

Agents with Agency: How Subnational Officials Exercise Their Autonomy Under Authoritarianism

by

Hongshen Zhu

Department of Political Science
Duke University

Date: _____

Approved:

Melanie Manion, Supervisor

Edmund Malesky

Daniel Stegmueller

Erik Wibbels

Dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Philosophy
in the Department of Political Science
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ABSTRACT

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Abstract

Subnational officials in strong authoritarian states are often depicted as passive agents under central command or opportunists resisting central control. This dissertation rejects the former characterization by recognizing the substantial autonomy of subnational officials and challenges the latter characterization by spotlighting the central-local alignment of interests as a common situation. The more the interests of the central government and the local level coincide, the more autonomy is granted. In particular, how subnational officials exercise their autonomy depends on whether the center supervises policy outcomes. Using rigorous quantitative methods, this dissertation examines how subnational officials exercise autonomy in unsupervised and supervised policy areas, respectively, using China's social security system and the COVID-19 lockdown. Without top-down supervision, China's subnational officials delivered different redistributive outcomes that reflected their perceived threat of local collective action. With top-down supervision, I show that China's subnational officials delivered similar pandemic control outcomes but chose different lockdown measures that reflected their perceived top-down political priority. In sum, subnational officials in authoritarian states are actors with strong agency whose preferences have important implications for policy decisions. The lack of variation in policy outcomes does not necessarily mean a lack of autonomy.

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Chapter 1

Introduction

Local governments are agents who govern places for a specified time. Their principal may be either the local population or the central state. In authoritarian unitary states, where the center appoints local leaders to rule on behalf of the state, local officials are permanent agents of the central state and temporary rulers of the local population. Local officials have a long-term relationship with the central state, as it is likely to outlast them. Simultaneously, they only have to interact with the local population for a certain period before being transferred. Aside from the time limit, the population does not have formal institutions to hold local officials accountable. In contrast, the central government has power over their career prospects and retirement benefits. Therefore, upward accountability dominates downward accountability among local officials.

In authoritarian states, the regime at the center is the supreme principal exercising political power. The center can impose its will throughout the country through its local representatives by exercising control over political careers. China, a one-party state with

a system that appoints local officials and rotates them from place to place, exemplifies the center-local relationships described above.

Although all authoritarian regimes have some formal and informal institutions to control local actors, the strongest manifestation of central control over local leaders is found in the one-party system with nomenklatura arrangements. Nomenklatura, literally the list of office titles, denotes the Soviet-style system. The party committee has authority over a list of important offices through powers of appointment, promotion, transfer, and removal (Harasymiw 1969). With the parallel structure of party and government, the nomenklatura provides one-party regimes with a powerful tool to control local government leaders along the party hierarchy. In China, each level of government official is administered by a party committee, which is one level higher in the political hierarchy (Manion 1985).

Control over appointments gives the center an intervention tool to reconcile discrepancies between central and local interests when principal-agent problems arise. Just as government intervention can correct market failures, the center can correct “local failures” by rewarding and punishing local leaders to internalize the externalities of local policies. This feature underscores much of the research on the governance of one-party regimes, for example, how Beijing uses promotion to create incentives for local leaders to promote economic growth, fiscal stimulus, grain procurement, environmental protection, and so on. (Li and Zhou 2005; Landry, Lü, and Duan 2018; Jiang 2018; Lü and Landry 2014; Kung and Chen 2011; Chen, Li, and Lu 2018).

Apart from political centralization by the party-state, administrative decentralization, necessitated by China’s geographic size and social complexity, is also a classic problem of governance: information asymmetry. The delegation of power to local officials and policy

variations that engenders give rise to oxymoronic descriptions like “decentralized authoritarianism” Landry, Lü, and Duan 2018, “fragmented authoritarianism” (Lieberthal and Oksenberg 1988), “combination of political centralization and economic decentralization” C. Xu 2011, among others. This dissertation builds on these characterizations of contemporary China’s political-economic institutions, focusing on when autonomy is granted and how local officials exercise autonomy.

1.1 State of Our Knowledge

1.1.1 Appointment System in Single-Party Regimes

Single-party authoritarian regimes have greater longevity and stability than do other types of authoritarian regimes, namely personalist and military regimes Geddes 1999.

Svolik (2012) suggests three features of how the party increases the regime’s ability to co-opt junior party members and prospective members: The institutionalized distribution of services and benefits. Junior cadres can assume that their services to the regime will be remunerated because senior cadres make a credible commitment to make room for them in the future. Political control over appointments of important offices and outside options enables the regime to attract prospective party members through career incentives and benefits allocation. Selective recruitment and promotion of loyalists and repression of dissidents incentivize compliance throughout the population.

Note that all three features of Svolik’s explanation are based on a nomenklatura-like system that gives the center ultimate control over appointment, promotion, transfer, and

removal from important posts. Suppose older cadres cannot be formally removed if they refuse to retire. The commitment to provide benefits to younger cadres in return for their service will not be credible.

Suppose the regime cannot make party membership a prerequisite for influential office. It cannot consistently persuade the population to follow the incumbent and discourage them from joining the opposition.

Suppose the regime cannot promote loyalists to more powerful posts and eliminate others. There are no incentives for local agents to enforce the central will.

Magaloni (2008) emphasizes the regime party's power-sharing function within the ruling coalition. Other rival elites in the ruling coalition will be willing to continue investing in existing institutions rather than join subversive forces if the dictator can credibly commit to sharing power with them over the long term. The dictator can do this by relinquishing his absolute power over appointments to important offices.

Magaloni's theory is that the power of appointment, promotion, transfer, and recall for important offices must be distributed throughout party institutions. The most systematic way of doing this is the nomenklatura system, in which political selection is based on predetermined rules rather than personal favors. Ideally, political selection in the nomenklatura system should be impersonal and even mechanical. It should be guided by precise criteria and objective information. In post-Mao China, decisions based on personal considerations are explicitly prohibited in political selection, although political recommendation is encouraged for information gathering Manion 1985.

1.1.2 Information Asymmetry in the Single-party System

Both the power-sharing and co-optation functions of the single party rely on a rules-based appointment system to solve the problem of credible commitment. Standardized evaluation measures are impersonal and clarify the “rules of the game” for actors, the agents of the state. Agents of the regime signal their competence and loyalty to the center because in such a system performance counts and their careers depend primarily on what they do, not who they are. Conversely, information asymmetry is less problematic in personalist regimes because state agents share common interests with the ruler through family or patronage ties.

The need for predictable evaluation makes information asymmetry the central problem of the system. The regime needs objective information to evaluate its agents because they have incentives not to report truthfully. Rather than being centralized and omnipotent, the nomenklatura’s system has diffuse authority because information gathering is fragmented and prone to manipulation, cover-ups, and collusion.

Cai (2000) documents that statistical manipulation of local officials dates back to the Maoist period and remains rampant in the reform era. Wallace (2016) shows that local officials in China overreport their GDP growth rates during leadership turnovers to boost their chance of promotion. He notes that the discrepancy between current growth, a less visible statistic, and GDP growth is greater in years with leadership changes. Pan and Chen (2018) show that local officials in China systematically conceal corruption complaints posted online by citizens from upper-level authorities. Zhou (2010) suggests that even upper-level authorities collude with lower-level officials to cover up misconduct from central monitor-

ing efforts.

In sum, the nomenklatura-like appointment system is central to the resilience of the one-party system because it solves the problem of credible commitment by distributing power according to predetermined rules. At the same time, the appointment system makes information asymmetry the central problem for the regime, because rule-based political selection is based on objective information.

Even under a single-party regime, the nomenklatura system can only take central authority so far. The single-party regime is the least-likely case for local autonomy, given the center's total control over the careers of local leaders. Yet "fragmented authoritarianism" (Lieberthal and Oksenberg 1988) is motivated by policymaking under the post-Mao Communist Party of China (CPC). With unprecedented advances in surveillance technology and Xi Jinping's strong political will to concentrate power, China may be more centralized than ever. However, I argue that these developments do not change the fundamental causes that establish de facto local authority, namely asymmetric information built into local conditions and aligned central-local interests.

1.2 Arguments of the Dissertation

Parallel to the dominant power of the center to manipulate the incentives of local officials, the lack of information about what local officials are doing and what they have done, always goes hand-in-hand with the hierarchical relationship. This creates a space of autonomy for local officials and, in turn, opens up avenues for local people to capture local officials by aligning their interests through collusion or corruption that goes unnoticed by

the central state. Both collusion and corruption are “illegitimate” ways of exercising local autonomy from the center’s perspective.

Collusion means that the local population helps local officials to perform better in the eyes of their superiors, so that the official can benefit through the formal institution. Corruption means that local people help local officials make private gains. For example, local business interests may work with local officials to waive the high social security tax so that local industry can expand production and the local economy. Or a business may bribe an official to receive special treatment from the government through subsidies and contract awards. Both collusion and corruption are often at odds with the center’s stated interests. The former is opportunistic, while the latter harms the state for private gain.

Even when the center can observe local officials’ present and past actions, the sheer heterogeneity across localities necessitates tolerance of legitimate policy variations and local discretion. The center should delegate some decision-making power to local officials to tailor for local conditions. In this case, top-down power that controls local incentives can become a barrier to effective governance. The forced incentives may impair the judgment of the local official and outweigh local information, as accountability from above would imply. The center is interested in promoting such local autonomy, which generates economic reform ideas and drives China’s economic advancement C. Xu 2011. Asymmetric information results in the center willingly or unwillingly granting de facto authority to local leaders on many political issues. Moreover, even when information is relatively extensive, it is better for the center to relinquish its control to shorten response time and avoid distorted incentives when the center and the municipality share common interests on the policy issue.

In sum, from the center's perspective, there are two ways of exercising local autonomy: one is illegitimate, the other is legitimate. The center would want to preserve the latter and prevent the former. Political variations due to the two motivations may be equivalent from an observational point of view, but the inclination toward each motivation may be different in different situations.

1.2.1 Autonomy Under Authoritarianism

The second chapter of this dissertation proposes a new typology of central-local relations in authoritarian states that recognizes that central-local dynamics vary across policy areas. In some policy areas, the subnational government is granted extensive autonomy, while in others it is not. The evolving central-local dynamic depends on two factors: Alignment of interests (natural or incentivized) and information symmetry (easy or difficult for the center to observe local conditions). Our focus on these two dimensions is not arbitrary. Misalignment of interests and information asymmetry between the principal and the agent are the two conditions that lead to principal-agent problems (Jensen and Meckling (1976)).

Due to asymmetric information, the center cannot enforce perfect delegation of interests and relies on local discretion to develop prompt policies to meet local conditions. With the authority conferred by the center, local leaders have limited but considerable policy discretion and can behave in ways that would be undesirable to the center. This "loss of control" is sometimes a trade-off that the center is willing to accept. The center meticulously develops formal institutions in the form of commands and assessments to improve the alignment between central and local interests and to enforce the central will.

In addition to information (a)symmetry, the alignment of interests between the center

and the municipalities is the other important dimension that determines how much autonomy should be granted. When the interests of the central and local governments align in an area, central intervention through the appointment system can be counterproductive. Just as a government subsidy can lead to oversupply in an efficient market, central intervention can distort the incentives of local decision makers by causing the radical imposition of a suboptimal policy under local conditions. In this situation, it would be better for the central office to allow local decision makers discretion. For example, the downtown landscape is a local issue where central and local interests should overlap. A central assessment based on this may result in local decision makers taking draconian measures to “clean up” street vendors that would otherwise have been tolerated by local decision makers because of the convenience they provide.

When the policy issue has immense externalities, as in the case of pollution or the control of a very contagious disease, central intervention becomes necessary to align interests between the center and the local level. The center can set tough targets for local officials and threaten them with penalties to internalize externalities. The more incentives the center imposes, the less autonomy the local state has, as not only are local conditions dwarfed, but more central oversight takes place to enforce these incentive structures. Interestingly, the more geographic externalities a policy issue has, the less likely it is that the outcome can be manipulated by local officials, as neighboring communities can detect spillover effects and report back to the center. Meanwhile, the more temporal externalities one policy issue has, the more likely the result can be manipulated by local officials since only ex-post audit can reveal the true state. This explains why air pollution draws much more local gov-

ernment effort than soil pollution, which is one of the biggest environmental challenges¹.

Specifically, the center grants more autonomy to local states when legitimate policy deviations are expected to prevail. This is the case when the center shares more interests with the local government, i.e., when externalities on the policy issue are less important. The center can trust local governments to make efficient adjustments that reflect local circumstances. Depending on whether the center can easily observe the situation on the ground, autonomy can be divided into unsupervised and supervised.

Unsupervised autonomy means that the center cannot easily verify or evaluate the delivered results, so it cannot monitor the results and punish incompetence. In this type of measure, the center does allow for variation in outcomes, but I do not see any central standards associated with rewards and punishments. This is not because these measures are unimportant to the center, but because the center does not want to allow artificial incentives to compromise natural alignment and does not have sufficient information to distinguish incompetence from legitimate deviation.

Supervised autonomy means that the center can more easily review and evaluate the delivered results, thus, it can monitor the results and punish incompetence. I expect that the center would set desired goals in such a way that underperformance would result in penalties for incompetence. As a result, local officials would deliver similar policy results. Simultaneously, the center allows for variations in implementation that are to be expected due to complex local conditions.

