

What drives criticisms of government on media?

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Abstract

In this paper, I study how political competition among provincial officials affects media criticism in China. I collect news reports on local mouthpiece outlets that criticize the provincial governments from 2004 to 2017. By exploiting the randomness of the pairing of the provincial governor and secretary, I prove that higher competition induces more media criticism. I construct a model to illustrate how competition can be generated by promotion pressure.

1 Introduction

One important role of media is to serve as a watchdog of the society, against any malpractices of the government. In the United States, it is common to see commercial newspapers, say *the New York Times* and *the Wall Street Journal*, publish articles criticizing the government or officials. Speaking of the reason, it is profitable for commercial newspapers to formulate content to cater to readers' needs, and readers do demand for a revelation of misconduct or malfeasance. However, the same logic doesn't apply to a regime where media is less independent from the government. Does non-democratic political regime have negative reports about government? If so, what drives the intensity of negative coverage?

The answer is partially revealed in the literature. Some papers have provided theoretical analysis and empirical evidence on freedom of media being allowed under dictatorship because the ruler wants to proctor the subordinates (Egorov et al., 2009, Lorentzen, 2014). Chen and Hong (2021) suggests that within-faction competition can drive mutual attack on media in the context of China (Chen and Hong, 2021). This paper adds to this literature by introducing a new mechanism: competition between provincial leaders due to promotion pressure increases media criticism.

In this paper, I construct a novel dataset containing media reports that criticize or at least point out existing local issues. With this dataset, I document that Chinese media, even the most government-dependent newspapers, can at least point out problems or room for improvement of local governments. Moreover, I find that the frequency of these reports can be driven by the competition between the top two provincial officials: the party secretary and the governor. The

competition between two provincial officials rises from the conflicts of taking credit for their joint performance. To illustrate this intuition, I build a principal-agent model with adverse selection, where two agents send economic and media signals to the principal to get promoted. When the performance from agents are intertwined and individual efforts are not observed, media serves as a complement signal. I then provide empirical evidence by exploiting a quasi-experiment on assignment of secretary-governor dyads.

Each Chinese provincial government is led by two top provincial officials, namely, the party secretary and the governor. Despite the fact that the party secretary is of one higher political rank than the governor, they cooperate in various aspects of local governance. Their roles in local development are such that the secretary is the “designer of the blueprint” and governor is the executor. Apart from the cooperation, party secretaries possess the entire control of the content published on provincial-government-led media (or mouthpieces).

The empirical strategy exploits the semi-random pairing of the party secretary and the governor. This setting provides two sources of variation to identify the impact of competition on media criticism. First, the pairing is semi-random such that the difference in their tenure years of secretary and governor is exogenous. The timing when a secretary and a governor is paired majorly depends on the movement of predecessors. Any movement decision is made by the Politburo Standing Committee based on predecessors’ traits and performance, which are largely independent of the incumbent pairs’ traits and performance. Second, statistical and anecdotal evidence suggests that for the provincial leaders, the third and the fourth years along their tenure track at their positions are the period when they are most likely to be examined for promotion. Whether the secretary and the governor enter their promotion period is also exogenous to their traits.

To illustrate how competition rises due to promotion pressure, I build a principal-agent model where principal represents the Politburo Standing Committee that makes personnel decisions and two agents represent the two top bureaucrats. Intuitively, since the principal values the agents’ ability to enhance economic growth, both bureaucrats, in order to get promoted, exert efforts to improve growth. However, because they cooperate on boosting growth, their individual efforts as signals of their own types are not observed. Rather, their joint performance is observed by the principal. As a result of this fuzzy signal, some secretaries are incentivized to send media signal to increase his promotion probability.

The first plausibly exogenous variation assigns dyads into two groups. The treatment groups consists of pairs where both bureaucrats are inaugurated almost simultaneously. Pairs of this kind need to send signals for their promotion examination, and due to the large overlap of their tenure year, their performance is highly intertwined. Compared with the other dyads in the control group, in which either at least one of them need not to signal for promotion examination, or their efforts to improve economy are not substantially intertwined, dyads in the treatment group is more (if not only) subject to the competition of “taking credit of performance”.

My empirical analysis yields three sets of results. First, I find that competition between

the secretary and the governor can lead to more media criticism on mouthpieces. Specifically, compared with a secretary of a dyad in the control group, during the secretary's promotion examination period, a secretary in a treated dyad report significantly more media criticism. This media reaction is mainly driven by the extra criticism on policies for improving economy, as opposed to policies on public affairs. Also, competition leads to higher media praise for local performance. Additionally, some evidence suggests that competition can induce higher individual media exposure of secretary and lower individual media exposure of governor. Second, the dyads in the treatment group produce higher GDP growth rate than the control group dyads. Third, media criticism in general helps the promotion of secretaries, and the assistance will be the largest when the economic performance is mediocre.

This paper contributes to two strands of literature. First, I add to the literature by documenting the existence of intra-criticism in non-democratic political regime (Egorov et al., 2009, Chen and Hong, 2021). Second, while plenty of work has focused on the effect of demand side on media content (Gentzkow and Shapiro, 2010, Qin et al., 2018), I focus on the supply side.

The remainder of the paper is organized as follows. I will introduce the background of study in Section 2. Section 3 describes the data used. Section 4 establishes a conceptual framework and the following sections 5 to 7 test model implications. Section 8 confirms the robustness of the main result. Section 9 concludes.

2 Background

2.1 Media

Various forms of media are present in China. In this study we focus on newspaper only. As the mostly controlled mouthpiece media, its reactions serve as the best to probe the incentives of bureaucrats.

In contrast, there are also commercial newspapers. Rigorously speaking, both commercial newspapers and mouthpieces are such that at least a part of their profit is from sales revenue or advertisement. They are also subject to control of the party. They differ in the following senses: first, there is one and only one mouthpiece newspaper under each province/prefecture administration (featured by having "ribao"(daily) in the head), whereas multiple commercial presses can exist under one administrative level. Second, mouthpiece is considered to be "the voice from the authority" and will be distributed within the bureaucratic system in the local government. Third, mouthpiece is directly under the control of the provincial party secretary. Secretary may read through what is reported in the mouthpiece and censor what he/she deems inappropriate, if any.

2.2 provincial bureaucratic system

In China, there is only one ruling party, the communist party. Every local administrative region (including provinces) has a ruling committee, whose members are all affiliated to the party. The top two officials of a committee, namely the party secretary (rank 1st) and governor (rank 2nd), are beyond the rest in terms of bureaucratic rank and decision-making power over most important issues within the region together. For example, in 2007, the party secretary of Shanghai municipality (the same rank as a province) was Xi Jinping and the governor back then was Han Zheng. They are now the Chairman/General Secretary and the first Vice Premier of PRC now.

There is a division of responsibilities between them. In principle, the secretary has complete control of personnel and propaganda, and is deeply involved in economic growth. Meanwhile, the governor takes more responsibility of execution of economic plans and public projects. If I draw an analogy between provincial bureaucratic system and firm's management, secretary is analogous to the chairman, who creates the blueprint of development, and governor is analogous to CEO, who executes the plan. While the power of personnel and propaganda is completely in the hand of the secretary, how much *de jure* power secretary has on making economic decision varies from case to case. In a speech by President Xi Jinping in 2016 which emphasize unity between secretary and governor [...], one can infer that the cooperation between the secretary and governor is not always harmonious; sometimes the secretary can be too aggressive and decisive, and sometimes can become a figurehead with less *de facto* power.

