municipality's violent crime clearance rate on the interaction between an indicator variable for Sinclair presence in the media market and an indicator variable for whether the municipality is covered at baseline, media market by year fixed effects, covered status by year fixed effects, and municipality fixed effects. Column (2) additionally includes the interaction between an indicator variable for Sinclair presence in the media market and baseline municipality characteristics (equation (4)). The characteristics included are log population, share male, share male between 15 and 30, share over 55, share white, share black, share Hispanic, share with 2 years of college, log median income, share of population below the poverty rate, share unemployed, log municipality area, and Republican vote share in the 2008 presidential election. Column (3) restricts the sample to municipalities with fewer than 50,000 people. Column (4) additionally controls for the property crime rate, the violent crime rate, and log population. Standard errors are clustered at the media market level. The dataset is a municipality by year panel. Treatment is defined at the yearly level. A media market is considered treated in a given year if Sinclair was present in the market in the January of that year. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010. Clearance rates are defined as total number of crimes cleared by arrest or exceptional means over total number of crimes. Crimes rates are crimes per 1,000 people under an inverse hyperbolic sine transformation. Both clearance rates and crime rates are winsorized at the 99% level.

**Table III:** Effect of Sinclair Entry on the Property Crime Clearance Rate, by Type of Crime

Dependent Variable	By Type of Crime			
	Property Crime Clearance Rate	Burglary	Theft	Motor Vehicle Theft
		(1)	(2)	(3)
Sinclair * Covered	-0.004 (0.009)	-0.013 (0.009)	-0.004 (0.011)	-0.006 (0.015)
Observations	14016	14013	14009	13953
Clusters	111	111	111	111
Municipalities	1752	1752	1752	1752
Outcome Mean in 2010	0.191	0.131	0.211	0.172
Media Market by Year FE	X	X	X	X
Covered by Year FE	X	X	X	X
Municipality FE	X	X	X	X
Sinclair * Controls	X	X	X	X

Notes: This table shows the effect of Sinclair entry on the property crime clearance rate of covered municipalities relative to non-covered municipalities, overall and for different types of property crimes. We regress the municipality's clearance rate for a given type of property crime on the interaction between an indicator variable for Sinclair presence in the media market and an indicator variable for whether the municipality is covered at baseline, the interaction between an indicator variable for Sinclair presence in the media market and baseline municipality characteristics, media market by year fixed effects, covered status by year fixed effects, and municipality fixed effects (equation (4)). The characteristics included are log population, share male, share male between 15 and 30, share over 55, share white, share black, share Hispanic, share with 2 years of college, log median income, share of population below the poverty rate, share unemployed, log municipality area, and Republican vote share in the 2008 presidential election. Standard errors are clustered at the media market level. The dataset is a municipality by year panel. Treatment is defined at the yearly level. A media market is considered treated in a given year if Sinclair was present in the market in the January of that year. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010. Clearance rates are defined as total number of crimes cleared by arrest or exceptional means over total number of crimes, winsorized at the 99% level.

**Table IV:** Effect of Sinclair Entry on Salience of Crime and Police

Dependent Variable Keyword	Monthly Search Volume			
	Crime	Police	Weather	Youtube
	(1)	(2)	(3)	(4)
Sinclair	-0.040*** (0.014)	-0.040*** (0.014)	-0.009 (0.016)	-0.011 (0.009)
Observations	14880	14880	14880	14880
Clusters	155	155	155	155
Outcome Mean in 2010	3.624	3.920	3.872	4.284
Media Market FE	X	X	X	X
Month FE	X	X	X	X
Media Market Controls	X	X	X	X

Notes: This table shows the effect of Sinclair entry on the salience of crime and police using Google trend data in differences-in-differences design. We regress the search volume for "crime" (column (1)), "police" (column (2)), "weather" (column (3)) and "youtube" (column (4)) on an indicator variable for Sinclair presence in the media market, baseline media market characteristics interacted with month fixed effects, media market fixed effects, and month fixed effects. The characteristics included are log population, share male, share male between 15 and 30, share white, share Hispanic, share unemployed, and log income per capita. Standard errors are clustered at the media market level. The dataset is at the media market by month level. Treatment is defined at the monthly level. The monthly level of searches is in logs.

**Table V:** Effect of Sinclair Entry on the Violent Crime Clearance Rate, by Share of the Population above 55

Dependent Variable	Violent Crime Clearance Rate	
	Share 55+ >= Median	Share 55+ < Median
Sub-Sample	(1)	(2)
Sinclair * Covered	-0.079*** (0.030)	-0.012 (0.029)
Observations	6920	6904
Clusters	97	92
Municipalities	865	863
Outcome Mean in 2010	0.462	0.464
Media Market by Year FE	X	X
Covered by Year FE	X	X
Municipality FE	X	X
Sinclair * Controls	X	X

Notes: This table shows the effect of Sinclair control on the share of crime stories that are about crime, by whether the share of the population over 55 was above the median (column (1)) or below the median (column (2)) in 2010. We regress the municipality's violent crime clearance rate on the interaction between an indicator variable for Sinclair presence in the media market and an indicator variable for whether the municipality is covered at baseline, the interaction between an indicator variable for Sinclair presence in the media market and baseline municipality characteristics, media market by year fixed effects, covered status by year fixed effects, and municipality fixed effects (equation (4)). The characteristics included are log population, share male, share male between 15 and 30, share over 55, share white, share black, share Hispanic, share with 2 years of college, log median income, share of population below the poverty rate, share unemployed, log municipality area, and Republican vote share in the 2008 presidential election. Standard errors are clustered at the media market level. The dataset is a municipality by year panel. Treatment is defined at the yearly level. A media market is considered treated in a given year if Sinclair was present in the market in the January of that year. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010. Clearance rates are defined as total number of crimes cleared by arrest or exceptional means over total number of crimes, winsorized at the 99% level.

**Table VI:** Effect of Sinclair Control on the Probability of Having a Local Crime Story, by Whether the Story is about a Crime Incident or an Arrest

Type of Story	Dependent Variable	
	Had Local Crime Story	
	Crime-Related	Arrest-Related
	(1)	(2)
Sinclair * Covered	-0.022*** (0.006)	-0.003 (0.002)
Observations	3065194	3065194
Clusters	112	112
Municipalities	2201	2201
Stations	323	323
Outcome Mean in 2010	0.080	0.019
Station by Week FE	X	X
Covered by Week FE	X	X
Station by Municipality FE	X	X
Sinclair * Controls	X	X

Notes: This table shows the effect of Sinclair control on the probability that a station reports local crime stories about covered municipalities relative to non-covered municipalities, by whether the story is about a crime incident or is arrest-related. Arrest-related stories are stories that contain crime bigrams related to arrests or prosecutions (e.g. "police arrested" or "murder charge") or include the string "arrest". Crime-related stories are all other crime stories. We regress an indicator variable for the station reporting a local crime-related (column (1)) or arrest-related (column (2)) story about the municipality on the interaction between an indicator variable for the station being under Sinclair control and an indicator variable for whether the municipality is covered at baseline, the interaction between an indicator variable for the station being under Sinclair control and baseline municipality characteristics, station by week fixed effects, covered status by week fixed effects, and station by municipality fixed effects (equation (1)). The characteristics included are log population, share male, share male between 15 and 30, share over 55, share white, share black, share Hispanic, share with 2 years of college, log median income, share of population below the poverty rate, share unemployed, log municipality area, and Republican vote share in the 2008 presidential election. Standard errors are clustered at the media market level. The dataset is a municipality-station pair by week panel. There are multiple stations in each media market covering the same municipalities, and the municipality-station pair is the cross-sectional unit of interest. Treatment is defined at the monthly level. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010.

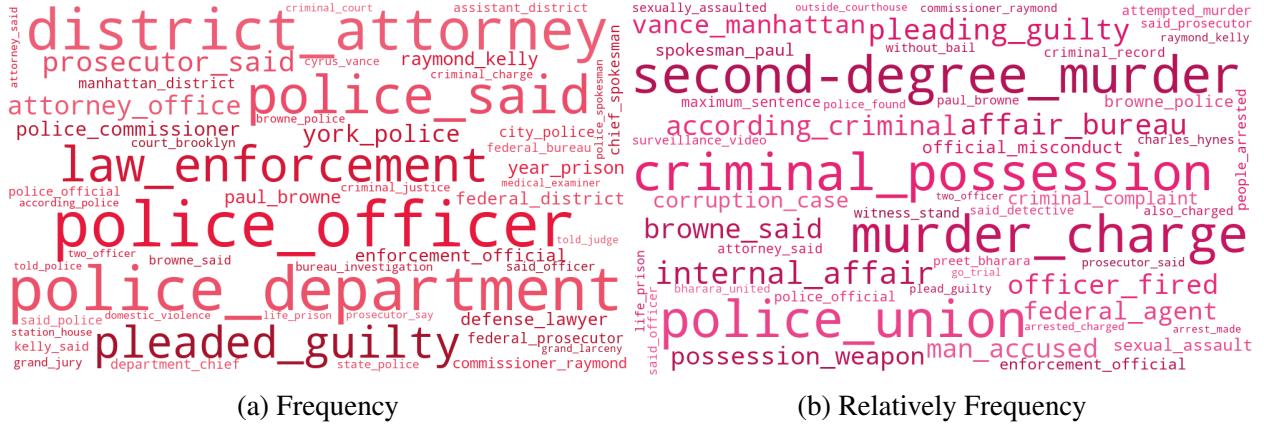
## Appendix Figures

**Appendix Figure I:** Local News Topics



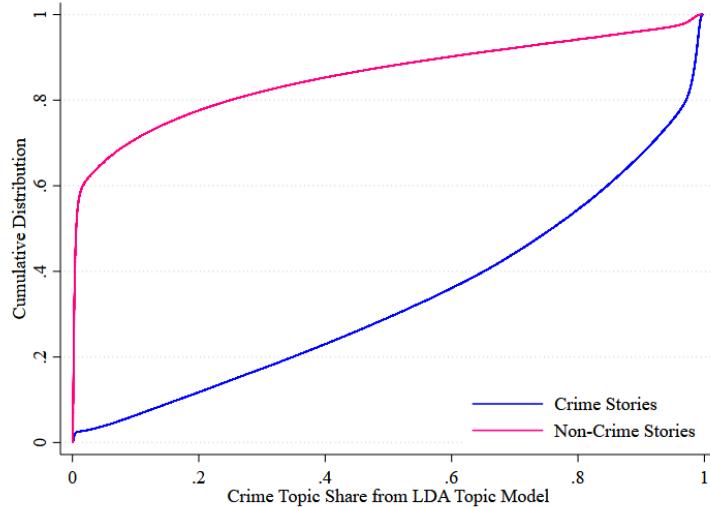
Notes: This figure shows word clouds of the 50 words and bigrams that have the highest probability of being generated by a given topic. The size of the word is proportional to the word's probability.