1. Reuters, April 16, 2019, www.reuters.com/article/us-china-pollution-soil/china-soil-pollution-efforts-stymied-by-local-governments-greenpeace-idUSKCN1RT04D

1.2.2 Unsupervised Autonomy: China's Social Security System

The third chapter of this dissertation examines China's social security collection from non-state-owned enterprises (SOE) as a case of unsupervised autonomy. First, the center recognizes the information asymmetry in the design and implementation of social insurance policy and intentionally delegates its authority, allowing for enormous variation across regions. Second, the central and local states have a common interest in maintaining social stability through the provision of social security. As expected, I observed differences in policy outcomes, but no evidence of reward or punishment associated with social security. Subnational officials use their autonomy to adapt policies to local challenges.

China's social policy regime is regarded in the literature as fragmented and decentralized (Ratigan 2017; Hurst 2004; Lin and Dale Tussing 2017; X. Huang 2020). In the implementation, China's central authorities allow counties to collect and manage most of the social security tax. Most social security accounts are decentralized, used, and managed at the county level.

The collection of social security contributions has become visibly loose. According to data at the industrial enterprise level from 2004 to 2007, the participation rate was 62.9%, and many enterprises used the minimum assessment base instead of actual salary to minimize contributions. Among participating enterprises, the average contribution rate was 9.2% of gross wages, far below the national nominal rate of 28%. The central government has condoned the apparent local negligence in collecting social security contributions.

Local leaders are often characterized as lacking incentives to collect social security if they are not under spending pressure (Nyland, Smyth, and Zhu 2006, 199). Moreover,

Social Security revenues are for exclusive use, and their misuse is a serious offense. Social Security is not fungible, while tax revenues are; local governments would prefer one yuan of tax revenue to one yuan of social security revenue in a surplus period. Since local businesses can only absorb a certain level of extractions, the social security tax competes with discretionary tax revenues. This leads to a general lack of incentive to maintain the social insurance system.

This incentive structure is reversed when a municipality faces increasing pressure in social spending. Due to the mandatory and fixed nature of taxation, tax collection is less flexible and more enforceable than social security collection; there is much less scope for introducing new revenue sources. Rather than using limited discretionary revenues to make up for a Social Security shortfall, local policymakers would prefer to collect more Social Security tax by expanding private enterprise participation.

Empirical results in chapter 3 find that social security tax enforcement correlates with the potential of local labor unrest, measured by the scale of laid-off workers. Using a novel measure of state effort of redistribution at the county level, the chapter finds more laid-off workers led to higher social security extraction from non-SOE firms. Local states follow a “demand-driven” strategy, and their willingness to compensate economic losers directly relates to the scale of *expected* collective action, not just realized action.

Under unsupervised autonomy, the Social Security system becomes a flexible tool for local governments to extract resources to preempt collective action, despite a national policy governing the scope of collection.

1.2.3 Supervised Autonomy: China's COVID-19 Lockdown

The fourth chapter of this dissertation examines China's COVID-19 lockdown decisions in early 2020 as a case of supervised autonomy. The CPC's top leadership, despite its absolute personnel control over local officials and the extreme importance of the issue, chose a decentralized approach and left control of the pandemic to local discretion. In contrast to the autonomy granted, which allowed for heterogeneous responses, strict political control was established by sanctioning officials who failed to deliver satisfactory results. As expected, as every city achieved zero COVID, there were few variations in the policy outcome (COVID-19 infection) but significant variations in policy implementations (lockdown severity).

Note that the supervised autonomy only characterizes the early 2020 COVID-19 situation in China when the unvaccinated population was facing a deadly virus with a reproductive number (R_0) of 2.5 (Burki 2022). This means local governments and the center share interests in containing the disease. As the mutated variant of the COVID-19 became more contagious (the Delta variant's R_0 is just under 7, Omicron's R_0 is estimated to be around 10 (Burki 2022)) and less deadly among the vaccinated population, the divergence between locality and the center became more stark. On the one hand, the cost of losing control in one city became lower because less people would die even if most of the population was infected. On the other hand, the externalities of losing control in one city became higher because the spillover was more probable and would impact larger population in a shorter period of time. The Omicron wave marked that the zero-COVID policy transformed from supervised autonomy to central command.

After the party center in Beijing sanctioned hundreds of officials in Wuhan for the first outbreaks in January 2020, pandemic control became an ever-present threat to political survival for local officials. With survival as a single goal, officials were keen to take extreme pandemic control measures to minimize career risks. Lockdowns have imposed enormous socioeconomic costs on rural communities. The January 23, 2020, lockdown of Wuhan was a precedent-setting event that gave local officials unprecedented power over the entire population in their jurisdictions.

China during the COVID-19 pandemic is an excellent example to examine how officials used their autonomy under centralized supervision. The pandemic crisis constrained officials' performance evaluations in a way that allows us to observe changes in bureaucratic decision making in a simplified, natural environment. The high frequency of lockdown decisions in response to daily infections and the high importance of the policy outcome in the calculus of all officials provide us with a short period of time with thousands of comparable policy decisions. The single-target incentive of pandemic control has become a default for all Chinese officials. We can concentrate on how the objectives of local officials impact their respective handling of local outbreaks.

To empirically examine these local lockdowns and local responses to central mandates, I constructed a novel dataset for 329 Chinese cities from January 1 to April 28, 2020, which documents these cities' daily intracity mobility, COVID-19 cases, precipitation, and temperatures. Intracity mobility data are from Baidu, which uses location data from Baidu Location-Based Service (LBS), a popular Chinese equivalent of geo-located Google services. According to LBS, intracity mobility intensity is measured as the proportion of city residents who change their locations. I match these data with the COVID-19 cases and

weather data from the China Data Lab of Harvard Dataverse. I use difference-in-difference methods to analyze how conflicting targets impact officials' pandemic responses dynamically. To measure new lockdown measures, I use differences in intracity mobility from the previous day.

In the early days of the pandemic, a simultaneous and high-profile campaign to eliminate poverty allowed me to examine the drastic trade-offs faced by the authorities. Cities that had just eliminated poverty imposed 68% more mobility restrictions than other poor cities in response to local unit infections. The conflicting goal of poverty eradication mitigated the COVID-19 severity of the restrictions in poor cities by 40%. In summary, officials in poor cities achieved zero COVID with fewer closures and less harm to the economy, while other officials pursued minimal risks due to unilateral survival incentives.

Findings in the chapter have important implications for understanding bureaucratic control in China. High-powered incentives have been instrumental to both China's development and many tragedies in its modern history. Simultaneously, we see more objectives are added to the evaluation of official performance, from pollutant reduction (Chen, Li, and Lu 2018) to welfare provision (Zuo 2015a), making monitoring harder and incentive murkier. These potentially conflicting objectives change the local official's single-target incentives by manifesting the center's multi-dimensional preference. While hard budgets impose external constraints on official action, conflicting objectives impose internal constraints.

The chapter also sheds light on the evaluation of China's zero-COVID policy. China's rapid nationwide lockdown has been instrumental in controlling the pandemic within its borders. Complaints about the draconian measures used in China's lockdowns surfaced

regularly on Chinese social media. These measures themselves have caused loss of life,² and Beijing's zero-COVID approach became a formidable institution, hard to change, even when the rest of the world opened its borders. Were all closures necessary given their immense social cost? The results of this study show that even officials with the fewest resources could afford to impose fewer lockdowns and succeed in controlling the outbreak; in addition, biased survival incentives rather than public health knowledge dictated some lockdown decisions.

2. "Anger at Xi'an Lockdown Spreads in China," *Wall Street Journal*, January 5, 2022, www.wsj.com/articles/anger-at-xian-lockdown-spreads-in-china-11641433781

Chapter 2

Autonomy Under Authoritarianism: A Typology

HONGSHEN ZHU AND VIOLA ROTHSCILD

When can we treat subnational units under authoritarianism as independent observations? The main thesis of this chapter is that we can treat subnational units under authoritarianism as independent as national units when subnational governments share interests with the central government. When the two actors do not share interests, the authoritarian central government will press its interest through incentive structure such that subnational units either become duplicated clones of a single central government or transform into agents of a top-down organization, both of which are inherently more interdependent than national units.

In an influential article in *Studies in Comparative International Development*, Snyder (2001) describes the analytical and methodological benefits of using subnational units in comparative politics. He argues that the subnational analysis does not only increase the number of observations but also strengthens the researcher's control over potential explanatory variables as "subnational units within a single country can often be more easily matched on cultural, historical, ecological, and socioeconomic dimensions than can national units"

(96).

In addition to increasing the number of observations and making controlled comparisons, going subnational can be an important tool for examining the spatially uneven nature of major political and economic transformations. In the nearly two decades since Snyder's seminal article was published, scholars of comparative politics have embraced subnational analyses. Quantitative single-country analysis exploiting large-n subnational variations increased substantially during the period from 2000-2017 (Pepinsky 2019). From Figure 2.1, we see the number of quantitative, single-country articles published in top political science journals grow significantly for nearly every region since 2000. The question of whether and when theories can be applied across levels of analysis, however, remains an important but under-researched topic (Wibbels 2006; Giraudy, Moncada, and Snyder 2019).

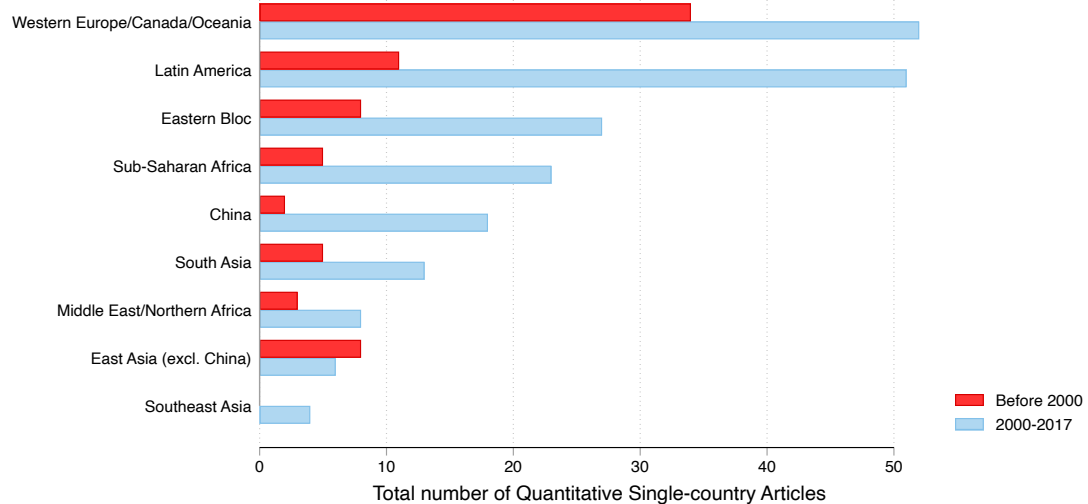


Figure 2.1: Quantitative single-country articles by region

Data are collected by Pepinsky (2019) covering *American Journal of Political Science*, *American Political Science Review*, *Journal of Politics*, *Comparative Politics*, *Comparative Political Studies*, and *World Politics* in 1965-2017. Data are reanalyzed by this chapter to display quantitative articles on China.

China, a region-sized, geographically and administratively complex authoritarian state¹ with a recent history of rapid economic development and a long history of local autonomy, presents an ideal setting for subnational analyses (Zuo 2015b; Rithmire 2014). Indeed, Chinese political scientists have long used access to rich local data and a well-studied institutional background to apply the subnational comparative method. The result is a large number of studies analyzing subnational differences in public goods (Tsai 2017; Chen and Huhe 2013) and welfare provision (X. Huang 2015; Ratigan 2017), environmental programs (Li 2011), agricultural de-collectivization (Chung 2000), poverty reduction efforts (Donaldson 2007), political selection (Jia, Kudamatsu, and Seim 2015; Landry, Lü, and Duan 2018), policymaking processes (Heilmann 2008), labor protests (Fu 2017; C. K. Lee 2007), economic development (Bulman 2016a; Whiting 2001; Yang 1997), and more. These studies have provided important insights into how and why political and economic phenomena lead to different outcomes in different parts of the country, what areas drive national averages and trends up or down, and what contradictions exist between national policies and subnational practices. Overall, these studies have helped to develop and advance the now widely held recognition that China is anything but monolithic.

However, the rising interest in China studies and its suitability for “scaling down” are underscored by two puzzling facts: first, the number of quantitative single-country articles about China in top political science journals is still significantly fewer than other developing regions such as Latin America, the Eastern Bloc, and Sub-Saharan Africa (see Figure 2.1); and second, Chinese politics articles are rarely cited by non-China articles,

1. China’s local administrative hierarchy consists of 31 provinces, 283 prefecture-level cities, 2,859 county-level units, and 40,831 township-level units.

unlike other single-country studies on Brazil, Russia, or India (Tsai 2017)². In sum, China studies has yet to fulfill its potential to contribute to the comparative politics literature in both quantity and transferability. What aspects of China as a region and China studies as a sub-field obstruct dialogue with other fields?

This chapter argues that China's "uniqueness" as a high-capacity, authoritarian state and the extant literature's focus—implicit or explicit—on principal-agent dynamics in central-local relationships can explain the peripheral status of China studies in comparative politics. Through developing a new typology of central-local relations in authoritarian states, we show that neither of these factors should preclude "bringing in China" for building comparative political theory Tsai (2017). Instead, it is the overemphasis of a subset of Chinese politics questions that makes many of China studies articles unsuitable to answer comparative politics questions.