Nevertheless, the balance of power is still decisively tilted towards the secretary, which can be easily reflected by the career path. A governor climbs the ladder to become a secretary, and the secretary can be promoted to be the central politburo or be lifted half a rank, from provincial to sub-national. Most commonly, secretary is believed to have the dominant power on government affairs, and governor is believed to obey the secretary whenever this is a conflict.

This system was first created by the Soviet Union. It could make the party deeply involved from top to bottom. [...] argued that the system can guarantee integrity of nation. After it was borrowed and adopted by China, it has evolved along the time. For example, when Hu Yaobang and Zhao Ziyang were the Chairman, they tried to propel a separation of the role of party and government, but that was deemed unsuccessful at the end, with their stepping down from the stage. Afterwards, the role of party secretary and governor have always been tangled to some extent.

The secretary and governor both strive for promotion. Massive literature has explored what determines officials' promotion. Factors may include faction affiliation [...], age [...], economic growth, fiscal income and so on.

2.3 Promotion

Even though it is not completely clear what incentive officials have in China, most scholars consider promotion as the part of their utility function. [...] Many factors can influence their promotion opportunity and intensity of desire to ladder, including whether they are alternative member of CCP or not [...], age [...], education [...], connection [...] and so on. I explore another variable, i.e., tenure year, to capture the intensity of promotion incentive. This is based on the following stylized fact: secretary and governors are most likely to be promoted in the third or fourth year during the tenure on the position. This fact is confirmed by both anecdotal evidence [...] and also data. (See figure 1)

figure 1

The reasons why we utilize this variable to capture change of intensity are threefold. First, whether one enters the third or fourth year is an exogenous variation. Second, unlike age, tenure year doesn't capture experience. Third, unlike connection and alternative membership of CPC, this variable is more independent from ability. Moreover, this variation across pairs of secretary and governor is more random than other variables mentioned above, since a tenure difference being assigned to a pair is partially due to when the predecessors were desposed. Even though we mainly use tenure variation as explanatory variable, we also include the variables for robustness check.

3 Data and Measurements

The data consists of two parts: newspaper coverage of critical news and official's data.

Sampling Negative News

The media data is obtained from the CNKI database. The major dataset is collected by manually reading the news and select. Other datasets are generated by applying machine learning taking the manually as training sample, which allows replication and cross-database validation.

The major dataset is collected in the following process. First I applied the a set of keywords (Chinese expressions of "still", "why", "is waiting for", "latent danger exists") to search in CNKI newspaper database. The searching range covers 28 provincial administrative regions from 2004 to 2017. I excluded Beijing because it's newspaper presses are considered to be national, not local [...]. I also excluded Tibet and Shandong because of the lack of coverage of CNKI database. I excluded Taiwan, Hong Kong and Macau because of their different political regime.

Second, based on the 5001 negative news articles, I generate a province-year panel dataset, using variables that capture the extensive and intensive margin of negative reportings. I use the frequency and the fraction of critical reports as the baseline measures for extensive margin.

Meanwhile, the fraction of text mentioning local problems (in contrast to mentioning the nation or other provinces) serves as the baseline measure for intensive margin. Other variables, including the number of articles published on the front page, average pages of the articles published, total and average length. See Table 1 for summary statistics of them.

Further, I made the selection process replicable by applying machine learning. To do this, first I used the newspaper dataset (generated in the second step) to train a classifier. Then I collected newpieces by searching with more keywords on CNKI and Wisenews and download without manual selection. Finally I applied the classifier to the re-collected ones. Since the accuracy of classifier is only 87.1%, the results using these auto-generated datasets will be presented in appendix.

(1)		
	mean	sd
Annual Count	12.76	11.02
Annual fraction	3.50	2.99
Front Page	4.13	5.25
Average page	5.72	2.54
Holiday	1.63	2.08
NationMeet	0.71	1.03
PolMeet	2.41	2.55
Total Length	20803.18	18557.06
Average Length	1600.61	695.09
Inward Criticism	8.59	4.70
DeepInvestigate	8.09	7.24
Followup	9.18	8.25
Observations	392	

Table 1: Summary Statistics: Measures for Media Criticism

Official Biographical Variables and Performance

I collected officials’ biographical data from [Xianxiang XU’s public dataset on provincial leaders] and www.chinavitea.com. I obtained the provincial public expenditures and GDP growth rates from National Bureau of Statistics. In this dataset, I have variables that capture basic information, such as education, birth place, age, gender, ethnicity and so on. I also constructed variables to capture their connections with the politburo standing committee, i.e., top leaders in China. Following [...], connection is defined by whether the persons share the same birthplace, were colleagues before resuming the positions, or the same college.

4 Conceptual Framework

To illustrate the intuition, I build a principal-agent model with adverse selection, assuming discrete types and efforts for parsimony and without a loss of generality. There are two agents, corresponding to the party secretary and the governor. The principal is the Politburo Standing

Committee that makes personnel decision of all secretaries and governors. Agents are assigned with types in the first stage by nature, and the types can be observed by both agents but not the principal. Both agents can be one of two types in enhancing local economy: high (H^e) and low (L^e). Additionally, secretary can be either high(H^m) and low(L^m) in sending media signal. I assume the economic type and the media type are positively correlated (Assumption 1).

Principal wants to select the high-type agent(s) in enhancing economic performance to promote based on her observed economic and media performance. I assume the principal has commitment power. Both the secretary and the governor hope to get promoted. Two agents pay efforts as signals to the principal. There are two dimensions where efforts can be paid: economy (e_s and e_g) and media (m). Secretary can send both signals ($e_s, m \in 0, 1$), but governor can only send the economic signal ($e_g \in 0, 1$). The two efforts are both costly¹, but for each signal, high-type bureaucrats have a lower marginal cost than low-type bureaucrats.

Working in pairs, economic performance is a result of the joint efforts made by both agents. Mathematically, instead of observing e_s and e_g respectively, the principal only observes $e = e_s + e_g$. Without the media signal, three observable economic performance levels ($e = 0, 1$, or 2) cannot distinguish four combinations of economic types ($H_s^e H_g^e, H_s^e L_g^e, L_s^e H_g^e, L_s^e L_g^e$). Even in the most separated equilibrium, when mediocre economic performance is observed, the principal only knows that one and only one of them is H , but she cannot tell which agent is H . Now since the media type and the economic type is positively correlated, in this case, the secretary of HH_m may send the media signal to increase the posterior belief of him being a H .

The unique equilibrium is described in Proposition 1 under Assumptions[...]. The proof can be found in the Appendix. Since the economic signals are the directly signals economic type, agents will send it whenever they can, suggesting that there is no ambiguity when none performance ($e = 2$) or good performance ($e = 0$) is observed. Otherwise when mediocre performance is observed, then principal knows that one of them is H and the other is L , not knowing which exactly is the H . Such economic performance corresponds to four cases: ($H^e H^m, L^e$), ($H^e L^m, L^e$), ($L^e H^m, H^e$), ($L^e L^m, H^e$). Among the four cases, secretaries of H^m will send media signals to increase the chance of being promote due to the positive correlation between media type and economic type. Under Assumption[...], their media signal will not be mimicked by the low types.