**Appendix Figure II:** Crime Bigrams, by Highest Frequency and Highest Relative Frequency



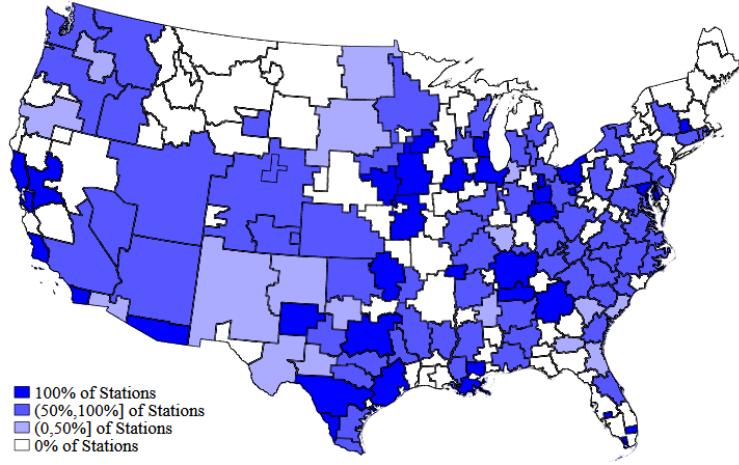
Notes: This figure shows word clouds of the top 50 bigrams that we use to identify crime stories by frequency (Panel (a)) and by relative frequency (Panel (b)). The size of the words is proportional to their absolute and relative frequency.

**Appendix Figure III:** Classification of Local Stories: Validation



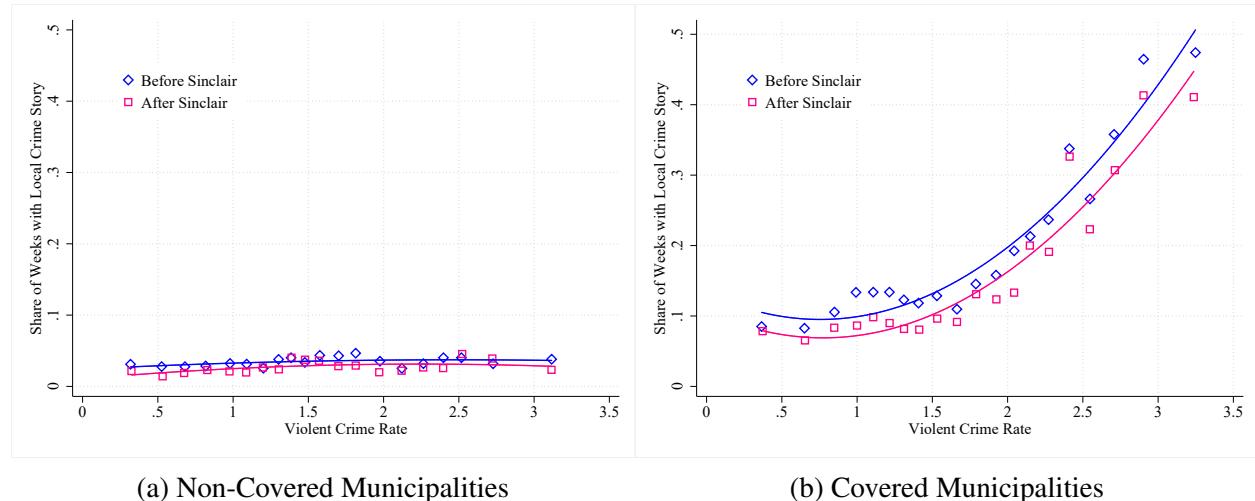
Notes: This figure shows the cumulative distribution of the crime topic share separately by whether local stories are classified to be about crime or not according to the methodology described in Section 3. Crime topic shares are from an unsupervised LDA model trained on local crime stories. Stories are defined to be local if they mention at least one of the municipalities with more than 10,000 people in the media market.

**Appendix Figure IV: Map of Media Markets Included in the Content Sample**



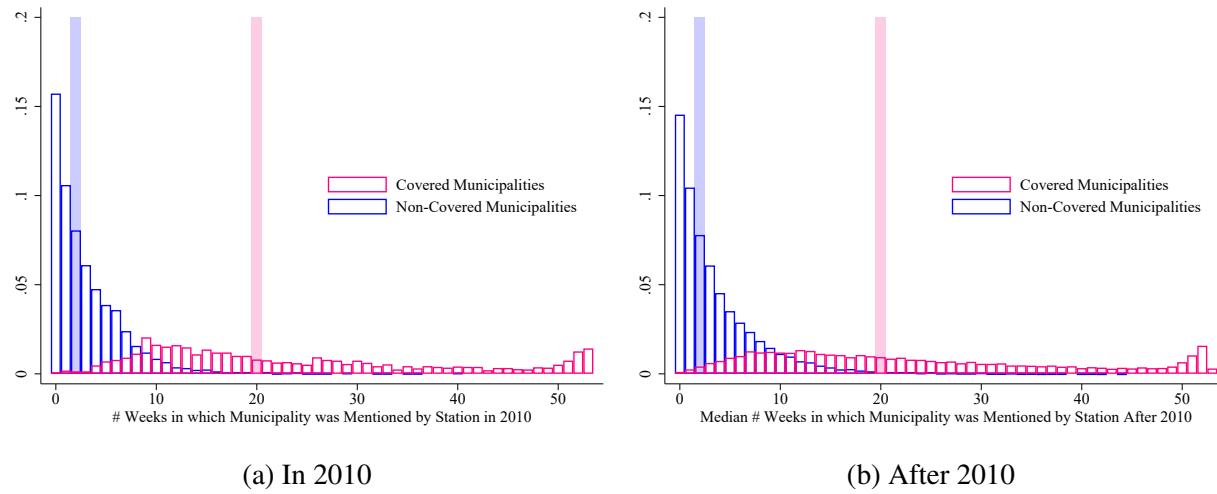
Notes: This map shows the share of stations for which we have content data continuously from 2010-2017 across media markets in the United States. Darker colors correspond to higher shares of media market stations included in the content data. 61% of media market have at least one station included in our sample, and for 88% of them the sample includes more than half of the stations present in the market.

**Appendix Figure V: Relationship Between Violent Crime Rates and Share of Weeks with Local Crime Story Before and After Sinclair Control, by Covered Status**



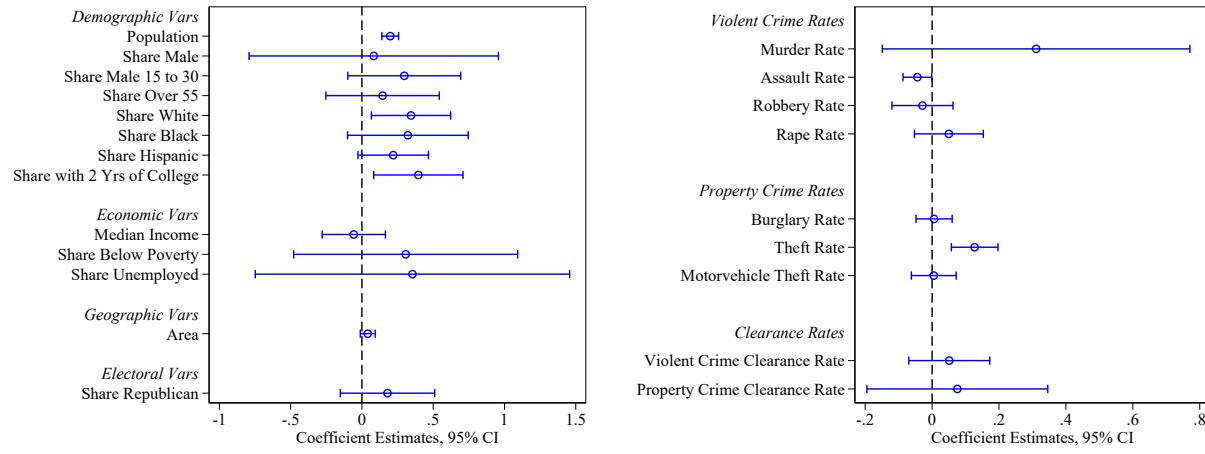
Notes: This figure shows how the relationship between violent crime rates and local crime reporting changes with Sinclair control, by whether a municipality is covered at baseline or not. Panel (a) shows a binned scatter plot of the relationship between the municipality's violent crime rate and the share of weeks in a year in which the station reports a local crime story about the municipality, separately before and after Sinclair control, for non-covered municipalities. Panel (b) shows the same binned scatter plot for covered municipalities. The sample is restricted to stations that ever experienced Sinclair control. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010. Crime rates are crimes per 1,000 people under an inverse hyperbolic sine transformation, and are winsorized at the 99% level.

**Appendix Figure VI:** Number of Weeks in which Municipality is Mentioned by Station in 2010 (Baseline Year) and After 2010, by Covered Status



Notes: This figure shows that covered status persists over time. Panel (a) presents a histogram of the number of weeks in which the municipality was mentioned by the station in 2010, by whether the municipality is covered at baseline or not. Panel (b) presents a histogram of the median number of weeks in which the municipality was mentioned by the station after 2010, by whether a municipality is covered at baseline or not. The two vertical lines indicate the median number of mentions for each group of municipalities. The overlap between the two distributions can be explained by covered status being determined based on the median share of weeks in which the municipality was mentioned in 2010 across stations. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010.