Section I discusses how Snyder's approach can be combined with China studies. Section II introduces a new typology of central-local relations in authoritarian states. Section III explains its applications and results with examples from the Chinese politics literature in specific policy areas. Using examples from China allows the authors to draw on their expertise and keep the analysis grounded in a single setting. In section IV, we conclude with our contribution.

2. Maybe the only exceptions are Shih (2004) and King, Pan, and Roberts (2013), where sub-national variations are muted in the patron-client framework and the censorship regime of the internet.

2.1 "Snyder in Shanghai"

Snyder's comparative subnational method begins with a vision of burgeoning global decentralization due to the devolution revolution in industrialized countries, Washington Consensus-style economic reforms in developing countries, democratization, and the collapse of central states. These motivating examples seem to preclude China as an ideal place to practise subnational comparative method. These motivating examples capture the centrifugal tide in the 1990s but many of these forces have reversed in the recent decade: overoptimism of democratization in the 1990s (Levitsky and Way 2015), signs of democratic backsliding (Freedom House 2016; Waldner and Lust 2018), stigmatization of the Washington Consensus (Serra and Stiglitz 2008), recentralization in many developing countries (Dickovick 2011), and theoretical and empirical evidences supporting centralization in governance (Treisman 2007; Cai and Treisman 2009; Malesky, Nguyen, and Tran 2014). These developments seem to run against the Snyder's vision of a more suitable world for the subnational comparative methods. At first glance, centralization and authoritarian states are both at odds with local autonomy and "scaling down."

However, local autonomy does not necessarily rely on democratization and federalism to exist. It is local autonomy that makes treating subnational units as independent observations credible. Indeed, regime type does not inherently diminish the applicability of subnational analysis in strong, authoritarian states. Autocrats with absolute power over subnational leaders sometimes delegate substantial power to subordinates such that there exists strong local autonomy in some policy areas (e.g. post-reform China, see C. Xu 2011). Conversely, democratic national governments can appoint subnational leaders and set lo-

cal budgets to leave little autonomy for local governments (e.g. post-Taliban Afghanistan, see Murtazashvili 2016). The degree of local autonomy is not about the sources of the local authority, but rather the degree of freedom in local policymaking. Admittedly, the presence of a strong central government does pose challenges to the transferability of China studies due to the particularities of Beijing's preferences. However, not everything is about Beijing and its imperatives. We argue that with clear delineations of central-local relations in research questions, we can carve out many policy areas in China studies where there is sufficient local autonomy to test comparative politics theories.

Secondly, Snyder warns about two common pitfalls in using the subnational approach. First, the process described by the hypothesis under study may not occur within subnational units, as is the case with macroeconomic policymaking. Second, subnational observations may be interdependent, affecting our ability to draw valid inferences. The assumptions of the P-A problem exemplify the two most common pitfalls in Snyder's warning. First, by assuming that the subnational unit has different interests than the national unit, the hypothesis tested on subnational units inherently does not apply to national units. Second, interdependence among subnational units is unavoidable as competition and collusion are built into the model that multiple agents adhere to one principal. Explicitly or implicitly, much of the literature on China policy focuses on principal-agent (P-A) problems as defining features of central-local dynamics. While this approach helps us understand how P-A problems play out differently in different contexts, it often morphs into a study of organizational behavior rather than comparative policy. It is no longer about "taking territory seriously" but about taking biographies of subnational leaders seriously. Sovereign states and democratic subnational governments do not have upper-level gov-

ernments as principals; as a result, the P-A problem framing in these subnational analyses theoretically precludes treating subnational units as independent units that implement policy autonomously according to local conditions. By scaling down, these analyses succeed in increasing the number of observations in terms of dyads between principal and agents. However, going subnational under the P-A framework only increases the number of agents—it does not add to the number of observations that resemble independent states.

To be sure, bureaucracy and central-local relations should be at the forefront of studying the country with arguably the longest bureaucratic tradition worldwide. However, a P-A problem is just a subset of possible central-local dynamics. We argue that many policymaking problems faced by subnational governments in China are not principal-agent problems, but problems of the across-locality variations. Various policies and government functions are carried out to reflect local challenges. Therefore, the mismatch between research interests in P-A problems and the subnational comparative method obscures the transferability of evidence found in China's subnational variations. By clearly delineating these comparative research questions, China, with its immense heterogeneity and data richness, can contribute much more to the comparative politics studies.

2.2 A New Typology

As the source of authority is top-down from the central state rather than bottom-up from the pluralistic consent of citizens, the dynamics of relations between the central government and local authorities in authoritarian states often take on P-A characteristics (Geddes, Wright, and Frantz 2018; Svobik 2012). As described above, Snyder's method is not

applicable in P-A situations because the locality behaves like a commanded agent rather than an autonomous entity. In these cases, we cannot infer the national unit from the sub-national unit. Nevertheless, researchers can take full advantage of Snyder’s method in evaluating central-local relations in authoritarian states because many policies and government functions do not cause P-A problems. Under these conditions, local states behave similar to mini-states that can be treated as independent units. Researchers must determine the specific nature of central-local dynamics before they become “subnational” in the authoritarian context.

We develop a new typology of central-local relations in authoritarian states that recognizes that central-local dynamics vary across policy domains. In some policy areas, the subnational government can be treated as a national government; in others, it cannot. The central-local dynamic that develops depends on two factors: Alignment of interests (natural or incentivized) and information symmetry (easy or difficult for the center to observe local conditions). Our focus on these two dimensions is not arbitrary. Misalignment of interests and information asymmetry between the principal and the agent are the two conditions that lead to P-A problems.³ We illustrate our typology in Figure 2.2.

		INTERESTS	
		Natural Alignment	Incentivized Alignment
INFORMATION	Symmetry: easy for center to observe local conditions	I: Supervised Autonomy	III. Central Command
	Asymmetry: difficult for center to observe local conditions	II: Unsupervised Autonomy	IV: Principal-Agent Problem

Figure 2.2: Dynamics of Central-Local Relations in Authoritarian States

3. See the classic article by Jensen and Meckling (1976)

2.2.1 Information: Observe, Understand, and Compare

The information dimension is automatic in that it arises from the inherent characteristics of the political task. The formulation of some policy goals requires less local knowledge than the formulation of others, and they are easier to measure than others. The main distinction here is how easy it is for the central state to observe and understand policy outcomes without relying on local information.

For authoritarian regimes that do not rely on performance for legitimacy, such as long-reigning monarchies and regimes dependent on charismatic leaders,⁴. The information dimension is less pronounced. For most modern autocracies, however, “socioeconomic or ‘performance’ reasons...have typically been regarded as the principal basis on which they can seek legitimacy.” (White 1986: 463). Without legal legitimacy gained through competitive elections, performance legitimacy makes objective information especially important to the regime. Access to accurate information is critical to achieving the right outcomes. This also means that the central-local dynamic must be somewhat impersonal, even mechanical. Officials should be judged by what they do, not by who they are. In such evaluations, local officials follow certain standards set by the center *ex-ante*, and the information collected *ex-post* is considered.

Information symmetry refers to an information situation in which the relative performance of local states is easy for the center to observe and understand without relying on local reporting. When information is symmetric, the central and local states agree on what to expect if the policy outcome falls short of the center’s demands. The certainty of the

4. i.e. “traditional legitimacy” and “charismatic legitimacy” respectively in Max Weber’s three types of legitimate rules. The third type is rational-legal legitimacy, where both elections and performance are classified.

consequences induces the local states to strive to meet the center's demand. Since the outcome of the evaluation (likelihood of career advancement) is predictable for local states and the performance is visible to the central state, local states should adopt the preferences of the center, regardless of the alignment of interests. However, whether they are mini-states that can be treated as independent units depends on how heavily the central preference is forced upon local states through top-down incentives. If local states are incentivized to not deviate from the central demand, then their behaviors are just duplicated observations of a single central state. Mistakenly treating them as independent can give rise to an overestimation of statistical significance.

In an asymmetric information situation, it is difficult for headquarters to observe and understand the relative performance of local states without relying on local reporting. In this situation, the central state is reluctant to cede more autonomy to local states because it cannot exercise effective control. When information is asymmetric, standards for punishments and rewards are less clear and often relative rather than absolute (e.g., local tax collection, social security collection). As evaluation depends on the actions and performance of other local states, which are also less visible to the central state, punishment or reward is less predictable. Owing to this uncertainty, the central state requirement is not met without deviation. Indeed, Jiang (2018) finds that local officials in patronage networks can moderate this uncertainty by securing credible promises of promotion from their patrons. With relatively clear expectations of rewards for economic growth—a policy area rife with asymmetric information—these officials are more incentivized to promote growth in their localities.

2.2.2 Interests: Externality, Intervention, and Interdependence

The interest dimension is not automatic, but is determined by central preferences. The center sets its preferences and then intervenes to a greater or lesser extent depending on whether it perceives the local interests as coinciding with its own.

Natural alignment refers to policy areas or government functions where the preferences of the central and local states coincide. This may be because the central state has lower stakes, or because the central and local time horizons and goals are similar, or both. When this is the case, the central state willingly cedes more autonomy to local states and exercises less control because it can trust local states.

Incentivized alignment refers to policy areas or government functions where the preferences of the central and local states diverge. This may be because the center has higher stakes or a different time horizon than the local states. When the policy issue has an externality, as in the case of pollution or the control of a very contagious disease, central intervention becomes necessary to align interests between the center and the local level. The center can set hard targets for local officials and threaten them with penalties to internalize externalities. The more incentives the center imposes, the less autonomy the local state has, as not only are local conditions dwarfed, but more central oversight takes place to enforce these incentive structures. Interestingly, the more geographic externalities a policy issue has, the less likely it is that the outcome can be manipulated by local officials, as neighboring communities can detect spillover effects and report back to the center. Meanwhile, the more temporal externalities one policy issue has, the more likely the result can be manipulated by local officials since only ex-post audit can reveal the true state. This

explains why air pollution draws much more local government effort than soil pollution, which is one of the biggest environmental challenges⁵.

Externality invites intervention and intervention transforms local concerns into principal-agent problems. When the preference of the principal becomes more salient and clear, the relative weight of local conditions depreciate in subnational officials' decisionmaking. With multiple agents and one principal, agents compete for relative performance and the acceptable standard moves with the average performance. Interdependence between subnational units become an institutionalized feature. As a result, subnational leaders do not behave like national leaders who have sovereign power and do not heed to top-down incentives.

This is not to say that there is no interdependence between subnational units in other configurations of information and interests. However, subnational analysis only needs to be as interdependent as cross-national analysis to stand out in the horse race. As long as the salience of interdependence (policy diffusion, borrowing, migration, competition) among subnational units are comparable to that among national units in the policy area, scaling down still provides net benefits. Indeed, the more contextualized knowledge in single-country analyses can help us to be more aware of the existence of interdependence and to model it more accurately. Without top-down intervention through career incentives, interdependence between subnational units are based on local conditions just as the interdependence between national units in a interconnected world.

We theorize that we do not observe P-A problems in the analysis of policy areas and government functions in quadrants I, II, and III due to the configuration of information and

5. Reuters, April 16, 2019, www.reuters.com/article/us-china-pollution-soil/china-soil-pollution-efforts-stymied-by-local-governments-greenpeace-idUSKCN1RT04D

interests. The extent of local state autonomy varies according to our characterization of the central-local dynamic: unsupervised autonomy, supervised autonomy, and central command. The autonomy of a local state increases with interest alignment and decreases with information symmetry. Only in policy areas and governing tasks in Quadrant IV—where both interests and information between central and local governments are misaligned—are principal-agent problems present. Much Chinese political literature explicitly and implicitly assumes central-local dynamics fall into this category. However, in this category, we cannot treat the subnational unit as mini-states. As for quadrant III of central command, local states are clones of the central state such that they should be treated as duplicated observations instead of independent observations.

2.2.3 Quadrant IV: Principal-Agent Problem

Before proceeding to our main analysis, we briefly review the characteristics of principal-agent problems that may arise in the quadrant IV. In policy areas and government functions where central and local interests are aligned only through incentives and information is asymmetric, we can expect P-A problems. In quadrants I, II, and III, the central government can impose its will: By delegating, monitoring, and punishing, it can either trust local agents or force renegade local agents back in line. In quadrant IV, however, local officials can behave like opportunistic agents, as they have both the incentives and the latitude to undermine the central state's plan.

Political Selection

Lacking the information necessary to monitor and punish local agents, the central state has to rely on rewards (e.g., career advancement) (Jia, Kudamatsu, and Seim 2015; Landry, Lü, and Duan 2018; Li and Zhou 2005) to induce competition (e.g., tournaments) between localities to achieve its desired goals (Kung and Chen 2011; Lü and Landry 2014; Maskin, Qian, and Xu 2000). Under these conditions, subnational units are agents responding to top-down incentives—we cannot treat them as mini-states in our analysis.

Note that the yardstick competition model that is used to explain local economic growth with promotion incentives assumes that interest misalignment between local officials and the center (Shleifer 1985). It may be simplistic to explain China's local growth in terms of the measure of competition, since economic growth itself does not involve any obvious differences of interest—both the central government and local states should naturally prefer higher economic growth. However, once the center uses economic growth as a yardstick for policy selection (i.e., promotes the most competent officials to the top), local interests are no longer aligned with the center, as each local official now has an incentive to signal his or her type with GDP figures that are boosted by short-term investments and even falsified statistics (Wallace 2016). For example, Vietnamese government may care about economic growth as much as Guangdong provincial government but it does not need to outperform Malaysian government to win any rewards from a transnational entity.