Proposition 1 *Under the Assumptions ?? to ??:*

¹While some people may think publishing on media is a cheap talk, I hereby provide three reasons to justify why media signals come with a cost. First, reporting more negative reports might stimulate anger of the public, especially for those reports related to bad attitudes and even possible corruption of local officials. Since the news in my dataset are mostly mild, unless the exposure is too much, I suspect these reports can induce any severe wrath. Second, usually negative news on mouthpiece comes directly with a solution very soon. [...] shows that the national mouthpiece, People's Daily, predicts policies to be implemented in around half a year. Therefore, it is reasonable to conjecture that publishing a negative news on the mouthpiece means the problem mentioned must be solved soon, which generate a potential cost. Finally, the negative news might directly points to any drawbacks or even mistakes of colleagues, which is deemed to some extent as a taboo. Publishing a negative report could sacrifice some affinity with colleagues.

	$Sec\ H^e H^m$	$Sec\ H^e L^m$	$Sec\ L^e H^m$	$Sec\ L^e L^m$
$Gov\ H^e$	$(1, 0), 1$	$(1, 0), 1$	$(0, 1), 1$	$(0, 0), 1$
$Gov\ L^e$	$(1, 1), 0$	$(1, 0), 0$	$(0, 0), 0$	$(0, 0), 0$

, where for $(a, b), c$, a and b represents for economic signals sent by the secretary agent and the governor agent respectively, and c represents for media signal.

Principal promotes both agents given $e = 2$ and promote neither given $e = 0$. When observing $e = 1$, principal will adopt a mixed strategy by promoting one of the agents according to her posterior belief.

Principal would interpret the signals in the following way. When the principal observes $e = 2$, she is certain that both secretary and governor are high-type in economic improvement. $(1, 1)$ can only come from $(HH_m)L$ or $(LH_m)H$. $(1, 0)$ can only come from $(HL_m)L$ or $(LL_m)H$. Finally $(0, 1)$ and $(0, 0)$ can only come from $(LH_m)L$ or $(LL_m)L$.

This unique equilibrium gives several testable implications on the comparison between pairs where both agents need to send signals for promotion and pairs where only one or none agent needs to signal for promotion. While the model describes how unobservable individual efforts give rise to the media reaction, alternatively, if only one agent needs to send the signal for promotion, then the observed economic performance will be attributed to this agent without ambiguity, and in such cases media signal is not necessary to increase the chance of promotion. It follows that media criticism is expected to be higher for pairs where both agents need to signal their types for promotion than other pairs (Corollary 1). It also naturally follows that the economic performance is higher for the former case than the latter (Corollary 2). Finally, within pairs where both need to signal for promotion, media signal is observed when economic performance is mediocre which helps secretaries' promotion (Corollary 3).

Corollary 1 *When secretary and governor have their promotion period overlapped, more media criticism will be observed.*

Corollary 2 *Pairs that resume office simultaneously tend to have higher economic performance.*

Corollary 3 *The higher economic performance is, the more likely both agents will be promoted. Media criticism will be observed when mediocre economic performance is observed.*

5 Conflicts due to Promotion Pressure

5.1 Baseline Result

The empirical strategy is motivated by a quasi-experiment performed on secretary-governor dyads. A secretary-governor dyad is assigned to a treatment group if the secretary and the governor are inaugurated in the same year or within two sequential years. The control group

consists of pairs that belong to either of the following three scenarios. First, both experience examinations for promotion, but the examinations are not overlapped. Second, only one of them experience an examination. Third, none of them experiences an examination. Figure [...] illustrates all the possible pairs.

The treated dyads are faced with higher within-pair competition for three reasons. First, both bureaucrats in the treatment group are incentivized to signal for promotion. In the control group, the type of one of the agent has been largely already revealed and there is little incentive to work as hard as a “new broom” who just resumes office. Second, pairs in the treatment group have their economic efforts highly intertwined. Dyads in the control group have their tenure year staggered enough to disentangle their individual contribution. Third, secretaries in the treated dyads are expected to receive promotion inspection (the 3rd or 4th year) together with their partners, which further advances the necessity to send media signal.

In the treatment group where dyads resume offices almost simultaneously, the treatment occurs when the secretary is under promotion examination. Noncompliant dyads can be either of the two cases. Firstly, since the sample data covers to 2017, those secretaries who receive promotion examination later than 2017 will not be compliant in the data. While this attrition is considered random enough, the other case is more troublesome: a pair resumes office almost simultaneously but one of them get moved before secretary’s promotion examination period. Since the estimate of interest is the treatment-on-treated rather than the intend-to-treat, I drop these noncompliant objects.

The pairing of secretary-governor dyads, especially the timing of pairing, substantially depends on the availability of job openings, which further depends on the movement of pairs’ predecessors based on their types and performance. As a result, the assignment of the control and treatment group is possibly random to pairs types. This can be further confirmed by the balanced table of personal traits: all except for one observable personal traits exhibit insignificant difference between control group and treatment group. Shown in Table 2 and Table 3, the control group and the treatment group are roughly balanced except that the treatment group tends to have more secretaries with local experience. This is because conventionally a party secretary opening is more often filled by a promotion of the local governor. Generally, there is a reason to believe that the assignment of treatment is random enough and independent to most observed and unobserved variables that matters for promotion decision.

Following the conceptual framework, I estimate the following econometric specification:

$$Criticism_{it} = \beta_1 AssignTreat_{it} + \beta_2 SecExam_{it} + \beta_3 AssignTreat_i \times SecExam_{it} + \gamma Z_i + \alpha_t + u_{it} \quad (1)$$

, where i is dyad and t is year. $AssignTreat_i$ is an indicator of whether dyad i is in the treatment group. $SecExam_{it}$ is a dummy that takes one when the secretary in dyad i is under promotion

	(1)		(2)		(3)	
	Control		Treatment		Difference	
	mean	sd	mean	sd	b	t
Has local Experience	0.21	0.41	0.50	0.50	-0.29***	(-3.47)
Age In Position	57.37	3.94	57.45	4.15	-0.07	(-0.10)
Experience(NProv)	3.29	1.28	3.46	1.39	-0.17	(-0.72)
Education	3.57	0.77	3.79	0.76	-0.21	(-1.57)
Sex	0.97	0.16	0.98	0.13	-0.01	(-0.34)
Engineer Background	0.32	0.47	0.34	0.48	-0.02	(-0.23)
Economics Background	0.43	0.50	0.52	0.50	-0.09	(-1.03)
Central Committee Member	0.33	0.47	0.41	0.50	-0.08	(-0.90)
Sec Connected	0.79	0.41	0.66	0.48	0.13	(1.58)
Sec Corrupt	0.11	0.31	0.14	0.35	-0.04	(-0.61)
Managed Propaganda	0.32	0.47	0.23	0.43	0.09	(1.12)
Sec Connected with Gov	0.13	0.34	0.11	0.31	0.03	(0.46)
Observations	75		56		131	

Table 2: Balance Table: Secretary

	(1)		(2)		(3)	
	Control		Treatment		Difference	
	mean	sd	mean	sd	b	t
Has local Experience	0.77	0.42	0.64	0.48	0.13	(1.61)
Age In Position	56.31	3.48	56.02	3.60	0.29	(0.46)
Experience(NProv)	2.39	1.11	2.61	1.25	-0.22	(-1.05)
Education	3.87	0.76	3.75	0.72	0.12	(0.90)
Sex	0.96	0.20	0.96	0.19	-0.00	(-0.13)
Engineer Background	0.29	0.46	0.34	0.48	-0.05	(-0.55)
Economics Background	0.45	0.50	0.54	0.50	-0.08	(-0.93)
Central Committee Member	0.75	0.44	0.70	0.46	0.05	(0.63)
Gov Connected	0.52	0.50	0.52	0.50	0.00	(0.02)
Gov Corrupt	0.08	0.27	0.07	0.26	0.01	(0.18)
Managed Propaganda	0.28	0.61	0.25	0.44	0.03	(0.33)
Observations	75		56		131	

Table 3: Balance Table: Governor

examination in year t . The set of control variables Z_i contains all observable personal traits, listed in Table 2 and Table 3.

