

Does Political Power Concentration Kill Private Investment? Evidence from China

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Abstract

We provide evidence showing that political power concentration, a significant threat to to democracy and the rule of law, leads to a decrease in private investment. Our study focuses on a wave of municipal leadership consolidation in China, where chiefs of police departments were appointed as adjunct supervisors of courthouses. The merging of executive and judicial authorities leads to judicial bias in favor of police in appealing cases and intensifies police scrutiny on private businesses for rent-seeking. Anticipating future infringements on property rights, businesses decrease their capital investment and experience decline in profits. Efforts to mitigate expropriation risk through private connections primarily benefit solely state-owned enterprises, indicated by the rise in entertainment and travel costs (ETC) for both state-owned and private entities, yet only state-owned enterprises exhibit a moderation of investment decline. Our findings also reveal a deterrent effect: business owners reduce investment when penalties received by firms in the same city and they reallocate their investments from cities with higher power concentrations to other regions.

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1 Introduction

Democracy and civil rights are under threat. The global democracy index, as created by the Economist Intelligence Unit and depicted in Figure 1, signals a marked deterioration over the past ten years. In the U.S., polls¹ reveal a pervasive sense of erosion in democracy and the rule of law, and “most people don’t have a say” on government policies. In non-democratic countries, there is a deliberate manipulation of constitutions to sabotage the checks and balances of government institutions. Despite the variance in forms, one of the greatest threat to democracy among different countries is the increased consolidation of political power. A range of factors contribute to this trend, encompassing both exogenous shocks like pandemics and conflicts, and endogenous issues such as escalating economic inequality and the emergence of populism. A natural question is that what are the economic implications of the political power concentration.

Estimating the causal effect of political power concentration on economic performance is challenging. Previous studies (La Porta et al., 2004; Feld and Voigt, 2003; Keefer and Knack, 2007) that rely on cross-country comparisons have two fundamental problems. One is measurement errors. The power concentration indices used in the previous literature are often constructed in subjective and non-transparent method, and thus tend to suffer from serious measure errors. The other challenge is omitted variable biases. Countries that have different degrees of power separation also differ in many unobserved characteristics, such as government institutions, stages of economic development, as well as culture. And these unobserved characteristics could also determine the economic outcomes.

This paper overcomes these challenges by studying a wave of municipal leadership consolidation in China, during which city police departments and courthouses were controlled by the same leader, and thus the separation of executive and judicial power was compromised severely.² Starting from 2003, a rising share of Chinese municipal governments appoint the chiefs of the police department to a joint position as the secretaries of the Political and Legal Affairs Commission (PLAC hereafter), which supervise local judges and public prosecutors. This is primarily pushed by the top political official Zhou Yongkang, and the goal is to empower the local police departments in the name of cracking

¹One example survey is from [CBS News](#), which shows 72% surveyed Americans believe democracy and the rule of law are under threat.

²Here we use the word “city” or “municipality” to represent the concept of prefecture-level division in China. In China’s administrative structure, a prefecture-level division is an administrative division which ranks below a province and above a county. There are 339 prefecture-level divisions in China.

down crimes and maintain social stability more effectively.³ Holding the joint position as the court supervisor enables the police department chief to silent the checks and balances from judges and to push for verdicts that the police desires in spite of the lack of convincing evidence. Effectively, power concentration takes place without changes to any formal institutions.

As shown in Figure 2, no more than 8% of cities appointed the same leader for both police department and PLAC before 2002, but this share gradually rose since Zhou Yongkang came into power and peaked at 42% in 2011. We leverage the gradual roll-out of the police and judicial leadership consolidation and compare the cities that have completed the power concentration with the cities that have not, to examine the consequences of concentrating executive and judicial powers. Our approach is advantageous because power concentration is clearly indicated by the police and judicial leadership consolidation, and the cities in China share the common economic development model and culture, and thus are greatly comparable. The comparability of the cities in our sample is confirmed by the parallel trends of the economic outcomes of interest. In addition, we collect various micro-level data so that we can trace the mechanism through which power concentration affects economic outcomes.

We first show that the police substantially increases its law enforcement pursuits against private economic activities after the judicial supervisor PLAC is controlled by the police department chief. Specifically, the police issue 25.4% more fines (monetary penalty) against local businesses, the number of temporary business suspensions increases by 10.3%, and the number of revoked business operating licenses rises by 8.5%. We interpret the increased law enforcement against private businesses as intensified rent-seeking by the police, and thus economically distortionary for the following four reasons. First, a significant share of the economic activities was informal during our studied period in China,⁴ which puts the police into an advantageous position in rent-seeking practices with their entitled power. Second, we find power concentration is significantly associated with an increased share of law enforcement pursuits that do not have sufficient violate documentation. Third, the appeals (against the police punishment) from businesses under the power concentration regime are 8.1% more likely to be successful than those from other cities when ruled by an upper court above the city, which suggests the police under the power concentration regime are more likely to abuse their unchecked

³Zhou Yongkang was the first minister of Public Security Department that holds a joint position in the Politburo of Chinese Communist Party since Deng Xiaoping's Reform and Opening-Up. The secretary of PLAC, in charge of the legal system, is one of the limited key leaders in a municipal party committee.

⁴Park et al. (2012) estimates 25.5% of urban jobs are in the informal sector in China in 2010.

executive power. Fourth, the significant drop of private investment shown in the data confirms the rent-seeking interpretation of the increased law enforcement against private economic activities.

We also find evidence that courts exhibited increased bias towards the police in appeal cases related to police enforcement. For the appeal cases, even though the predicted success rate based on a BERT model analysis shows a notable increase of 2.58%, the actual success rate in trials at the local court does not significantly change. Furthermore, a noteworthy aspect is the bias between real and predicted outcomes (-3.75%), revealing a systematic bias in the local judicial system, potentially indicating that real trial outcomes may not fully capture the severity or nuances of cases involving officials from police department. This disparity highlights the influence of local power structures on legal proceedings.

Such power concentration is likely to have a significant impact on relationship between the authority and companies. A plausible hypothesis is that the concentration of power may enable those in authority to more unrestrainedly expropriate companies, especially through fines. Companies, on the other hand, will proactively establish political connections with powerful leaders, often through bribes, and if that is not sufficient to meet security needs, companies will cut investments, lowering overall economic efficiency.

We then investigate the economic consequences of the concentrating executive and judicial powers, by examining the investment of private businesses. We focus on private investment since it is the driver of long-run economic growth (Solow, 1956; Romer, 1986; Barro, 1991). We hypothesize that the concentration of power may enable those in authority to more unrestrainedly expropriate private firms, especially through fines. Private firms will have to proactively establish political connections with powerful leaders, often through bribes. If that is too costly, private firms will cut investments, lowering overall economic efficiency.

The results show that the private firms reduce their total investment by 10.2% after the police and the court are under the same leadership. The investment into R&D drops even more, by 9.5%. Firms experiencing a reduction in investment also see a decrease in their stock returns, by about 3%. This finding suggests a direct correlation between investment levels and market confidence, underlining the broader economic implications of investment decisions influenced by the political environment.

Further work is done to investigate the channels through which power concentration decreases

corporate investment incentives. The rent-seeking law enforcement by the police has two effects. First, these businesses have to increase their expenses on developing or maintaining a relationship with the police, which reduces their cash holding, thus the increasing operating cost crowds out investment. Furthermore, the shareholders' concern about property rights increases, so they are less willing to invest in the future (Besley, 1995).

Literature review. A significant body of classic literature explores the critical role that checks and balances play in maintaining democracy and opposing tyranny (La Porta et al., 2004; Fox and Van Weelden, 2010; Buisseret, 2016; Gratton and Morelli, 2022). In some recent works, it is discussed when the division of powers is ideal from the voters' point of view. In particular, Acemoglu et al. (2013) suggest that the voters may dismantle check and balances and tolerate the ruler's rent out of concern that the influence from the coordinated elites will cost their re-distributions. Similarly, Aghion et al. (2004) share this concern by suggesting that the check and balance may not be optimal as the ex post check and balances will too often block the legislative actions. Our paper complements the literature by providing evidence from a non-democratic society where the check and balances has nothing to do with the redistribution and legislative actions. In that sense, our paper joins the work of Shleifer and Vishny (1998); Blanchard and Shleifer (2001) who discussed the necessity to impose checks over local governments.

Our paper is also related to literature that depicts the complex and contradictory role of government officials. This issue is likely more severe in developing nations such as China, where corruption is endemic, external monitoring is nonexistent, and core institutions such as property rights protection is weak⁵. According to Chen and Kung (2019), municipal officials provide princelings land quotas in exchange for promotion possibilities. He and Peng (2022) provides evidence that the police complicity in organized prostitution. In our paper, the local police are more likely to issue fines on private companies and use this as a threat to obtain rents. In this regard, our paper is similar to the work of Bertrand et al. (2007), who emphasize the significance of allocation distortion by corrupt bureaucrats.

Overview. The paper proceeds as follows. Section 2 introduces the institutional background in the study. Section 3 describes the data used for the empirical exercises. Section 4 outlines the

⁵See Bardhan (1997); Jain (2001); Svensson (2005); Banerjee et al. (2012); Olken and Pande (2012); Rose-Ackerman and Palifka (2016); Fisman and Golden (2017) for extensive reviews of the corruption literature.

empirical strategy. Section 5 demonstrates the responses of the local police when they are entitled with the unchecked power. Section 6 investigates the effect on the private investment. Section 7 concludes.

2 Institutional Background

2.1 Police and Judicial Power Concentration in Chinese Cities in Early 2000

Similar to western countries, the government of China is also made up by separate legislative, executive and judicial branches: National People's Congress, State Council, and Supreme People's Court. But the Communist Party establishes its authoritarian power by controlling all the government branches. For legal affairs, the Communist Party sets up the Central Political and Legal Committee (C-PLAC) to supervise the police force, court and procuratorate⁶. At the local level, city governments emulate this political structure, with the Municipal Political and Legal Affairs Commission overseeing city police, municipal courts, and municipal procuratorates. The secretary of the local PLAC is generally a member of the local Municipal Party Committee, considered the highest decision-making body in local affairs. The secretary of PLAC serves as a representative of the Communist Party in monitoring the three law enforcement government branches, as seen in the upper panel of Figure 3. The secretary of PLAC will grade the performance of these law enforcement branches, and report to municipal Party Committee, which determines the promotion/demotion of their leaders and approves their finances. That gives the secretary of PLAC great power. At this point, administrative powers vested in the police force, and judicial powers administered by the court and procuratorate are separate and balanced. They all operate under the exclusive political leadership of the Communist Party's representative, who have no incentive to show preference to either side.