## Appendix Figure VII: Differences in Socio-Economic Characteristics Between Covered and Non-Covered Municipalities

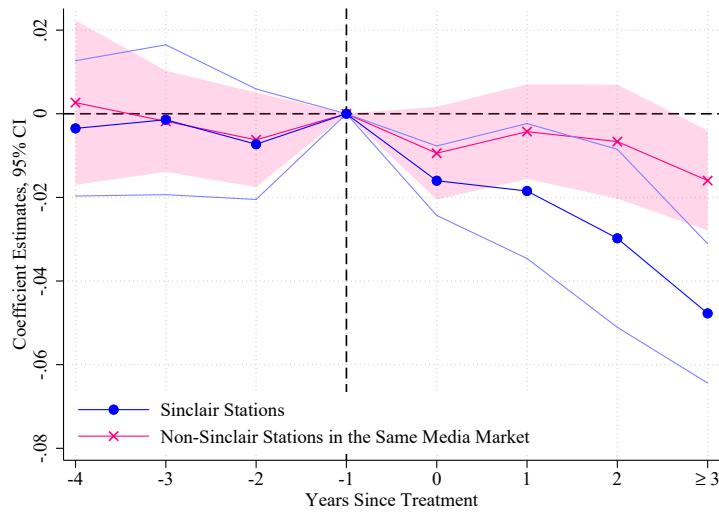


(b) Socio-economic Characteristics

(b) Crime and Clearance Rates

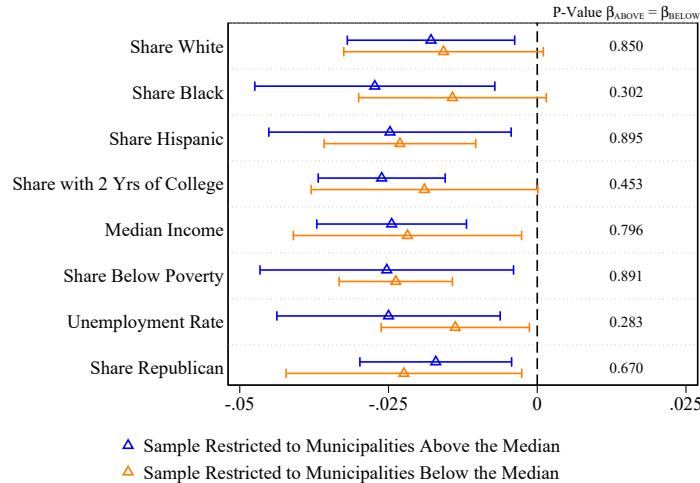
Notes: This figure shows along which dimensions covered and non-covered municipalities differ. We report coefficient estimates together with 95% confidence intervals from a regression of an indicator variable for the municipality being covered at baseline on socio-economic characteristics of the municipality, crime and clearance rates in 2010, and media market fixed effects. All coefficients are estimated in the same regression, but we report them in two separate graphs for ease of exposition. Standard errors are clustered at the media market level. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010. Clearance rates are defined as total number of crimes cleared by arrest or exceptional means over total number of crimes. Crimes rates are crimes per 1,000 people under an inverse hyperbolic sine transformation. Both clearance rates and crime rates are winsorized at the 99% level.

**Appendix Figure VIII:** Effect of Sinclair Control for Sinclair-Controlled Stations and Other Same Media Market Stations on the Probability of Having a Local Crime Story, by Year since Treatment



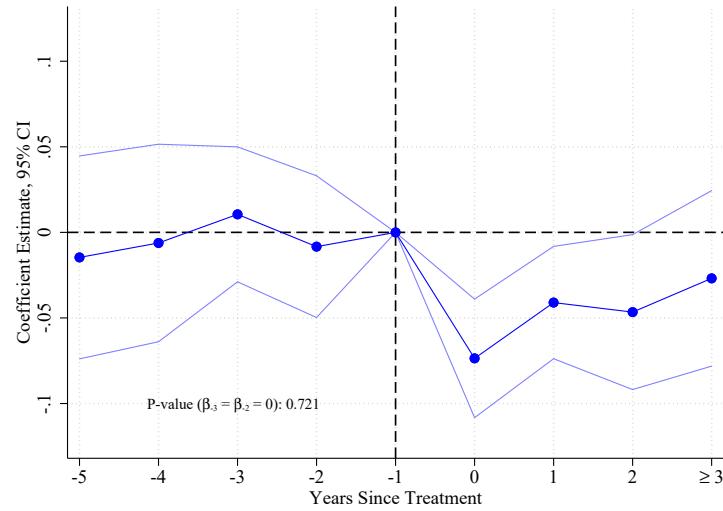
Notes: This figure shows the effect of Sinclair entry, separately for stations directly controlled by Sinclair and for same media market stations not directly controlled by Sinclair, on the probability that a station reports local crime stories about covered municipalities relative to non-covered municipalities, by year since treatment. We report coefficient estimates and 95% confidence intervals from a regression of an indicator variable for the station reporting a local crime story about the municipality on the interaction between indicator variables for years since Sinclair control and an indicator variable for whether the municipality is covered at baseline for Sinclair stations, the interaction between indicator variables for years since Sinclair entry and an indicator variable for whether the municipality is covered at baseline for non-Sinclair station in a Sinclair media markets, station by week fixed effects, covered status by week fixed effects, and station by municipality fixed effects (equation (2)). The omitted category is T-1. Standard errors are clustered at the media market level. The dataset is a municipality-station pair by week panel. There are multiple stations in each media market covering the same municipalities, and the municipality-station pair is the cross-sectional unit of interest. Treatment is defined at the monthly level, but the effect is constrained to be the same by year since treatment. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010.

**Figure IX:** Effect of Sinclair Control on the Probability of Having a Local Crime Story, Heterogeneous Effects by Municipality Characteristics



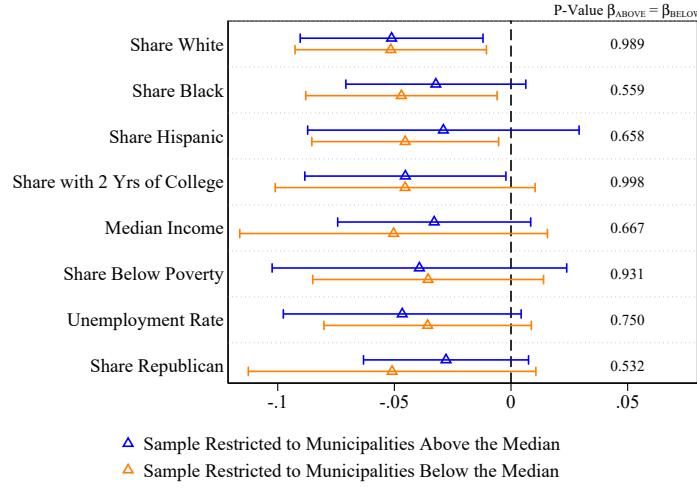
Notes: This figure presents the heterogeneity of the effect of Sinclair entry on local crime reporting. We report coefficient estimates and 95% confidence intervals from two separate regression models for municipalities above and below the median according to the characteristic. The  $p$ -value reported is from a test of equality of the main coefficients across the two samples. We regress an indicator variable for the station reporting a local crime story about the municipality on the interaction between an indicator variable for the station being under Sinclair control and an indicator variable for whether the municipality is covered at baseline, the interaction between an indicator variable for the station being under Sinclair control and baseline municipality characteristics, station by week fixed effects, covered status by week fixed effects, and station by municipality fixed effects (equation (1)). The characteristics included are log population, share male, share male between 15 and 30, share over 55, share white, share Hispanic, share with 2 years of college, log median income, share of population below the poverty rate, share unemployed, log municipality area, and Republican vote share in the 2008 presidential election. Standard errors are clustered at the media market level. The dataset is a municipality-station pair by week panel. There are multiple stations in each media market covering the same municipalities, and the municipality-station pair is the cross-sectional unit of interest. Treatment is defined at the month level. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010.

**Appendix Figure X:** Effect of Sinclair Entry on the Violent Crime Clearance Rate, by Year since Treatment, Estimated Including Data for 2009



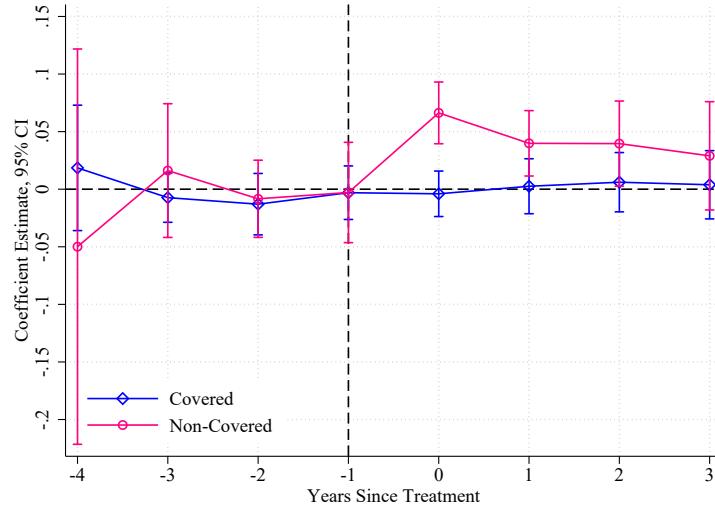
Notes: This figure shows the effect of Sinclair entry on the violent crime clearance rate of covered municipalities relative to non-covered municipalities, by year since treatment using data that additionally includes 2009. We report coefficient estimates and 95% confidence intervals from a regression of the municipality's violent crime clearance rate on the interaction between indicator variables for years since Sinclair entry and an indicator variable for whether the municipality is covered at baseline, media market by year fixed effects, covered status by year fixed effects, and municipality fixed effects (equation (5)). The omitted category is T-1. Standard errors are clustered at the media market level. The dataset is a municipality by year panel. Treatment is defined at the yearly level. A media market is considered treated in a given year if Sinclair was present in the market in the January of that year. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010. Clearance rates are defined as total number of crimes cleared by arrest or exceptional means over total number of crimes, winsorized at the 99% level.

