

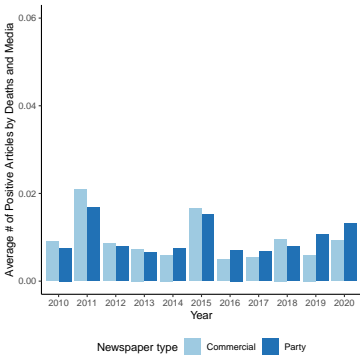
# Transition of Elite Network and Decay of Media Market in China

Li Han<sup>1</sup> Tao Li<sup>2</sup> Yabin Yin<sup>1</sup>

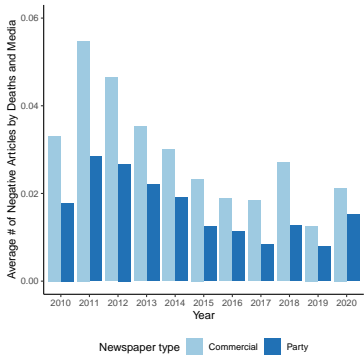
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# Motivation: decay of media market following leadership transition



(a) Positive Articles



(b) Negative Articles

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- There was no major changes in the ownership/financial structure of Chinese media market (Repnikova 2017).
- What we observed under the new leadership is largely informal: rhetoric and personal campaign against media freedom.
- The puzzle goes beyond the media market.
  - President Xi has reshaped Chinese economy without abandoning the fundamental economic institutions built in the early reform era.





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- A transition of leadership is always accompanied by a transition of elite networks.
- In the Chinese context, Xi's factional followers became more powerful when Xi consolidated power.
- The factional network under Xi helps to exert his influences, despite the absence of deep institutional changes.

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- We find newspapers' journalistic/investigative articles covering local (in-province) accidents significantly ↓ after Xi's takeover, relative to their counterparts in control provinces.
- Mechanism: through counteracting the media's market incentives.

# Literature

- The general leadership literature
  - Identifying the leadership effect (Jones & Olken 2005; 2009)
  - Fixed leader traits (Besley et al. 2011; Brender & Drazen 2013; Dreher et al. 2009; Dube & Harish 2020; Hayo & Neumeier 2014; Jong-A-Pin & Mierau 2022)
  - How elites’ network erodes state capacity (Bai et al. 2022)
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  - How elites' network erodes state capacity (Bai et al. 2022)
- **Contribution: We bring the perspective of leader-follower relationship to this literature.**
- The authoritarian factionalism literature
  - The reciprocal relationship between leaders and factional followers (Nathan 1973)
  - How factional followers receive private benefits from their patrons (Chen & Kung 2019; Francois et al. 2022; Jia et al. 2015; Jiang & Zhang 2020; Shih et al. 2012).
- **Contribution: fill the gap by demonstrating how do authoritarian leaders receive support from their factional followers**

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- The media sector becomes profitable:
  - *During 1990-2000, the revenues of leading provincial newspapers were comparable to the revenues of the top 50 listed firms in China (L. Yang and Sun 2001).*
  - *Nanfang Daily Media Group generated a revenue of 2.89 billion yuan (or USD 420 million) in 2020 alone for Guangdong provincial government.*



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  - Features critical or investigative reporting.

## Commercial Newspapers vs. Party Dailies

Table 1: Commercial Newspapers vs. Party Dailies

	Commercial Newspapers	Party Dailies
<b>Purpose</b>	Profit-seeking, attract readers	Mouthpiece, propaganda
<b>Covering Topics</b>	Accidents, crimes, corruptions, entertainment, etc.	Leaders
<b>Writing Style</b>	Factual, journalistic, investigative (negative, original)	Praising, propaganda (positive)
<b>Funding Source</b>	Self-funded (marketized)	Local government, or commercial newspapers in the same media group
<b>Ownership</b>	Central/Local governments	Central/Local governments
<b>Censorship</b>	Post-publication ⇒ pre-publication	Pre-writing

# Xi's Goal of Media Control

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- Call for media control in a much more aggressive way than his predecessors ever since taking power in 2012:
  - *Document Number Nine* (April 2013): warns against seven dangerous “Western values” including media freedom.
  - National Conference on Propaganda and Ideological Work (August 2013): stressed that the media must play a key role in the ideological battle against “Western values”.
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  - "South Weekly Affair" (January 2013): post- to pre-publication censorship.
- Initiate the encompassing-all "Meiti Xingdang" Campaign (February 19, 2016)
  - "All the state-owned media must hold the surname of the Party".
  - Call all the media to serve the ruling party Chinese Communist Party (CCP).





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  - List of Xi provinces [Details](#).

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  - ✧ *By administrative ranks: 73 are provincial newspapers, 157 are municipal newspapers.*



- **Find all the articles (44406)** covering the 258 accidents from the 230 newspapers within a 7-day window after the occurrence of the accidents.

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- A unit corresponds to one newspaper's coverage of an accident. There are  $230 \times 258 = 59340$  observations.

Table 2: Illustration of Newspaper-Accident Sample

No.	Newspaper	Affiliated Province	Accident	Occurred Location	Local	Total #	# of Neg.	# of Pos.	# of Original	# of Reprinted
1	Nanfang Daily	Guangdong	Tianjin Explosion	Tianjin	0	16	7	9	11	5
2	Tonight News Paper	Tianjin	Tianjin Explosion	Tianjin	1	118	17	101	109	9
3	Tonight News Paper	Tianjin	Yichang Bridge Collapse	Henan	0	5	4	1	0	5
				...						

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## ■ Local/Word Entropy Score

- Measures the **usage of the fixed formula**.
- Larger entropy score indicates less use of fixed formula in articles.