However, in practice, local police wield more power compared to the courts and procuratorates. This is because Chinese police not only apprehend fugitives but also possess a range of crucial administrative approval powers. For instance, they can decide whether significant business establishments, such as hotels, bars, and KTVs, can operate, and whether an enterprise passes fire safety inspections. They also have the authority to approve major events like concerts. These powers often grant local

⁶The procuratorate is in charge of both the investigation and prosecution of crime. This is a feature of a civil law inquisitorial rather than common law adversarial system. Countries such as Japan, China, Russia and Indonesia adopt the procuratorial system.

police chiefs more practical authority than the PLAC secretaries who are not directly involved in these approval tasks. The increase in such practical power often indicates a higher potential for abuse of power. The legal remedy for cases of police abuse of power is administrative litigation, which needs to be filed in the local courts. Although the odds of obtaining a winning verdict against police is not high, the presence of judges, who outrank police chiefs by half a level in the Chinese bureaucratic hierarchy, usually demonstrates a willingness to override the actions of the police and help curb the most egregious instances of power abuse, especially when the PLAC secretary does not have a clear bias.

However, this power balance was disrupted in the 2000s when one of China's most powerful political figures, Zhou Yongkang, rose to prominence. Zhou gained renown for his iron-fisted approach to crime and dissent during his tenure as the Party Secretary of Sichuan Province. In 2002, Zhou took office as the deputy secretary of the C-PLAC and the minister of Public Security (the state police department). This dual appointment is unprecedented, and the goal is to arm the party leader (Zhou) directly with police power. Some interpret it as a signal to fight against the rising violent rate during the 1990s and restore social stability Yang (2017). Others consider it as a consequence of political maneuvering: Zhou, as a protégé of formal president Jiang Zemin, was put into this crucial position to help Jiang retain influence after his retirement.

Upon assuming office, Zhou immediately began advocating for merging local police chief and PLAC secretary positions.⁷ The purpose is clearly stated: to enhance the local police's administrative status, to weaken the checks and balances of the procuratorates and courts, and to improve the efficiency of the local police in combating crimes. (Han Dayuan and Yu Wenhao, 2011). The merging of PLAC and city police leaderships gradually rolls out in local municipal governments. Before 2002, cases existed for some cities, where the same leader took the dual position of PLAC secretary and police chief. But those cases were rather occasional, and happened in less than 8% of cities. Since Zhou Yongkang started to push for merging leadership between PLAC and city police, this share gradually rose and peaked at 42% in 2011. During the period between 2003 and 2010, 175 out of 334 appoint the chiefs of the police department to a joint position as the secretaries of PLAC. Figure 2 plots the proportion of cities that appoints the same person to lead both PLAC and city police over

⁷This is formally legislated as "Decision of the Central Committee of the Communist Party of China on Further Strengthening and Improving Public Security". <http://www.reformdata.org/2003/1118/4921.shtml>

time.

By assuming the role as police chiefs, the PLAC secretaries directly acquired police force, while still overseeing city court and procuratorate, as seen in the lower panel of Figure 3. This would tilt the balance of power in favor of police power. It becomes difficult for the judges' to demand more evidence from the police in specific cases. After consolidating power, the local PLAC secretaries found that serving as the local police chief made them more representative of police interests. They more frequently intervened in specific cases, instructing the procuratorate to initiate prosecutions and the court to convict without sufficient evidence. Prosecutors' Requests for local police for additional evidence were often overlooked. This kind of intervention became more common with the pressure faced by the police, who were assigned a specific number of crime targets (including criminal and civil offenses) and deadlines to combat these crimes. Due to career considerations, prosecutors and judges often had no choice but to comply with these orders. ⁸

Much anecdotal evidence highlights the impact of changes in power structure and the expansion of police department powers. Many cases that were previously returned by the procuratorate due to insufficient evidence and required police re-investigation were quickly adjudicated under the intervention of the PLAC secretary/police chief. In the anti-mafia campaign in Chongqing, local procuratorates and the court were forced to make prosecution and sentence decisions following orders of local police. More than 1000 entrepreneurs were arrested economic crimes, and more than 100 billion RMB (\$15 billion) worth of assets are confiscated or appropriated by officials who handle the cases.⁹ In fact, many cases lacked sufficient evidence and were overturned after the city leadership team led by Bo Xilai was cracked down for corruption and criminal charges.

The involvement of PLAC secretaries prevented numerous judges from conducting impartial trials in administrative litigation, designed to scrutinize police authority. This added difficulty for victims of police power abuse seeking legal redress, further diminishing the constraints on potential abuse of power by the police. The police soon realized that this unrestrained authority could be easily

⁸Another reason is that most judges and prosecutors in China receive inadequate judicial education, unable to uphold the concept of judicial independence (Yu Zhanhua, 2000). Most senior judges and prosecutors in China come from military or elementary school teaching backgrounds, entering the industry in the late 1970s when legal reform increased demand for legal practitioners. Only 20% of judges and prosecutors in China hold a bachelor's degree or higher. Most judges and prosecutors practice without passing the national lawyer examination, a situation tolerated by the system until 2002.

⁹See <http://news.sina.com.cn/c/2012-12-08/121725762791.shtml> and https://www.bbc.com/zhongwen/simp/focus_on_china/2012/03/120319_cr_heichihui

exploited for rent-seeking purposes, leading to a rapid surge in corruption. In subsequent probes into corruption cases occurring years after the consolidation of positions, many implicated individuals were linked to the PLAC/police consolidated leadership.

The prevalence of the shared leadership of PLAC and city police persists till 2012, when the leading political figure Zhou Yongkang retired from the secretary of central PLAC. Two years later, Zhou was arrested and prosecuted for corruption in 2014 and soon receiving a life sentence a year later. The crime-cracking and power consolidation campaign led by him was reverted.¹⁰ As a result, the share of cities that still have the dual position of PLAC secretary and police chief dropped to pre-2002 level, as shown in Figure 2.

3 Data and Summary Statistics

3.1 Status of Duality of Police Chief and PLAC Secretary

To capture the rise and fall of the local police power at the city level, we web-scrape career records of 1,800 city police chiefs and 1,967 PLAC secretaries. Specifically, we search Baidu Baike, which is equivalent to Wikipedia for Chinese content, with keywords “[city name] + police chief” and “[city name] + PLAC secretary”. We then parsed all the relevant articles, extract the politicians’ biographical information, and organize their career path into an individual-month level panel data.

Based on the local politicians’ career path database, we construct a a city-year level panel data, with an indicating variable $Duality_{it}$, which equals one if the same leader took both PLAC secretary and city police chief for at least one month at city i in year t . From 2000 to 2020, our panel data contains 4,932 observations. Figure 2 shows the time trend of the duality prevalence, and Figure 4 shows the spacial distribution of duality in year 2003, 2007, 2011 and 2018. From a glance of the spatial distribution, duality is not clustering in certain provinces or regions, which alleviates the concern of regional endogeneity.

¹⁰In a PLAC national convention in January 2013, Meng Jianzhu, secretary of PLAC immediately after Zhou Yongkang, requires explicitly that the PLAC should stop interfering in the judicial system. See “the Decision of the on Some Major Issues concerning comprehensively Advancing the rule of Law”. In 2014, the Communist Party Central Committee made it clear that the PLAC should not intervene or give instructions in the specific and individual case. In a convention held on November of 2013, the Supreme Court stipulates that the courts should maintain their legal independence and shall not collude with the local police and procuratorates. See “the Opinions on Establishing and Improving the Working Mechanism for Preventing Unjust, False and Erroneous Criminal Cases”.

3.2 Measuring Law Enforcement Outcomes

We measure the abuse of the executive power by the police in several dimensions with information from a number of sources.

3.2.1 Administrative Penalty Decisions Issued by the Police

We first focus on the total number of administrative penalties issued by the city police, extracted from PKULaw database, which provides the most comprehensive coverage of legal cases in China. The cases include administrative penalty decisions, civil disputes, criminal offences, and other judicial decisions. From 2000 to 2020, we compile 11,000,000 records of administrative penalty decisions. Since each record is presented as the original script, we have to parse the script to extract our interested information, including the name of issuing agency (the police, including the fire department/environmental protection office/etc.), the date of penalty issuance, the recipient of penalty, the type of penalty (warning¹¹/monetary penalty¹²/operation suspension¹³/license revocation¹⁴/etc.), and the amount of monetary penalty. Then we aggregate the case level micro data to the city-year level, and add the information to the regression panel.

3.2.2 Penalty Appeals

Second, we measure the abusiveness of the police power with the appeal rate of the administrative penalties issued by the police. To compute the appeal rate, we collect a separate set of administrative litigation cases from PKULaw, in which agencies of local governments are sued by private parties. Merging the administrative litigation cases to the administrative penalties with the same involved entities helps us identify the cases where the recipient of the penalty appeals against the police's decision.

¹¹Warning refers that an administrative organ gives serious admonishment to citizens, legal persons or other organizations for violating administrative regulations.

¹²Monetary penalty refers that an administrative organ forces the violator to pay a certain amount of money.

¹³Operation suspension refers that an administrative organ requires citizens, legal persons or other organizations, engaging in illegal production and business activities to stop production and operation.

¹⁴License revocation refers that the legal personality or business qualification is cancelled by an administrative organ and all business activities must be terminated.

3.2.3 City-level Confiscation Income Data

Finally, we supplement the case-level law enforcement outcome measures with municipal confiscation income data from the yearbooks published by the cities. We manually collect the yearbooks in the PDF format, and read out the confiscation income from the reported “General public budget revenue” table. Having the a second measure of law enforcement outcome from a different source alleviate the concern of measurement issue, and lend more statistical power to our empirical tests. In total, we have 2,886 observations of annual confiscation income, with average amount of 500 million RMB (Table 1).