**Figure XI:** Effect of Sinclair Controls on the Violent Crime Clearance Rate, Heterogeneous Effects by Municipality Characteristics



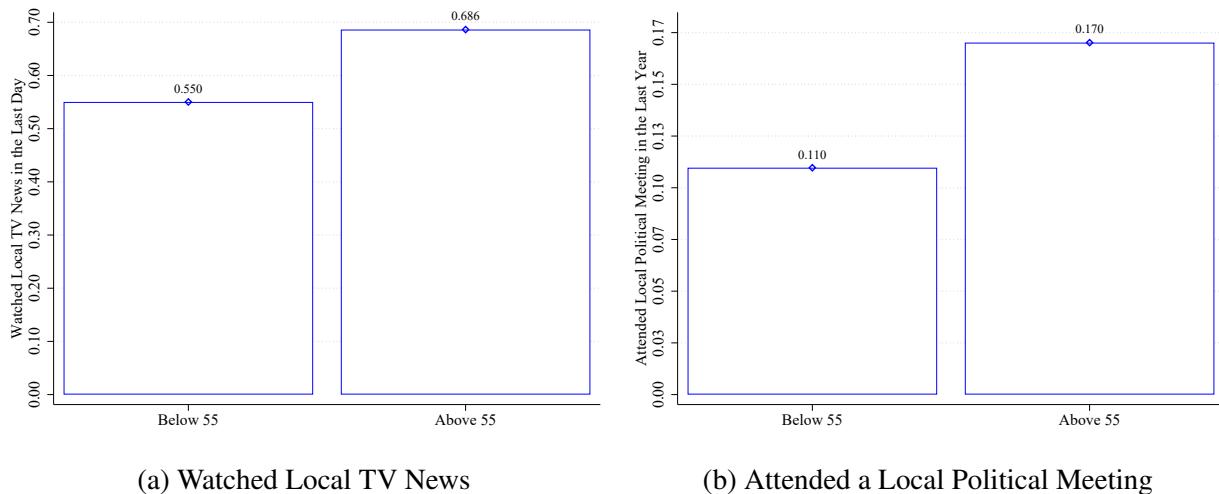
Notes: This figure presents the heterogeneity of the effect of Sinclair entry on the violent crime clearance rate. We report coefficient estimates and 95% confidence intervals from two separate regression models for municipalities above and below the median according to the characteristic. The  $p$ -value reported is from a test of equality of the main coefficients across the two samples. We regress the municipality's violent crime clearance rate on the interaction between an indicator variable for Sinclair presence in the media market and an indicator variable for whether the municipality is covered at baseline, the interaction between an indicator variable for Sinclair presence in the media market and baseline municipality characteristics, media market by year fixed effects, covered status by year fixed effects, and municipality fixed effects (equation (4)). The characteristics included are log population, share male, share male between 15 and 30, share over 55, share white, share Hispanic, share with 2 years of college, log median income, share of population below the poverty rate, share unemployed, log municipality area, and Republican vote share in the 2008 presidential election. Standard errors are clustered at the media market level. The dataset is a municipality by year panel. Treatment is defined at the yearly level. A media market is considered treated in a given year if Sinclair was present in the market in the January of that year. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010. Clearance rates are defined as total number of crimes cleared by arrest or exceptional means over total number of crimes, winsorized at the 99% level.

**Figure XII:** Effect of Sinclair Controls on the Violent Crime Clearance Rate by Year since Treatment, Robustness to Heterogeneous Effects in TWFE Models



Notes: This figure shows the effect of Sinclair entry on the violent crime clearance rate by year since treatment, estimated separately for covered and non-covered municipalities using an estimator robust to heterogeneous treatment effects in TWFE models. The starting point is a TWFE model that regresses the outcome on year and municipality fixed effects. We estimate placebo coefficients leading up to treatment and dynamic treatment effects using the robust estimator proposed by de Chaisemartin and D'Haultfoeuille (2020), which we report together with 95% confidence intervals from 1000 bootstrap repetitions. The analysis is run separately for covered and non-covered municipalities, but we report the coefficients on the same graph for ease of comparison. Standard errors are clustered at the media market level. The dataset is a municipality by year panel. Treatment is defined at the year level. A media market is considered treated in a given year if Sinclair was present in the market in the January of that year. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010. Clearance rates are defined as total number of crimes cleared by arrest or exceptional means over total number of crimes. Clearance rates are winsorized at the 99% level.

**Figure XIII:** Local News Viewership and Political Participation, by Age



Notes: This figure reports the share of people who reported watching local TV news in the last day (Panel (a)) or attended a local political meeting in the last year (Panel (b)), separately for individuals below and above 55. Data are from the 2010 Cooperative Congressional Election Study.

## Appendix Tables

**Appendix Table I:** Sample Summary

	Overall	Included in the Content Analysis
		(1)
# of Stations	835	323
# of Stations Ever Controlled by Sinclair	121	38
# of Stations Ever Owned and Operated by Sinclair	110	37
# of Stations Ever Owned and Operated by Cunningham	10	1
# of Stations Ever Controlled by Sinclair through a Local Marketing Agreement	10	4

Notes: This table presents summary counts for full-powered commercial TV stations affiliated with a big four network 2010-2017, separately for all stations (column (1)) and for the sample of stations included in the content analysis (column (2)).

**Appendix Table II:** Descriptive Statistics

	Municipalities Included in the Analysis				All Municipalities				P-value		
	N	Mean	SD	Min	Max	N	Mean	SD	Min	Max	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Had a Local Crime Story											
Had a Local Crime Story	2201	0.259	0.267	0.000	1.000						
	2201	0.099	0.167	0.000	0.912						
Panel A: Content											
Property Crime Rate	1752	4.071	0.525	2.440	5.101	2358	4.064	0.540	2.440	5.101	0.849
Violent Crime Rate	1752	1.668	0.810	0.168	3.486	2358	1.715	0.807	0.168	3.486	0.173
Property Crime Clearance Rate	1752	0.191	0.119	0.000	0.600	2358	0.191	0.117	0.000	0.600	0.875
Violent Crime Clearance Rate	1752	0.463	0.255	0.000	1.000	2358	0.465	0.251	0.000	1.000	0.872
Panel B: Crime and Clearance Rates											
Population	1752	58779	156552	10008	3772486	2358	58394	216189	10008	8078471	0.882
Share Male	1752	0.487	0.025	0.422	0.863	2358	0.487	0.026	0.282	0.863	0.581
Share Male 15-30	1752	0.230	0.074	0.071	0.758	2358	0.231	0.074	0.071	0.803	0.642
Share Over 55	1752	0.232	0.063	0.069	0.683	2358	0.236	0.064	0.068	0.695	0.043
Share White	1752	0.755	0.177	0.012	0.989	2358	0.760	0.177	0.012	0.990	0.374
Share Hispanic	1752	0.117	0.158	0.000	0.978	2358	0.115	0.157	0.000	0.978	0.681
Share with 2 Years of College	1752	0.154	0.182	0.001	0.987	2358	0.155	0.188	0.001	0.987	0.939
Median Income	1752	0.365	0.148	0.052	0.879	2358	0.360	0.147	0.031	0.883	0.299
Share Below Poverty Line	1752	54.321	21.389	17.526	182.237	2358	53.397	21.312	17.526	237.135	0.450
Share Unemployed	1752	0.136	0.078	0.012	0.435	2358	0.140	0.078	0.012	0.442	0.316
Log Area	1752	0.079	0.031	0.015	0.317	2358	0.080	0.031	0.014	0.317	0.196
Share Republican	1752	17.476	0.959	14.595	21.486	2358	17.409	0.994	13.136	21.486	0.221

Notes: This table reports descriptive statistics for the main variables considered in the analysis and for municipality characteristics. Columns (1) to (5) restrict the sample to municipalities included in the main analysis; columns (6) to (10) include all municipalities with more than 10,000 people. Column (11) reports the *p*-value of the difference between the two samples from a regression of the specified characteristics on a dummy for the municipality being included in the analysis, with standard errors clustered at the media market level. The control analysis includes 2201; 1752 are also in the police behavior analysis. The reference sample additionally includes 606 municipalities that satisfy the conditions to be included in the police behavior analysis, but are located in media markets for which we have no content data (see Appendix B for a detailed explanation). Content and crime and clearance rates are measured in 2010. Crime rates are defined as crimes per 1,000 people under an inverse hyperbolic sine transformation and clearance rates as total number of crimes cleared by arrest or exceptional means over total number of crimes. Both clearance rates and crime rates are winsorized at the 99% level.

**Appendix Table III: Sinclair Entry and Media Market Socio-Economic and Political Characteristics**

Dependent Variable	Pop.	Share Male	Share Male	Share White	Share Hispanic	Unempl.	Income per Capita	Turnout	Share Repub.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: All DMAs									
Sinclair	0.001 (0.004)	0.021 (0.021)	-0.002 (0.029)	0.003 (0.062)	0.113 (0.080)	-0.255 (0.170)	0.007 (0.005)	-0.012 (0.015)	-0.002 (0.007)
Observations	1640	1640	1640	1640	1640	1640	1640	1640	1640
Clusters	205	205	205	205	205	205	205	205	205
Outcome Mean in 2010	13.519	49.407	10.725	83.283	11.638	9.433	3.572	0.508	0.515
Panel B: DMAs in Content Data									
Sinclair	-0.000 (0.005)	0.033 (0.021)	-0.011 (0.032)	0.113 (0.084)	0.101 (0.105)	-0.075 (0.208)	0.005 (0.007)	0.001 (0.003)	0.003 (0.007)
Observations	896	896	896	896	896	896	896	896	896
Clusters	112	112	112	112	112	112	112	112	112
Outcome Mean in 2010	14.127	49.283	10.806	80.661	13.729	9.526	3.595	0.432	0.510

Notes: This table shows the relationship between Sinclair entry and socio-economic and political trends. We regress the outcome on an indicator variable for Sinclair entry, media market fixed effects, and year fixed effects. The sample includes all media markets in Panel A, and is restricted to media markets in the content data in Panel B. Standard errors are clustered at the media market level. The dataset is a media market by year panel. Treatment is defined at the yearly level. A media market is considered treated in a given year if Sinclair was present in the market in the January of that year. Population and income per capita are defined in logs.

**Appendix Table IV:** Effect of Sinclair Control on the Probability of Having a Local Story, Differences-in-Differences Decomposition

Dependent Variable Sample	Had Local Crime Story					
	Non-Covered		Covered		Covered and Non-Covered	
	(1)	(2)	(3)	(4)	(5)	(6)
Sinclair	-0.003 (0.003)	-0.002 (0.002)	-0.035*** (0.013)	-0.030** (0.012)	-0.002 (0.003)	-0.001 (0.003)
Sinclair * Covered				-0.027** (0.010)	-0.030*** (0.011)	-0.024*** (0.007)
Observations	1633962	1633962	1431232	1431232	3065194	3065194
Clusters	89	89	111	111	112	112
Municipalities	1108	1108	1093	1093	2201	2201
Stations	277	277	320	320	323	323
Outcome Mean in 2010	0.016	0.016	0.172	0.172	0.089	0.089
Station by Municipality FE	X	X	X	X	X	X
Week FE	X	X	X	X	X	X
Controls by Week FE		X		X	X	X
Covered by Week FE			X	X	X	X
Station by Week FE				X	X	X

Notes: This table shows the effect of Sinclair control on the probability that a station reports a local story using a differences-in-differences specification estimated separately for non-covered (columns (1) and (2)) and covered (columns (3) and (4)) municipalities. We regress the outcome on an indicator variable for the station being under Sinclair control, station by municipality fixed effects and week fixed effects. Columns (2) and (4) additionally control for baseline municipality characteristics interacted with week fixed effects. Column (5) to (7) show instead how we arrive to the triple differences-in-differences specification using the full sample. In particular, column (5) estimates a differences-in-differences with heterogeneous treatment effects for covered and non-covered municipalities. We regress the outcome on an indicator variable for the station being under Sinclair control, the interaction between an indicator variable for whether the municipality is covered at baseline, baseline municipality characteristics interacted with week fixed effects, station by municipality fixed effects and an indicator variable for the station being under Sinclair control and an indicator variable for whether the municipality is covered at baseline, baseline municipality characteristics interacted with week fixed effects. Finally, column (7) includes station by week fixed effects and week fixed effects. Column (6) additionally controls for covered status by week fixed effects. The characteristics included are log population, share male, share male between 15 and 30, share over 55, share black, share Hispanic, share with 2 years of college, log median income, share of population below the poverty rate, share unemployed, log municipality area, and Republican vote share in the 2008 presidential election. Standard errors are clustered at the media market level. The dataset is a municipality-station pair by week panel. There are multiple stations in each media market covering the same municipalities, and the municipality-station pair is the cross-sectional unit of interest. Treatment is defined at the month level. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010.