# Summary Statistics

Table 1: Summary Statistics

<i>Variables</i>	All (1)	Xi Province (2)	Control Province (3)	Difference (4)
<i>Panel A: Accident Characteristics</i>				
Industrial Accident	0.516 (0.501)	0.533 (0.501)	0.5 (0.502)	0.033 (0.063)
Transport Accident	0.341 (0.475)	0.292 (0.456)	0.384 (0.488)	-0.092 (0.059)
Miscellaneous Accident	0.143 (0.351)	0.175 (0.382)	0.116 (0.321)	0.059 (0.044)
Total Deaths	22.143 (32.838)	23.717 (26.587)	20.775 (37.481)	2.941 (4.009)
Baidu Index	19362.088 (135207.88)	25973.228 (190875.116)	13613.27 (50752.832)	12359.958 (17952.061)
Observations	258	120	138	
<i>Panel B: Article Characteristics</i>				
Sentiment Score	-0.128 (0.439)	-0.127 (0.437)	-0.129 (0.441)	0.002 (0.004)
Share of Positive Articles	0.322 (0.467)	0.324 (0.468)	0.32 (0.466)	-0.004 (0.004)
Share of Original Articles	0.37 (0.483)	0.403 (0.491)	0.342 (0.474)	0.061*** (0.005)
Share of Local Articles	0.106 (0.308)	0.121 (0.326)	0.093 (0.29)	0.029*** (0.003)
Article-Level Entropy	11.577 (0.634)	11.582 (0.631)	11.573 (0.637)	0.009 (0.006)
Observations	44406	20487	23919	

## Summary Statistics

### Panel C: # of Articles per Accident per Media

Total #	0.748 (2.347)	0.733 (2.324)	0.763 (2.368)	-0.03 (0.019)
# of Neg.	0.508 (1.404)	0.494 (1.38)	0.52 (1.426)	-0.026** (0.012)
# of Original	0.277 (1.544)	0.296 (1.618)	0.259 (1.472)	0.037*** (0.013)
# of Neg. Original	0.17 (0.913)	0.182 (0.949)	0.158 (0.878)	0.024*** (0.008)
Observations	59340	28638	30702	

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

# Empirical Design





# Empirical Design

- We compared the *change* in the coverage on accidents by newspapers affiliated with *Xi provinces relative to* those with *control provinces after* Xi and his followers' *takeover* with a **staggered Difference-in-Differences (DID)** model.
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- Treatment group: newspapers in Xi provinces.
- Control group: newspapers in other province-year combinations.
- Causality: Our identification relies on the discrete expansion of Xi's *pre-2007* personal connections across the provincial governments *after 2012*, and the *unplanned* nature of accidents.

# Specification

$$Y_{jpc} = \beta_1 Takeover_{pt} + \beta_2 Exit_{pt} + \mathbf{X}_c\alpha + \theta_j + \gamma_c + \delta_t + \epsilon_{jpc} \quad (1)$$

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- $Takeover_{pt}$  equals 1 if province  $p$  is taken over by Xi or his followers at time  $t$ .



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- $Y_{jpc}$  denotes the dependent variables including the number of negative/positive/original/reprinted articles.
- $Takeover_{pt}$  equals 1 if province  $p$  is taken over by Xi or his followers at time  $t$ .
- $Exit_{pt}$  indicates whether Xi's factional follower in province  $p$  has left this province because of promotion or rotation at accidents' occurrence time  $t$ .

## Specification

$$Y_{jpc} = \beta_1 Takeover_{pt} + \beta_2 Exit_{pt} + \mathbf{X}_c \alpha + \theta_j + \gamma_c + \delta_t + \epsilon_{jpc} \quad (1)$$

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- $\epsilon_{jpc}$  is the error term. Standard errors are clustered at the media level.

## What We Find: Baseline

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**Table 3:** Baseline Results: Does the takeover/exit of Xi-followers affect the number of negative articles

<i>Accident's Locality:</i>	Outcome variable: The number of negative article					
	Local			Nonlocal		
	(1) All	(2) Commercial	(3) Party	(4) All	(5) Commercial	(6) Party
Takeover	-0.922*** (0.330)	-1.754** (0.685)	-0.429* (0.251)	0.018 (0.033)	-0.019 (0.047)	0.049 (0.041)
Exit	1.432*** (0.357)	2.433*** (0.706)	0.709*** (0.266)	0.068* (0.039)	0.147** (0.063)	-0.008 (0.044)
Mean	0.896	1.294	0.586	0.493	0.640	0.365
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Media FEs	Yes	Yes	Yes	Yes	Yes	Yes
Location FEs	Yes	Yes	Yes	Yes	Yes	Yes
Year and Month FEs	Yes	Yes	Yes	Yes	Yes	Yes
Obs	2128	931	1197	57212	26675	30537
Adj. R <sup>2</sup>	0.414	0.430	0.395	0.240	0.265	0.242

Note: The outcome variable is the number of negative articles of an accident reported by a newspaper. All regressions control for provincial secretary's age, the logarithm of total deaths of the accident, Baidu index of the accidents, and accident type categorized into industrial accident, transportation accident and miscellaneous accident. All standard errors are clustered at the media level. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

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- Negative articles covering local (in-province) accidents significantly ↓ after Xi's takeover, relative to their counterparts in control provinces.
  - Whole sample: ↓ by 1.03 times of the mean.
  - Commercial newspapers: ↓ by 1.36 times of the mean.
  - Party dailies: ↓ by 0.73 times of the mean.

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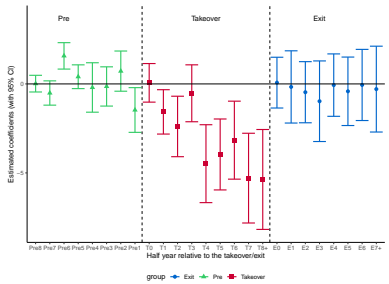


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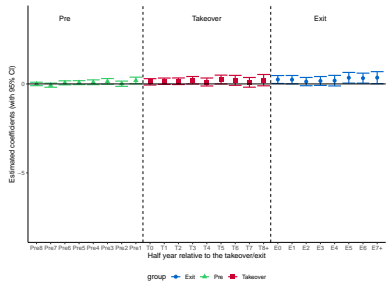
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↓
- The decline was driven by Xi's factional networks instead of more permanent changes in local policies or institutions.