3.3 Measuring Judicial Independence

We manage to scrape all first-instance administrative litigation cases from PKULaw, ranging from 2000 to 2020, and then extract those administrative lawsuits that resulted from administrative penalties imposed by the police department. The number of such first instance lawsuits was 17,000. Then, we search the title of those first-instance cases in PKULaw’s second instance cases pool. That is, if the results could be retrieved, it means that people or firms file an appeal to the Superior Court.¹⁵ We find 1,900 appeals in those first instance cases. Information on the cases provided by PKULaw includes the title and the content of the trial documents, whereby we can tell the outcome of the trial. In general, the probability of winning an administrative lawsuit initiated by a citizen or a company against the police department stays low, less than 10% for both first and second trials.

3.4 Firm-Level Economic Outcomes

We measure the economic outcomes by looking at the local public firms’ investment activities from their disclosed financial statements that are collected and compiled by China Stock Market and Accounting Research (CSMAR) database. In addition to total investment and R&D investment, we also collect information like number of employees, total sales and total cash holdings. To measure firms’ burden in maintaining public relationships, we also collect their entertainment expenses from the iFinD database.

¹⁵Typically, the first trial takes PLACe in the local court, while the second trial takes PLACe at a higher level (such as a provincial high court).

4 Research Design

4.1 Staggered Difference-in-Differences

This paper takes advantage of the gradual roll-out of the municipal leadership consolidation campaign, led by Zhou Yongkang. Since the local political cycle is predetermined and unsynchronized, the timing of reelections (including appointments of city police chiefs and PLAC secretaries) varies across municipalities. Our identification strategy is designed to exploit the timing of the joint appointment of police chiefs and PLAC secretaries as a positive shock in the degree of local power concentration. The joint appointment, which allows the chiefs of police departments to become the *de facto* supervisor of the heads of prosecutors and court judges weakens the checks and balances to the police departments, and symbolizes the infringement of the executive power on the judicial power.

This identification strategy has several advantages. First, this setting allows us to exploit the variations in the local political power structure while controlling other factors quasi-constant. This is in sharp contrast to the cross-country studies (La Porta et al., 2004; Feld and Voigt, 2003; Keefer and Knack, 2007), whose estimation is potentially biased by the confounding factors, such as other political factors, stage of economic development, and culture. Second, the variations in our identification strategy are mostly coming from the timing of the reelection, which is predetermined by the local political cycles and unlikely to be correlated with local economic conditions. Third, due to the panel nature of our data, we can control for city and year fixed effects in our specifications, as well as a vector of characteristics that absorb heterogeneity correlated with city political and economic conditions.

Formally, we estimate the following staggered difference-in-differences (DID) model:

$$\log Y_{c,t} = \lambda_t + \gamma_c + \beta Duality_{c,t} + Controls_{c,t} + e_{c,t}, \quad (1)$$

where $\log Y_{c,t}$ is the log of interested dependent variables in city c at year t , including the number of administrative punishment cases where licenses are revoked, number of cases where illegal income are forfeited, and number of cases issued by the police departments (fire departments, environmental departments), total confiscation income of the governments, successful administrative litigation against the police, and total administrative litigation against the police. $Duality_{c,t}$ equals 1 if there is a joint appointment in city c at year t , otherwise takes the value of 0. At the city level, we control log of

GDP and fiscal ratio, as well as the year fixed effects λ_t and city fixed effects γ_c . The coefficient of interest is β , which measures the difference, conditional on controls, in the log of interested dependent variables between cities with joint position and those without joint position at year t . The standard errors are clustered at the city level when constructing confidence intervals.

Our identification assumption is that there were no time-varying city-specific factors correlated with the timing of the adoption of duality appointment. This assumption is most likely to be true since the timing of reelection is predetermined by the local political cycles and not an endogenous choice of the city. To further provide support for this assumption, we follow Suárez Serrato and Zidar (2016) and Fuest et al. (2018) and estimate the dynamic DID model:

$$\log Y_{c,t} = \lambda_t + \gamma_c + \sum_{k=-3}^5 \beta_k Duality_{c,t-k} + Controls_{c,t} + e_{c,t}, \quad (2)$$

where the dynamic coefficients β_k s measure the relationship between power concentration and the change in the political outcomes of interest, and all other notations keep the same meaning as in Eq. (1). The pre-treatment correlations are the set of the coefficients with $k < 0$.¹⁶ If the parallel trends assumption holds, the estimates of β_k where $k < 0$ should be close to zero and statistically insignificant. The effects of power concentration after the joint appointment of policy chiefs and PLAC secretaries are denoted by the set of the coefficients with $k \geq 0$.

After examining the political outcomes at the city level, we then investigate firms' investment behaviors to reveal the impact of power concentration on the private sector's investments, with the following firm level DID regression:

$$\log Y_{i,c,t} = \lambda_t + \delta_i + \beta Duality_{c,t} + Controls_{i,c,t} + e_{i,c,t}, \quad (3)$$

where $\log Y_{i,c,t}$ is the log of interested dependent variables of firm i in city c at year t , including the total investment, the R&D investment, entertainment expenses, and cash holding. $Duality_{c,t}$ equals 1 if there is a joint appointment in city c at year t , otherwise takes the value of 0. At the firm level, we control log of sales and log of employees, as well as the year fixed effects λ_t and firm fixed effects δ_i . The coefficient of interest is β , which measures the difference, conditional on controls, in the

¹⁶We follow the convention used in event study models and choose the period $k = -1$ as our reference period so we set $\beta_{-1} = 0$.

investment between firms locating in cities with joint position and those locating in cities without joint position at year t . The standard errors are clustered at the city level when constructing confidence intervals.

4.2 Instrument Variable Approach

One concern regarding the staggered difference-in-differences estimation is that the local political power concentration could be correlated with certain unobserved city characteristics that are also linked to firm investment decisions. To mitigate this concern, we also exploit exogenous variations in PLAC secretaries' age to instrument for the duality appointment.

In China, civil servants and government officials generally retire at the age of 60. Therefore, as officials approach retirement age, their prospects of ascending to higher positions are affected. The rule of thumb is "Seven Up, Eight Down", which is an informal but widely used rule that government officials encounter during their career progression. According to this rule, officials still have opportunities for promotion when they are 57 years old (hence "Seven Up"), but once they exceed the age of 58, the chances of promotion greatly diminish ("Eight Down").¹⁷

Figure 5 clearly illustrate that this rule of "Seven Up, Eight Down" operates effectively for the duality appointment of the PLAC secretaries as the police chiefs. The chance of duality appointment, which is seen as a promotion, drops sharply at the age of 58. This reflects the fact that in China, the political power and influence are usually closely related to age, experience, and long-term service within the system, since the long-term service is viewed not just as a measure of loyalty and dedication to the system, but also as a valuable asset that contributes to stability and continuity in governance.

Based on this institutional characteristic, we use the dummy of the PLAC secretary's age under or equal to 57 as our instrumental variable.

5 Empirical Results on Law Enforcement

We start by investigating how the power concentration enable the police to increase their law enforcement against the private economic activities, and then analysis its effect on their investment

¹⁷It is important to note that the "Seven Up, Eight Down" rule is not absolute. It is influenced by factors such as individual capabilities, political environment, and networking. Some officials may still manage to get promoted after the age of 58, especially if they have significant achievements or strong networks. However, this rule, to some extent, reflects the general attitude of the Chinese bureaucratic system towards age and career planning.

strategy.

5.1 The Law Enforcement Response

We take the data on police issued penalties to capture the use of power by the police in response to their unchecked power under the duality regime. Estimates of Eq. (1), where we control for city and year fixed effects, are presented in Table 2. Column (1) presents the effect of duality on the log of all ticket numbers (plus one) issued by the police to the private businesses. We add one to the number of the tickets to avoid dropping too many city-year observations with 0 tickets. We control for the GDP per capita, corporate tax, public security expenses and fiscal income. The police in the duality-regime cities issues 25.8% more tickets to the businesses, than the cities with the police and PLAC under separate leaderships.

Columns (2) to (5) investigate the duality effect on tickets of different kinds. Column (2) looks into the warning tickets, and finds 14.7% increase of warning tickets in the duality-regime cities. Even though the warning ticket is the most modest punishment imposed to the business for legal violations, such as failure to accept inspections by government agencies as required, there is still real consequence out of this punishment. The warning ticket will be recorded into the credit profile of the business, and makes it harder for the business to get external finance, and secure business partners.

Column (3) investigates a more severe form of punishment, monetary penalties. The businesses under the police and judicial power concentration regime receive 25.4% more monetary fines compared with their peers in cities with the powers separated. The amount of the fine typically ranges from 2,000 to 50,000 RMB (or 300 to 7,000 USD), and it also raises a flag in the credit report of the business.

Column (4) shows the DID estimate of the executive and judicial power concentration on operation suspensions issued by the police. The duality increases the likelihood for the local businesses to get operation suspended by 10.3 percentage points. This is an even more severe type of the punishment. The suspension period typically ranges from 1 week to 3 months, depending on the situation.

Lastly, column (5) presents the estimation result for the number of license revocation issued by the police department. This is a permanent type of punishment, which aims to end the operation of the businesses. The duality increases the likelihood for the local businesses to get license revoked by 8.5 percentage points.

Figure 6 plots the dynamic DID estimates for the punishment ticket results with Eq. (2). We can confirm the cities under the duality regime share the parallel trend in law enforcement with the cities without duality from the estimated pre-treatment coefficients, which validates our identification assumption. Starting at the year that the joint position is appointed to one person, the tickets issued by the police department take off.

Overall, we find the police becomes more aggressive in issuing legal violation tickets and punish the target businesses from warnings to licence revocations, after their chief is appointed to supervise the city court judges.

5.2 Abuse of Power by the Police

The aggressiveness of law enforcement by the police is quite evident from the regression results. How do we interpret it? On the one hand, the powerful police becomes more efficient in enforcing law and punishing the illegal behaviors by the local businesses, which would have a positive impact and help restore social justice and market order. On the other hand, the weakening checks and balances by the judicial system of the executive power increases their rent-seeking tendency and results in distortionary behaviors.