**Appendix Table V:** Effect of Sinclair Control on the Probability of Having a Local Story, by Whether the Story is about Crime

Dependent Variable	Had Local Story	Decomposition	
		Crime	Non-Crime
		(1)	(2)
Sinclair * Covered	-0.039*** (0.012)	-0.022*** (0.006)	-0.017 (0.013)
Observations	3065194	3065194	3065194
Clusters	112	112	112
Municipalities	2201	2201	2201
Stations	323	323	323
Outcome Mean in 2010	0.242	0.089	0.153
Station by Week FE	X	X	X
Covered by Week FE	X	X	X
Station by Municipality FE	X	X	X
Sinclair * Controls	X	X	X

Notes: This table shows the effect of Sinclair control on the probability that a station reports a local story about covered municipalities relative to non-covered municipalities, overall (column (1)) and by whether the story is about crime (columns (2) and (3)). We regress the outcome on the interaction between an indicator variable for the station being under Sinclair control and an indicator variable for whether the municipality is covered at baseline, the interaction between an indicator variable for the station being under Sinclair control and baseline municipality characteristics, station by week fixed effects, covered status by week fixed effects, and station by municipality fixed effects (equation (1)). The characteristics included are log population, share male, share male between 15 and 30, share over 55, share white, share black, share Hispanic, share with 2 years of college, log median income, share of population below the poverty rate, share unemployed, log municipality area, and Republican vote share in the 2008 presidential election. Standard errors are clustered at the media market level. The dataset is a municipality-station pair by week panel. There are multiple stations in each media market covering the same municipalities, and the municipality-station pair is the cross-sectional unit of interest. Treatment is defined at the monthly level. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010.

**Appendix Table VI:** Effect of Sinclair Control on Overall Crime Coverage, by Whether the Story is Local

Dependent Variable	Share of Stories about Crime	Decomposition		
		Local	Non-Local	
		(1)	(2)	
Sinclair		-0.009* (0.005)	-0.012*** (0.004)	0.002 (0.003)
Observations	30928	30928	30928	
Clusters	112	112	112	
Stations	323	323	323	
Outcome Mean in 2010	0.132	0.061	0.071	
Station FE	X	X	X	
Month FE	X	X	X	
Media Market Controls	X	X	X	

Notes: This table shows the effect of Sinclair control on the share of crime stories that are about crime, by whether the story is local or not, using a differences-in-differences specification. We define a story to be local if it mentions at least one of the municipalities with more than 10,000 people in the media market. We regress the outcome on an indicator variable for the station being under Sinclair control, baseline media market characteristics interacted with month fixed effects, station fixed effects, and month fixed effects. The characteristics included are log population, share male, share male between 15 and 30, share white, share Hispanic, share unemployed, and log income per capita. Standard errors are clustered at the media market level. The dataset is a station by month panel. Treatment is defined at the monthly level.

**Appendix Table VII:** Effect of Sinclair Control on Coverage of Non-Local Crime Stories

Dependent Variable	Share of Stories About Non-Local Crime	Share of Stories About Non-Local Police	Has Non-Local Story About Police Misconduct	Has Non-Local Story About Crime and Drugs	Has Non-Local Story About Crime and Immigrants
	(1)	(2)	(3)	(4)	(5)
Sinclair	0.002 (0.003)	0.001 (0.002)	-0.030** (0.012)	0.052** (0.024)	0.052*** (0.019)
Observations	30928	30928	30928	30928	30928
Clusters	112	112	112	112	112
Stations	323	323	323	323	323
Outcome Mean in 2010	0.132	0.061	0.071	0.801	0.186
Station FE	X	X	X	X	X
Month FE	X	X	X	X	X
Media Market Controls	X	X	X	X	X

Notes: This table shows the effect of Sinclair control on coverage of non-local crime stories. We define a story to be local if it mentions at least one of the municipalities with more than 10,000 people in the media market. All other stories are non-local. We define a story to be about crime following the methodology described in [Section 3](#) (column (1)). We define a story to be about police if it contains the word "police" (column (2)), and about police misconduct if it contains both "police" and "misconduct" (column (3)). We define a story of be about crime and drugs if the story is about crime and in contains any of the following strings: "drug", "drugs", "marijuana", "cocaine", "meth", "ecstasy" (column (4)). Finally, we define a story of be about crime and immigrants if the story is about crime and in contains any of the words "immigration", "immigrant", "migrant", "undocumented" (column (5)). We regress the outcome on an indicator variable for the station being under Sinclair control, baseline media market characteristics interacted with month fixed effects, station fixed effects, and month fixed effects. The characteristics included are log population, share male, share male between 15 and 30, share white, share Hispanic, share unemployed, and log income per capita. Standard errors are clustered at the media market level. The dataset is a station by month panel. Treatment is defined at the month level.

**Appendix Table VIII:** Effect of Sinclair Control on the Probability of Having a Local Crime Story, by Political Leaning of the Municipality

Sub-Sample	Dependent Variable		Had Local Crime Story	
			Share	Share
	Republican	Republican	>= Median	< Median
		(1)	(2)	
Sinclair * Covered		-0.018*** (0.006)	-0.021** (0.011)	
Observations	1526536	1519012		
Clusters	98	82		
Municipalities	1097	1087		
Stations	283	240		
Outcome Mean in 2010	0.076	0.100		
Station by Week FE	X	X		
Covered by Week FE	X	X		
Station by Municipality FE	X	X		
Sinclair * Controls	X	X		

Notes: This table shows the effect of Sinclair control on the share of crime stories that are about crime, splitting the sample by whether the municipality's Republican vote share was above (column (1)) or below (column (2)) the median in the 2008 presidential election. We regress an indicator variable for the station reporting a local crime story about the municipality on the interaction between an indicator variable for the station being under Sinclair control and an indicator variable for whether the municipality is covered at baseline, interactions between an indicator variable for the station being under Sinclair control and baseline municipality characteristics, station by week fixed effects, covered status by week fixed effects, and station by municipality fixed effects (equation (1)). The characteristics included are log population, share male, share male between 15 and 30, share over 55, share white, share black, share Hispanic, share with 2 years of college, log median income, share of population below the poverty rate, share unemployed, log municipality area, and Republican vote share in the 2008 presidential election. Standard errors are clustered at the media market level. The dataset is a municipality-station pair by week panel. There are multiple stations in each media market covering the same municipalities, and the municipality-station pair is the cross-sectional unit of interest. Treatment is defined at the monthly level. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010.

**Appendix Table IX:** Effect of Sinclair Control on the Probability of Having a Local Crime Story, Robustness Checks

Dependent Variable	Baseline		Had Local Crime Story						Treatment Definition		
			Data Cleaning and Sample								
	Less	More	Fixed	Same	Drops	Owned and	Group				
Robustness to...	Restrictive Crime Story Definition	Restrictive Crime Story Definition	No Imputation Definition	Division of Newscasts into Stories	Sample as UCR Analysis	Divested Stations	Operated by Sinclair Only				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)				
Sinclair * Covered	-0.022*** (0.006)	-0.024*** (0.006)	-0.020*** (0.005)	-0.021*** (0.006)	-0.026*** (0.006)	-0.022*** (0.007)	-0.022*** (0.006)	-0.022*** (0.006)	-0.022*** (0.006)	-0.022*** (0.006)	-0.019*** (0.006)
Observations	3065194	3065194	2978841	3065194	2440702	3058924	3065194	3058924	3065194	3058924	3051818
Clusters	112	112	112	112	112	111	112	112	112	112	111
Municipalities	2201	2201	2201	2201	2201	1752	2201	2201	2201	2201	2193
Stations	323	323	323	323	323	322	321	323	323	323	319
Outcome Mean in 2010	0.089	0.096	0.070	0.088	0.106	0.098	0.089	0.089	0.089	0.089	0.088
Station by Week FE	X	X	X	X	X	X	X	X	X	X	X
Covered by Week FE	X	X	X	X	X	X	X	X	X	X	X
Station by Municipality FE	X	X	X	X	X	X	X	X	X	X	X
Sinclair * Controls	X	X	X	X	X	X	X	X	X	X	X

Notes: This table shows the robustness of the effect of Sinclair control on the probability that a station reports a local story about covered municipalities relative to non-covered municipalities. We regress an indicator variable for the station reporting a local crime story about the municipality on the interaction between an indicator variable for the station being under Sinclair control and an indicator variable for whether the municipality is covered at baseline, the interaction between an indicator variable for the station being under Sinclair control and baseline municipality characteristics, station by week fixed effects, covered status by week fixed effects, and station by municipality fixed effects (equation (1)). The characteristics included are log population, share male, share male between 15 and 30, share over 55, share white, share black, share Hispanic, share with 2 years of college, log median income, share of population below the poverty rate, share unemployed, log municipality area, and Republican vote share in the 2008 presidential election. Column (1) reports the baseline estimate. Column (2) identifies crime stories using bigrams that are five (instead of ten) times more likely to appear in the crime library than in the non-crime library. Column (3) identifies crime stories using bigrams that are twenty (instead of ten) times more likely to appear in the crime library than in the non-crime library. Column (4) leaves spells shorter than eight weeks for which we have no content data as missing. Column (5) segments the newscasts into stories using a fixed number of tokens per story (see Appendix A for further details). Column (6) restricts the sample to municipalities also included in the crime analysis. Column (7) drops stations that were eventually divested from the sample. Column (8) restricts treatment to stations owned and operated by Sinclair. Column (9) drops stations that were not acquired by Sinclair as part of multi-station deal. Standard errors are clustered at the media market level. The dataset is a municipality-station pair by week panel. There are multiple stations in each media market covering the same municipalities, and the municipality-station pair is the cross-sectional unit of interest. Treatment is defined at the monthly level. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010.