As with job market signaling (Spence 1973), local officials withhold private information about their true competence level from the center and want the center to believe they are competent. This classic example of the P-A problem is inherent to the political selec-

tion, rather than any substantive content of the standard that is used for political selection. If social security collection (or some other policy metric) were somehow deemed the primary way to measure the competence of local officials, then social security would fall in Quadrant IV.

It is not surprising, then, that the China literature focuses disproportionately on quadrant IV, since it is concerned with political selection and P-A problems are inherent in the political selection process. To promote competent types, the center must set relative standards that introduce fierce competition. Economic growth is chosen as the predominant measure of policy selection because it is selective enough to have many variations and complex enough to avoid brute force enforcement. These properties generally correspond to a policy issue with asymmetric information.

2.3 Application and Outcomes

Through careful consideration of interests and information, we can determine the nature of central-local dynamics in certain policy areas. Depending on the outcome, we can then predict how the central state rewards and punishes local actors and how local states behave in turn. This section explains our typology and describes the implications for the central and local behaviors we are likely to observe in each category. To illustrate the potential applications of our typology, we draw on examples from policy areas that have inspired a large literature in both political science and China studies.

2.3.1 Quadrant I: Supervised Autonomy

In analyzing policy areas and government functions where central and local interests naturally align and information is symmetrical, we should observe that the central state cedes autonomy to the local state. The natural alignment of interests allows the central state to rely on the local state's knowledge and its handling of complex local circumstances. The central state allows for some variation in implementations and outcomes and does not set specific standards or goals but retains the ability to monitor outcomes and punish incompetence. As such, local states behave like mini-states with some autonomy.

Social Stability

Social stability is one of the “imperative goals” (yipiao foujue) that the central state sets for local officials. After the 1989 Tiananmen protests, a central rule stipulated that the occurrence of “mass petitions to higher levels, illegal demonstrations, mass riots, strikes, or school boycotts” in a jurisdiction constituted a one-time denial of a local official's promotion, regardless of performance in other areas.⁶ However, contrary to the conventional wisdom that this stipulation forms the institutional basis of why local states maintain social stability, it is not universally enforced. The center is more tolerant of social instability in some regions than others: local officials in high-growth regions can be promoted despite social unrest, while officials in low-growth regions are punished for social unrest (Bulman 2016a).

6. “Provisions of the Central Committee for Comprehensive Management of Social Security on the Implementation of the One-Vote Veto System (Trial Implementation)” 《中央社会治安综合治理委员会关于实行社会治安综合治理一票否决权制的规定（试行）》，Central Committee, 1992, www.elinklaw.com/zsglmobile/lawView.aspx?id=10144.

Enforcement of this stipulation is also unfeasible. Analysis of social media posts, Zhang and Pan (2019) identifies more than 100,000 “collective action events” that occurred during the period from 2010 to 2017, distributed across 96% of counties. The pervasiveness of collective action events implies that not all occurrences of social instability result in punishments for local officials. If we limit ourselves only to observable, large-scale social unrest, the enforcement of centralized punishments is still not categorical. Even high-profile, large-scale protests that attract international attention may not lead to punishment. For instance, neither the Wukan incident in 2011⁷ nor the Xiamen p-Xylene plant protests in 2007⁸ impeded the promotion of city leaders. In sum, while social instability increases the chance of central punishment, it is not as compelling as conventional wisdom assumes. Indeed, if nullification of other gains is certain once collective action occurs, then the local official would have no incentive to resolve the crisis.

In addition to penalties from the center, local states have their own reasons for preventing social unrest. First, protests are geographically concentrated and are usually directed against the local state as a strategy to attract the attention of the central state to correct poor policy implementation (Cai 2010; Lorentzen 2013; O’Brien and Li 2006; Qin, Strömberg, and Wu 2017). Second, large-scale social unrest can cause serious disruptions to the local society through traffic blockades and demonstrations (Cai 2002). Either out of fear of punishment by the central government or out of self-interest, or both, it is evident that local states have a common interest with the central government in maintaining social stability.

7. Andrew Jacobs, “Village Revolts Over Inequities of Chinese Life,” *The New York Times*, December 14, 2011, <https://www.nytimes.com/2011/12/15/world/asia/chinese-village-locked-in-rebellion-against-authorities.html>.

8. “Thousands Protest Against Chemical Plant in Xiamen,” *South China Morning Post*, June 2, 2007, <https://www.scmp.com/article/595260/thousands-protest-against-chemical-plant-xiamen>.

To manage different kinds of collective action events, local officials selectively deploy various methods: material concessions (Pan 2020), targeting friends and families of activists (Deng and O'Brien 2013), physical intimidation and repression (Ong 2018), and co-optation (Elfstrom 2019; D. Liu 2019; X. Xu 2021). The range of options for dealing with social unrest illustrates the autonomy granted to local states. While the occurrence of social unrest is not difficult for outsiders to detect, solutions require local knowledge to implement quick and effective responses. By both allowing autonomy and selectively punishing local officials who fail, the central state has “successfully prevented the emergence of full-fledged social movements.” (Elfstrom 2019: 860).

Applying our framework to the politics of social stability in China, it maps to supervised autonomy. First, despite low incentives for local reporting, large-scale social unrest—by definition—causes observable social effects, making it relatively easy for the center to monitor and evaluate. Second, the central and local governments have a shared interest in preventing social unrest. The resulting configuration of information and interests suggests that local states behave like mini-states to manage social unrest. The central state tolerates deviations in the implementation and results. However, it also makes clear that it is closely monitoring outcomes and may punish failures in social stability maintenance.

2.3.2 Quadrant II: Unsupervised Autonomy

In areas of policy and government where central and local interests naturally align but information is asymmetric, we should observe that the central state cedes the greatest autonomy to local states. The natural alignment of interests allows the central state to rely on local states' knowledge and handling of complex local circumstances. However, be-

cause of the information asymmetry, the central state cannot monitor outcomes or punish incompetence, unlike in Quadrant I. The central state has no control over the local states. Therefore, in this type of policy, the central state allows for variation in outcomes, but we do not see central standards associated with rewards and punishments. This is not because these policies are unimportant to the central state, but because the central state does not want to jeopardize natural alignment by offering rewards and does not have sufficient information to enforce punishments. Under these conditions, local states will also behave like mini-states with autonomy.

To be sure, there may still exist interdependence between subnational units in this quadrant. For example, even if localities have the unsupervised autonomy to set local tax rates, the incentives to attract investment with tax breaks can lead to a “race to the bottom” competition between them. This certainly violates the independence assumption among cases and Snyder’s second caveat. However, as argued before, this kind of interdependence is not so different from pro-business competition between national units for investment from international capital and multi-national corporations.

Social Security

China’s social security system is highly localized. According to the 2011 Social Insurance Law,⁹ county-level governments manage the spending and collection of social security taxes.¹⁰ As X. Huang (2015) explains, “[t]he centre delegates discretionary power to local officials in policy design regarding the coverage and generosity of social insurance to

9. “Social Insurance Law” 《中华人民共和国社会保险法》, 2010, <http://www.gov.cn/flfg/2010-10/28/content.1732964.htm>. The law was enacted in 2011.

10. In China, provinces encompass prefectures, and prefectures encompass counties. Prefectures usually comprise county-level urban districts and rural counties.

accommodate diverse local situations” (457). Resulting from this delegation, local regulations often differ formally, such as payment rates and caps on payment size, as well as informal ways, such as enforcement on the ground (Rickne 2013). For example, in an analysis of firm-level data from Shanghai, Nyland, Smyth, and Zhu (2006) and Nyland, Thomson, and Zhu (2011) find that penalties for non-compliance with the social security tax are weakly enforced among non-state-owned enterprises but better enforced among state-owned enterprises where compliance is high. The degree of regional fragmentation of the social security system manifests across nearly 3,000 county-level units. Adding to the evidence that variation is tolerated by the center, Persson and Zhuravskaya (2016) find no correlation between social expenditure and the promotion prospects of local officials. The variation is better explained by local conditions. Indeed, X. Huang (2015) finds that local governments implement social health insurance policies according to local fiscal resources and the risk of social unrest.

Widespread collective action following massive layoffs during the reform of state-owned enterprises in the late 1990s prompted the central government to establish a social security system (Hurst and O’Brien 2002). Not only does the center want to avoid collective action, economic-driven collective action often targets local governments such that it is in their interest to head off social unrest with concessions (Cai 2002).

Applying our framework to social security policy in China, it corresponds exactly to the principle of unsupervised autonomy. First, the center recognizes the information asymmetry in the design and implementation of social security policy and deliberately delegates its authority, allowing for enormous regional variation. Second, the central and local states have a common interest in maintaining social stability through the provision of social secu-

rity. We observe differences in policy outcomes, but no evidence of reward or punishment related to social security. As mini-states, local states use their autonomy to adapt their policies to local challenges.

2.3.3 Quadrant III: Central Command

In policy domains where central and local interests are aligned only through imposed incentives (i.e., not naturally), but information is symmetric, we should observe that local states strive to meet standards set by the central state and face predictable penalties when they fail. Since the center does not rely on local knowledge, the standards are likely to be hard targets. Under these conditions, local states would manipulate information if they could-but they cannot. As the center upholds the universal standard, it does not allow for differences in outcomes and will use penalties to identify and weed out disloyal or incompetent local representatives. Consequently, local states behave like clones of the central state, i.e., without autonomy. Only in this quadrant, local officials can be said as agents without agencies that mindlessly implement central commands. If local states are incentivized to not deviate from the central demand, then their behaviors are just duplicated observations of a single central state. Mistakenly treating them as independent can give rise to an overestimation of statistical significance.

Environmental Governance

Environmental policy is an example of a policy area in transition. Existing literature has focused on the implementation gap that exists between ambitious central policies and local execution and enforcement (Economy 2010; Kostka 2016; Ran 2013; Rooij 2006). Principal-

agent problems—marked by data falsification (Ghanem and Zhang 2014), uneven enforcement (B. v. Rooij et al. 2017), and foot-dragging and blame games (Eaton and Kostka 2014; B. v. Rooij et al. 2017) are inherent as a result of misaligned interests and asymmetric information, as environmental officials are largely “under the authority of officials whose priority is short-term growth rather than long term sustainability” (Lieberthal 2007: 8). Indeed, scholars note that a “critical constraint” on policy implementation is the inability to access accurate information, and monitor, evaluate, and enforce the policies at local levels (Wong and Karplus 2017).

This dynamic is changing, however. Beginning with the 11th Five-Year Plan (2006–2011), the center introduced hard targets for emission reductions and new mechanisms to monitor local agents. Chen, Li, and Lu (2018) find a significant decrease in both SO₂ emissions and GDP growth following the implementation of hard targets for pollution reduction.¹¹ X. Zhang (2017) evaluates the effects of a Ministry of Environmental Protection program launched in 2007 to decrease data falsification and enhance the quality of emission data; she finds that “the implementation of the program increased the difficulty for localities to overreport emission reductions, enhanced local monitoring and enforcement capacity, and deterred violations among regulated parties” (749). More and better information is also coming from civil society and non-governmental organizations that are posting real-time measurements of air and water emissions on websites and mobile apps (Shin 2017).

The trend toward re-centralization has accelerated under Xi Jinping. Technological

11. This policy change was accompanied by increased local oversight by the State Environmental Protection Agency (SEPA). SEPA records report each firm’s SO₂ emissions through direct monitoring. Chen, Li, and Lu (2018) conclude that it is very unlikely that the data were systematically manipulated via collusion between SEPA officials and local bureaucrats. In this case, accurate information and incentivized alignment resulted in effective Central Command.

advances and big data approaches to environmental management have made local conditions more visible to the central state. (Kostka and Zhang 2018). In 2016, the Ministry of Environmental Protection announced the construction of a national ecological big data platform to centralize data management.¹² In 2018, Xi consolidated environmental governance into a new and expanded Ministry for Ecology and Environment. While scholars note that recentralization efforts have produced mixed results, there is a consensus that “the strengthening of vertical linkages between the Ministry of Environmental Protection and new local enforcement agencies have made it harder to fabricate information about local conditions and created new obstacles for those shirking environmental responsibilities” (Kostka and Nahm 2017: 750).

As central knowledge of local practices becomes more symmetrical, environmental policy has moved from a P-A problem dynamic to a central command dynamic. Our framework points to the importance of a thorough knowledge of policy in a spatial and temporal context to determine which quadrant best reflects it. As B. v. Rooij et al. (2017) points out, richer and more urbanized areas have stronger and more frequent enforcement than do inland areas. Furthermore, in some cases, where the center still relies heavily on localities for information, environmental policies continue to be P-A problems. For example, this remains the case with water quality and soil pollution, where investment in data measurement and collection has lagged Kostka and Zhang 2018. However, where data is more reliable, and the center has good enough information—air pollution, for instance—we will observe a Central Command dynamic, characterized by hard targets accompanied

12. “Notice of the State Council on Issuing the Action Plan for Prompting the Development Plan of Big Data,” 《国务院关于印发促进大数据发展行动纲要的通知》 State Council, 2015, http://www.gov.cn/zhengce/content/2015-09/05/content_10137.htm.

by predictable punishments for failing to achieve the targets. Despite an unwillingness to curb pollution, local states behave like clones of the central state through effective central command.