# Event Study: the Number of Negative Articles

- When a province became a Xi province, negative coverage on local (in-province) accidents drops more than that in control provinces .
- A recovery ↑ since Xi's factional followers exit the provinces.
- No significant effect for reports on non-local (out-of-province) accidents.



(a) Local Reporting



(b) Nonlocal Reporting

# Robustness Check

We found our results are **NOT** influenced by the following issues:

- Confounding factors in the media industry?
  - Not driven by the emergence of the digital media industry. [Details](#)
  - Not driven by the demand-side change. [Details](#)
- Fewer Accidents in Xi Provinces? [Details](#)
  - Xi's takeover did not influence local accidents' occurrence and intensity.
- Endogenous Rotation?
  - Use more exogenous measurements of Xi-takeover and still find the negative effect. [Details](#)
- Small Sample Bias?
  - Randomization Inference waives the concern. [Details](#)
- Issues with Staggered DID Design
  - Alternative method ([Callaway and Sant'Anna 2021](#)) supports our results. [Details](#)
- Different Definitions of Negative Articles?
  - We try five alternative definitions and find the results are robust. [Details](#)

# What Fronts of Journalism Have Changed?

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**Table 4: How Does Xi-Takeover Impact Writing Styles (Local News Only)**

Outcome Variable:	# of Original Articles		# of Reprinted Articles		Entropy Score	
	(1) Commercial	(2) Party	(3) Commercial	(4) Party	(5) Commercial	(6) Party
Takeover	-2.544** (1.035)	-0.508 (0.469)	0.210 (0.359)	-0.536* (0.307)	-0.170** (0.072)	-0.061 (0.074)
Exit	4.468*** (0.995)	1.793*** (0.460)	0.628* (0.374)	1.032*** (0.364)	0.163* (0.088)	0.288*** (0.096)
Mean	0.662	0.288	0.633	0.297	11.633	11.653
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Media FEs	Yes	Yes	Yes	Yes	Yes	Yes
Location FEs	Yes	Yes	Yes	Yes	Yes	Yes
Year and Month FEs	Yes	Yes	Yes	Yes	Yes	Yes
Obs	931	1197	931	1197	2545	2148
Adj. R <sup>2</sup>	0.503	0.439	0.444	0.370	0.068	0.118

Note: The outcome variable for columns (1)(3) is the number of original articles of an accident reported by a newspaper. The outcome variable for columns (2)(4) is the number of reprinted articles of an accident published by a newspaper. The outcome variable for columns (5)-(6) is the average word entropy score of a piece of article. All regressions control for provincial secretary's age, the logarithm of total deaths of the accident, Baidu index of the accidents, and accident type categorized into industrial accident, transportation accident and miscellaneous accident. All standard errors are clustered at the media level. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

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- The entropy score of articles significantly ↓ after Xi's takeover, relative to their counterparts in control provinces.
  - Whole sample: ↓ by 0.97% of the mean.
  - Commercial newspapers: ↓ by 1.45% of the mean.
  - Party dailies: not change significantly.

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⇓
- Newspapers in Xi provinces publish more reprints and use more cliches, relative to other provinces ⇒ suggesting harsher media control.



## Mechanisms: Counteract the Market Incentives

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- The negative takeover effect is driven by the most marketized newspapers — the self-funded newspapers.
- The negative takeover effect is more **salient** on newspapers whose home citizens have **more** attention to accidents.
- In short, the marketized newspapers are no longer able to meet the information demand as before. And more so in Xi provinces.

**Table 5:** Mechanism: The Effect Through Powering Down the Media’s Market Incentive (Local News Only)

	Funding Sources			Responsiveness to the Market		
	SelfFunded	Partly-GovFunded	Fully-GovFunded	All	Commercial	Party
Takeover	-1.268*** (0.476)	-0.943 (0.619)	0.027 (0.149)	-0.633** (0.314)	-1.410** (0.668)	-0.231 (0.250)
Exit	1.987*** (0.497)	1.103 (0.704)	0.231 (0.183)	1.604*** (0.354)	2.664*** (0.686)	0.839*** (0.279)
Att_Intensity				0.007 (0.010)	0.007 (0.017)	0.015* (0.009)
Takeover*Att_Intensity				-0.032*** (0.011)	-0.032* (0.018)	-0.030*** (0.010)
Exit*Att_Intensity				0.013 (0.011)	0.005 (0.018)	0.016 (0.010)
Mean	1.144	0.554	0.210	0.896	1.294	0.586
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Media FEs	Yes	Yes	Yes	Yes	Yes	Yes
Location FEs	Yes	Yes	Yes	Yes	Yes	Yes
Year and Month FEs	Yes	Yes	Yes	Yes	Yes	Yes
Obs	1378	502	248	1821	808	1013
Adj. R <sup>2</sup>	0.414	0.403	0.307	0.429	0.448	0.423

Note: The outcome variable is the number of negative articles of an accident reported by a newspaper. Columns (1) to (3) report the differential takeover effect on the newspapers

# Who Fans the Flames of the 2016 Media Campaign



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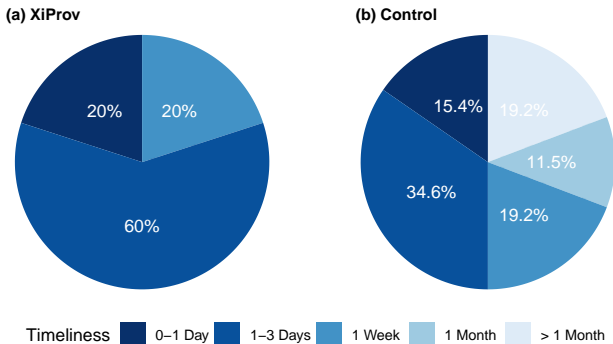


Figure 3: The pie charts show the proportions of the endorsement on the media campaign in terms of the different levels of timeliness among Xi provinces (a) and control provinces (b).