Expecting to be examined together with the governor doesn't significantly affect media criticism, suggested by the insignificance of the coefficient for β_1 . Intuitively, the secretary will not react in advance until the examination takes place. This can be explained by the timeliness of media reports. When the secretary is under promotion examination, the number of critical reports is slightly lower, suggested by the negative and insignificant coefficient of β_2 . This result emphasizes the importance of competition between the secretary and governor in driving media criticism. Consistent with the model implications, secretaries not faced with the competition with their governors need not to increase the media criticism.

The coefficient of interest - β_3 - is positive significant across different specifications. Compared with those examined secretaries that don't go through promotion examination with their partners, examined secretaries in pairs that face this competition will increase the media criticism. Suggested by Column (1) of Table 4, on average, the between-dyad competition induces the examined secretary to increase the number of critical articles by around 1/4 of the average number of critical articles. The positive significance of β_3 remains after adding the unbalanced personal traits (Column 2) or all personal traits (Column 3). It also preserves if a poisson

regression specification is estimated (Column 6).

	(1) Count	(2) Count	(3) Count	(4) Count	(5) Count	(6) Count
main						
Assign Treatment	-2.000 (1.385)	-1.369 (1.386)	-0.967 (1.818)	-0.821 (1.811)		-0.122 (0.116)
Sec Exam	-0.562 (1.282)	-0.373 (1.244)	-0.798 (1.450)	-0.934 (1.610)	-0.365 (1.471)	-0.104 (0.112)
Assign Treatment=1 \times Sec Exam=1	3.138* (1.567)	3.001* (1.517)	3.605** (1.701)	4.861* (2.370)	3.842** (1.778)	0.244** (0.118)
Gov Exam				-0.288 (1.175)		
Assign Treatment=1 \times Gov Exam=1				-1.354 (2.038)		
controls		Unbalanced	All	All		All
cluster	Province	Province	Province	Province	Province	Province
fixed effects	Year&Prov	Year&Prov	Year&Prov	Year&Prov	Year&Pair	Year&Prov
N obs	349	349	349	349	349	349
F stat	9.690	23.74	.	.	3.826	
adj. R2	0.140	0.154	0.181	0.179	0.222	

Standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

Table 4: Baseline Regression Results

Note: Dependent variable is the number of critical reports. In column (2), only unbalanced personal traits are controlled, column (3) to (4) have all variables controlled. In column (5), I control for dyad fixed effects.

An alternative explanation is that the secretary increases media criticism only when the governor is under promotion examination. I estimate Equation 3. Compared with Equation 1, I add $GovExam_{it}$ and its cross term with $AssignTreat_i$. Suppose the alternative explanation is true, then β_4 and/or β_5 should be positive and should take over the significance of β_3 . Suggested by Column (4) of Table 4, β_3 remains positive significant while β_4 and β_5 are negative and insignificant, implying that this explanation may not be plausible.

$$Criticism_{it} = \beta_1 AssignTreat_{it} + \beta_2 SecExam_{it} + \beta_3 AssignTreat_i \times SecExam_{it} \quad (2)$$

$$+ \beta_4 GovExam_{it} + \beta_5 AssignTreat_i \times GovExam_{it} + \gamma Z_i + \alpha_t + u_{it} \quad (3)$$

Finally, to address the concern of omitted variable bias, I estimate the effect of promotion pressure using a difference-in-difference design. Suggested by the negative estimate of β_2 , when secretaries are not in competition, they decrease (slightly) media criticism when they are under promotion examination than their other tenure years. Compared with these examined secretaries, those examined secretaries faced with competition (treatment group) on average increase media criticism significantly, suggested by the positive significant estimate for β_3 .

The pattern remains using other dependent variables for media criticism, despite the loss of significance. Table 5 shows the results using the frequency, fraction, average length, total length and fraction of text about local affairs. Most variables show that the critical reports are more intensive, more prominent, and more locally targeted during years when the dyad is both under promotion examination than other years, even though some results are not significant.

	(1)	(2)	(3)	(4)	(5)
	Count	fraction	Front Page	Total Length	Inward Criticism
Assign Treatment	-0.967 (1.818)	0.129 (0.350)	0.426 (0.776)	-1621.5 (2871.2)	-0.841 (0.529)
Sec Exam	-0.798 (1.450)	-0.0841 (0.335)	0.238 (0.611)	-716.9 (2795.5)	-0.0496 (0.850)
Assign Treatment=1 × Sec Exam=1	3.605** (1.701)	0.730 (0.462)	0.111 (1.218)	4318.9 (3276.6)	1.557 (1.059)
controls	All	All	All	All	All
cluster	Province	Province	Province	Province	Province
fixed effects	Year&Prov	Year&Prov	Year&Prov	Year&Prov	Year&Prov
N obs					
adj. R2	0.181	0.424	0.108	0.137	0.174

Standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

Table 5: Baseline Regression Results for Multiple Dependent Variables

5.2 Why Between Secretary and Governor?

To further provide evidence on conflicts between secretary and governor, I explore how much the mouthpiece covers secretary’s and/or governor’s name. A secretary or a governor’s name is mentioned mostly due to their public appearance or a citation of their speech. Their names are very rarely mentioned in a critical news. Among the 5002 pieces of negative news in my sample, there is only one piece that mentions the secretary’s name. In general, the frequency of mentioning one’s name represents how much he/she is exposed in a non-negative way, if not positive.

I measure the independent exposure of the secretary as the fraction of articles that cover *only* the secretary over total number of articles that cover him. I measure the independent exposure of the governor in a similar way. I estimate Equation 4 using the independent exposure of the secretary and the governor as the dependent variables and Table 6 shows the results. β_3 captures how competition distort the secretary’s media strategy when he (and only he) is under promotion examination, and β_4 further captures how his behavior is further distorted when governor’s promotion examination overlaps with his promotion examination.

$$MentionSecOnly_{it} = \beta_1 AssignTreat_{it} + \beta_2 SecExam_{it} + \beta_3 AssignTreat_{it} \times SecExam_{it} + \beta_4 BothExam_{it} + \gamma Z_i + \alpha_t + \epsilon_{it} \quad (4)$$

The result using the difference-in-difference (Column 3) design illustrates that the individual exposure of the secretary increases when the secretary is under examination. When the secretary is faced with competition, the individual exposure will decrease if only secretary is under examination, but this decrease will be offset if the promotion examinations of the dyad overlap. Intuitively, the secretary’s independent exposure of himself is necessary when he is under examination. However, it becomes less plausible when they are in close cooperation, leading to a decrease of sole exposure when only the secretary is under examination. However, when both the secretary and the governor are under examination, disentangling performance

becomes much more necessary, which further increase the individual exposure.