2.4 Contribution

This typology offers three major contributions. First, it provides substantive and theoretical clarity about central-local relations in authoritarian regimes. Second, this typology enables not only the identification of central-local dynamics, but also the prediction of the behavior of central and local states within these dynamics. Third, it helps scholars conducting subnational analyzes in authoritarian contexts design research agendas that yield the benefits Snyder envisions.

2.4.1 Analytical Clarity

The typology we present here allows us to identify the underlying dynamics of central-local relations in different policy domains. Substantively, this typology provides researchers with a more precise way to understand and interpret the mechanisms that lead to desired outcomes. For example, it can explain why central leadership introduces competition of scale in some policy areas and cedes autonomy to local leadership in others. Theoretically, it forces researchers to make explicit their assumptions about information symmetry and alignment of interests in formulating the policy issue of their study.

Classifying a policy can be complicated: Not all policies can be clearly placed in a single category. For example, economic growth is desired at both the central and local

levels, but policy choice creates further incentives for alignment, creating principal-agent problems. Some measures are more easily observed in certain regions or sectors than in others. For example, births in rural China are often unreported or underreported because infants in rural areas can be enrolled in local elementary school without the household being registered (Shi and Kennedy 2016). Finally, political changes can occur within a very short period of time. For example, the Chinese state could not monitor urban air quality until after 2012. Also, in 2015, the One-Child Policy was replaced by a Two-Child Policy. Policies with natural alignment tend to be more stable than those with incentivized alignment.

Despite these caveats, this typology is useful because this complexity can be unraveled with the help of expert knowledge and a clearly defined policy goal. At the outset of a research project, scholars studying authoritarian politics can consider where a particular policy (in their chosen geographic and temporal context) should be placed on the interest-information matrix to determine the expected central-local dynamics, whether or not there is a P-A problem, and what the consequences are. They can do the thought experiment of "how would Guangdong province approach this policy differently from Vietnamese government?" to gauge the role of central intervention on the issue. Once the researcher has first identified the central-local dynamics, they can predict how many policy variations to expect across subnational units and be aware of how independent these units are.

2.4.2 Predictions

Second, as described in section III, we can not only identify the central-local dynamics that result from a given configuration of information and interests, but also make predictions

about how central and local states will behave. In this way, we can, in a sense, trace how the central state sets standards and incentives in particular policy areas and how local states manage these dynamics.

For example, we can predict that the central-local dynamic on the implementation of the zero-COVID policy in China should change according to the extent of externality of pandemic control. The early 2020 COVID-19 situation in China can be characterized as supervised autonomy when the unvaccinated population was facing a deadly virus with a reproductive number (R_0) of 2.5 (Burki 2022). This means local governments and the center share interests in containing the disease since the locality reaped most of the benefits after shouldering the costs of lockdown. As the virus mutated to be more contagious (the Delta variant's R_0 is just under 7 and Omicron's R_0 is estimated to be around 10 (Burki 2022)) and less deadly among the vaccinated population, the divergence between locality and the center became more stark. On one hand, the cost of losing control of the virus became lower for the local state because less people would die even if most of the local population was infected. On the other hand, the externalities of losing control in one city became higher because the spillover was more probable and would impact larger population in a shorter period of time. The Omicron wave in the early 2022 marked the transformation of the central-local dynamic on the zero-COVID policy from supervised autonomy to central command. The alignment of interests was no longer natural but completely relying on the threat of punishment from the center. We should observe less variations in policy implementation despite the zero-COVID policy remained unchanged. Future studies can test whether the reproductive number of the virus correlates with the decline of policy variations in pandemic control.

2.4.3 Research Agenda

This typology serves as a guide for a new research agenda for scholars conducting subnational analyzes in authoritarian states. As evident from the literature on China, studies of strong authoritarian states focus predominantly on the quadrant IV. Our typology focuses on quadrants I-III. Where subnational units have autonomy, we can treat them as mini-states and apply the subnational comparative method. Where P-A problems exist or subnational units are clones of the center, we cannot do this.

With the increasing abundance of data and better ability to analyze it, the situation on the ground is evolving away from quadrant IV, in China and around the world. Technology-enabled information collection and monitoring systems are making local conditions more legible to the central state, increasing information symmetry. To understand how these changing dynamics play out, it is particularly important to focus our attention on Quadrants I-III. For example, poverty alleviation—a personal project that Xi Jinping supports—could be assigned to central command given its clear goals and local disinterest. Pandemic control could be assigned to supervised autonomy, given its urgency for both levels of government and observable results through contact tracing. Local taxation could correspond to unsupervised autonomy because it requires local knowledge and central disinterest.

Finally, this typology emphasizes local autonomy. Thus, understanding local state interests is central to the research agenda. Without a deep understanding of local state interests, researchers cannot develop expectations about central-local dynamics in cases of autonomy. As Snyder notes, local states may have conflicting policies and preferences that buck national trends. Researchers should be sensitive to these undercurrents and look

beyond what the center wants, as tempting as that may be when studying authoritarian regimes. Until now, understanding the interests of a local state has been conceptualized in a P-A framework that focuses on how local officials navigate a particular career system designed by their principal. This may be one of the reasons why much of the Chinese politics literature has yet to be incorporated into the mainstream comparative politics literature Tsai 2017. By turning our attention to policy issues in Quadrants I-III, we can gain a more nuanced understanding of local interests in authoritarian regimes and, in doing so, can carefully generalize our findings.

Chapter 3

Unsupervised Autonomy: China's Social Security System

Economic change is disruptive. Inevitably, there are “losers” in these structural changes, such as laid-off state-owned enterprise (SOE) workers in former socialist countries in Eastern Europe. In these nascent democracies, economic losers converted their preferences into social welfare policies by winning elections (Deacon 2000). More inclusive political regimes are more likely to avoid “winner-take-all” partial reforms, as losers can exert more influence on policy outcomes (Hellman 1998, 230).

However, economic liberalization does not always come hand-in-hand with political liberalization. Former socialist countries like China and Vietnam underwent radical economic changes without democratization. Like Eastern Europe, the Chinese state has introduced a redistributive social security system in response to the grievances of losers. Lacking inclusive political institutions, the Chinese state still integrated the losers' preferences into social policies.

It is not uncommon for autocracies to develop an exclusive welfare state that co-opts crucial supporting groups (Knutzen and Rasmussen 2018). However, studies about con-

tentious politics in contemporary China among laid-off workers (Hurst 2004), pensioners (Hurst and O'Brien 2002), and peasants (Bernstein and Lü 2003) give important insights on how collective action of the masses can catalyze state concessions. X. Huang (2020) argues that autocrats provide stratified social protection that balances elite privileges and mass welfare to ensure the survival of their regime. This chapter links the different literature of authoritarian welfare states by looking at the contentious politics behind the establishment of China's welfare state. I argue that the state adopts a "demand-driven" strategy of appeasement such that the collective action of losers in economic liberalization stimulated the expansion of a social security system.

Autocrats' concessions to the masses are studied closely in the literature on government responsiveness. Przeworski, Stokes, and Manin (1999, 9) define a state as "responsive" if it adopts policies that are signaled as preferred by citizens. An array of robust empirical studies document authoritarian responsiveness that reflects local concerns to the center through representatives (Malesky and Schuler 2010) and claims to take account of citizens' inputs (Meng, Pan, and Yang 2017) or gives information to satisfy citizens' requests (Distelhorst and Hou 2017; Chen, Pan, and Xu 2016). However, with the exception of Jiang and Zeng (2019), who demonstrate that Chinese officials institute land liberalization in response to mass grievances, "responsiveness," as it is measured in the literature, focuses on action replying to online complaints. In these cases, compensation takes the form of particularistic and piecemeal transactions that address individual grievances. No other party's interest is harmed, and no resource is systematically redistributed. The literature is usually not concerned with whether the state makes policy tradeoffs in large-scale situations. Using China as a case, the chapter finds that an authoritarian state can make

programmatic changes that effectively harm one group, including itself. The state is willing to pay a real price for responsiveness for fear of collective action.

The chapter makes a new conceptual distinction regarding how the state makes concessions. State appeasement is often characterized as either the active searching out of grievances (“police patrol”) or passively waiting for aggrieved parties to complain (“fire alarm”) (McCubbins and Schwartz 1984). Both approaches rely on the premise of limited information. If the state has enough structural knowledge about the scale and location of grievances, however, it can program policy designs in advance to appease them systematically. This avoids the high cost of surveillance and the risk of an eruption of discontent. I call this the “mail post” approach, as modern states are prone to using the postal service to collect information about their subjects (e.g., census and tax records) and provide public services to them (e.g., stimulus checks). China’s local administrations adopted this approach to calibrate their social security system according to prior knowledge about local collective action potential without experiencing social unrest. While the “fire alarm” approach emphasizes realized protests, this new concept includes unrevealed grievances into the state’s strategies of appeasement.

The chapter also makes a substantive contribution to political economy studies on the establishment of the Chinese welfare state. I find that, due to the fiscal crisis that forced the state to lay off millions of SOE workers, most of the burden of financing social security to cover economic losers was shifted to private firm owners and their employees through their contributions. These new contributors then became future claimants of these benefits. This self-reinforcing dynamic explains why China’s welfare state continues to expand to include most of the population instead of remaining exclusive, as autocratic welfare states

normally do.

The case is studied at a subnational level in China, where the key features of the social security system are decentralized, and the large-scale dismantling of SOEs has produced enormous variation in the size of the displaced workforce. State commitment is operationalized to the welfare state as the enforcement of social security collection because the latter can only be used to provide welfare and crowds out discretionary tax revenue. The level of expected collective action is measured as the number of laid-off workers. The chapter finds that greater expected collective action leads to greater social security collection, suggesting more government commitment to the welfare state. In summary, the chapter tests a “demand-driven” strategy of authoritarian responsiveness: whether authoritarian concessions increase with the level of *potential* collective action.

The rest of the chapter is organized as follows. Section 2 introduces the background of the dismantling of SOEs and the social security system in China. Section 3 lays out the theoretical arguments. Section 4 introduces the research design that exploits an instrumental variable. Section 5 presents and discusses results.

3.1 Background

3.1.1 Demolition and Reconstruction of the Welfare State

Before the 1990s, the Chinese welfare state was a classic club good as expected in authoritarian states. Benefits were exclusive to the state sector, where only personnel affiliated with the state were covered, such as SOE workers, officials, teachers, doctors, and the mili-

tary. The old welfare regime was also highly fragmented: each work unit provided its own package of benefits, including housing, healthcare, pensions, and lifetime employment to its employees (Frazier 2011). Rapid market-oriented reforms in the lead up to China's entry to the World Trade Organization in 2001 ended lifetime employment for tens of millions of SOE workers and deprived them of SOE-provided benefits. Most of these workers were laid off, while many others were pushed into "early retirement" and designated as pensioners. From 1998 to 2003, 29.7 million workers were laid off, while pensioners on pension payrolls increased from 27.3 million to 38.6 million.¹ Central planners responded by expanding the old micro-welfare state to a national social safety net that included pensions, health insurance, and unemployment insurance. The new system replaced the fragmented firm-level welfare state with a more unified welfare state administered by city and county governments. It also eliminated the participation barriers and made the system accessible to all urban workers.

Privatization and social welfare provision is usually perceived as being on opposite sides of the political spectrum. Counterintuitively, the two policies occurred simultaneously in the late 1990s in China. The co-occurrence of the two events was not a coincidence. Indeed, Frazier (2011, 40) argues that the creation of China's welfare regime was a direct response to the looming threat of labor unrest that emerged because of labor liberalization. At its root, the effort to build a universal welfare state was a way to appease unemployed SOE workers during a period of economic upheaval and liberalization.

The urgent need for liberalization came from large-scale financial losses among the SOEs that had survived only through consuming credit provided by state-owned banks.

1. Ministry of Human Resources and Social Security (MOHRSS), 1998–2003 "劳动和社会保障事业发展统计公报."

The fiscal and debt burden of SOEs forced the state to privatize most SOEs and downsize the rest. Laid-off workers lost their salaries and the micro-welfare system, from schooling to healthcare, supplied by SOEs. These measures reneged on the cradle-to-grave promise given to SOE employees. The state partially made up for this by allowing the laid-off workers to be covered by the newly founded social security system. Even though pre-reform SOE workers had never contributed to social security, their tenure in the SOE was counted as contributed, and they could contribute more to the fund as individuals afterward. After reaching retirement age, they would be eligible to receive pensions if they had contributed for 15 years. This part of the spending was called “historical debt” in the social security system because it represents an unfunded burden to cover pre-reform SOE workers. In effect, SOE liberalization and the new social security system externalized the massive welfare burden from decentralized provisions within SOEs to local governments.

Laid-off workers from downsized SOEs led to a steep rise in unemployment (Solinger 2002). Despite the state’s efforts at reemployment, according to a survey by the Chinese Federation of Labor Unions, only 18% found new jobs (H. Y. Lee 2000, 928). The number of laid-off workers translates into the expected scale of collective action for two reasons. First, former SOE workers are specifically able to organize collective action such as labor protests. They represent a more cohesive group than non-SOE workers because they share a working relationship and common community from factory neighborhoods to children’s factory schools (Cai 2002, 341). Second, as these workers were once promised lifetime care by the state and were recognized as “the ruling class,” they have a political mandate to claim compensation from the state, similar to the “rightful resistance” found by O’Brien and Li (2006) among Chinese peasant protests. Of the 58 documented SOE-related protests

between 2004 and 2007, 39 of them demanded better compensation in restructuring the economy (Elfstrom and Velden 2016).