# Who Fans the Flames of the 2016 Media Campaign

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- Newspapers in early endorsement provinces significantly ↓ their negative articles on local accidents, relative to their counterparts in late endorsement provinces.

**Table 6:** Does the early endorsers of the media campaign affect the number of negative articles

	Local			Nonlocal		
	All	Commercial	Party	All	Commercial	Party
Takeover	-1.042*** (0.346)	-2.653*** (0.906)	-0.529** (0.260)	-0.117*** (0.031)	-0.210*** (0.043)	-0.035 (0.037)
Exit	1.341*** (0.343)	2.553*** (0.790)	0.657** (0.275)	0.088** (0.040)	0.177** (0.068)	0.005 (0.044)
Post2016	-0.211 (0.306)	0.288 (0.367)	-0.072 (0.117)	-0.339*** (0.034)	-0.458*** (0.050)	-0.227*** (0.038)
Early_endorsement*Post2016	-0.793*** (0.196)	-1.589*** (0.489)	-0.415** (0.172)	-0.090** (0.043)	-0.098 (0.065)	-0.096* (0.049)
Mean	0.896	1.294	0.586	0.493	0.640	0.365
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Media FEs	Yes	Yes	Yes	Yes	Yes	Yes
Location FEs	Yes	Yes	Yes	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes	Yes	Yes	Yes
Obs	2128	931	1197	57212	26675	30537
Adj. R <sup>2</sup>	0.420	0.416	0.385	0.224	0.244	0.228

Note: The outcome variable is the number of negative articles of an accident reported by a newspaper. All regressions control for provincial secretary's age, the logarithm of total deaths of the accident, Baidu index of the accidents, and accident type categorized into industrial accident, transportation accident and miscellaneous accident. All standard errors are clustered at the media level. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

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**Table 7:** The Differential Effects of the Media Campaign on the Number of Negative Articles

Newspaper's type:	Outcome variable: The number of negative article							
	Commercial				Party			
	(1) Local	(2) Nonlocal	(3) Xi	(4) Non-Xi	(5) Local	(6) Nonlocal	(7) Xi	(8) Non-Xi
Xi2016*Post_Campaign	-2.417*** (0.628)	-0.014 (0.073)			-0.818*** (0.304)	-0.032 (0.064)		
Local			1.872*** (0.508)	0.621*** (0.142)			0.446*** (0.154)	0.235*** (0.051)
Local*Post_Campaign			-2.544*** (0.601)	-0.272* (0.160)			-0.645*** (0.210)	-0.072 (0.058)
Mean	1.294	0.640	0.646	0.665	0.586	0.365	0.409	0.367
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Media FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Location FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Month FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs	931	26675	4386	23220	1197	30537	5160	26574
Adj. R <sup>2</sup>	0.430	0.264	0.332	0.265	0.396	0.242	0.264	0.245

Note: The outcome variable is the number of negative articles of an accident reported by a newspaper. All regressions control for provincial secretary's age, the logarithm of total deaths of the accident, Baidu index of the accidents, and accident type categorized into industrial accident, transportation accident and miscellaneous accident. All standard errors are clustered at the media level. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01



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- Our paper links and extends two literatures related to autocracies:
  - The econ. literature on leaders' effects. — lacks study on levels below the top leader, esp. on informal institutions.
  - The poli. sci. literature on factionalism. — focuses on the benefits received by the followers and lacks the prospective of the leaders.

# Critical/Negative: An Example

## The Mess of the Sodium Cyanide Storage in Ruihai, *The Beijing News* (Beijing), 16th August 2015

### 瑞海氰化钠仓储乱局

The **mess** of the sodium cyanide storage in Ruihai

数百吨露天存放的氰化钠成为天津港爆炸后次生危害；瑞海国际涉嫌混杂储存危化品  
Hundreds of tons of sodium cyanide stored in the open air caused a secondary hazard after the explosion in Tianjin Port; Ruihai International Corp. was **suspected** of storing hazardous chemicals in a mixed manner which is **illegal**.

8月13日下午，河北诚信有限责任公司六七名工作人员“**搅乱**”了天津爆炸救援现场。  
On the afternoon of August 13th, 6 staff members of Hebei Chengxin Co., Ltd. "**disturbed**" the rescue site of Tianjin explosion.

下午2时许，位于天津港第九大街的现场救援指挥部传来消息，有人在警戒线外声称现场有他们公司约700吨氰化钠，如果不及时处理**后果不堪设想**。指挥部马上派人将他们接进救援指挥部。据他们汇报，他们通过一家第三方货代公司，将他们氰化钠运至天津港，准备在这里报关出口，但还未从天津东疆保税港区瑞海国际物流公司运走，就发生了爆炸，这批氰化钠不知现状如何。  
At 2 p.m., according to the on-site rescue headquarters on the 9th Avenue of Tianjin Port, someone outside the cordon claimed that there were about 700 tons of sodium cyanide stored in their company. If they were not dealt with in time, **the consequences would be disastrous**. The headquarters immediately took them in. According to their report, these people transported the sodium cyanide to Tianjin Port through a third-party freight forwarding company, where the sodium cyanide were ready to be declared for export. However, an explosion occurred before it was transported from Ruihai International Logistics Company in the Dongjiang Free Trade Port Zone in Tianjin. The status of the sodium cyanide is unclear now.

据新京报记者调查，瑞海在仓储氰化钠的多个环节存在“**糊涂账**”及**违规行为**。  
According to the investigation by a reporter from the Beijing News, Ruihai had "**confused accounts**" and **irregularities** in many aspects of storing sodium cyanide.