To correctly interpret the intensified law enforcement by the police, we first investigate whether the judicial checks and balances are weakening from the judge decisions in administrative litigation against the police. After a local business receive a violation ticket from the police, it could appeal by filing an administrative litigation against the police, and the trial will be first judged in the municipal court. If the trial fails in the first trial, the business can file a second trial at the provincial court. Since the power consolidation implies that the judge decision at the municipal court would be biased in favor of the police. We just focus on the decisions of the second trials at the provincial court, which the municipal police chief has little control over. Table 3 column (1) reports DID estimates for the success rate of the second trials against the police, and it suggests the administrative litigations from cities under duality regimes are 8.1% more likely to be ruled against the police, which indicates the police in these cities are more likely to abuse their executive power in the first place.

In 2010s, a significant share of Chinese economic activities is still informal. Park et al. (2012) estimates that more than 25% of urban jobs are in the informal sectors in 2010. The pace of the economic development is much faster than the regulatory reform, which makes legal or regulatory

compliance a serious burden to most businesses. What is worse is that many officials in the regulators (e.g. Industry and Commerce Bureaus and Environmental Protection Agencies) impose challenges to the businesses on purpose to ask for kickbacks. Therefore, the police is given much room for discretion in policing local businesses' compliance of law and regulations. This actually puts the police into an advantageous position in seeking rents. When they are entitled with the unchecked power in the duality cities, they are more likely to abuse their power and exchange their leniency for bribes (Glaeser and Shleifer, 2002).

5.3 Judicial Bias Under Power Concentration

We now delve into the intricate relationship between the police power and judicial bias in municipal courts, by comparing the first-trial and second-trial outcomes of the appeals of the police tickets. The success rate in second trials provides an objective metric for assessing the extent to which the police may be abusing their power, since the provincial courts have less interest of conflict with the municipal police departments. The outcomes of first trials, on the other hand, shed light on potential judicial biases at the municipal court level..

Table 3 column (2) reports DID estimates for the success rate of the first trials against the police. The success rate of appeals is insignificantly different under duality regime even if the second trial result indicates the tickets are biased in favor of the police. And the point estimate is even negative. This suggests that the municipal court actually favors the local police due to the conflict of interest.

To quantify the degree of judicial bias in first trials, the study employs a sophisticated machine learning algorithm — BERT (Bidirectional Encoder Representations from Transformers). This algorithm is used to predict the “objective” success rate of the trials, with the second trial outcomes serving as the training sample. The objective success rate aims to represent what the success rate should ideally be if unbiased judicial processes were applied. The DID estimates for the “objective” success rate of the first trials (Column (3)) and the municipal court bias (Column (4), which is the difference between the realized success rate and the “objective” success rate) highlight the extent of bias. If the municipal court were unbiased and aligned with the standards of the higher-level (provincial) court, there should be a 2.6% increase in the success rate of first trials under the duality regime. However, the observed discrepancy of 3.7 percentage points suggests a significant bias due to a conflict of interest at the municipal court level.

These results underscores the challenges in ensuring impartiality in the judicial system during power concentration. The machine learning technique provides us a novel approach to quantifying judicial bias.

5.4 IV Estimates

One concern regarding the staggered difference-in-differences estimation is that the local political power concentration could be correlated with certain unobserved city characteristics that are also linked to firm investment decisions. To mitigate this concern, we also leverage the “Seven Up, Eight Down” promotion rule, and exploit the exogenous variations in PLAC secretaries’ age to instrument for the duality appointment. Specially, we use the dummy of the PLAC secretary’s age under or equal to 57 as our instrumental variable.

In Column (1) of Table 4, we report the result of the first stage relevant test of the instrumental variables. We find that our instrumental variable has a strong correlation with our independent variable — the police-PLAC duality. The coefficient is significant at the 1% significant level and the F-statistics is above the rule-of-thumb threshold of 10.

There are always possibilities that the age of local PLAC secretary would affects the police ticket and firm investment through other channels. For instance, the aged PLAC secretary could coincide with certain adverse city-level economic conditions, as reflected in low fiscal revenue of the government high unemployment rate. Therefore, we conduct the placebo test and investigate the potential alternative channels through which our instrumental variables might affect the outcome variable. In particular, we check whether the age of PLAC secretary is associated with GDP growth rate, population, unemployment rate and crime rate. We do not observe any significant correlation, suggesting that the exclusive restriction conditions are plausibly satisfied.

Table 5 reports the two-stage-least-squares estimation result using the IV approach. The police in the duality-regime cities issues 38.9% more tickets to the businesses, than the cities with the police and PLAC under separate leaderships. This is of the same magnitude as the DID estimation in Table 2.

6 Empirical Results on Private Investment

We have shown the judicial checks and balances are compromised and the police abuses their executive power after the leadership merge between the police and PLAC. In this part, we analyze its economic implications.

The theoretical literature argues that power separation and judicial independence is strongly associated with secure property rights and economic freedom (Hayek, 1960; Glaeser and Shleifer, 2002). These are crucial factors for the private investment. Therefore, the duality appointment campaign during our studied period in China is predicted to have a negative impact on the private investment.

6.1 Private Investment Response

In this section of the study, we delve deeper into firm-level data to analyze investment decisions using Eq. (3). The focus is on understanding how the consolidated leadership of local police and courts impacts corporate investment behaviors. The findings are represented in Table 6.

Column (1) of the table highlights the effects of duality on the total investment made by firms. The data reveals a significant downturn, showing that firms reduce their total investment by approximately 10.2%.

Column (2) shifts the focus to R&D investment, a sector crucial for innovative advancement and long-term economic sustainability. Intriguingly, even this vital investment area is not immune to the effects of duality, experiencing a decline of 9.45%. This reduction in R&D investment is particularly concerning, given its recognized role as a catalyst for long-term economic growth, as noted in seminal works like those by Solow (1956), Romer (1986), and Barro (1991).

Additionally, the analysis extends to the financial repercussions for firms that curtail their investments. Firms experiencing a reduction in investment also see a decrease in their stock returns, by about 3%. This finding suggests a direct correlation between investment levels and market confidence, underlining the broader economic implications of investment decisions influenced by the governance structure.

Overall, this analysis presents a comprehensive view of how the interplay between local governance structures and corporate investment decisions can have far-reaching effects on the economy.

The reduction in both total and R&D investments under a dual leadership system not only impacts individual firms but could also have broader implications for economic growth and innovation. These insights are crucial for policymakers and business leaders alike, as they navigate the complexities of governance and its impact on the economic landscape.

6.2 Mechanism of Investment Drop

We further investigate the channels through which power concentration decreases firms' investment incentives. The rent-seeking law enforcement by the police have two effects. First, the firms have to spend more expenses to develop or maintain their relationship with the police, which reduces their contemporaneous cash holding. Thus the increasing operating cost crowds out investment. Furthermore, the shareholders' concern on the property right infringement increases, so that they are less willing to invest into the future (Besley, 1995).

Table 8 presents results that rule out the first hypothesis. Using financial constraints indicators including Kaplan&Zingales Index, White&Wu Index, and cash holding, we split our sample into two groups: firms with low financial constraints and high financial constraints. The empirical effect of duality across financially more constrained and less constrained firms is similar.

Despite the conventional wisdom that financial constraints are a major barrier to firm investment, the data reveals that these constraints do not significantly impede the investment decisions of firms. Instead, it appears that the governance structure, exemplified by the 'Duality' condition, plays a more critical role in influencing investment levels.

6.3 Spill-overs of Duality Effect

Our investigation extends beyond the immediate effects of 'Duality' to consider the broader implications of a firm's geographical and political closeness to the epicenters of administrative authority. Table 9 delves into these complexities by dissecting duality into two distinct yet related constructs: "Holder Duality" and "Prov Duality".

The concept of "Holder Duality", detailed in the first column of the table, pertains to the interconnectedness within firms that arise from sharing common major shareholders. This interconnectedness could potentially forge a robust network that supports strategic collaboration and resource sharing. Our findings are particularly revealing in this context, indicating a substantial uptick in

investment activities (7.74%) among such firms. This could be indicative of a strategic orientation towards fortifying property rights, possibly as a preemptive maneuver against the challenges that typically accompany concentrated power structures.

Conversely, “Prov Duality”, presented in the second column, scrutinizes the investment behaviors of firms located in close geographical and political proximity to cities within the same province known for their centralized power. The analysis unveils a discernible pattern: firms in close proximity to these power hubs tend to reduce their investment (evidenced by a coefficient of -9.07%). This pattern not only underscores the direct effects of duality but also its peripheral impact, hinting at a ripple effect where the accumulation of power within certain urban centers can cast a shadow on the investment landscape of neighboring regions.

In synthesizing these findings, our study paints a comprehensive picture of how the concentration of power, both in terms of shareholding patterns (“Holder Duality”) and geographical-political centrality (“Prov Duality”), can influence corporate investment decisions. The contrasting effects observed — the positive influence of shared major shareholders versus the negative impact of proximity to power-dense cities — suggest a nuanced relationship between corporate governance structures and investment confidence. These insights contribute to a more granular understanding of the investment climate and the multifaceted nature of power dynamics within the corporate sector.

7 Conclusion

In this paper, we provide evidence that weakening power separation in the government reduces private investment. We study a wave of municipal leadership consolidation in China, during which the chief of police department is appointed to be the adjunct supervisor of courthouse and procuratorate. We find that the concentration of executive and judicial powers leads to the aggressive increase of the police’s law enforcement against private businesses for rent-seeking. The businesses, as a consequence, have to spend more expenses to develop their relationship with the government, and are more concerned about property right infringement in the future. As a result, the total private investment drops by 10.2%, and R&D investment drops by 9.5%. Our study emphasize the importance of sustaining checks and balances in preventing expropriate from a strong state.