Providing sustained welfare is not the only option to quell the protests of economic losers. Hurst (2004) documents two alternatives: regions badly hit by the economic reform, like the Northeast, could only afford to forcefully suppress protests, while fiscally resourceful regions chose to use one-time payments to buy off protesters. The first tactic is politically unsustainable when protests have massive crowds and rightful mandates; the second tactic adds immediate fiscal pressure to local administrations. One-time payments are usually funded by local discretionary revenue and central transfers, and the unemployment insurance fund.² More importantly, the one-time payment method is prohibited by the central state as a way to absolve the SOE's responsibility to laid-off workers' previous social security entitlement.³ Evidently, the monetary value of twenty years' worth of accumulated pensions exceeds any one-time compensation that local administrations can afford. However, the social security system creates a new source of revenue for local administrations if they expand the collection to growing private and foreign firms whose young employees will not claim benefits for decades. In short, a welfare system that recognizes past contributions and promises regular *future* payments is a compromise, fiscally viable to both local administrations and economic losers.

2. MOHRSS, "1998年劳动和社会保障事业发展统计公报."

3. "No work unit can end employee's social security relations with 'buy-off' measures." Ministry of Labor and Social Security, 1999, Document No. 10. "关于贯彻两个条例扩大社会保险覆盖范围加强基金征缴工作的通知"

3.1.2 China's Social Security System

A Decentralized System

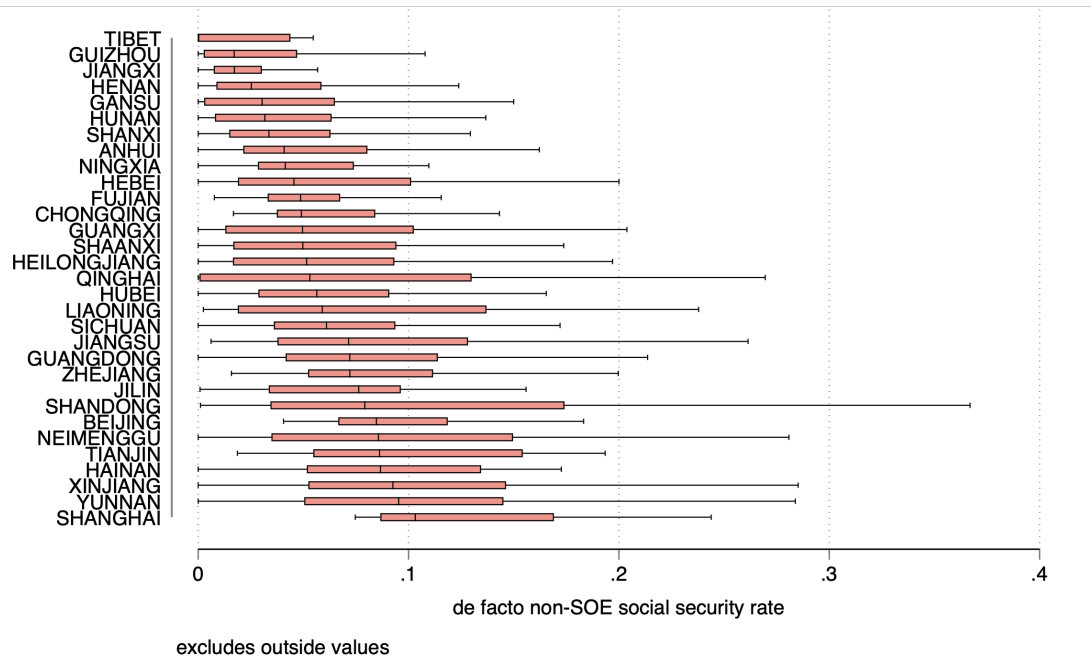


Figure 3.1: Differing enforcement of social security tax (2005)

Even after the reforms in the 1990s, China's social policy regime is regarded in the literature as fragmented and decentralized (Ratigan 2017; Hurst 2004; Lin and Dale Tussing 2017; X. Huang 2020). Figure 3.1 illustrates the variation in the county-level *de facto* social security rate (SSR) across the 31 provinces of China as of 2005. Note that variation *within* provinces is as significant as that *across* provinces.⁴ Despite the national guideline of 28%, the SSR in almost all counties falls well below that level.

4. In China, provinces encompass prefectures, and prefectures encompass counties. Prefectures usually comprise county-level urban districts and rural counties. At the end of 2005, there were 333 prefecture-level units and 2862 county-level units. http://www.gov.cn/test/2007-03/23/content_559298.htm

In the implementation, China's central authorities allow counties to collect and manage most of the social security tax. All medical and unemployment insurance for workers is raised and spent at the county level. The latter is actively used to support laid-off workers from a locality in the first two years of unemployment. County governments also assume sole responsibility for pension expenditure that is used to compensate workers who retire early in their jurisdiction. The decentralization of the social security system makes it ineffective in reducing inter-regional inequality. Moreover, the social security system is fragmented along sectoral boundaries: during the period studied in this chapter, social security only covered urban workers; separate systems were later set up to cover rural residents (2009) and urban residents (2012). This also hinders the system's ability to alleviate inter-sector inequality. However, the systems demonstrate mildly progressive redistributive effects within some sectors (Gao 2010; Gao, Yang, and Zhai 2019).

Before 2015, the national nominal rate required Chinese firms to contribute 28% of an employee's salary to the social security bureau (pension 20%, health care 6%, unemployment insurance 2%). Individual prefectures were given some discretion regarding the designated contribution rate, but most prefectures set it above 20%.

Social security authorities ask firms to contribute using their employees' gross salary as the base from which they calculate the social security contribution.⁵ However, according to data at the industrial firm level from 2004 to 2007, the participation rate (non-zero contribution) was 62.9%, and many firms used the minimum base (60% of the local average wage) instead of the real salary to indicate participation while minimizing their contribution. Among participating firms, the median contribution rate was 9.2% of gross salary, far

5. MOHRSS, "人力资源社会保障部对十二届全国人大五次会议第1188号建议的答复," www.mohrss.gov.cn/gkml/zhgl/jytabl/jydf/201711/t20171102_280551.html

below the national nominal rate of 28%.

Most social security accounts are decentralized, used, and managed at the county level.⁶ A typical retiree's pension plan is comprised of three parts: a base pension, personal account pension, and transitional pension. The prefecture absorbs the funding required for base pensions, while the remainder of the revenue is returned to the counties to spend on personal accounts and transitional pensions.⁷ The transitional pension is earmarked for workers employed by the state before the establishment of the social security system, who had therefore not made prior contributions. Most laid-off workers fall within this group, as they were employed before the social security system was established. Overall, social security is a county-level issue in China.

National policy does not always reflect the true situation if subnational units control the policy process on the ground (Snyder 2001). Building a social security system represents the center's immediate response to the broken promise of the "iron rice bowl," with local administrations granted the political leeway to customize the policy without causing a public backlash. Gallagher (2017, 108) uses "high standards, self-enforcement" to describe the central state's strategy: by passing a high-standard labor protection legislation lacking enforcement mechanisms, it can claim credit for protecting workers and shift the blame of poor implementation and enforcement to the local administration. Analyzing collective action of laid-off workers, Hurst (2004, 111) argues that regional fragmentation is "probably the single most important variable" in understanding the working class's role

6. The central state pushed to centralize medical insurance at the prefecture level by 2009 and to the provincial level by 2011. National Healthcare Security Administration. "国家医疗保障局对十三届全国人大二次会议第3489号建议的答复." www.nhsa.gov.cn/art/2019/8/6/art_26_1621.html

7. As explained in this guiding plan from the Guangdong provincial state general office: 2003/7/21, "广东省养老保险市级统筹工作指导方案," http://www.gdsi.gov.cn/zcfg_ylbx/20150507/2688.html

in contemporary Chinese politics and calls for a comparative subnational approach. Local governments design their social programs according to local socioeconomic conditions. Using provincial-level data, X. Huang (2020) finds that provinces with more migrants and a higher dependency ratio expand health insurance coverage to pool social risks. Therefore, the divergence of the central-local trends observed in Figure 3.1 is by design.

Social Security vs. Taxation

Local leaders are often characterized as lacking incentives to collect social security if they are not under spending pressure (Nyland, Smyth, and Zhu 2006, 199). Moreover, social security revenue is earmarked for exclusive use, and misuse of it is a serious transgression. For instance, Chen Liangyu, Shanghai's party secretary and a Politburo member, was convicted of abusing power and misappropriating the city's \$4.8 billion social security fund in 2008. Unlike tax revenue, social security funds are not fiscal resources that can be used to invest in projects or improve the welfare of officials. By contrast, if necessary, tax revenue can be used for social security expenditure. In sum, social security is non-fungible, and tax revenue is fungible: local administrations would prefer one yuan of tax revenue to one yuan of social security revenue in a time of surplus. A prudent social planner may want to accumulate social security funds to counter looming demographic challenges. However, if local officials have time horizons as short as their tenure (three years on average for county leaders), they are generally not concerned with any future social security deficits that their successors will face.

This incentive structure is reversed if a locality faces mounting social spending pressure. Due to the compulsory and fixed nature of taxation, tax collection is less flexible and

better enforced than social security collection; there is much less room to introduce new sources of revenue. Instead of pouring constrained discretionary revenue to replenish a social security deficit, local leaders would rather collect more social security tax by expanding participation among non-SOEs. With forbearance measures like allowing a minimum instead of a full contribution, county leaders can control the priority of social security collection. Social security contributions and taxation are collected through separate channels and usually by different bureaus, so it is not difficult to differentiate enforcement.

3.2 Theory

3.2.1 Demand-Driven Appeasement

Establishing a welfare system is a formidable task for the state and requires a sustained commitment of resources. In an authoritarian state that lacks the mechanisms of accountability to citizens, a welfare system is especially expensive for ruling elites in terms of opportunity costs, as it carves away the state extraction that could otherwise be used to advance their private goals. More importantly, due to the loss aversion of beneficiaries, any reduction or renegeing on welfare promises is likely to result in widespread public grievances. Once established, the state must continuously supplement the welfare system with extractions to sustain social stability. Therefore, the state is more likely to use targeted welfare programs to solve credible commitment problems to win over crucial supporting groups (Knutsen and Rasmussen 2018).⁸ X. Huang (2020) also finds that China's central

8. Knutsen and Rasmussen use "critical supporting groups." I change the term to avoid confusion.

and local states frequently increase health insurance reimbursement rates for the privileged groups of state employees, retirees, and urban formal workers to maintain support.

Who constitutes the crucial supporting group for the regime? Knutsen and Rasmussen (2018, 664) define it as “individuals who support the regime and, if they were to retract their support, would substantially increase the probability of the regime ending.” SOE industrial workers are certainly a crucial supporting group for the Chinese party-state, but it is theoretically a stretch to include laid-off SOE workers, who were abandoned by the state, explicitly against local administrations, and implicitly against the central state (Hurst 2004, 110).

If laid-off workers are not the crucial supporting group, why did the state extend the club goods of social security to millions of people banished from the coalition? Protests by laid-off workers target local governments overtly (99). As the highest authority figure in the locality, the local leader’s authority and control over society are damaged by social unrest. Protests and strikes interrupt economic activities and require either fiscal or coercive resources to manage. Even with a minimalist assumption that local administrations maximize discretionary revenues, we expect that social unrest will be managed to minimize the destruction to economic output and the consumption of revenues.⁹ The state’s willingness to provide social welfare follows the threat of social instability; that is, it is a demand-driven strategy. Ideally, by appeasing percolating grievances before protesters gather in the streets, the authoritarian state anticipates citizen demands to devise a minimal but sufficient welfare state to ensure stability.

9. A stipulation from 1992 (“中央社会治安综合治理委员会关于实行社会治安综合治理一票否决权制的规定（试行）”，1992.1.13.）states that the occurrence of “mass petitioning to upper levels, illegal demonstrations, crowd disturbances, strikes, or school boycotts” constitutes a “veto point” in career advancement.

The demand can take the form of either realized protests or the existence of mobilization potential. The theory is agnostic to the form of demand because the state has an interest in avoiding even probabilistic collective action. This means examining realized protests or raised complaints similar to the literature on collective action and responsiveness, but also the potential for collective action observable to the state. In a way, collective action under authoritarianism functions like votes in electoral democracies, with the capacity to stage collective action mirroring the expected voter turnout of a social group in a democratic election. Compliance without assertiveness in an autocracy resembles disenfranchising oneself in a democracy.

The demand-driven strategy generates a testable implication: social security is collected and distributed to address actual and possible collective action (Hypothesis 1). Subsequently, more active and organized citizens can push the state to devote more to providing social welfare. Note that this implication does not necessarily contradict with the elitist arguments raised by Knutsen and Rasmussen (2018) and X. Huang (2020) as privileged groups (e.g., urban formal workers, retirees, and state employees) are better organized and more active for the same reasons that endowed laid-off SOE workers more bargaining power.

3.2.2 “Mail Post”

Even if state concessions are demand-driven, how does the state know about citizen demands? First, the state can actively search for grievances directly and address them before they erupt (“police patrol”). Second, the state can respond to the revealed demand *ex post* when it experiences protests or petitions (“fire alarm”) (McCubbins and Schwartz 1984).