# Journalistic/Negative: An Example

## Hazardous Chemicals in Tianjin Ruihai Logistics Exploded, Many People Were Injured, *The Beijing News* (Beijing), 13th August 2015

天津瑞海物流危化品爆炸多人受伤  
 Hazardous chemicals in Tianjin Ruihai Logistics exploded, many people were injured

危化品堆垛发生火灾，扑救现场发生爆炸；火球引发周边二次爆炸；消防官兵2人失联4人受伤  
 A fire broke out in the stack of hazardous chemicals, and an explosion occurred at the rescue site; the fireball caused a secondary explosion in the surrounding area; 2 firemen lost contact and 4 were injured

新京报讯 公安部消防局官方微博发布消息称，8月12日22时50分，天津消防总队接到报警称，天津滨海新区港务集团瑞海物流危化品堆垛发生火灾。23时30分左右，现场发生爆炸。据新华社消息，爆炸喷发火球同时引发周边多家企业二次爆炸，方圆数公里有强烈震撼。目前受伤人员被送往附近医院急救，具体伤亡情况尚不清楚。  
 (*The Beijing News*) According to the official Weibo account of the Fire Department of the Ministry of Public Security, at 22:50 on August 12, the Tianjin Fire Brigade received an alarm that a fire broke out in the stacks of hazardous chemicals in Ruihai Logistics of Tianjin Binhai New Area Port Group. Around 23:30, an explosion occurred at the scene. According to the Xinhua News Agency, the explosion erupted, and the fireballs caused a secondary explosion in a number of companies in the surrounding area. There was a strong sense of shock within a radius of several kilometers. At present, the injured were sent to a nearby hospital for emergency treatment. The specific casualties are unclear.

居民担心污染准备撤离  
 Residents are worried about pollution and prepare to evacuate

爆炸发生后，附近多个小区居民称受冲击波影响门窗破裂，目前已断水，空气中弥漫着呛人味道，居民担心危化品污染空气准备撤离。事发爆炸地点南边不到700米的万科清水湾港业主邵女士称，爆炸冲击波导致家中门窗全部变形，事发当时整栋楼都发生了晃动，“我家客厅灯直接炸飞了，阳台木门炸碎”。  
 After the explosion, residents in several nearby communities said that doors and windows were broken due to the impact of the shock wave. The water supply has been cut off, and the air is full of choking smells. Residents are worried that hazardous chemicals will pollute the air and prepare to evacuate. Ms. Shao, a resident of Vanke Qingshui Harbor, which locates in less than 700 meters south of the explosion site, said that the shock wave of the explosion caused all the doors and windows in the house to be deformed. At the time of the incident, the entire building was shaken. "The light in my living room exploded directly, and the balcony wooden door exploded."

# Propaganda/Positive: An Example

## “Positive Energy” Spread on the Internet, *Tonight News Paper* (Tianjin), 13th August 2015

正能量“刷屏”网络平台  
 “Positive energy” spread on the Internet

本报讯 天津滨海新区爆炸事故发生后，昨夜今晨，周边市民和现场抢险人员的安全牵动着津城市民的心，大家通过各种方式送去**关爱**，并提供力所能及的**帮助**。在网络上，各种**理性的**官方实用消息、向消防官兵等现场工作人员**致敬的**暖心帖被大量转发，**爱心**汇聚新区，网上传播着**正能量**。

After the explosion accident in Tianjin Binhai New District, last night and this morning, the safety of surrounding citizens and rescuers at the scene affected the hearts of Tianjin citizens. Everyone sent **care and help** within their capacity in various ways. On the Internet, various **rational** official and practical news and **heart-warming** posts **paying tribute** to the firemen and other on-site staff have been forwarded in large numbers. **Love** is gathered in the Binhai New District, and “**positive energy**” is spread on the Internet.

感人！爱心指南暖人暖心  
 Touching! Caring guide warms people's hearts

今天凌晨2时许，一条名为《转发！滨海新区可免费留宿宾馆以及医院的联系方式》的帖子已经在网上被大量转发，里面详细记录着各大爱心酒店的联系方式和地址。事故发生后，到哪里去献血、献血需要注意哪些问题、事故现场周边交通管制、事故现场如何急救等实用帖“刷屏”微博、微信朋友圈等网络平台，为有需要的市民提供了一份**爱心指南**。正如一位网友“婷婷雨里”所说：这一刻虽然我们不在现场，**但与新区人民同在**，希望能提供更多的帮助。

At about 2 a.m. in the morning today, one article titled "Repost! Contact Information for Free Accommodation Hotels and Hospitals in Binhai New District" has been forwarded in large numbers on the Internet. It comprehensively records the contact information and addresses of major beneficence hotels in detail. After the accident, practical posts such as where to donate blood, what issues should be paid attention to when donating blood, traffic control around the accident site, how to get first aid at the accident site, are spread on social media like Weibo and WeChat Moments. They provide a **caring guide** for citizens in need. As a netizen "Tingting Yuli" said: "Although we are not at the scene at this moment, **we are with people in the Binhai New District** and hope to provide more help."

## Did Xi Takeover Impact Positive Articles

**Table 8: Does Xi-takeover Impact the Number of Positive Articles**

<i>Accident's Locality:</i>	Outcome variable: The number of positive article					
	Local			Nonlocal		
	(1) All	(2) Commercial	(3) Party	(4) All	(5) Commercial	(6) Party
Takeover	-0.530 (0.403)	-0.581 (0.661)	-0.614 (0.472)	0.010 (0.014)	0.008 (0.021)	0.011 (0.019)
Exit	2.349*** (0.374)	2.663*** (0.601)	2.116*** (0.488)	-0.025 (0.016)	-0.017 (0.024)	-0.036* (0.020)
Mean	1.312	1.494	1.171	0.201	0.216	0.187
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Media FEs	Yes	Yes	Yes	Yes	Yes	Yes
Location FEs	Yes	Yes	Yes	Yes	Yes	Yes
Year and Month FEs	Yes	Yes	Yes	Yes	Yes	Yes
Obs	2128	931	1197	57212	26675	30537
Adj. R <sup>2</sup>	0.516	0.568	0.442	0.295	0.315	0.282