For dyads who resume office almost simulataneously, the independent exposure of the governor is significantly less (Column 4 and 5). When both secretary and governor are under promotion examination, the individual exposure of governor further decreases, suggested by the significant negative coefficient β_4 of Column (5). However, this result becomes insignificant under the DiD specification.

	Exposure of Secretary			Exposure of Governor		
	(1) Mention Sec Only	(2) Mention Sec Only	(3) Mention Sec Only	(4) Mention Gov Only	(5) Mention Gov Only	(6) Mention Gov Only
Assign Treatment	-0.0303 (0.0228)	-0.0302 (0.0228)		-0.0418* (0.0207)	-0.0422* (0.0210)	
Sec Exam	-0.000485 (0.0174)	-0.000355 (0.0177)	0.0299* (0.0153)	0.00823 (0.0188)	0.00641 (0.0190)	-0.0134 (0.0181)
Assign Treatment=1 \times Sec Exam=1	0.0221 (0.0196)	0.0190 (0.0292)	-0.0459** (0.0206)	0.0178 (0.0277)	0.0604 (0.0406)	0.0500 (0.0352)
Both Exam		0.00364 (0.0199)	0.0390** (0.0171)		-0.0507** (0.0238)	-0.0258 (0.0255)
controls	All	All		All	All	
cluster	Province	Province	Province	Province	Province	Province
fixed effects	Year&Prov	Year&Prov	Year&Pair	Year&Prov	Year&Prov	Year&Pair
N obs	349	349	349	349	349	349
F stat	.	.	51.28	.	.	36.31
adj. R2	0.150	0.147	0.210	0.352	0.356	0.222

Standard errors in parentheses
* $p < .10$, ** $p < .05$, *** $p < .01$

Table 6: Secretary vs Governor: Mention Name

Note:

5.3 Categories of news

Since the intertwined performance that accounts for promotion during the sample period is mostly the provincial economic growth, one expects that the increased media criticism is more about economic growth than other topics. In this section, I categorize news into two mutually exclusive major topics: economic growth and public affairs. Economics-related articles criticize the existing economic policies, e.g., policies that constrain local firms' entrance or liquidity. Other articles are generally about public affairs that focus on criticizing at least one of the following issues: medical expenditure, education, agriculture, culture, environment, market regulation, social benefits, unemployment, transportation, urbanization, technological development and local government management.

Table 18 shows the results of Equation 1 using the frequency of economic news as the dependent variable. β_3 is positive and significant across different specifications, which is consistent with the finding in Table 4. Meanwhile, Table 19 shows the results of public news coverage. Despite the positive sign and large magnitude, β_3 is insignificant. All in all, the baseline results are likely largely driven mainly by media criticism about economic growth than public affairs.

One special topic of public affairs is the local governance and personnel. Articles of such topic focuses on criticizing the government's inefficiency or even potential corruption, especially

	(1)	(2)	(3)	(4)	(5)
	Economic News	Economic News	Economic News	Economic News	Economic News
Assign Treatment	-0.827* (0.407)	-0.751* (0.406)	-0.688 (0.574)	-0.689 (0.596)	
Sec Exam	-0.402 (0.342)	-0.365 (0.345)	-0.502 (0.396)	-0.615 (0.451)	-0.680 (0.510)
Assign Treatment=1 \times Sec Exam=1	1.247*** (0.425)	1.225*** (0.415)	1.419*** (0.474)	1.926*** (0.627)	1.701*** (0.556)
Gov Exam				-0.277 (0.446)	
Assign Treatment=1 \times Gov Exam=1				-0.307 (0.630)	
controls		Unbalanced	All	All	
cluster	Province	Province	Province	Province	Province
fixed effects	Year&Prov	Year&Prov	Year&Prov	Year&Prov	Year&Pair
N obs	349	349	349	349	349
F stat	6.936	11.13	.	.	6.814
adj. R2	0.0953	0.0935	0.128	0.129	0.189

Standard errors in parentheses
* $p < .10$, ** $p < .05$, *** $p < .01$

Table 7: Media Criticism on Economic Affairs

	(1)	(2)	(3)	(4)	(5)
	Public News	Public News	Public News	Public News	Public News
Assign Treatment	-1.173 (1.100)	-0.619 (1.112)	-0.279 (1.380)	-0.132 (1.353)	
Sec Exam	-0.160 (1.103)	-0.00803 (1.069)	-0.296 (1.243)	-0.318 (1.340)	0.314 (1.212)
Assign Treatment=1 \times Sec Exam=1	1.892 (1.324)	1.776 (1.285)	2.186 (1.428)	2.935 (1.931)	2.141 (1.451)
Gov Exam				-0.0114 (0.893)	
Assign Treatment=1 \times Gov Exam=1				-1.047 (1.685)	
controls		Unbalanced	All	All	
cluster	Province	Province	Province	Province	Province
fixed effects	Year&Prov	Year&Prov	Year&Prov	Year&Prov	Year&Pair
N obs	349	349	349	349	349
F stat	7.018	11.52	.	.	3.954
adj. R2	0.125	0.141	0.164	0.161	0.185

Standard errors in parentheses
* $p < .10$, ** $p < .05$, *** $p < .01$

Table 8: Media Criticism on Public Affairs

of city- or county-level local governments. Party secretaries, rather than provincial governors, take the totality of responsibility for issues of this kind. Table 9 shows the results of political news. Interestingly, media criticism of such will only increase when secretary is under promotion examination when they are not subject to promotion competition, suggested by the positive significant estimate of β_2 . Competition will not increase media criticism of such, but rather decrease it, suggested by the negative yet insignificant β_3 . The positive β_2 could be explained by the secretary exercising the watchdog function of mouthpiece media to detect local problems. However, publishing articles of this kind can also induce an extra attribution of any blame on the secretary, which is risky when the performances of secretary and governor are entangled. This can explain the negative estimate of β_3 .

	(1)	(2)	(3)	(4)	(5)
	Political News	Political News	Political News	Political News	Political News
Assign Treatment	0.00147 (0.137)	0.0185 (0.149)	0.0976 (0.159)	0.145 (0.165)	
Sec Exam	0.276 (0.186)	0.283 (0.189)	0.336* (0.192)	0.420** (0.185)	0.375 (0.229)
Assign Treatment=1 × Sec Exam=1	-0.0642 (0.268)	-0.0724 (0.276)	-0.103 (0.290)	-0.273 (0.287)	-0.126 (0.311)
Gov Exam				0.218 (0.139)	
Assign Treatment=1 × Gov Exam=1				-0.0843 (0.198)	
controls		Unbalanced	All	All	
cluster	Province	Province	Province	Province	Province
fixed effects	Year&Prov	Year&Prov	Year&Prov	Year&Prov	Year&Pair
N obs	349	349	349	349	349
F stat	4.166	5.762	.	.	9.928
adj. R2	0.0499	0.0406	0.0226	0.0219	0.0816

Standard errors in parentheses
* $p < .10$, ** $p < .05$, *** $p < .01$

Table 9: Media Criticism on Political Issues

5.4 Media Praise

Another media signal to send is media praise. Compared with media criticism, media praise may differ on at least two dimensions. First, criticism may induce more social cost than praise, implying that the former is a more power signal to separate types than the latter. Indeed, the coverage on praise is much higher than on criticism. Second, intuitively media criticism is about “dividing the cake” (or taking more credit of the joint performance), whereas media praise is about “making the cake” (or exaggerating the joint performance) - increasing either during the promotion examination under competition can effectively enlarge the individual performance attributed. In this section, I estimate Equation 1 using the number of articles that praise local performance as the dependent variable of interest.