Scholars have applied the fire alarm and police patrol models to the Chinese context. Dimitrov (2015, 51) argues that protests, which provide information voluntarily to the state, act as a fire alarm and play an important role in crisis governance in China. Gallagher (2017) suggests that China relies on the “fire alarm” mechanism for its labor law enforcement. The center uses campaigns to disseminate legal knowledge to empower individual workers to demand protection from local administrations instead of pressuring local administrations from the top to enforce labor laws uniformly. Gallagher emphasizes the self-enforcement element of China’s labor law, where *individual* workers must actively use the legal code to sound the fire alarm and expose the local administration. Legal codes give economic losers a focal point to unify their expectations, which strengthens their ability to mobilize if they are not satisfied.

Both approaches are sub-optimal for the state. “Police patrols” are more costly to the state because they bear the information cost directly by building up surveillance and auditing bureaucratic wrongdoings. McCubbins and Schwartz (1984) defines police patrols’ aims as “detecting and remedying any violations of legislative goals and, by its surveillance, discouraging such violations.” The response is likely to be particularistic if violations are sporadic instead of systematic. In essence, the approach is collecting information *after* policy-making and concentrating on supervision of implementation. Therefore, the policy impact is by design corrective instead of fundamental.

The “fire alarm” approach lets citizens bear the cost by voluntarily providing information — but the state bears the risk for erupted grievances. As the state has situational information provided by fire alarms like protests and petitions, it addresses them *ex post* with particularistic compensation. Therefore, it is no coincidence that the responsiveness liter-

ature is dominated by studies of particularistic concessions that target individuals (Chen, Pan, and Xu 2016; Distelhorst and Hou 2017; Meng, Pan, and Yang 2017). After all, petitions and protests are mostly about individual grievances and can therefore be efficiently (and cheaply) addressed by particularistic on-the-spot compensation.

Both approaches rely on the premise that the state has limited information, such that it must either spread its resources to stay ahead of troubles or spend efficiently but lag crises. A third situation exists when the state has prior structural information to understand the scale and location of the grievances and sends in programmatic help in advance. I call this the “mail post” approach, similar to governments sending stimulus checks to low-income households to relieve them of economic hardship, using prior tax records to identify recipients.

The “mail post” approach is how China handled the economic losers created by its SOE reform. Local administrations were aware of the scale of SOE layoffs as they directed the grievance-generating process. Consequently, they did not need to rely on protests or mass surveys to locate and measure grievances. This enabled the state to devise an appeasement scheme in advance to stay ahead of collective action. Moreover, the state could mix the approach with the fire alarm method to fine-tune its appeasement strategies without missing too much.

Differences in the kind of information determine the timing and type of state concessions. If the state has structural information, such as the number of laid-off workers in a locality, it can address mass grievances with *ex ante* programmatic arrangements. In practice, the state combines the three approaches by designing its policy baselines with structural information and calibrates them on the margin in response to signals and su-

Table 3.1: Mail Post vs. Fire Alarm vs. Police Patrol

Information type	Mail post structural	Fire alarm situational	Police patrol situational
Timing	<i>ex ante</i>	<i>ex post</i>	<i>ex post</i>
Response type	programmatic	particularistic	particularistic
Policy impact	baseline	incremental	corrective
Governance process	policy design	responsiveness	supervision

pervision after implementation. Table 1 summarizes the differences between the mail post and the other two approaches.

The empirical implication of combining both approaches is that long-lasting structural information, such as the scale of laid-off workers in a locality, can be expected to dominate recent signals sent as protests in determining social security policy. More precisely, we should expect the number of laid-off workers to determine baseline SSRs while experiencing protests should only correlate with incremental changes in a locality's SSRs (Hypothesis 2).

3.2.3 Snowballing of the Autocratic Welfare State

In democracies, the median voter is poorer than the average voter; their preference is redistributive and supports a larger welfare state (Meltzer and Richard 1981). In autocracies, the winning coalition is a minority of the population (Bueno De Mesquita et al. 2005), so its preference for the welfare state is more exclusive and benefits the crucial supporting group at the expense of "other citizens" (Knutsen and Rasmussen 2018). We should expect the autocratic welfare state to be self-limiting in size instead of expanding to include more people. However, this may not be sustainable if the autocracy is forced to fund the limited

welfare state with the social security contribution from other citizens.

Unlike discretionary tax revenue, social security tax creates clear expectations for its subjects about what public good provisions they should get in return. Just like legal codes that unify expectations for workers, social security creates a focal point for the citizens who contribute to claim future benefits. When the state collects social security from other citizens, they also give out promises for future welfare. In turn, to fund the benefits to these other citizens, the state must expand its participation in the welfare state further to include more citizens in the tax base. Eventually, the limited welfare state will be pushed to include all productive labor.

Moreover, the booming administrative capacity and budgets of local social security bureaus create momentum for future welfare state expansion. As Frazier (2011, 80) recounts, the staff and offices of China's local social insurance bureaucracy nearly doubled in the period between 1998 and 2004.

In China's case, the nationalization of various work units' micro-welfare states created immense pressure on government finance. Social unrest threatened by laid-off workers forced local administrations to find new sources of revenue to fund the nascent and limited welfare state. Non-SOE firms and their employees who never enjoyed the welfare state became an untapped pool of potential contributors. The self-reinforcing dynamic of seeking future claimants as contributors positioned the SOE reforms in 1998–2003 as a critical juncture that kickstarted the massive expansion of the social security system in the two decades after 1998.

As Figure 3.2 illustrates, urban worker pension participation declined in the 1990s and

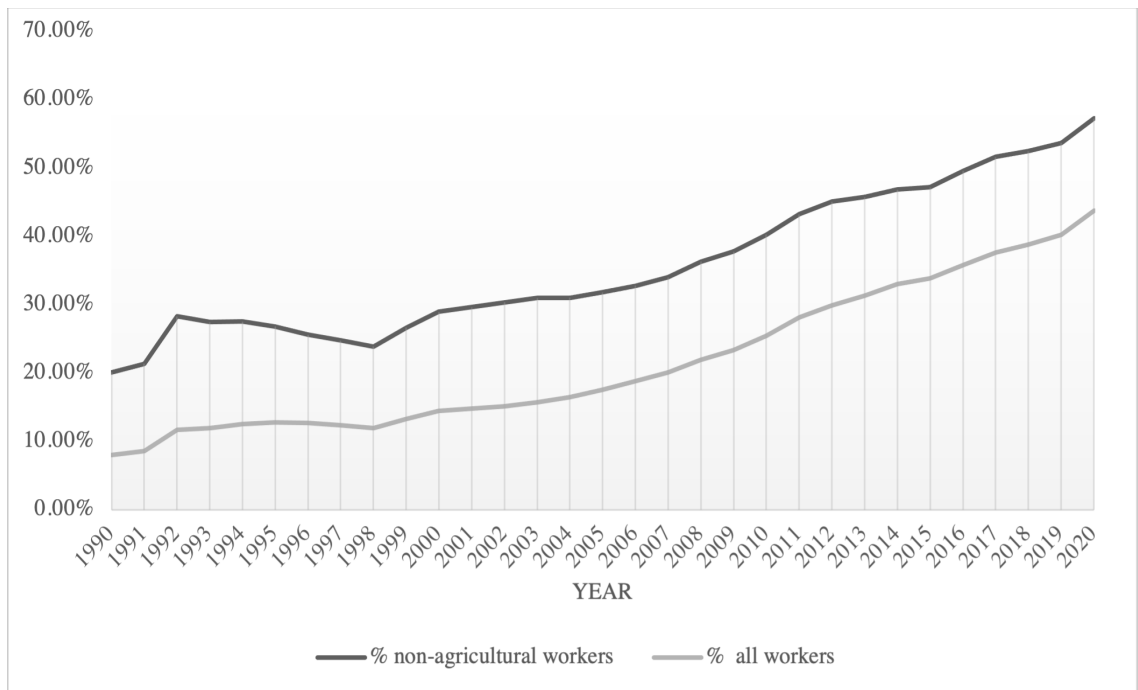


Figure 3.2: Rising pension participation

started to pick up only after 1998. Then it consistently outpaced the rapid industrialization of China to cover most non-agricultural workers. Workers participating in the urban worker pension scheme increased from 84.8 million in 1998, covering the majority of the 88 million SOE workers and few non-SOE workers, to 328.6 million in 2020, covering 57.3% of non-agricultural workers.¹⁰ The empirical implication of the self-reinforcing dynamic of the autocratic welfare state indicates that the persisting effects of the surge of organized economic losers in the future collection of social security can be observed (Hypothesis 3).

10. MOHRSS, 1998 – 2020, “劳动和社会保障事业发展统计公报.”

3.3 Research Design

3.3.1 Data

I construct an original dataset that aggregates firm-level social security and SOE downsizing information to the county level from 2004 to 2007, the only years for which firm-level social security contribution data are published. The firm-level data are from the China Industrial Enterprise Dataset (CIED), which surveys all SOE industrial enterprises and large (annual revenue exceeding \$650,000) non-SOE industrial enterprises. These firm data are matched with the Landry, Lü, and Duan (2018) county-level administrative data using state-assigned county IDs. County governments do not systematically report social welfare spending as late as 2020. To our knowledge, this is the first dataset that systematically measures China's county-level social welfare commitment. Due to data availability restriction, the dataset only covers the first term of the Hu Jintao and Wen Jiabao administration (2003-2007) when the central government was characterized as prioritizing social welfare (Zuo 2015a). This may impact the external validity of the analyses beyond the Hu-Wen era (2003-2012). However, it also increases the internal validity by unifying the central policy preference and incentives across the period such that ideology variations among officials are less of a concern.

I obtained social unrest data from the International Institute of Social History's Micro Labor Conflicts Dataverse. The data are based on the Strike Map project at the China Labour Bulletin (Elfstrom and Velden 2016). Only protests waged by SOE workers are selected. The dataset covers 2004-2015 and geo-locates SOE-related protests to the county level, for which the period 2004-2007 is used here. Most protests occur at a prefectural

level and are not geo-located to an exact urban district. Therefore, all urban districts in a prefectural seat are treated as having experienced the protest, and counties outside the urban area as not having experienced the protest.¹¹ Given the notification system of mass incidents within the party, protests can have spillover effects on local leaders in other localities, but such effects bias against this study's results.

3.3.2 Operationalization

The unit of analysis of the chapter is county-year because the county is the lowest administration level responsible for collecting, supervising, and managing the social security tax.¹² There are policies to centralize management of social security to higher levels.¹³ Centralization allows prefectures and provinces to redistribute funding from affluent localities to insolvent localities. This would weaken the connection between the county's social security collection and its spending ability. Even if some counties' social security funds were centralized to higher levels in 2004–2007, the weakened incentive for county leaders to collect social security should be a bias against my results.

The dependent variable is the local state's commitment to the welfare state. To construct the dependent variable, the *de facto* SSR across local, large non-SOE industrial firms is used.¹⁴ Local states exercise discretion in social security collection to balance social

11. Urban districts are at the same administrative rank as counties. The reasoning is that the urban districts of a prefectural seat represent an inter-connected built-up greater metropolitan area; county seats are usually removed from urban districts, separated by a rural expanse.

12. State Council. 1999/01/22, "社会保险费征缴暂行条例."

13. Despite the effort to pool social security funds at higher levels, such as in prefectures and provinces, progress is slow and incomplete as of 2019. See Xinhua, 2019/09/02, "部分省市加快推进养老保险省级统筹." <http://www.xinhuanet.com/fortune/2019-09/02/c.1124948968.htm>

14. Large firm is firms with annual revenue of more than 5 million RMB. They are more "trans-

spending and business costs (Nyland, Smyth, and Zhu 2006). I argue that this is a superior measurement of local state commitment than social spending because frequent upper-level transfers make social spending more of a national commitment than a local commitment. In addition, China's county governments do not systematically report social spending. For each firm's *de facto* SSR, the sum of its overall contribution to pensions and medical and unemployment insurances is calculated, then divided by gross salary. To determine the county-level SSR, the simple average of the SSRs of all large non-SOE industrial firms is taken.

This study concentrates on non-SOE firms for two research design purposes. First, to better measure the state commitment, the social security contribution should be more involuntary and requiring stricter enforcement. Non-SOE owners are supposedly minimizing costs such that their default decision should be to make the minimal social security contribution to their employees. By contrast, SOEs managers do not have the profit incentive to deviate from mandated social security policy and risk employees' complaints. Second, from the state's perspective, collecting social security from SOEs is an internal transfer between different departments of the state apparatus, while the non-SOE contributions represent external funding that can save fiscal expenditure on social spending. Therefore, only the *de facto* non-SOE SSR reflects the willingness and commitment of the local administration to the welfare state. This assumption predicts that SOEs contribute more towards social security. The data corroborate this: the median county-level SSR across SOEs is 15%, while it is 5% across non-SOEs.

parent" to the state because they are annually required to report their accounting information. Any deviation from state regulations that is discovered in the data can be seen because of "forbearance," where the state chooses not to exercise its capacity (Holland 2016).

The independent variable is the number of laid-off SOE workers in the county during the period of SOE reform (1998-2003). The cumulative year-to-year net decreases of the county's total SOE workers is added. Admittedly, this measure underestimates the true number of laid-off SOE workers because new hiring in some local SOEs cancels out the downsizing of other SOEs in the calculation of net contraction of the state economy. However, when SOE industrial firms faced a uniformly negative economic outlook in 1998–2003, the disparity of fortunes was unlikely. As SOE development became more unbalanced post-reform, the net downsizing of SOEs became less representative of the true scale of layoffs. Therefore, the measurement is limited in 1998-2003 to avoid possible measurement errors.