Note: The outcome variable is the number of positive articles of an accident reported by a newspaper. All regressions control for provincial secretary's age, the logarithm of total deaths of the accident, Baidu index of the accidents, and accident type categorized into industrial accident, transportation accident and miscellaneous accident. All standard errors are clustered at the media level. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

## Did Article Become More Positive?

Table 9: Does Xi-takeover Impact the Sentiment Score of News Articles

	Local			Nonlocal		
	All	Commercial	Party	All	Commercial	Party
Takeover	0.122*** (0.045)	0.101* (0.057)	0.149** (0.069)	0.017 (0.013)	0.019 (0.015)	0.009 (0.017)
Exit	0.042 (0.086)	0.029 (0.116)	0.052 (0.105)	-0.027 (0.022)	-0.037 (0.026)	-0.017 (0.032)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Media FEs	Yes	Yes	Yes	Yes	Yes	Yes
Location FEs	Yes	Yes	Yes	Yes	Yes	Yes
Year and Month FEs	Yes	Yes	Yes	Yes	Yes	Yes
Obs	4699	2549	2150	39707	22595	17112
Adj. R <sup>2</sup>	0.193	0.157	0.187	0.200	0.156	0.244

Note: The outcome variable is the sentiment score of a piece of news article. All regressions control for provincial secretary's age, the logarithm of total deaths of the accident, Baidu index of the accidents, and accident type categorized into industrial accident, transportation accident and miscellaneous accident. All standard errors are clustered at the media level. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

## Media Campaign: Official Response

Table 10: The Response to the Media Campaign Varying Among Provinces

<i>Outcome variable:</i>	Response Order	# of Articles		
	(1) Timeliness	(2) 1 Day	(3) 1 Week	(4) 1 Month
Takeover2016	-2.685** (1.298)	0.520** (0.208)	0.229 (0.153)	0.025 (0.050)
Date FEs	No	No	Yes	Yes
Obs	31	30	210	900
Adj. R <sup>2</sup>	0.032	0.154	0.204	0.297

*Note:* The outcome variable for column (1) is the order that a province held an official meeting to respond to the 'Meiti Xingdang' campaign. The outcome variables for columns (2) to (4) are the total number of articles covering 'Meiti Xingdang' campaign by newspapers in a province within 1 day, 1 week, and 1 month after the launch of the campaign, respectively. \* p<0.1; \*\* p<0.05; \*\*\* p<0.01

## Xi Province List

Table 11: List of Xi Provinces and Control Provinces

	Province	Name	Takeover	Exit	Group
1	Beijing	Cai Qi	2017-06-01	NA	Xi
2	Chongqing	Chen Min'er	2017-07-01	NA	Xi
3	Fujian	Power Base	2012-12-01	NA	Xi
4	Guizhou	Chen Min'er	2015-08-01	2017-06-30	Xi
5	Hainan	Liu Cigui Shen Xiaoming	2017-03-01	NA	Xi
6	Henan	Lu Zhangong	2012-12-01	2013-02-28	Xi
7	Jiangsu	Li Qiang (Zhejiang)	2016-06-01	2017-02-09	Xi
8	Jiangxi	Liu Qi	2018-03-01	NA	Xi
9	Jilin	Bayanqulo	2014-08-01	2020-10-31	Xi
10	Shaanxi	Power Base	2012-12-01	NA	Xi
11	Shanghai	Li Qiang (Zhejiang)	2017-10-01	NA	Xi
12	Tianjin	Huang Xingguo	2014-12-01	2016-08-31	Xi
13	Yunnan	Chen Hao	2016-08-01	2020-10-31	Xi
14	Zhejiang	Power Base	2012-12-01	NA	Xi

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## Classification: Positive or Negative

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- Fine-tune a BERT-liked pre-trained model called *Sentiment Knowledge Enhanced Pre-training* (SKEP) using our task-specific labelled data. [Details](#)
  - Splitted 44406 pieces of news articles into 0.77 million pieces of sentences.
  - Randomly sampled 5000 pieces and labelled into three classes, positive (1), negative (-1) and neutral (0) based on the sentiment the sentence conveys.
  - Train/fine-tune SKEP model, setting epochs equal to 5 times, and learning rate to  $2 * e^{-5}$ .
  - After fine-tuning, the model's accuracy reaches 82% or so, better than traditional BERT model (79%).
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- Aggregate sentence level sentiment score to article level by taking the average.
  - The article level sentiment score is a continuous variable ranging from -1 to 1.
  - Define an article's tone to be positive (Tone=1) if its sentiment score is larger than 0, otherwise, negative (Tone=0).

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## Classification: Technical Details

- SKEP exploits an unsupervised sentiment knowledge mining method, Pointwise Mutual Information (PMI) to conduct a sentence-level estimation (Tian et al. 2020).
- It builds up a collection of word-pairs for the inputted content, where each pair contains a sentiment seed word  $s$  from a pre-established lexicon that can be positive  $s+$  or negative  $s-$ .
- Calculate the probability of the co-occurrence of the word-pair in a sentence:

$$PMI(w, s) = \log \frac{p(w, s)}{p(w)p(s)} \quad (2)$$

- the sentiment/polarity of the word  $w$  is depended on:

$$WP(w) = \sum_{s=+} PMI(w, s+) - \sum_{s=-} PMI(w, s-) \quad (3)$$

- $WP(w) > 0$ , positive;  $WP(w) < 0$ , negative. Aggregates the word-level sentiment to estimate a sentiment score for the full text. [back](#)