**Appendix Table X:** Effect of Sinclair Control on the Probability of Having a Local Crime Story, by Type of Crime

Type of Crime	Dependent Variable		Had Local Crime Story	
			Violent	Property
	(1)	(2)		
Sinclair * Covered			-0.018*** (0.005)	-0.004** (0.002)
Observations	3065194	3065194		
Clusters	112	112		
Municipalities	2201	2201		
Stations	323	323		
Outcome Mean in 2010	0.067	0.013		
Station by Week FE	X	X		
Covered by Week FE	X	X		
Station by Municipality FE	X	X		
Sinclair * Controls	X	X		

Notes: This table shows the effect of Sinclair control on the probability that a station reports local crime stories about covered municipalities relative to non-covered municipalities, by type of crime. We regress an indicator variable for the station reporting a local crime story about the municipality on the interaction between an indicator variable for the station being under Sinclair control and an indicator variable for whether the municipality is covered at baseline, interactions between an indicator variable for the station being under Sinclair control and baseline municipality characteristics, station by week fixed effects, covered status by week fixed effects, and station by municipality fixed effects (equation (1)). The characteristics included are log population, share male, share male between 15 and 30, share over 55, share white, share black, share Hispanic, share with 2 years of college, log median income, share of population below the poverty rate, share unemployed, log municipality area, and Republican vote share in the 2008 presidential election. Standard errors are clustered at the media market level. The dataset is a municipality-station pair by week panel. There are multiple stations in each media market covering the same municipalities, and the municipality-station pair is the cross-sectional unit of interest. Treatment is defined at the monthly level. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010.

**Appendix Table XI:** Effect of Sinclair Entry on the Violent Crime Rate, by Type of Crime

Dependent Variable	By Type of Crime				
	Violent Crime Rate	Murder	Assault	Robbery	Rape
	(1)	(2)	(3)	(4)	(5)
Panel A: Crime Rates					
Sinclair * Covered	0.021 (0.032)	0.003 (0.005)	0.006 (0.034)	0.027 (0.017)	-0.011 (0.021)
Observations	14016	14016	14016	14016	14016
Clusters	111	111	111	111	111
Municipalities	1752	1752	1752	1752	1752
Outcome Mean in 2010	1.668	0.033	1.227	0.716	0.301
Panel B: Dummy = 1 if at least one Crime					
Sinclair * Covered	- -	0.027 (0.040)	-0.000 (0.005)	0.002 (0.011)	0.051*** (0.019)
Observations	-	14016	14016	14016	14016
Clusters	-	111	111	111	111
Municipalities		1752	1752	1752	1752
Outcome Mean in 2010	-	0.463	0.908	0.965	0.933
Media Market by Year FE	-	X	X	X	X
Covered by Year FE	-	X	X	X	X
Municipality FE		X	X	X	X
Sinclair * Controls	-	X	X	X	X

Notes: This table shows the effect of Sinclair entry on the crime rates of covered municipalities relative to non-covered municipalities, for different types of violent crimes. We regress the municipality's crime rate for a given type of violent crime on the interaction between an indicator variable for Sinclair presence in the media market and an indicator variable for whether the municipality is covered at baseline, the interaction between an indicator variable for Sinclair presence in the media market and baseline municipality characteristics, media market by year fixed effects, covered status by year fixed effects, and municipality fixed effects (equation (4)). The characteristics included are log population, share male, share male between 15 and 30, share over 55, share white, share black, share Hispanic, share with 2 years of college, log median income, share of population below the poverty rate, share unemployed, log municipality area, and Republican vote share in the 2008 presidential election. Standard errors are clustered at the media market level. The dataset is a municipality by year panel. Treatment is defined at the yearly level. A media market is considered treated in a given year if Sinclair was present in the market in the January of that year. In Panel A, reports outcomes are defined as crime rates; in Panel B, outcomes are defined as indicator variables for experiencing at least one crime. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010. Crime rates are defined as crimes per 1,000 people under an inverse hyperbolic sine transformation, and are winsorized at the 99% level.

**Appendix Table XII:** Effect of Sinclair Entry on the Property Crime Rate, by Type of Crime

Dependent Variable	By Type of Crime			
	Property Crime Rate	Burglary	Theft	Motor Vehicle Theft
		(1)	(2)	(3)
Sinclair * Covered	0.054*** (0.019)	0.046* (0.026)	0.051** (0.025)	0.041 (0.028)
Observations	14016	14016	14016	14016
Clusters	111	111	111	111
Municipalities	1752	1752	1752	1752
Outcome Mean in 2010	4.071	2.431	3.750	1.238
Media Market by Year FE	X	X	X	X
Covered by Year FE	X	X	X	X
Municipality FE	X	X	X	X
Sinclair * Controls	X	X	X	X

Notes: This table shows the effect of Sinclair entry on the crime rate of covered municipalities relative to non-covered municipalities, for different types of property crimes. We regress the municipality's crime rate for a given type of property crime on the interaction between between an indicator variable for Sinclair presence in the media market and an indicator variable for whether the municipality is covered at baseline, the interaction between an indicator variable for Sinclair presence in the media market and baseline municipality characteristics, media market by year fixed effects, covered status by year fixed effects, and municipality fixed effects (equation (4)). The characteristics included are log population, share male, share male between 15 and 30, share over 55, share white, share black, share Hispanic, share with 2 years of college, log median income, share of population below the poverty rate, share unemployed, log municipality area, and Republican vote share in the 2008 presidential election. Standard errors are clustered at the media market level. The dataset is a municipality by year panel. Treatment is defined at the yearly level. A media market is considered treated in a given year if Sinclair was present in the market in the January of that year. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010. Crime rates are defined crimes per 1,000 people under an inverse hyperbolic sine transformation, and are winsorized at the 99% level.

**Appendix Table XIII:** Effect of Sinclair Control on the Violent Crime Clearance Rate, Differences-in-Differences Decomposition

Dependent Variable Sample			Violent Crime Clearance Rate			Covered and Non-Covered (7)	
	Non-Covered (1) (2)		Covered (3) (4)				
Sinclair	0.043*** (0.014)	0.051*** (0.012)	-0.003 (0.009)	-0.008 (0.009)	0.040*** (0.013)	0.045*** (0.012)	
Sinclair * Covered				-0.039*** (0.014)	-0.050*** (0.014)	-0.046*** (0.015)	
Observations	6528	6528	7488	7488	14016	14016	
Clusters	86	86	110	110	111	111	
Municipalities	816	816	936	936	1752	1752	
Outcome Mean in 2010	0.440	0.440	0.483	0.483	0.463	0.463	
Municipality FE	X	X	X	X	X	X	
Year FE	X	X	X	X	X	X	
Controls by Year FE		X		X	X	X	
Covered by Year FE			X		X	X	
Media Market by Year FE				X	X	X	

Notes: This table shows the effect of Sinclair entry on the violent crime clearance rate using a differences-in-differences specification estimated separately for non-covered (columns (1) and (2)) and covered (columns (3) and (4)) municipalities. We regress the outcome on an indicator variable for the station being under Sinclair control, municipality fixed effects and year fixed effects. Columns (2) and (4) additionally control for baseline municipality characteristics interacted with year fixed effects. Column (5) to (7) show instead how we arrive to the triple differences-in-differences specification using the full sample. In particular, column (5) estimates a differences-in-differences with heterogeneous treatment effects for covered and non-covered municipalities. We regress the outcome on an indicator variable Sinclair presence in the media market and an indicator variable for whether the municipality is covered at baseline, baseline municipality characteristics interacted with year fixed effects, municipality fixed effects and year fixed effects. Column (6) additionally controls for covered status by year fixed effects. Finally, column (7) includes media market by year fixed effects and is similar to our baseline triple differences-in-differences specification. The characteristics included are log population, share male, share male between 15 and 30, share over 55, share white, share black, share Hispanic, share unemployed, log municipality area, and Republican vote share in the 2008 presidential election. Standard errors are clustered at the media market level. The dataset is a municipality by year panel. Treatment is defined at the year level. A media market is considered treated in a given year if Sinclair was present in the market in the January of that year. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010. Clearance rates are defined as total number of crimes cleared by arrest or exceptional means over total number of crimes. Clearance rates are winsorized at the 99% level.

**Appendix Table XIV:** Effect of Sinclair Entry on the Violent Crime Clearance Rate, by Type of Crime

Dependent Variable	Violent Crime Clearance Rate	By Type of Crime			
		Murder	Assault	Robbery	Rape
		(1)	(2)	(3)	(4)
Panel A: Full Sample					
Sinclair * Covered	-0.045*** (0.017)	0.116 (0.091)	-0.014 (0.019)	-0.053* (0.030)	-0.066** (0.026)
Observations	14016	6789	12744	13597	13126
Clusters	111	110	110	111	111
Municipalities	1752	1350	1600	1749	1739
Outcome Mean in 2010	0.463	0.649	0.591	0.337	0.375
Panel B: Balanced Sample					
Sinclair * Covered	-0.044** (0.020)	- -	-0.009 (0.024)	-0.079** (0.034)	-0.061* (0.035)
Observations	9360	-	9360	9360	9360
Clusters	109	-	109	109	109
Municipalities	1170	-	1170	1170	1170
Outcome Mean in 2010	0.492	-	0.576	0.358	0.407
Media Market by Year FE	X	-	X	X	X
Covered by Year FE	X	-	X	X	X
Municipality FE	X	-	X	X	X
Sinclair * Controls	X	-	X	X	X

Notes: This table shows the effect of Sinclair entry on the violent crime clearance rate of covered municipalities relative to non-covered municipalities, for different types of violent crimes. We regress the municipality's clearance rate for a given type of violent crime on the interaction between an indicator variable for Sinclair presence in the media market and an indicator variable for whether the municipality is covered at baseline, the interaction between an indicator variable for Sinclair presence in the media market and baseline municipality characteristics, media market by year fixed effects, covered status by year fixed effects, and municipality fixed effects (equation (4)). The characteristics included are log population, share male, share male between 15 and 30, share over 55, share white, share black, share Hispanic, share with 2 years of college, log median income, share of population below the poverty rate, share unemployed, log municipality area, and Republican vote share in the 2008 presidential election. Standard errors are clustered at the media market level. The dataset is a municipality by year panel. Treatment is defined at the year level. A media market is considered treated in a given year if Sinclair was present in the market in the January of that year. Panel A includes the full sample; Panel B restricts the sample to municipalities that experience at least one assault, one robbery, and one rape in every year. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010. Clearance rates are defined as total number of crimes cleared by arrest or exceptional means over total number of crimes, winsorized at the 99% level.