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Tables

Table 1 Summary Statistics

	N	Mean	P1	P50	P99
By City-Year					
Duality	4,919	0.21	0	0	1
GDP	4,925	180.70	5.30	89.07	1,699.75
Fiscal Ratio	4,839	6.84	2.72	6.49	13.81
Confiscation Income	2,886	488.45	24.99	293.99	3,421.34
Number of Warning Tickets	3,742	10.61	0	0	279
Number of Monetary Penalty Tickets	3,742	65.70	0	0	1,302
Number of Operation Suspension Tickets	3,742	5.05	0	0	117
Number of License Revocation Tickets	3,742	2.01	0	0	44
Total Number of Violation Tickets Issued by the Police	3,742	79.60	0	0	1,843
By Litigation Case					
Success Rate for First Trials	19,282	0.106	0	0	1
Success Rate for Second Trial	1,983	0.064	0	0	1
By Firm-Year					
Private Firms					
Sales	17,934	4,526	214.6	1,016	6,655
Employees	17,944	3.749	0.311	1.338	6.366
Total Investment	9,438	342.1	0.730	84.41	583.9
R&D Investment	13,450	114.6	8.179	39.99	198.8
Entertainment Expenses	5,771	5.744	0.636	2.836	11.44
Cash	17,814	1,316	67.14	361.4	1,669
SOEs					
Sales	14,956	17,008	373.7	2,202	23,738
Employees	14,960	9.195	0.472	2.544	15.99
Total Investment	7,924	1,265	1.198	139.2	1,926
R&D Investment	7,256	299.1	2.804	48.69	507.8
Entertainment Expenses	2,428	5.823	0.424	2.651	14.10
Cash	14,822	3,088	91.18	558.5	5,232

Note: This City-Year panel summarizes the characteristics of cities our sample. Fiscal ratio refers to the percentile share of government avenue in local GDP. The unit of GDP is billion RMB, and the unit of confiscation income is million RMB. The litigation case part reveals the success rate for administrative litigation in both first and second trials against the police department. And the Firm-Year panel states the statistics of listed firms in our sample. The unit of sales, total investment, R&D investment, entertainment expenses and cash is million RMB. And the unit of employees is thousand person.

Source: Baidu Baike, CEIC, PKULaw, City Yearbooks, CSMAR, iFinD.

Table 2 Effect of Power Concentration on Violation Tickets

	Log (1+Number of Violation Tickets Issued by the Police)				
	All	Warning	Monetary Penalty	Operation Suspension	License Revocation
	(1)	(2)	(3)	(4)	(5)
Duality	0.258*** (3.222)	0.147** (2.254)	0.254*** (3.204)	0.103** (2.019)	0.0846*** (2.829)
GDP per Capita	-0.764*** (-2.988)	-0.375* (-1.741)	-0.875*** (-3.454)	-0.210 (-1.445)	-0.243** (-2.012)
Corporate Tax	-0.181 (-0.841)	-0.0971 (-0.598)	-0.091 (-0.436)	-0.299** (-2.557)	-0.090 (-1.155)
Public Security Expense	1.002*** (3.146)	0.151 (0.767)	1.142*** (3.569)	0.464*** (3.074)	0.087 (0.659)
Fiscal Income	0.065 (0.382)	0.187 (1.391)	0.087 (0.510)	0.091 (0.839)	0.139* (1.798)
Observations	3,387	3,427	3,429	3,430	3,435
R-squared	0.700	0.492	0.693	0.449	0.405
City FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES

Note: This specification is reported in Equation (1). The key independent variable Duality is a dummy variable that equals to 1 if the local PLAC secretary holds the concurrent post as the police department chief. We gather ticket-level administrative punishments data from PKULaw and collapse it to calculate the number of administrative punishments that revoke licenses and forfeit illegal gains in city c at year t . Control variables including the Log (GDP per capita), Log (corporate tax), Log (public security expense) and Log (fiscal income) are collected from CEIC. Column (1) show that the power concentration lead to the number of administrative punishment tickets that are issued by the police department increase about 25.8%. Column (2), (3), (4) and (5) respectively show that the power concentration lead to the number of police tickets that warn firms, fine firms, suspend firms' operation, and revoke firms' licenses increase about 14.7%, 25.4%, 10.3%, and 8.46%. We control for the year fixed effect and city fixed effect. Standard errors in parentheses are clustered at the city level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 3 Effect of Power Concentration on Success Rate of Ticket Appeals

	Success Rate of First Trial			
	Success Rate of Second Trial	Court Outcome	Predicted Outcome	Court Bias
	(1)	(2)	(3)	(4)
Duality	0.081* (1.828)	-0.012 (-0.838)	0.026** (2.131)	-0.037** (-2.011)
GDP per Capita	-0.162 (-0.532)	-0.194*** (-4.050)	0.012 (0.301)	-0.206*** (-3.221)
Corporate Tax	-0.589*** (-2.667)	-0.083* (-1.954)	-0.069* (-1.877)	-0.014 (-0.239)
Public Security Expense	0.619 (1.318)	0.083 (0.882)	-0.057 (-0.707)	0.140 (1.118)
Fiscal Income	0.292* (1.837)	0.082** (2.211)	-0.058* (-1.802)	0.139*** (2.817)
Observations	1,510	16,532	16,533	16,532
R-squared	0.219	0.106	0.194	0.159
Controls	YES	YES	YES	YES
City FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES

Note: This specification is reported in Equation (2). The key independent variable Duality is a dummy variable that equals to 1 if the local PLAC secretary holds the concurrent post as the police department chief. We gather ticket-level administrative punishments data from PKULaw and collapse it to calculate the number of administrative punishments that revoke licenses and forfeit illegal gains in city c at year t . Control variables including the Log (GDP per capita), Log (corporate tax), Log (public security expense) and Log (fiscal income) are collected from CEIC. Column (2) uses the real success rate issued by local city-level court, showing that real success rates stay unchanged. In column (3), we use second trial litigation cases conducted in province-level court to train a BERT model, which can be trained to predict success rate of case based on information provided by case text. Column (3) points out that predicted success rate increased 2.58%, indicating that corresponding circumstances became more serious. And column (4) shows the gap between real and predicted judicial results decreases 3.75%, revealing a systematic bias in local judicial system. We control for the year fixed effect and city fixed effect. Standard errors in parentheses are clustered at the city level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 4 First Stage: Effect of PLAC Secretary Age on Duality

	Duality	GDP Growth rate	Population	Unemploy- ment	Crime Rate
	(1)	(2)	(3)	(4)	(5)
Start Age \in [48-57]	0.797*** (3.947)	-0.001 (-0.022)	-0.001 (-0.037)	-0.000 (-0.565)	0.000 (-0.232)
GDP per Capita	0.038 (0.543)	0.119*** (6.211)	-0.145*** (-13.92)	0.001*** (3.333)	0.000 (-0.605)
Corporate Tax	-0.036 (-0.623)	0.005 (0.316)	0.004 (0.534)	0.000 (0.156)	-0.000*** (-8.124)
Pulic Security Expense	-0.242*** (-3.091)	0.026 (1.215)	0.036*** (3.256)	0.001** (2.073)	0.000* (1.939)
Fiscal Income	0.030 (0.605)	0.043*** (3.284)	0.032*** (4.664)	-0.001*** (-3.933)	-0.000 (-0.223)
Observations	2,341	2,226	2,225	2,157	1,491
R-squared	0.530	0.511	0.997	0.838	0.710
City FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES

Note: This specification is reported in Equation (3). The key independent variable PLAC secretary age between 48 and 57 when starting the term is a dummy variable that equals to 1 if the local PLAC secretary starts the term at the age between 48 and 57, this data also collected from Baike.baidu.com. Control variables including the Log (GDP per capita), Log (corporate tax), Log (public security expense) and Log (fiscal income) are collected from CEIC. Column (1) shows that if the start age of PLACs is proper, the chance is significantly bigger (79.7%) that he or she can get the dua-position as police chief. Column (2)-(4) clarifies that the start age of PLACs has nothing to do with other local economic and political conditions. We control for the year fixed effect and city fixed effect. Standard errors in parentheses are clustered at the city level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 5 IV Regression: Effect of Power Concentration on Violation Tickets

	Log (1+Number of Violation Tickets Issued by the Police)
Duality (IV)	0.389*** (3.098)
GDP per Capita	-0.657 (-1.399)
Corporate Tax	-0.321 (-1.031)
Pulic Security Expense	1.060*** (2.791)
Fiscal Income	0.0114 (0.0429)
Observations	1,784
R-squared	0.011
City FE	YES
Year FE	YES

Note: This specification is reported in Equation (4). The key independent variable Duality is a dummy variable that equals to 1 if the local PLAC secretary holds the concurrent post as the police department chief. The instrument variable PLACs' age between 48 and 57 when starting the term is a dummy variable that equals to 1 if the local PLAC secretary starts the term at the age between 48 and 57, this data also collected from Baike.baidu.com. Control variables including the Log (GDP per capita), Log (corporate tax), Log (public security expense) and Log (fiscal income) are collected from CEIC. The 2SLS result shows that the dua-position brings the number of police tickets increase by 38.9%. We control for the year fixed effect and city fixed effect. Standard errors in parentheses are clustered at the city level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 6 Effect of Power Concentration on Private Corporate Investment

	Log (1+Total Investment) (1)	Log (1 + R&D Investment) (2)	Stock Return (3)
Duality	-0.102** (-2.008)	-0.0945** (-2.141)	-0.0303* (-1.805)
Employee	0.911*** (17.16)	0.644*** (13.49)	-0.0281** (-2.478)
Sales GR	0.0991*** (2.822)	0.0369 (1.470)	0.160*** (8.333)
Connect Person	0.127 (1.365)	0.0896* (1.901)	0.0272 (0.738)
Establish Age	-0.694*** (-3.722)	-0.617*** (-3.735)	0.0325 (0.591)
Manage Cost Ratio	-1.449*** (-2.787)	-0.0402 (-0.118)	-0.153 (-1.380)
GDP per Capita	0.0598 (0.271)	0.157 (0.962)	0.0791 (1.214)
Fiscal Income	0.422*** (2.758)	0.234* (1.700)	-0.0310 (-0.587)
Observations	9,350	7,811	8,069
R-squared	0.752	0.862	0.559
Controls	YES	YES	YES
Firm FE	YES	YES	YES
Year FE	YES	YES	YES

Note: This specification is reported in Equation (5). The key independent variable Duality is a dummy variable that equals to 1 if the local PLAC secretary holds the concurrent post as the police department chief. We gather annual firm-level investment data from CSMAR. Control variables including Log (employee), Log (connect person), sales growth rate, year from establishment, management cost ratio to sales, the Log (GDP per capita), and Log (fiscal income) are collected from CSMAR and CEIC. Column (1) and (2) show that power concentration brings firms to decrease their total investment and R&D investment by 10.2% and 9.5%, respectively. Result from column (3) shows that firm's annually stock return decreases 3% under power concentration. We control for the year fixed effect and firm fixed effect. Standard errors in parentheses are clustered at the city level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 7 Heterogeneous Effect of Power Concentration on Private Corporate Investment by Profitability