## Robustness Check: Natural Disaster as a Placebo

**Table 12:** Placebo Test: Does Xi-takeover Impact the Number of Negative Articles Related to Natural Disasters

<i>Disaster's Locality:</i>	Outcome variable: The number of negative article on Natural Disasters					
	Local			Nonlocal		
	(1) All	(2) Commercial	(3) Party	(4) All	(5) Commercial	(6) Party
Takeover	0.420 (0.718)	0.516 (0.893)	-0.303 (1.202)	-0.612 (0.389)	-0.999 (0.719)	-0.329 (0.208)
Exit	0.393 (0.358)	0.551 (0.421)	0.226 (0.423)	0.102 (0.103)	0.146 (0.144)	0.017 (0.118)
Mean	2.389	2.766	1.888	1.017	1.124	0.854
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Media FEs	Yes	Yes	Yes	Yes	Yes	Yes
Location FEs	Yes	Yes	Yes	Yes	Yes	Yes
Year and Month FEs	Yes	Yes	Yes	Yes	Yes	Yes
Obs	1475	842	633	9270	5605	3665
Adj. R <sup>2</sup>	0.531	0.581	0.408	0.373	0.386	0.411

Note: The outcome variable is the number of negative articles of a disaster reported by a newspaper. All regressions control for provincial secretary's age, the logarithm of total deaths of the accident, and accident type categorized into industrial accident, transportation accident and miscellaneous accident. All standard errors are clustered at the media level. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

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## Robustness Check: Demand Side Change?

Table 13: The Effect of Media Coverage on the Public Attention

	Outcome: Ln(Daily Baidu Index)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Accident's Locality:</i>	Local	Local	Nonlocal	Nonlocal	Local	Local	Nonlocal	Nonlocal
Lag.Count	0.012** (0.004)	0.045*** (0.011)	0.037*** (0.006)	0.064*** (0.009)				
Day	0.182*** (0.028)	0.197*** (0.030)	0.052*** (0.009)	0.055*** (0.009)	0.181*** (0.028)	0.194*** (0.030)	0.053*** (0.009)	0.056*** (0.009)
Lag.Count*Day		-0.010*** (0.003)		-0.008*** (0.001)				
Lag.Count.Neg					0.050*** (0.011)	0.122*** (0.033)	0.062*** (0.010)	0.100*** (0.015)
Lag.Count.Neg*Day						-0.023** (0.009)		-0.012*** (0.002)
Mean	5.959	3.532	5.959	3.532	5.959	3.532	5.959	3.532
Province FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Accident FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Month FEs	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs	956	956	28897	28897	956	956	28897	28897
Adj. R <sup>2</sup>	0.647	0.650	0.702	0.702	0.650	0.652	0.703	0.703

Note: The table reports how the media coverage influences people's attention towards accidents. The outcome variable is the logarithm of daily Baidu index of an accident in a province. The variable *Lag.Count* indicates the lagged total number of articles reported by newspapers in a province. The variable *Lag.Count.Neg* indicates the lagged number of negative articles reported by newspapers in a province. The variable *Day* measures the duration from the occurrence of the accident. All models control for the logarithm of national level Baidu index of the accident keywords. All standard errors are clustered at the province level. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

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## Robustness Check: Not Influence Accidents' Occurrence and Intensity

**Table 14:** Robustness Check: Does the Takeover of Xi's Factional Followers Influence the Occurrence and the Intensity of Local Accidents

<i>Outcome variable:</i>	# of Accident					# of Deaths
	(1) All	(2) Large	(3) Ordinary	(4) Industrial	(5) Non-industrial	(6) Log(Deaths)
Takeover	0.004 (0.020)	-0.016 (0.014)	0.021 (0.015)	0.004 (0.014)	0.000 (0.014)	0.009 (0.065)
Exit	-0.035 (0.023)	-0.014 (0.012)	-0.021 (0.015)	-0.013 (0.014)	-0.022* (0.012)	-0.087 (0.077)
Mean	0.063	0.011	0.052	0.032	0.030	0.174
Location FEs	Yes	Yes	Yes	Yes	Yes	Yes
Year and Month FEs	Yes	Yes	Yes	Yes	Yes	Yes
Obs	4093	4093	4093	4093	4093	4093
Adj. R <sup>2</sup>	0.030	0.015	0.024	0.021	0.009	0.030

*Note:* The outcome variable of column (1) is the number of accidents happened in a province during a year-month. From columns (2) to (5), the outcome variables are the number of large accidents, ordinary accidents, industrial accidents, non-industrial accidents, respectively. In column (6), the outcome variable is the logarithm of total deaths caused by accidents in a province during a year-month. All regressions control for provincial secretary's age. All standard errors are clustered at the province level. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

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## Robustness Check: Alternative Takeover

**Table 15:** Robustness Check: The effect of Xi's taking power on the number of negative articles reported in his original power bases

<i>Accident's Locality:</i>	Outcome variable: The number of negative article					
	Local			Nonlocal		
	(1) All	(2) Commercial	(3) Party	(4) All	(5) Commercial	(6) Party
Post	-0.344 (0.527)	-0.219 (0.977)	-0.506 (0.409)	0.313*** (0.066)	0.619*** (0.116)	0.047 (0.064)
Powerbase*Post2012	-6.261*** (1.496)	-9.179*** (2.616)	-3.435*** (1.110)	-0.032 (0.062)	0.005 (0.085)	-0.055 (0.084)
Mean	0.896	1.294	0.586	0.493	0.640	0.365
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Media FEs	Yes	Yes	Yes	Yes	Yes	Yes
Location FEs	Yes	Yes	Yes	Yes	Yes	Yes
Year and Month FEs	Yes	Yes	Yes	Yes	Yes	Yes
Obs	2128	931	1197	57212	26675	30537
Adj. R <sup>2</sup>	0.480	0.513	0.444	0.240	0.265	0.242

Note: The outcome variable is the number of negative articles of an accident reported by a newspaper. All regressions control for provincial secretary's age, the logarithm of total deaths of the accident, Baidu index of the accidents, and accident type categorized into industrial accident, transportation accident and miscellaneous accident. All standard errors are clustered at the media level. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

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## Robustness Check: Alternative Takeover (Cont')