**Appendix Table XV:** Effect of Sinclair Entry on Police Violence

Dependent Variable	All Fatalities			Fatalities Involving Intentional Use of Force		
	Any (1)	White (2)	Minority (3)	Any (4)	White (5)	Minority (6)
Sinclair * Covered	-0.046 (0.030)	-0.038 (0.026)	0.011 (0.017)	-0.025 (0.023)	-0.021 (0.026)	0.003 (0.016)
Observations	14016	14016	14016	14016	14016	14016
Clusters	111	111	111	111	111	111
Municipalities	1752	1752	1752	1752	1752	1752
Outcome Mean in 2010	0.146	0.072	0.053	0.114	0.055	0.044
Media Market by Year FE	X	X	X	X	X	X
Covered by Year FE	X	X	X	X	X	X
Municipality FE	X	X	X	X	X	X
Sinclair * Controls	X	X	X	X	X	X

Notes: This table shows the effect of Sinclair entry on the probability of experiencing an officer-involved fatality in covered municipalities relative to non-covered municipalities. Columns (1) to (3) look at all fatalities, while columns (4) to (6) focus on fatalities that are classified as involving intentional use of force (this excludes suicides and fatalities involving a vehicle pursuit). We regress an indicator variable equal to 1 if the municipality experienced an officer-involved fatality of a given type on the interaction between an indicator variable for Sinclair presence in the media market and an indicator variable for whether the municipality is covered at baseline, the interaction between an indicator variable for Sinclair presence in the media market and baseline municipality characteristics, media market by year fixed effects, covered status by year fixed effects, and municipality fixed effects (equation (4)). The characteristics included are log population, share male, share male between 15 and 30, share over 55, share white, share Hispanic, share with 2 years of college, log median income, share of population below the poverty rate, share unemployed, log municipality area, and Republican vote share in the 2008 presidential election. Standard errors are clustered at the media market level. The dataset is a municipality by year panel. Treatment is defined at the year level. A media market is considered treated in a given year if Sinclair was present in the market in the January of that year. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010.

**Appendix Table XVI:** Effect of Sinclair Entry on the Police Spending and Employment

Data Source Dependent Variable	Census of Government			UCR	
	Police Expend. Per Capita	Judicial Expend. Per Capita	Police Employees per 1,000 People	Police Employees per 1,000 People	Police Officers per 1,000 People
	(1)	(2)	(3)	(4)	(5)
Sinclair * Covered	-0.001 (0.005)	-0.002 (0.002)	0.085 (0.173)	-0.028 (0.029)	-0.012 (0.022)
Observations	8449	8449	9472	14015	14015
Clusters	109	109	111	111	111
Municipalities	1371	1371	1501	1752	1752
Outcome Mean in 2010	0.240	0.019	2.967	2.370	1.846
Media Market by Year FE	X	X	X	X	X
Covered by Year FE	X	X	X	X	X
Municipality FE	X	X	X	X	X
Sinclair * Controls	X	X	X	X	X

Notes: This table shows the effect of Sinclair entry on the spending and employment of police departments of covered municipalities relative to non-covered municipalities. We regress the municipality's spending or employment measure on the interaction between an indicator variable for Sinclair presence in the media market and an indicator variable for whether the municipality is covered at baseline, the interaction between an indicator variable for Sinclair presence in the media market and baseline municipality characteristics, media market by year fixed effects, covered status by year fixed effects, and municipality fixed effects (equation (4)). The characteristics included are log population, share male, share male between 15 and 30, share over 55, share white, share Hispanic, share with 2 years of college, log median income, share of population below the poverty rate, share unemployed, log municipality area, and Republican vote share in the 2008 presidential election. Standard errors are clustered at the media market level. The dataset is a municipality by year panel. Treatment is defined at the yearly level. A media market is considered treated in a given year if Sinclair was present in the market in the January of that year. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010. All outcome variables are winsorised at the 99% level.

**Appendix Table XVII:** Effect of Sinclair Entry on the Violent Crime Clearance Rate, Robustness

Dependent Variable	Baseline		Violent Crime Clearance Rate		Treatment Definition		
	Data Cleaning		Drops		Stations	Partially Owned and Treated	Group Acquis. Only
	No	No	DMA's with Divested Stations	Operated by Sinclair	Years as Treated		
Robustness to...	Winsorizing	Imputation					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Sinclair * Covered	-0.045*** (0.017)	-0.047*** (0.018)	-0.047*** (0.018)	-0.045*** (0.017)	-0.036** (0.015)	-0.031* (0.016)	-0.047** (0.018)
Observations	14016	14016	14016	13760	14016	14016	13528
Clusters	111	111	111	106	111	111	103
Municipalities	1752	1752	1752	1720	1752	1752	1691
Outcome Mean in 2010	0.463	0.464	0.464	0.466	0.463	0.463	0.461
Media Market by Year FE	X	X	X	X	X	X	X
Covered by Year FE	X	X	X	X	X	X	X
Municipality FE	X	X	X	X	X	X	X
Sinclair * Controls	X	X	X	X	X	X	X

Notes: This table shows the robustness of the effect of Sinclair entry on the violent crime clearance rate of covered municipalities relative to non-covered municipalities. We regress the municipality's violent crime clearance rate on the interaction between an indicator variable for Sinclair presence in the media market and an indicator variable for whether the municipality is covered at baseline, the interaction between an indicator variable for Sinclair presence in the media market and baseline municipality characteristics, media market by year fixed effects, covered status by year fixed effects, and municipality fixed effects (equation (4)). The characteristics included are log population, share male, share male between 15 and 30, share over 55, share white, share black, share Hispanic, share with 2 years of college, log median income, share of population below the poverty rate, share unemployed, log municipality area, and Republican vote share in the 2008 presidential election. Column (1) reports the baseline estimate for reference. Column (2) does not winsorize clearance rates, while column (3) does not correct for likely erroneous observations using the methodology described in [Appendix B](#). Column (4) drops media markets with stations that were eventually divested. Column (5) restricts treatment to media markets with stations owned and operated by Sinclair. Column (6) defines the year to be treated if Sinclair was present in the market in the December of that year. Column (7) drops markets that were entered by Sinclair not as part of multi-station deals. Standard errors are clustered at the media market level. The dataset is a municipality by year panel. Treatment is defined at the year level. A media market is considered treated in a given year if Sinclair was present in the market in the January of that year unless otherwise specified. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010. Clearance rates are defined as total number of crimes cleared by arrest or exceptional means over total number of crimes, winsorized at the 99% level.

**Appendix Table XVIII:** Robustness to Heterogeneous Effects in TWFE Models

Dependent Variable	Violent Crime Clearance Rate	
	Sample	Non-
		Covered
		(1)
Sinclair		0.066*** (0.014)
		-0.004 (0.010)

Notes: This table shows the effect of Sinclair on the violent crime clearance rate, estimated separately for covered and non-covered municipalities using an estimator robust to heterogeneous effects in TWFE models. The starting point is a TWFE model that regresses the outcome on year and municipality fixed effects. We estimate the treatment effect using robust estimator proposed by de Chaisemartin and D'Haultfoeuille (2020), which we report together with standard errors estimated from 1000 bootstrap repetitions. The analysis is run separately for covered and non-covered municipalities. Column (1) reports the robust estimator for non-covered municipalities, and columns (2) for covered municipalities. Standard errors are clustered at the media market level. The dataset is a municipality by year panel. Treatment is defined at the year level. A media market is considered treated in a given year if Sinclair was present in the market in the January of that year. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010. Clearance rates are defined as total number of crimes cleared by arrest or exceptional means over total number of crimes. Clearance rates are winsorized at the 99% level.

**Appendix Table XIX:** Effect of Sinclair Entry on the Violent Crime Clearance Rate, No Staggered Timing

Dependent Variable Restricted to Media Markets Treated in...	Violent Crime Clearance Rate			
	2012	2013	2014	2015
	(1)	(2)	(3)	(4)
Sinclair * Covered	-0.106** (0.046)	-0.032*** (0.012)	-0.024 (0.022)	0.003 (0.013)
Observations	9320	8944	9976	9320
Clusters	60	59	70	62
Municipalities	1165	1118	1247	1165
Outcome Mean in 2010	0.446	0.438	0.447	0.442
Media Market by Year FE	X	X	X	X
Covered by Year FE	X	X	X	X
Municipality FE	X	X	X	X
Sinclair * Controls	X	X	X	X

Notes: This table shows the robustness of the effect of Sinclair entry on the violent crime clearance rate of covered municipalities relative to non-covered municipalities to eliminating variation in treatment coming from the staggered timing of Sinclair entry. In particular, we restrict the sample to media markets that were never exposed to Sinclair and media markets that were acquired by Sinclair in the year specified in the column header. We only estimate separately years in which Sinclair entered more than three media markets. We regress the municipality's violent crime clearance rate on the interaction between an indicator variable for Sinclair presence in the media market and an indicator variable for whether the municipality is covered at baseline, the interaction between an indicator variable for Sinclair presence in the media market and baseline municipality characteristics, media market by year fixed effects, covered status by year fixed effects, and municipality fixed effects (equation (4)). The characteristics included are log population, share male, share male between 15 and 30, share over 55, share white, share black, share Hispanic, share with 2 years of college, log median income, share of population below the poverty rate, share unemployed, log municipality area, and Republican vote share in the 2008 presidential election. Standard errors are clustered at the media market level. Standard errors are clustered at the media market level. The dataset is a municipality by year panel. Treatment is defined at the yearly level. A media market is considered treated in a given year if Sinclair was present in the market in the January of that year. Covered municipalities are municipalities that are mentioned in the news more than the median municipality in 2010. Clearance rates are defined as total number of crimes cleared by arrest or exceptional means over total number of crimes, winsorized at the 99% level.

## Appendix A – Law Enforcement in the United States

Law enforcement in the United States is highly decentralized. Municipal police departments are the primary law enforcement agencies in incorporated municipalities. Non-incorporated areas fall instead under the responsibility of county police, state police, or sheriff’s offices, depending on the state’s local government statutes. Tribal departments have jurisdictions on Native-American reservations, while special jurisdiction agencies such as park or transit police provide limited policing services within the specific area. Sheriff’s offices are also responsible for the functioning of courts. Sheriffs are the only law enforcement heads that can be elected as well as appointed, again depending on the state. Finally, the FBI has jurisdiction over federal crimes (i.e. crimes that violate U.S. federal legal codes or where the individual carries the criminal activity over multiple states). However, most crimes are prosecuted under state criminal statutes. [Owens \(2020\)](#) explains in detail the functioning of law enforcement agencies in the United States.