	Log (1+Total Investment)					
	Profit		ROA		ROE	
	Low	High	Low	High	Low	High
	(1)	(2)	(3)	(4)	(5)	(6)
Duality	-0.0448 (-0.639)	-0.135** (-2.330)	0.0177 (0.264)	-0.196** (-2.274)	-0.0131 (-0.153)	-0.165** (-2.190)
Employee	0.873*** (8.093)	0.749*** (12.43)	0.821*** (8.903)	0.924*** (13.03)	0.814*** (8.428)	0.879*** (13.12)
Sales GR	-0.00966 (-0.136)	0.0560 (1.170)	0.0875* (1.675)	0.0746 (1.403)	0.0689 (1.237)	0.0748 (1.464)
Connect Person	0.119 (0.959)	0.0664 (0.710)	0.269** (2.222)	0.144 (1.267)	0.165 (1.014)	0.137 (1.275)
Establish Age	-0.302 (-1.122)	-0.515** (-2.400)	-0.982*** (-4.076)	-0.710** (-2.327)	-0.884*** (-2.770)	-0.550** (-2.547)
Manage Cost Ratio	-0.0151 (-0.0162)	-1.624** (-2.125)	-1.265 (-1.592)	-0.858 (-1.158)	-0.902 (-1.449)	-1.637** (-2.157)
GDP per Capita	0.634* (1.660)	-0.330 (-1.521)	0.670** (2.027)	-0.303 (-0.996)	0.624 (1.539)	-0.151 (-0.613)
Fiscal Income	0.425 (1.599)	0.295* (1.764)	0.627*** (2.689)	0.255 (1.285)	0.416 (1.568)	0.202 (1.265)
Observations	3,261	5,005	4,586	4,223	3,824	5,008
R-squared	0.718	0.799	0.771	0.778	0.767	0.795
City Controls	YES	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES

Note: This specification is reported in Equation (5). The key independent variable Duality is a dummy variable that equals to 1 if the local PLAC secretary holds the concurrent post as the police department chief. We gather annual firm-level investment data from CSMAR. Control variables including Log (employee), Log (connect person), sales growth rate, year from establishment, management cost ratio to sales, the Log (GDP per capita), and Log (fiscal income) are collected from CSMAR and CEIC. Using profit indicators including profit scale, ROA, ROE, and currency scale, we split our sample into two groups: firms with low profitability and high profitability. Results above show the “predatory hypothesis”, which states that enterprises with stronger profitability are more affected by concentrated power, leading them to significantly reduce their investments. Conversely, enterprises with weaker profitability are less affected. We control for the year fixed effect and firm fixed effect. Standard errors in parentheses are clustered at the city level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 8 Heterogeneous Effect of Power Concentration on Private Corporate Investment by Liquidity Measures

	Log (1+Total Investment)					
	KZ Index		WW Index		Cash	
	Low	High	Low	High	Low	High
	(1)	(2)	(3)	(4)	(5)	(6)
Duality	-0.117*	-0.171*	-0.131*	-0.151*	-0.0908	-0.127**
	(-1.735)	(-1.809)	(-1.664)	(-1.928)	(-0.797)	(-2.018)
Employee	0.802***	0.891***	0.851***	1.008***	0.884***	0.765***
	(11.03)	(9.228)	(11.08)	(9.311)	(8.598)	(12.25)
Sales GR	0.00575	0.152**	0.0663	0.282***	0.211***	0.0620
	(0.117)	(2.593)	(1.344)	(2.901)	(3.477)	(1.556)
Connect Person	0.0874	0.263	0.343***	-0.0857	0.196	0.0134
	(0.641)	(1.484)	(2.977)	(-0.533)	(1.539)	(0.139)
Establish Age	-0.464	-1.010***	-0.545**	-0.706***	-0.563**	-0.486**
	(-1.466)	(-3.715)	(-2.232)	(-3.143)	(-2.148)	(-2.133)
Manage Cost Ratio	-0.565**	-0.764**	0.160	-0.515**	-0.930	-0.343
	(-2.188)	(-2.023)	(0.841)	(-1.982)	(-1.174)	(-0.762)
GDP per Capita	0.000	0.000	0.000	-0.000	0.537	-0.222
	(1.201)	(-0.301)	(0.633)	(-1.125)	(1.413)	(-0.965)
Fiscal Income	0.307*	0.511*	0.471***	0.369	0.391	0.372**
	(1.686)	(1.707)	(2.848)	(1.156)	(1.466)	(2.307)
Observations	4,384	4,345	4,900	4,856	2,912	6,032
R-squared	0.775	0.751	0.770	0.683	0.734	0.779
City Controls	YES	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES

Note: This specification is reported in Equation (5). The key independent variable Duality is a dummy variable that equals to 1 if the local PLAC secretary holds the concurrent post as the police department chief. We gather annual firm-level investment data from CSMAR. Control variables including Log (employee), Log (connect person), sales growth rate, year from establishment, management cost ratio to sales, the Log (GDP per capita), and Log (fiscal income) are collected from CSMAR and CEIC. Using financial constraints indicators including Kaplan&Zingales Index, and White&Wu Index, we split our sample into two groups: firms with low financial constraints and high financial constraints. Results above show that the hypothesis of "financing constraints" is ruled out, meaning that enterprises do not reduce their investments due to limited access to financing. We control for the year fixed effect and firm fixed effect. Standard errors in parentheses are clustered at the city level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

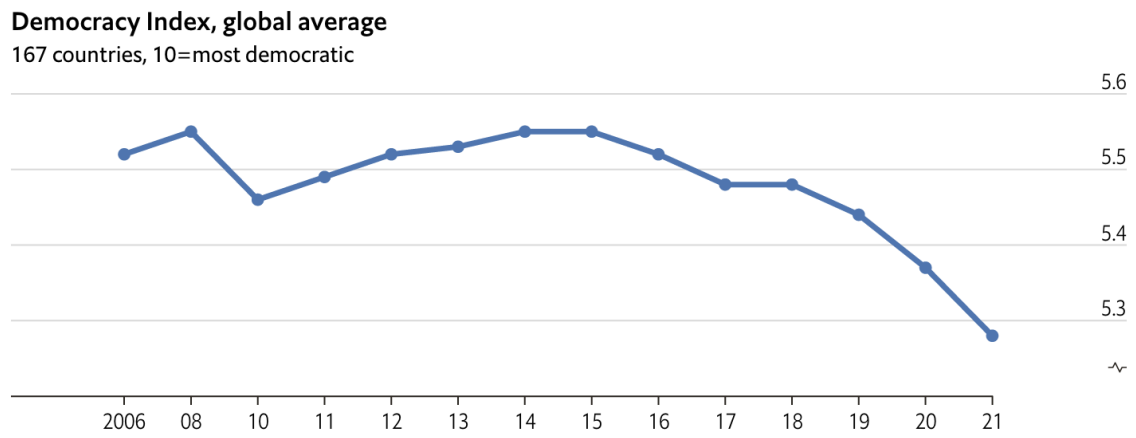
Table 9 Spillover Effect of Power Concentration on Private Corporate Investment

	Log (1+Total Investment)	
	(1)	(2)
Duality	-0.143** (-2.455)	-0.176*** (-2.943)
Common Owner Duality	0.0774** (2.387)	
Province Duality		-0.0907*** (-2.706)
Employee	0.874*** (14.00)	0.874*** (13.97)
Sales GR	0.121*** (4.237)	0.118*** (4.170)
Connect Person	0.235** (2.261)	0.239** (2.280)
Establish Age	-0.665*** (-4.030)	-0.653*** (-4.035)
Manage Cost Ratio	0.308 (1.372)	0.291 (1.322)
GDP per Capita	0.308 (1.372)	0.291 (1.322)
Fiscal Income	0.487*** (3.006)	0.511*** (3.107)
Observations	11,144	11,144
R-squared	0.721	0.721
Controls	YES	YES
Firm FE	YES	YES
Year FE	YES	YES

Note: This specification is reported in Equation (5). The key independent variable Duality is a dummy variable that equals to 1 if the local PLAC secretary holds the concurrent post as the police department chief. We gather annual firm-level investment data from CSMAR. Control variables including Log (employee), Log (connect person), sales growth rate, year from establishment, management cost ratio to sales, the Log (GDP per capita), and Log (fiscal income) are collected from CSMAR and CEIC. In column (1), we establish connections between enterprises through their common top ten shareholders, using these links to assess whether there is a concentration of power among the enterprises connected to them. We found that investment in such enterprises increases by 7.4%, indicating that concerns over property rights have led shareholders to redirect resources. On the contrary, shown in column (2), if an enterprise is in the same province as another city with concentrated power, their investment decreases by 9.07%, which demonstrates the spillover effect of fear. We control for the year fixed effect and firm fixed effect. Standard errors in parentheses are clustered at the city level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