Competition increases media praise when the secretary is under promotion examination. Suggested by the positive significant coefficient of β_3 in all columns in Table 10, while examined secretary tend to decrease the media praise when competition is absent, the presence of competition significantly increase the media praise.

6 Promotion Pressures and Economic Performance

How is this promotion conflict reflected in the real sector? In this section, I will analyze how the treatment affect GDP growth rate, which is believed the major index for economic performance. I estimate Equation 5, where ΔGDP_{it} represents the GDP growth rate.

$$\Delta GDP_{it} = \beta_1 AssignTreat_{it} + \beta_2 BothExam_{it} + \beta_3 SecExam_i + \beta_4 GovExam_{it} + \gamma Z_i + \alpha_t + u_{it} \quad (5)$$

The model predicts a positive significant estimate for coefficient β_1 . Intuitively, when the dyads are assigned in the treatment group, they exert efforts starting from their first year

	(1)	(2)	(3)	(4)	(5)
	Media Praise	Media Praise	Media Praise	Media Praise	Media Praise
Assign Treatment	-4.566 (3.196)	-4.344 (3.283)	-4.458 (3.237)	-3.602 (2.860)	
Sec Exam	-6.955* (3.991)	-6.445 (3.952)	-4.663 (3.791)	-3.159 (3.842)	-6.642 (4.037)
Assign Treatment=1 \times Sec Exam=1	10.67** (4.161)	10.43** (4.145)	9.622** (3.926)	6.570* (3.788)	10.85** (4.123)
Gov Exam				3.914 (2.860)	
Assign Treatment=1 \times Gov Exam=1				-1.519 (4.263)	
controls		Unbalanced	All	All	
cluster	Province	Province	Province	Province	Province
fixed effects	Year&Prov	Year&Prov	Year&Prov	Year&Prov	Year&Pair
N obs	349	349	349	349	349
F stat	19.61	35.88	.	.	6.057
adj. R2	0.358	0.370	0.409	0.409	0.300

Standard errors in parentheses
* $p < .10$, ** $p < .05$, *** $p < .01$

Table 10: Media Praise

in preparation for their pending promotion examination suppose they are both high types, leading to an overall higher average GDP growth rate in the treatment group. Moreover, it is also possible that economic performance during promotion examination periods is more relevant than other periods. Suppose this is true, then β_3 and β_4 are expected to be positive significant. However, β_2 may not be significant when $SecExam_i$ and $GovExam_{it}$ are controlled.

β_1 is indeed positive and significant as expected. The average GDP growth rate of the treatment group is 1.39% higher than that in the control group. β_1 remains positive and significant under different model specifications. Additionally, when both bureaucrats are under promotion examination, the GDP growth rate is significantly higher than other periods, suggested by the positive significant estimate of β_2 in Column (2). However, this significance is eliminated when either $SecExam_{it}$ or $GovExam_{it}$ is included or both. Moreover, neither β_3 nor β_4 is positive significant, implying that the timeliness of economic performance, in constrast to the cumulative average performance, may not enjoy significantly extra relevance in determining promotion.

	(1)	(2)	(3)	(4)	(5)
	GDP growth	GDP growth	GDP growth	GDP growth	GDP growth
Assign Treatment	0.0139** (0.00578)	0.0105* (0.00589)	0.0107* (0.00579)	0.0107* (0.00587)	0.0110* (0.00572)
Both Exam		0.00917** (0.00337)	0.00814 (0.00541)	0.00713 (0.00480)	0.00452 (0.00793)
Sec Exam			0.00125 (0.00397)		0.00225 (0.00442)
Gov Exam				0.00228 (0.00372)	0.00311 (0.00413)
controls	All	All	All	All	All
cluster	Prov	Prov	Prov	Prov	Prov
fixed effects	Year&Prov	Year&Prov	Year&Prov	Year&Prov	Year&Prov
N obs	348	348	348	348	348
adj. R2	0.849	0.851	0.850	0.851	0.850

Standard errors in parentheses
* $p < .10$, ** $p < .05$, *** $p < .01$

Table 11: Fiscal Revenue Growth Rate

Note: Outliers have been dropped.

7 Promotion, Media Criticism and Growth

In this section, I examine the relationship among media criticism, growth and promotion of bureaucrats. Implications about promotion can be summarized in the following table.

	Intend to Treat		Control Group	
Bureaucrat	Secretary	Governor	Secretary	Governor
Media Criticism	Helps, especially for mediocre growth	Hurts, especially for mediocre growth	Ambiguous	Ambiguous
Growth	Helps	Helps	Helps	Helps

I estimate Equation 6 to estimate the role of media criticism and growth on promotion of secretary and governor. For each pair i and bureaucrat $j = s, g$, $Promoted_{ij}$ is an indicator for whether bureaucrat j is promoted *at the end of* the partnership of pair i . $Growth_{ij}$ and $Criticism_{ij}$ represent the average per year economic performance and media performance in office. To construct the two variables, I regress the GDP growth rate on year- and province-fixed effects, and then calculate the per-year average using the residuals. I construct the $Criticism_{ij}$ variable in a similar way using the frequency of critical articles. $Growth_{ij}$ and $Criticism_{ij}$ are 0 when growth and media criticism are average.

$$Promoted_{ij} = \beta_0 + \beta_1 Growth_{ij} + \beta_2 Criticism_{ij} + \gamma Z_{ij} + u_{ij} \quad (6)$$

Since the promotion occurs at the end of the partnership of pair i , and $Growth_{ij}$ and $Criticism_{ij}$ are constructed with within-pair observations, the coefficients of interest, β_1 and β_2 , could carry causal interpretation, should there be no omitted variable bias. However, since there can be omitted variable that are relevant for promotion and correlated with performance, β_1 and β_2 are interpreted as correlations. I estimate Equation 6 for secretaries and governors respectively using treatment sample and control sample separately.

For those pairs who resume offices almost simultaneously, media criticism is positively correlated with secretary's promotion. Suggested by Table 12 Column (1), using all pairs intended to treat, including those who got promoted before the examination period, higher media criticism is associated with the promotion. Controlling the individual-level traits do not affect the magnitude or inference of β_1 and β_2 much (Column 2).