## Appendix B – Data Cleaning

### Newscast Transcripts

**Separating Newscasts into News Stories.** We segment each newscast into separate stories using an automated procedure based on content similarity across sentences. We begin by selecting the number of stories each newscast is composed of using texttiling ([Hearst, 1997](#)), an algorithm that divides texts into passages by identifying shifts in content based on word co-occurrence. We then divide sentences into passages using the Content Vector Segmentation methodology proposed by [Alemi and Ginsparg \(2015\)](#), which identifies content shifts by leveraging the representation of sentences into a vector space using word embeddings. In addition, we show that our results are robust to a simple segmentation procedure that separates the newscast into stories of 130 tokens, based on the fact that the average person speaks at around 130 words per minute.

**Interpolation.** To maximize sample size in the presence of short gaps in the data, we replace missing observations in spells shorter than two consecutive months using linear interpolation. In particular, we linearly interpolate the number of crime stories in which a municipality is mentioned in a given week. We define our main outcome, which is an indicator variable equal to 1 if the municipality was mentioned in a station’s crime story in a given week, based on the interpolated variable. 3% of total observations are missing in the raw data and get replaced using this procedure.

## UCR Data

**Identifying and cleaning record errors.** UCR data have been shown to contain record errors and need extensive cleaning (Evans and Owens (2007) and Maltz and Weiss (2006)). Following the state of the art in the crime literature, we use a regression-based method to identify record errors and correct them. The method is similar to procedures used, among others, by Chalfin and McCrary (2018), Evans and Owens (2007), Ba and Rivera (2019) and Weisburst (2019), but most closely follows the one proposed by Mello (2019).

For each city, we fit the time series of crimes and clearances 2009-2017 using a local linear regression with bandwidth two. We compute the absolute value of the percent difference between actual and predicted values (adding 0.01 to the denominators to avoid dealing with zeros) and identify an observation to be a record error if the percent difference exceeds a given threshold. The threshold is computed as the 99th percentile of the distribution of percent differences for cities within a population group.<sup>38</sup> We substitute observations that are identified as record errors using the predicted value from the time-series regression. We follow this procedure to clean the crime and clearance series of each type of crime (property, violent, murder, assault, robbery, rape, burglary, theft, and motor vehicle theft). Overall, around 1% of observations are substituted using this procedure.

**Population smoothing.** To define crime rates we use a smoothed version of the population count included in the UCRs, again following the crime literature. In particular, we fit the population time series of city using a local linear regression with a bandwidth of 2 and replace the reported population with the predicted values. This is necessary because population figures are reported yearly, but tend to jump discontinuously in census years (Chalfin and McCrary (2018)).

**Sample Definition.** Our starting sample is composed by municipalities with more than 10,000 people with a municipal police department (2623 municipalities). This excludes 116 municipalities, mainly located in California, that contract their contract out law enforcement services to the local sheriff's office.

To create a balanced sample, we exclude municipalities that do not continuously report crime data to the FBI 2010-2017 (236 municipalities) and do not have at least one violent and one property crime in every year (29 municipalities). This leaves us with 2358 municipalities. The empirical strategy requires restricting the sample to municipalities located in media markets included in the content data (which further drops 601 municipalities) and the regressions drops 5 singleton municipalities (Correia (2015)). The final sample includes 1752 municipalities.

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<sup>38</sup>Mello (2019) supports this choice by noting that the percent differences tend to be more dispersed for smaller than for larger cities, perhaps because the number of crimes and arrests is increasing with city size. We follow the same size categories: 10,000-15,000, 15,000-25,000, 25,000-50,000, 50,000-100,000, 100,000-250,000, and >250,000.

## Google Trends Data

The Google Trends API normalizes the search interest between 0 and 100 for the time and location of each query. In particular, "each data point is divided by the total searches of the geography and time range it represents to compare relative popularity. [...] The resulting numbers are then scaled on a range of 0 to 100 based on a topic's proportion to all searches on all topics" ([Stephens-Davidowitz, 2014](#)). We modify the script provided by [Goldsmith-Pinkham and Sojourner \(2020\)](#) to query the Google trends API.

Importantly, the Google trends API limits the number of geographic locations per query to five. We ensure comparability across media markets and time by including that of the New York media market in all our queries, and normalizing search volume to the one of New York media market following [Müller and Schwarz \(2019\)](#) and [Goldsmith-Pinkham and Sojourner \(2020\)](#). The Google trends API censors observations that are below an unknown threshold. Google trends data by municipality are censored with a very high frequency, which makes it impossible to construct a panel of municipalities over time.

## Appendix C – Classifying Local Crime News

We build a classifier model that assigns a specific type of crime to each of the 415,604 local news stories in our sample. To train the model, we need a sub-sample of the stories to be labeled with the correct crime type. We create this sub-sample by performing a naive keyword search, using the following keywords:

1. Murder: MURDER, HOMICID, KILLE;
2. Assault: ASSAULT;
3. Robbery: ROBBE;
4. Rape: RAPE, SEXUAL ASSAULT;
5. Burglary: BURGLAR;
6. Theft: THIEF, STEAL, STOLE, THEFT.

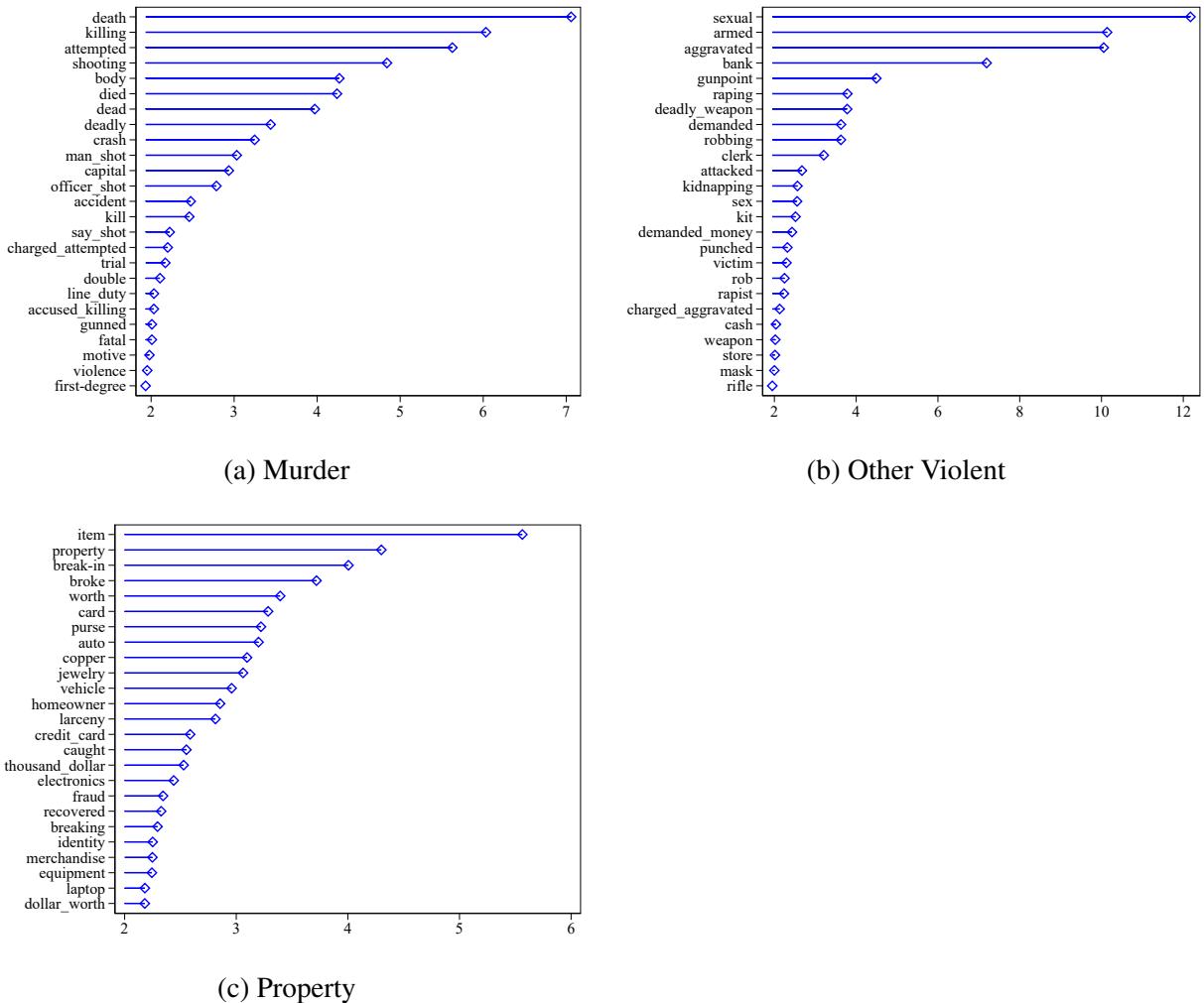
We selected these terms to minimize the presence of false positives. In fact, we checked using the full vocabulary that these keywords return tokens and bigrams that appear to be closely related to the crime considered. The training sample is then defined to be the sample of crime stories that contain at least one of the keywords (205,299 stories). Because it is difficult to distinguish between assault and rapes and burglary and theft, we classify stories into three categories: stories about

murder, stories about other violent crimes (assault, robbery, and rape), and stories about property crimes (burglary and theft). Because a story can potentially cover different types of crimes, we train separate binary models for each category.

We use this sub-sample to train a classifier model. In particular, we train a support vector machine model using stochastic gradient descent. The features that are used to predict the label are the top most frequent 25,000 tokens and bigrams in the full corpus. We exclude the keyword used to define the original labels from the features, as they contain significant information for the training sample, but we already know that we will not be able to leverage this information for out-of-sample predictions. The features are TF-IDF weighted. We train the model on 80% of the sample, and use the remaining 20% as a test sample to evaluate model performance.

We find that the three models perform well, with F1-scores of 0.83 (murder), 0.77 (other violent crimes), and 0.80 (property). [Appendix C Figure I](#) shows the most predictive feature for each category. Reassuringly, the features selected by the different models appear to intuitively link to the respective crimes. We use the models to predict the category of the remaining 210,305 stories. Using this method, we are able to assign a crime type to 85% of all local crime stories.

### Appendix C Figure I: Most Predictive Features for News Type Classifier



Notes: This figure shows the most predictive features for the classification models used to identify the content of local crime news.