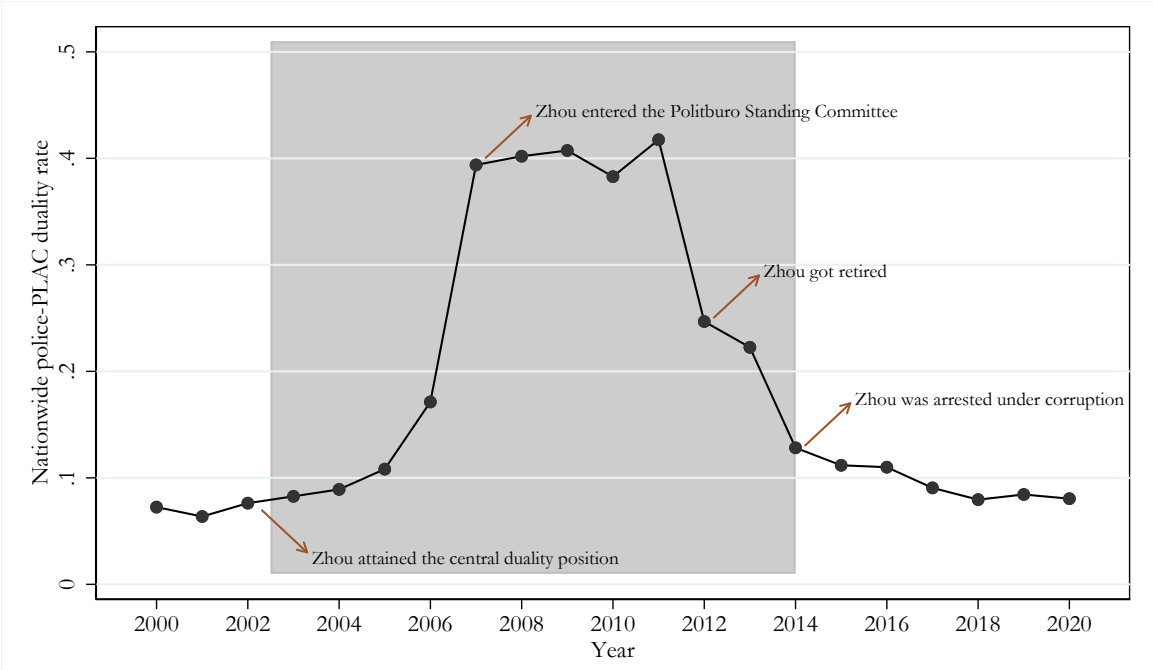
Figures

Figure 1 Trend of Global Democracy



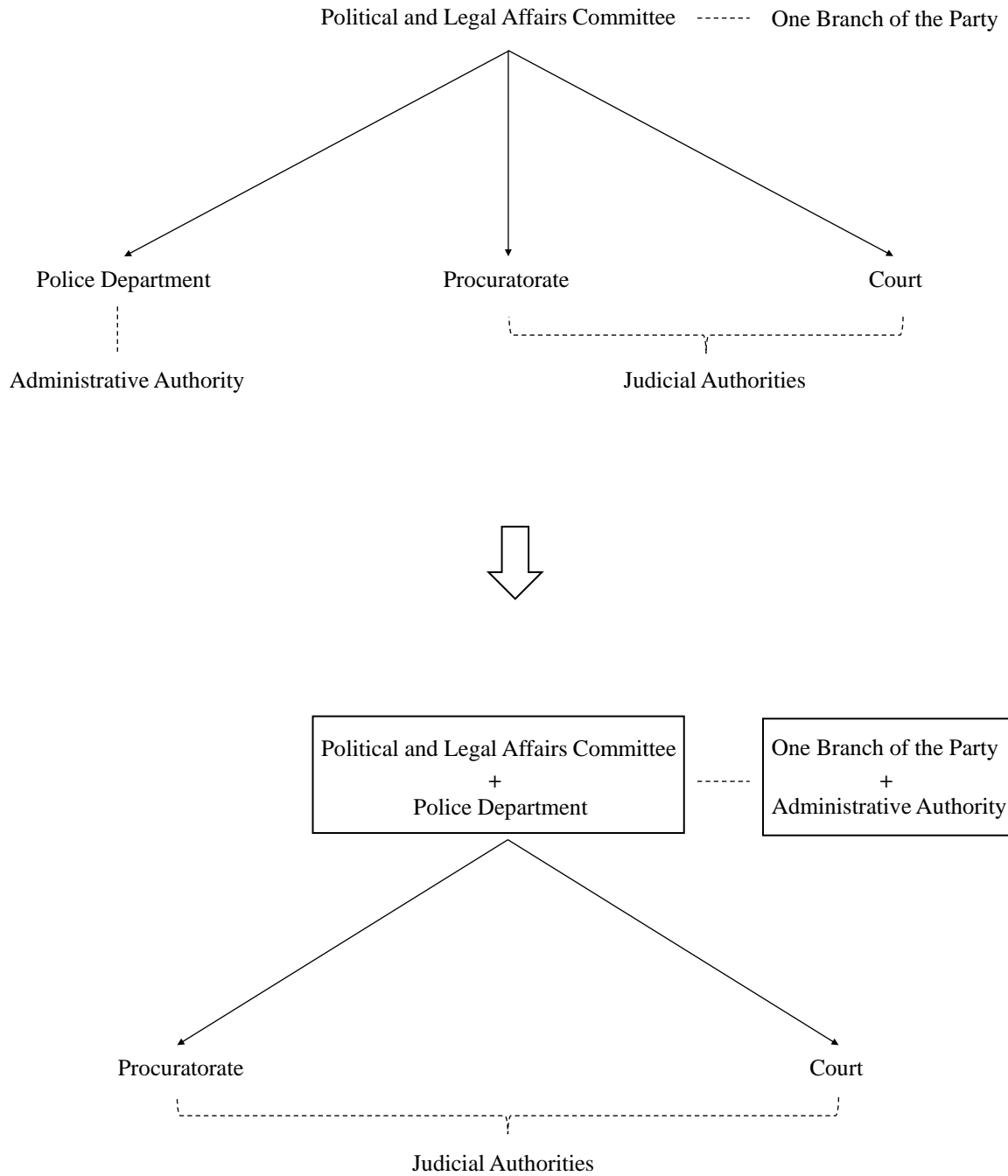
Note: The Democracy Index published by the Economist Group is an index measuring the quality of democracy across the world. The index is based on 60 indicators grouped into five categories, measuring pluralism, civil liberties, and political culture. In addition to a numeric score and a ranking, the index categorizes each country into one of four regime types: full democracies, flawed democracies, hybrid regimes, and authoritarian regimes.

Figure 2 The Time Sequence of Zhou's Rise and Fall and the Ratio of Police-PLAC Duality



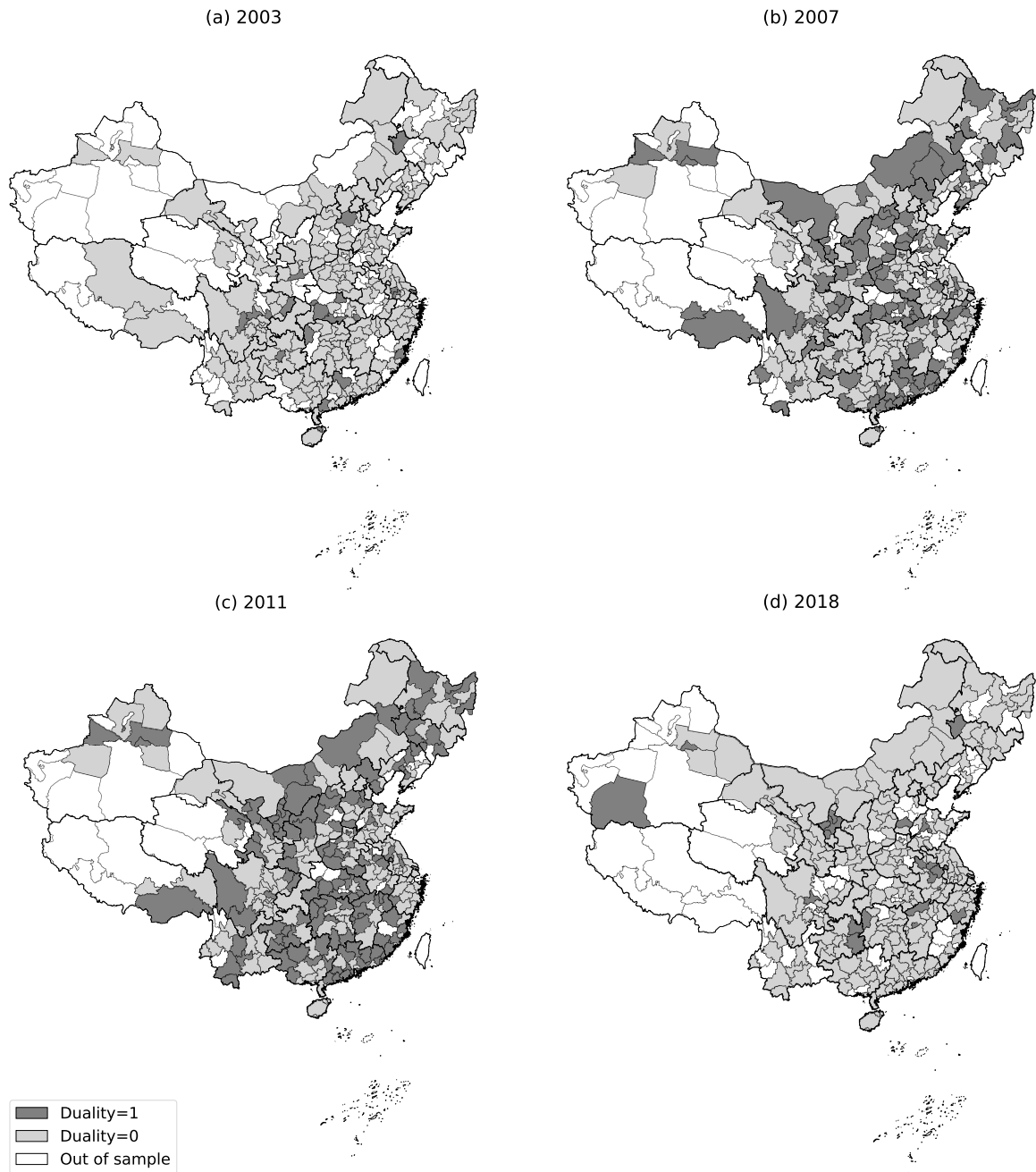
Note: The Y-axis is the share of dual position of police chief and PLAC secretary across the nation. And the shadow area covers the period when Zhou Yongkang stayed influential.