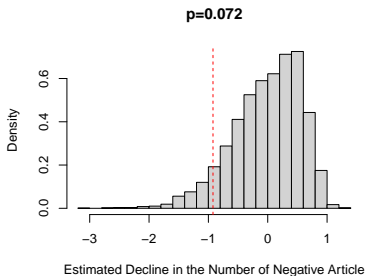
Table 16: Robustness Check: Alternative Power Bases Definition (Jiang 2018)

<i>Accident's Locality:</i>	Outcome variable: The number of negative article					
	Local			Nonlocal		
	(1) All	(2) Commercial	(3) Party	(4) All	(5) Commercial	(6) Party
Post	-0.505 (0.528)	-0.489 (0.970)	-0.564 (0.420)	0.323*** (0.067)	0.632*** (0.116)	0.050 (0.066)
Powerbase_alt*Post2012	-4.144*** (1.149)	-5.328*** (1.611)	-2.459* (1.278)	-0.102 (0.065)	-0.078 (0.093)	-0.082 (0.082)
Mean	0.896	1.294	0.586	0.493	0.640	0.365
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Media FEs	Yes	Yes	Yes	Yes	Yes	Yes
Location FEs	Yes	Yes	Yes	Yes	Yes	Yes
Year and Month FEs	Yes	Yes	Yes	Yes	Yes	Yes
Obs	2128	931	1197	57212	26675	30537
Adj. R <sup>2</sup>	0.449	0.467	0.420	0.240	0.265	0.242

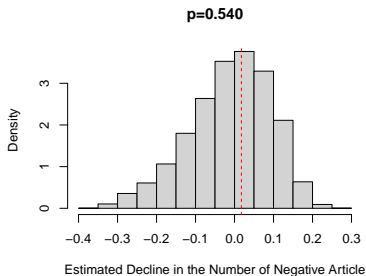
Note: The outcome variable is the number of negative articles of an accident reported by a newspaper. All regressions control for provincial secretary's age, the logarithm of total deaths of the accident, Baidu index of the accidents, and accident type categorized into industrial accident, transportation accident and miscellaneous accident. All standard errors are clustered at the media level. \* p<0.1; \*\* p<0.05; \*\*\* p<0.01

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# Robustness Check: Randomization Inference



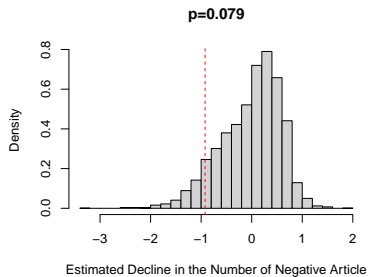
(a) Between Provinces, Local Reporting



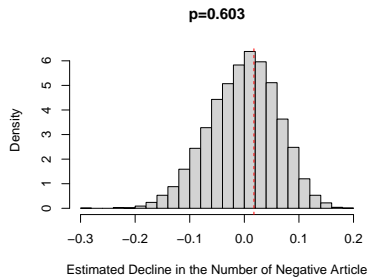
(b) Between Provinces, Nonlocal Reporting

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## Robustness Check: Randomization Inference (Cont')



(a) Entire Sample, Local Reporting



(b) Entire Sample, Nonlocal Reporting

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## Robustness Check: Check Staggered DID

**Table 17:** Robustness Check: Aggregated Treatment Effect of *Takeover* for Multiple Time DID

<i>Accident's Locality:</i>	Outcome variable: The number of negative article					
	Local			Nonlocal		
	(1) All	(2) Commercial	(3) Party	(4) All	(5) Commercial	(6) Party
<i>Panel A: Never Treated As Control</i>						
Takeover	-1.701** (0.661)	-2.814** (1.321)	-0.760 (0.478)	0.058 (0.058)	0.063 (0.083)	0.054 (0.065)
<i>Panel B: Not Yet Treated As Control</i>						
Takeover	-1.675*** (0.635)	-2.738** (1.311)	-0.796 (0.478)	0.056 (0.054)	0.061 (0.077)	0.049 (0.065)

Note: The table reports aggregated treatment effect parameters under the unconditional parallel trends assumptions and with clustering at the media level. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

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## Robustness Check: Alternative Definitions of Negative Articles

Table 18: Robustness Check: Different Classification of Negative Articles

Accident's Locality:	Outcome variable: The number of negative article									
	Local					Nonlocal				
	(1) < 0	(2) < 0 - 0.1SD	(3) < 0 - 0.2SD	(4) < 0 - 0.3SD	(5) < 0 - 0.4SD	(6) < 0	(7) < 0 - 0.1SD	(8) < 0 - 0.2SD	(9) < 0 - 0.3SD	(10) < 0 - 0.4SD
Takeover	-0.790*** (0.282)	-0.766*** (0.278)	-0.706*** (0.261)	-0.636*** (0.224)	-0.541*** (0.191)	0.017 (0.031)	0.017 (0.031)	0.018 (0.030)	0.017 (0.028)	0.012 (0.027)
Exit	1.195*** (0.309)	1.158*** (0.306)	1.056*** (0.285)	0.908*** (0.245)	0.758*** (0.205)	0.068* (0.036)	0.065* (0.035)	0.065* (0.034)	0.063* (0.033)	0.063** (0.031)
Mean	0.734	0.719	0.678	0.613	0.555	0.434	0.419	0.367	0.395	0.364
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Media FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Location FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Month FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs	2128	2128	2128	2128	2128	57212	57212	57212	57212	57212
Adj. R <sup>2</sup>	0.386	0.383	0.369	0.355	0.351	0.230	0.229	0.227	0.222	0.219

Note: The outcome variable is the number of negative articles of an accident reported by a newspaper. All regressions control for provincial secretary's age, the logarithm of total deaths of the accident, Baidu index of the accidents, and accident type categorized into industrial accident, transportation accident and miscellaneous accident. All standard errors are clustered at the media level. \*p<0.1, \*\*p<0.05, \*\*\*p<0.01

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