Moreover, to test the role of media criticism in promotion when growth is mediocre, I further modify Equation 6 by adding a cross term: $Growth_{ij}^2 \times Criticism_{ij}$. $Growth_{ij}^2$ captures how economic performance is away from its average since $Growth_{ij}$ equals 0 when economic status is average. Including this term changes the interpretation β_2 - it now reflects the correlation between media criticism and promotion when economic performance is around the average. Suggested by Column (3) of Table 12, the positive correlation between criticism and promotion is significantly positive when performance is around its average. As the economic growth moves away from being modest, the positive correlation between media criticism and promotion drops.

Further, for those treated pairs, higher media criticism during their promotion examination period significantly conduces secretary's promotion when economic performance is around the average, and as it moves away from the average, the effect of media criticism on promotion diminishes (Column 4).

By contrast, secretaries in the control group do not enjoy the assistance of higher media criticism. Rather, their promotion gets hurt when media criticism is high. Column (5) of Table 12 shows the results using only control group pairs: higher media criticism is associated with lower promotion. Meanwhile, it remains puzzling why no significant correlation between media criticism and economic growth is observed.

The same analysis is performed for the governor, and the results are anticipated to be reversed. However, neither media criticism nor economic performance significantly affect the promotion of governor.

	(1)	(2)	(3)	(4)	(5)
	Secretary Promoted	Secretary Promoted	Secretary Promoted	Secretary Promoted	Secretary Promoted
GDP Growth	-0.716 (1.398)	-1.213 (1.323)	-2.103 (1.468)	-1.443 (2.279)	3.703** (1.804)
Media Criticism	0.00747 (0.00492)	0.00927* (0.00476)	0.0134** (0.00562)		-0.0180** (0.00722)
Media Criticism \times Squared GDP Growth (log)			-0.153 (0.112)		
Media Criticism During Examination				0.0437** (0.0162)	
Media Criticism During Examination \times Squared GDP Growth (log)				-1.034*** (0.349)	
controls	N	Y	Y	Y	Y
groups	Treatment	Treatment	Treatment	Treatment	Control
N obs	85	85	85	53	73
F stat	1.411	3.441	3.413	2.467	2.492
adj. R2	0.00970	0.379	0.387	0.372	0.303

Standard errors in parentheses
* $p < .10$, ** $p < .05$, *** $p < .01$

Table 12: Secretaries' promotion and Performance on Economic Growth and Media
Note:

	(1)	(2)	(3)	(4)	(5)
	Governor Promoted	Governor Promoted	Governor Promoted	Governor Promoted	Governor Promoted
GDP Growth	-2.256 (1.677)	-1.619 (1.694)	-1.249 (1.904)	0.775 (2.856)	2.852 (1.779)
Media Criticism	0.00556 (0.00590)	0.00637 (0.00610)	0.00466 (0.00729)		-0.00808 (0.00712)
Media Criticism \times Squared GDP Growth (log)			0.0636 (0.146)		
Media Criticism During Examination				0.0365 (0.0217)	
Media Criticism During Examination \times Squared GDP Growth (log)				-0.476 (0.346)	
controls	N	Y	Y	Y	Y
groups	Treatment	Treatment	Treatment	Treatment	Control
N obs	85	85	85	53	73
F stat	1.547	2.672	2.526	1.137	0.801
adj. R2	0.0129	0.295	0.286	0.0526	-0.0615

Standard errors in parentheses
* $p < .10$, ** $p < .05$, *** $p < .01$

Table 13: Governors' Promotion and Performance on Economic Growth and Media
Note:

Figure 1 shows the estimated correlation of promotion of secretary and governor as a function of economic performance. The horizontal axis represents percentiles of $Growth_{it}$ and the vertical

axis represents the correlation of $Promoted_{ij=s}$ and $Promoted_{ij=g}$. An U-shape pattern is observed: the correlation becomes negative when performance is less extreme. Growth at the head or tail is more likely to get equal promotion decision for the secretary and the governor in a dyad. This is consistent with the model prediction that the conflict rises when mediocre performance is observed.

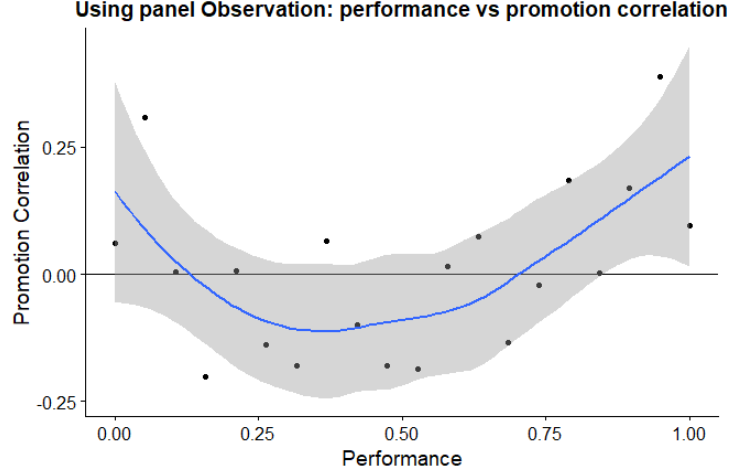


Figure 1: Correlation of Promotion of Secretary and Governor and Economic Growth

Note:

8 Discussion

These results suggest another plausible mechanism that differs from the model implication. The bureaucrats under competition may be more desperate in boosting growth, and thus they tend to overlook the regulations, resulting in more negative events, which induces more negative news. To check this possibility, I repeat the baseline analysis using news from Hong Kong media. I also analyze air pollution data to see if competition induces higher social costs.

Negative news about provinces reported by Hong Kong media may very well reflect the real performance of the mentioned provinces. It is not uncommon to observe Hong Kong media report negatively about mainland China. Some media outlets in Hong Kong are very much unaffected by the government in Hong Kong, say Epoch Times. I sample the negative news published on two commercial newspapers, Hong Kong Economic Journal and Wenweipo, that is about accidents occurred in industries, such as mining and infrastructures. It is very unlikely that the such reports strategically react to promotion pressure of any provincial leader in Mainland China.

I find little evidence that Hong Kong media reports more negatively about a province when the examined secretary is under promotion pressure. Critical coverage on either Wenhui or Xinbao exhibits the media reporting pattern found in the baseline analysis. This suggests that

the effect of competition on media criticism is unlikely driven by a worse performance of dyads under competition.

	(1) Count(Xinbao)	(2) Count(Wenhui)	(3) Air Quality
Assign Treatment	0.180 (0.501)	0.773 (0.542)	1.698 (1.919)
Sec Exam	-0.332 (0.585)	0.738 (0.654)	-1.358 (1.614)
Assign Treatment=1 \times Sec Exam=1	0.143 (0.552)	-1.301 (0.791)	1.653 (1.785)
controls	All	All	All
cluster	Prov	Prov	Prov
fixed effects	Year&Prov	Year&Prov	Year&Prov
N obs	349	349	349
adj. R2	0.0476	0.375	0.815

Standard errors in parentheses
* $p < .10$, ** $p < .05$, *** $p < .01$

Table 14: Does Competition Induce Higher Social Cost?

Meanwhile, the air quality index is not significantly lower for treatment group, implying that there is not strong evidence on competition leading to higher air pollution. In contrast, the air quality is even higher for periods ruled by dyads under competition. This is another piece of evidence that undermine the possibility that competition is leading to worse performance and thus higher media criticism.