Figure 3 Change in Power Structure of the Justice System



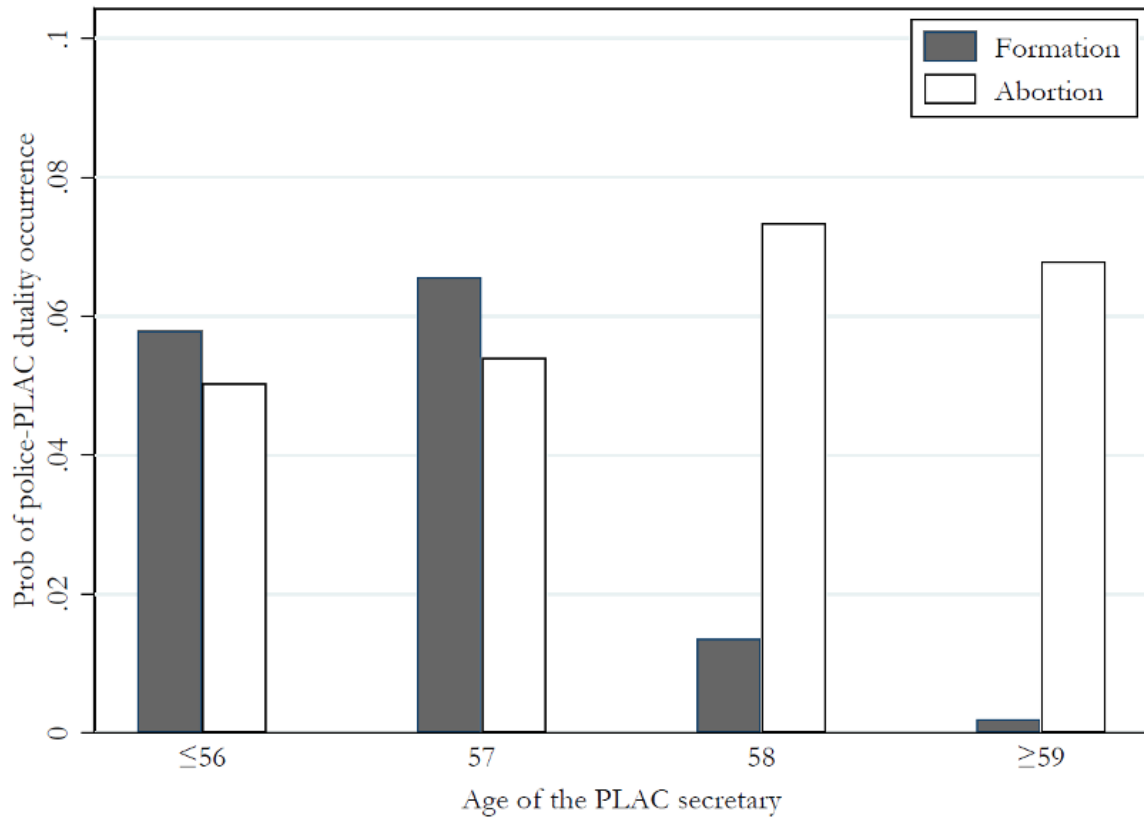
Note: In China, the secretary of the PLAC is in charge of the three departments: the police department, the procuratorate, and the court. And when the secretary of the PLAC is also the chief of the police department, the latter becomes the *de facto* supervisor of the heads of prosecutors and court judges.

Figure 4 The Rise and Fall of Duality in China



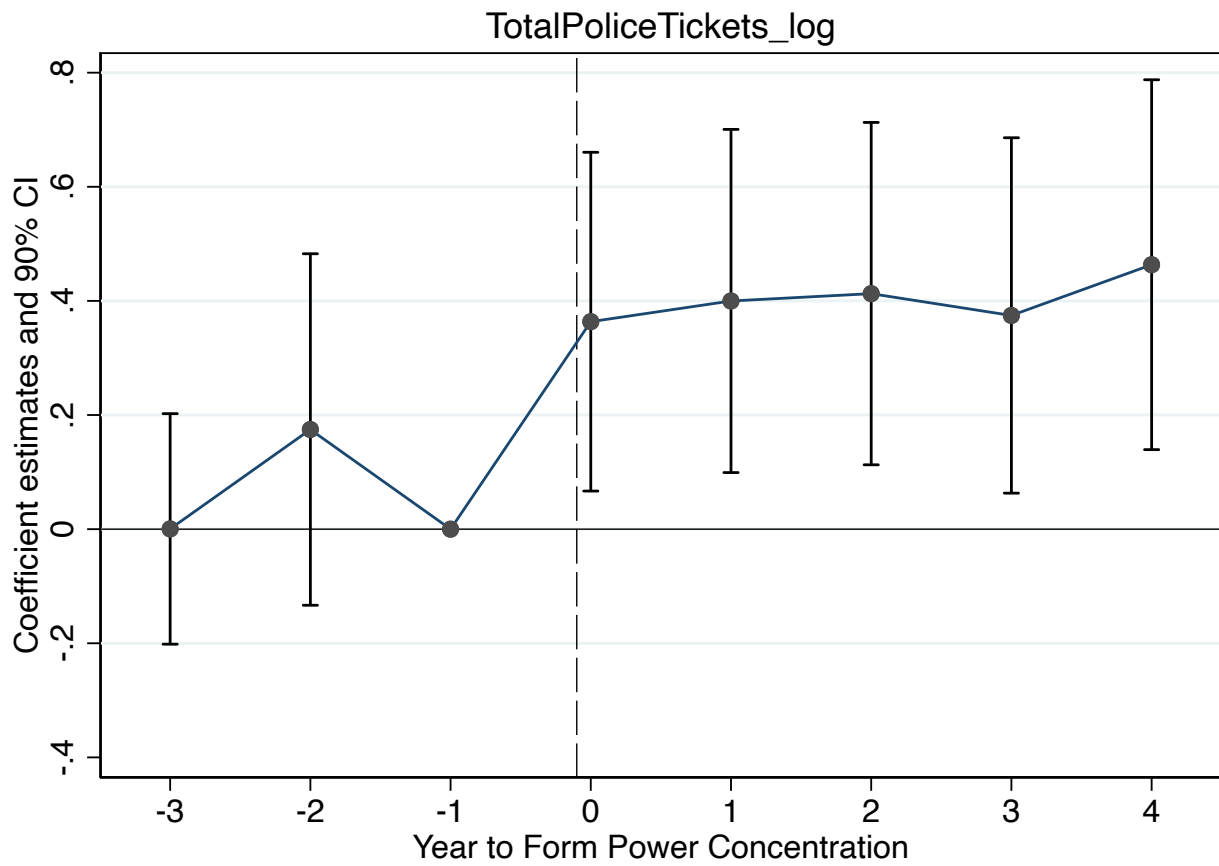
Note: Dark grey cities with are associated with dual position between police chief and PLAC secretary. Light grey cities with are associated with non-dual position. White cities are observations with Null value.

Figure 5 Impact of Ages of PLAC Secretary on the Likelihood of Establishing of Duality



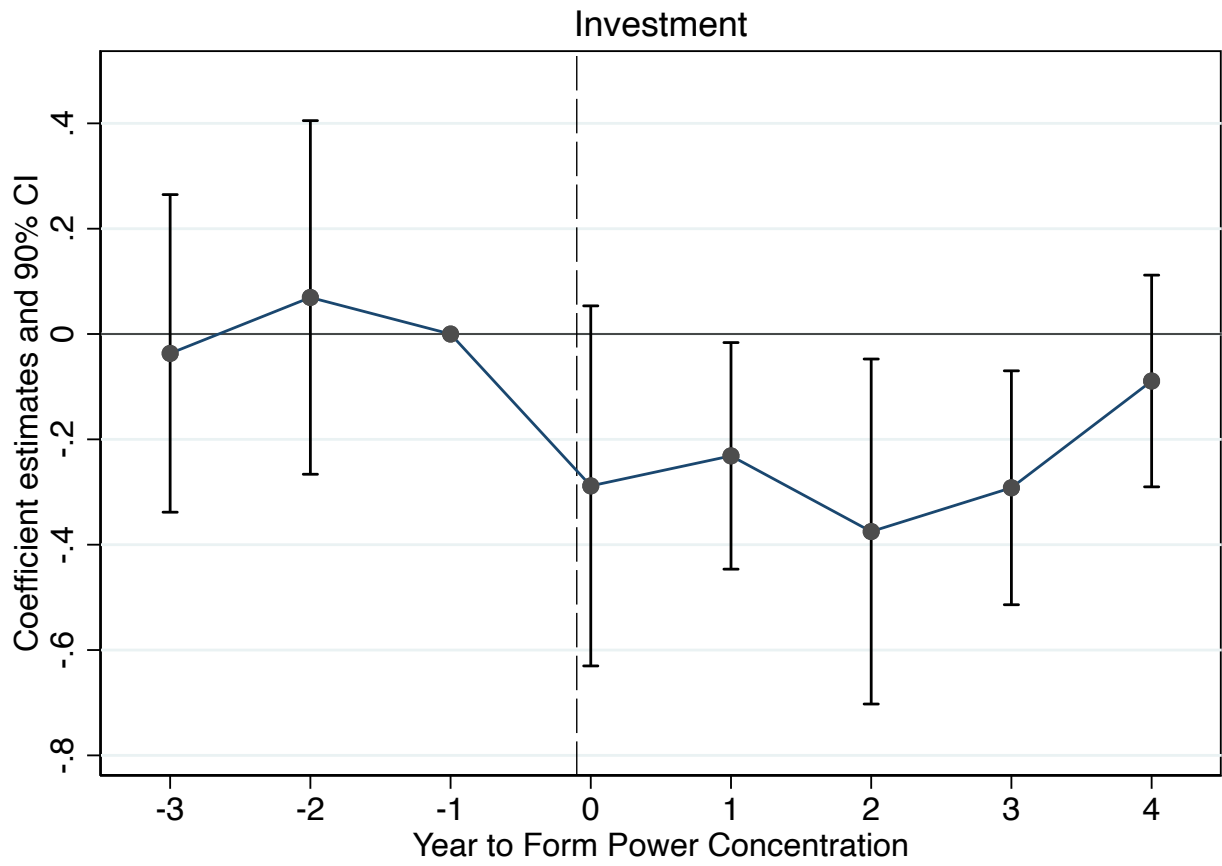
Note: The X-axis is the age of the PLAC secretary. The Y-axis is the likelihood of the incident of the formation (Grey) and abortion (White) of the duality.

Figure 6 Dynamics of Effect of Power Concentration on Police Tickets



Note: The figure reports the coefficient and 90% confidential intervals of the power concentration on log (number of specific tickets issued by the police department).

Figure 7 Dynamics of Effect of Power Concentration on Corporate Investment



Note: The figure reports the coefficient and 90% confidential intervals of the power concentration on log (specific outcomes).