	(1) Air Quality	(2) Air Quality	(3) Air Quality	(4) Air Quality	(5) Air Quality
Assign Treatment	2.140 (1.753)	2.287 (1.937)	2.272 (1.968)	2.188 (1.937)	2.106 (1.979)
Both Exam		-0.405 (1.356)	-0.276 (1.991)	0.838 (1.908)	1.624 (2.912)
Sec Exam			-0.156 (1.292)		-0.679 (1.417)
Gov Exam				-1.385 (1.544)	-1.634 (1.681)
controls				All	
cluster	Prov	Prov	Prov	Prov	Prov
fixed effects	Year&Prov	Year&Prov	Year&Prov	Year&Prov	Year&Prov
prov trend					
N obs	348	348	348	348	348
F stat
adj. R2	0.812	0.811	0.811	0.811	0.811

Standard errors in parentheses
* $p < .10$, ** $p < .05$, *** $p < .01$

Table 15: Does Competition Induce Higher Social Cost?

In summary, I do not find strong evidence for this alternative story. One might still argue that despite these evidence, the incomppliance of regulations could have been done in a more subtle way, but the lack of data doesn't allow me to check further.

9 Conclusion

$$1) NewsSentiment_{tn} = \beta_0 + \beta_1 USattitude_t + \beta_2 CNattitude_t + \gamma_1 LeftRank_n + \gamma_2 USattitude_t X LeftRank_n + \gamma_3 CNattitude_t X LeftRank_n + u_{tn}$$

$$2) \text{ NewsSentiment}_{tn} = \beta_0 + \beta_1 I_{bigevents,tn} + \gamma_1 \text{LeftRank}_n + \gamma_2 I_{bigevents,tn} X \text{LeftRank}_n + u_{tn}$$

$$3) \text{ NewsSentiment}_{tn} = \beta_0 + \beta_1 \text{Affinity}_{tn} + \gamma_1 \text{LeftRank}_n + \gamma_2 \text{Affinity}_{tn} X \text{LeftRank}_n + u_{tn}$$

A Model Solution

I denote an equilibrium by $\{(e_s^t, m_s^t), e_g^t, f(e = e_s^t + e_g^t, m_s^t)\}$, where t indicates the types of secretary and governor (i.e. $t \in HH, HL, LH, LL$), s and g denotes for secretary and governor respectively, and $f()$ denotes the contract that specifies principal's promotion decision for secretary and governor given what she observes. An equilibrium is fully specified by the strategy profile plus the belief.

To solve for a separating equilibrium, solution must satisfy IR and IC conditions. IR is binding on LL type. That being said, the $\bar{e}_L = \bar{m}_L = 0$. Now indicate $\bar{e}_H = \bar{e} > 0$ and $\bar{m}_H = \bar{m} > 0$. For LH pairs, at a separating equilibrium, governor has incentive to send \bar{e} to distinguish from LL. Secretary in LH pairs however, will have incentive to send some signal(s) if he can mimic HL or HH. For HL pairs to not mimic LL, at equilibrium, secretary has incentive to either send $e_s^{HL} = \bar{e}$, or $m_s^{HL} = \bar{m}$ or both to distinguish himself. Now it naturally follows that HL secretary will not send \bar{e} only, as

1) HL doesn't want to deviate to LL: 2) LH doesn't want to deviate to LL: 1) HH doesn't want to deviate to HL: $C_H^e e_s^{HH} + C_H^m m^{HH}$

B Robustness Check

content...

C Tables

	(1)		(2)		(3)	
	Attrition		Treated		Difference	
	mean	sd	mean	sd	b	t
Has local Experience	0.61	0.50	0.51	0.50	0.10	(0.93)
Age In Position	59.65	4.45	57.58	3.92	2.06**	(2.15)
Experience(NProv)	3.26	1.18	3.45	1.41	-0.20	(-0.69)
Education	3.97	0.66	3.78	0.76	0.19	(1.19)
Sex	0.97	0.18	1.00	0.00	-0.03	(-1.00)
Engineer Background	0.16	0.37	0.36	0.49	-0.20**	(-2.16)
Economics Background	0.65	0.49	0.49	0.50	0.15	(1.39)
Central Committee Member	0.35	0.49	0.42	0.50	-0.06	(-0.57)
Sec Connected	0.55	0.51	0.71	0.46	-0.16	(-1.46)
Sec Corrupt	0.00	0.00	0.15	0.36	-0.15***	(-3.03)
Managed Propaganda	0.26	0.44	0.25	0.44	0.00	(0.04)
Sec Connected with Gov	0.13	0.34	0.09	0.29	0.04	(0.52)
Observations	31		55		86	

Table 16: Balance Table: Secretary

	(1)		(2)		(3)	
	Attrition		Treated		Difference	
	mean	sd	mean	sd	b	t
Has local Experience	0.55	0.51	0.65	0.48	-0.11	(-0.95)
Age In Position	56.13	3.96	56.31	3.41	-0.18	(-0.21)
Experience(NProv)	2.71	1.04	2.62	1.25	0.09	(0.36)
Education	4.19	0.79	3.73	0.73	0.47***	(2.69)
Sex	0.90	0.30	0.98	0.13	-0.08	(-1.38)
Engineer Background	0.32	0.48	0.35	0.48	-0.02	(-0.21)
Economics Background	0.58	0.50	0.53	0.50	0.05	(0.47)
Central Committee Member	0.74	0.44	0.60	0.49	0.14	(1.36)
Gov Connected	0.65	0.49	0.51	0.50	0.14	(1.23)
Gov Corrupt	0.06	0.25	0.05	0.23	0.01	(0.18)
Managed Propaganda	0.19	0.40	0.24	0.43	-0.04	(-0.46)
Observations	31		55		86	

Table 17: Balance Table: Governor

	(1)	(2)	(3)	(4)
	Count	Frontpage	Length	InwardCriticism
Assign Treatment	-0.485 (0.377)	-0.0148 (0.153)	-704.8 (735.8)	0.554 (0.946)
Both Exam	0.687** (0.314)	0.228 (0.281)	1081.3* (555.5)	0.666 (1.028)
controls	Unbalanced	Unbalanced	Unbalanced	Unbalanced
cluster	Prov	Prov	Prov	Prov
fixed effects	Year&Prov	Year&Prov	Year&Prov	Year&Prov
N obs	346	294	346	346
F stat	6.075	3.033	8.158	5.310
adj. R2	0.0822	0.0342	0.0666	0.0247

Standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

Table 18: News about Economic Growth

	(1)	(2)	(3)	(4)
	Count	Frontpage	Length	InwardCriticism
Assign Treatment	-0.0848 (0.954)	0.484 (0.452)	-667.6 (1848.4)	-0.252 (0.611)
Both Exam	1.074 (0.751)	0.534 (0.843)	527.9 (1305.2)	1.225** (0.588)
controls	Unbalanced	Unbalanced	Unbalanced	Unbalanced
cluster	Prov	Prov	Prov	Prov
fixed effects	Year&Prov	Year&Prov	Year&Prov	Year&Prov
N obs	346	294	346	346
F stat	5.365	5.551	3.425	6.383
adj. R2	0.133	0.106	0.0887	0.117

Standard errors in parentheses

* $p < .10$, ** $p < .05$, *** $p < .01$

Table 19: News about Public Affairs