3.3.3 Identification

Instrumental Variable

The chapter uses an instrumental variable strategy to identify the effect of economic losers' size on government commitment to welfare. Ideally, social security data from the peak period of SOE layoffs (1998–2003) and a panel data structure would be used to estimate the temporal appeasement to the mounting pressure from laid-off workers. However, as the independent variable of historical layoffs does not vary across time, county-year two-way fixed effects cannot be used. Instead, I control for prefecture fixed effects. To make sure the results are not driven by one particular year, I analyze cross-county variations of the *de facto* SSR in each year of 2004-2007.

The obstacle to a valid identification strategy is that the scale of laid-off workers is not

randomly assigned. To mitigate this concern, I use “legacy SOEs” as an instrumental variable to predict laid-off SOE workers after 1998. From 1964 to 1972, fearing nuclear warfare with the Soviet Union and the United States, the Chinese state spread its industrial investment across the country.¹⁵ Mao Zedong established the principle of “near mountains, spread out, take cover” (靠山,分散,隐蔽) for new investments. Due to the haste in economic decision-making and the destruction wrought by the Cultural Revolution, many investment choices were made for security reasons with inadequate knowledge and projects were deliberately dispersed to many counties to avoid invasion.

I use the number of employees working in SOEs founded in 1964–1972 at the beginning of the massive layoffs in 1998 as an instrumental variable. I normalize the variable with the county’s total number of employees included in the CIED survey.

To avoid bias introduced by the normalization term (current total employees) and SOE workforce variation introduced during 1972–1998,¹⁶ I use, as an alternative measure, the number of SOEs founded between 1964–1972 as an instrumental variable to instrument the logged number of laid-off SOE workers.

Table 3.2: Instrumental Variables and Corresponding Independent Variables

Instrumental Variables	Independent variables	Correlation
$\frac{\# \text{ of employees in legacy SOEs in 1998}}{\text{total employees}}$	$\frac{\# \text{ of SOE layoffs in 98-03}}{\text{total employees}}$	0.3583
$\frac{\# \text{ of employees in legacy SOEs in 1998}}{\text{total employees}}$	$\frac{\# \text{ of SOE layoffs in 98-03}}{\text{city population}}$	0.2111
$\# \text{ of SOEs founded in 64-72 in 1998}$	$\ln(\# \text{ of layoffs in 98-03})$	0.4880

15. The cut points are exogenously determined by U.S. foreign policy. In 1964, the U.S. started bombing North Vietnam, alerting Mao Zedong of the immediate possibility of large-scale warfare. In 1972, the U.S. president, Nixon, visited China and normalized Sino-U.S. relations, causing the threat of conflict to recede. (Naughton 1988)

16. To avoid large variation caused by driving results to the division of small normalization terms, the observations with largest 5% instruments and independent variables are trimmed.

The model specification is as follows:

First stage model:

$$\widehat{layoff}_{pit} = \gamma_0 \widehat{legacy}_{i98} + \widehat{\gamma} X_{i97} + \widehat{\theta}_p \quad (3.1)$$

Second stage model:

$$SSR_{pit} = \beta_1 \widehat{layoff}_{s_{it}} + \beta X_{i97} + \alpha_p + \epsilon_{pit} \quad (3.2)$$

where $layoff_{pit}$ is the instrumented independent variable, $legacy$ is the instrumental variable, and SSR_{pit} is the dependent variable for county i in prefecture p at year t . For each year between 2004–2007, the two stages are run once with pre-treatment county-level covariates X_{i97} and fixed effects of prefecture p .

Controls

The study controls for general local tax revenue per capita in 1997 to capture the local administration's fiscal capacity, which constrains social security collection and impacts the state's inclination to lay off workers. Additionally, it controls the population and the urbanization rate to capture local economic development, which determines the county's scales of both SOEs and non-SOEs. The "near mountains, spread out, take cover" guideline of legacy SOE investment may bias the economic endowment of SOE locations. The study controls the county seat's distance to the prefecture capital and topographic features, such as relief amplitude, to capture selection conditions that impact economic endowment. Latitude and longitude are controlled, which captures the county's geographical position

that may impact the availability of strategic investment in 1964–1972. Non-SOE SSR may be influenced by the proportion of migrant workers who may want to contribute less as their prospects of claiming the benefits are uncertain. To address this concern, the proportion of migrants in the county’s population is controlled using census data from 2000.

Exclusion Restriction

The spatial distribution of strategic investment is independent of unmeasured causes of non-SOE social security collection during 2004–2007 for four reasons. First, there was no private economy or social security system during 1964–1972, such that the decision-maker for investment did not impact non-SOEs’ SSR intentionally. Second, the requirement to diversify investment for strategic reasons made some localities industrialized for reasons independent of their endowments (D. Chen 2003, 160). Third, even if some investment were made for affinity to transportation hub or resources, this is partly addressed by controlling across-prefecture variations. To address any remaining concerns, the county’s distance from the prefectural capital is controlled to capture transportation conditions. Summary statistics for the variables used in the analysis are reported in Table 3.

Although the dependent variable is measured after 2004, the laying-off process began in 1998. All control variables are measured for 1997 to avoid post-treatment bias. As Deuchert and Huber (2017) warn, controlling for post-treatment covariates when they are common outcomes of pre-treatment covariates and unobservables that impact the dependent variable may introduce confounding associations between unobservables and instruments.

Distribution of legacy SOEs may impact current states not only through their failures,

but also through their successes. More legacy SOEs may lead to both more surviving SOEs and more layoffs. More SOE presence may increase the social security collection. Therefore, I also control for SOE employee share of 2004-2007 to account for this as robustness check in Table A.2.

Methods have been developed to test robustness of instrumental variable estimates even when the exclusion restriction assumption is partially relaxed. Conley, Hansen, and Rossi (2012) replace the (exact) exclusion restriction in an instrumental variable model with an assumption related to its support or distribution. I allow the instrument to have a non-zero independent coefficient γ on the dependent variable. γ is set to be at most 0.018. To put it into perspective, 0.018 equals 55% of the instrument's effect on the dependent variable through the independent variable (Table 3.4(3)'s 0.711 times Table 3.5(3)'s 0.046). As Table A.3 shows, the results are largely robust even if we allow a significant amount of the instrument's effects not going through the independent variable.

Placebo test in Table A.4 shows that the potential collective action only impact extraction from non-SOE, not SOEs, as expected.

Relevance of Instruments

As strategic SOEs were established following little to no economic logic, their disadvantageous endowment made them likely to suffer losses after the country gradually transitioned to a market economy. Therefore, by 1998, localities with more strategic investments ended up with more failed SOEs and experienced greater pressure to downsize SOE workers. Table 4 illustrates the first stage of the 2SLS models in 2005. Model 4(1-2) uses the number of laid-off workers in the county as the independent variable and uses the number of

Table 3.3: Summary Statistics

Variable	N	Mean	SD	Min	Max
Non-SOE SSR	10638	0.07	0.06	0	0.36
Log (# of layoffs)	9778	8.03	1.68	0	14.02
Layoffs over total employee	9307	0.53	0.49	0	2.44
Layoffs over urban population	9017	0.04	0.03	0	0.16
# of SOEs founded in 1964–1972 in 1998	10638	4.04	4.78	0	115
Legacy SOE employee in 1998 share	10143	0.14	0.17	0	0.81
Log (tax per capita) in 1997	8513	5.44	0.74	3.06	8.7
Log (tax per capita)	10228	6.38	1.11	0	10.74
Non-SOE effective tax rate	10638	0.09	1.96	-29.8	148.23
Rural population share in 1997	8513	75.74	23.31	0	98.35
Log (population) in 1997	8513	12.78	0.76	8.98	14.83
Migrant ratio in 2000	9920	0.05	0.08	0.00	0.91
Log (distance to prefecture seat)	10141	-1.35	1.82	-12.78	2.08
Latitude	10638	33.32	6.78	18.28	52.97
Longitude	10638	112.76	8.76	75.18	134.3
SOE-related protest	10638	0.04	0.2	0	1
Relief amplitude	9522	0.84	1.03	0.00	6.77

legacy SOEs as the instrument, without and with controls, respectively. Models 4(3-4) and 4(5-6) use legacy SOE employees' share in current total employees as the instrument for both laid-off workers in 1998–2003 as a share of current total employees and the share of the urban population, respectively. The high Kleibergen-Paap rk Wald F statistic results help assuage concerns of weak instruments (Lal et al. 2021).

3.4 Results

Table 5 illustrates the second-stage 2SLS estimation of three measures of laid-off worker scale's effects on non-SOE SSR in 2005, using their respective instruments with and without controls. Laid-off workers, instrumented by legacy SOE presence, are consistently correlated with more social security extractions from non-state sectors.

Table 3.4: First Stage: Legacy SOEs as the Instrumental Variable in 2005

	<i>Laid-off workers during 98–03</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
	log(layoffs)		% of employee		% of urban pop	
# of legacy SOEs	0.173*	0.066*				
	(0.008)	(0.011)				
legacy SOE employee			0.711*	0.552*	0.040*	0.037*
			(0.063)	(0.068)	(0.005)	(0.005)
Constant	7.308*	-16.244*	0.393*	-1.701	0.038*	-0.095
	(0.044)	(7.595)	(0.012)	(2.179)	(0.001)	(0.165)
Prefecture FE	✓	✓	✓	✓	✓	✓
Controls		✓		✓		✓
Observations	2381	1814	2184	1685	2152	1682
R-squared	0.514	0.657	0.423	0.485	0.320	0.386
K-P rk Wald F statistic	442.2	36.9	128.0	65.8	73.5	53.4

Robust standard errors clustered around counties.

* $p < 0.05$

Table 3.5: Second Stage: Legacy SOEs as the Instrumental Variable in 2005

	<i>Dependent variable: Non-SOE SSR</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
log(layoffs)	0.016*	0.016*				
	(0.002)	(0.006)				
share of employee			0.046*	0.039*		
			(0.012)	(0.016)		
share of urban pop					0.706*	0.506*
					(0.212)	(0.243)
Prefecture FE	✓	✓	✓	✓	✓	✓
Controls		✓		✓		✓
Observations	2381	1814	2184	1685	2152	1682
R-squared	0.021	0.069	0.011	0.108	-0.056	0.078
C-D Wald F statistic	608.4	58.4	168.0	86.0	79.1	58.9
K-P rk Wald F statistic	442.2	36.9	128.0	65.8	73.5	53.4
K-P rk LM statistic	254.2	34.0	126.2	69.3	74.0	55.3

Robust standard errors clustered around counties.

* $p < 0.05$

Table 6 illustrates the OLS estimation of laid-off workers as a share of total employees on non-SOE SSR. Laid-off workers as a share of total employees are correlated with a higher non-SOE SSR across all years in the data, with and without controls. All models passed the underidentification test and weak identification test with high values of LM statistics and F statistics (Stock and Yogo 2005).

Table 3.6: OLS Estimation: Laid-off workers over Total Employees

	<i>Dependent variable: Non-SOE SSR</i>							
	2004		2005		2006		2007	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
layoffs over employee	0.023*	0.016*	0.024*	0.016*	0.023*	0.013*	0.022*	0.012*
	(0.003)	(0.003)	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)
Constant	0.052*	-0.093	0.057*	-0.383	0.057*	-0.068	0.057*	0.358
	(0.002)	(0.416)	(0.002)	(0.371)	(0.002)	(0.381)	(0.002)	(0.332)
Prefecture FE	✓	✓	✓	✓	✓	✓	✓	✓
Controls		✓		✓		✓		✓
Observations	2275	1748	2264	1745	2304	1770	2185	1697
R-squared	0.381	0.491	0.359	0.441	0.376	0.430	0.352	0.409

Robust standard errors clustered around counties.

* $p < 0.05$

What about years other than 2005? Table 7 illustrates the 2SLS estimates of the effect of laid-off SOE workers as a share of total employees on non-SOE *de facto* SSR, instrumented by legacy SOE workers as a share of total industrial employees for each year during 2004–2007. Three out of four cross-sectional 2SLS models across 2004–2007 demonstrate a significant and positive effect of laid-off SOE workers on non-SOE *de facto* SSR.

This result is also substantive. Take a median county in 2006 as an example, where laid-off workers comprised 56% of current employees. In this county, laid-off workers would produce a 2.4 percentage-point increase in non-SOE SSR, explaining 46% of the median county's non-SOE SSR level of 5.19%. These results demonstrate that counties with more laid-off SOE workers respond to mounting pressure from losers' demands for

Table 3.7: Second stage: Laid-off Workers over Total Employees

	<i>Dependent variable: Non-SOE SSR</i>			
	(1)	(2)	(3)	(4)
	2004	2005	2006	2007
Layoffs over employee	0.019 (0.012)	0.039* (0.016)	0.045* (0.016)	0.028* (0.013)
Prefecture FE	✓	✓	✓	✓
Controls	✓	✓	✓	✓
Observations	1697	1685	1714	1642
R-squared	0.197	0.108	0.049	0.081

Robust standard errors clustered around counties.

* $p < 0.05$

a safety net by redistributing income from large non-SOEs owners to social security. The state redistributes economic resources from private business owners to soften the impact of its broken promise to laid-off SOE workers.

Tables 7 (1)–(4) illustrate that more laid-off workers are correlated with lower tax per capita across all years, confirming the theorized tradeoff between discretionary revenue and social security collection. However, winners do not get tax breaks to compensate for their higher social security burden. Tables 7 (5)–(8) illustrate that more laid-off workers do not decrease the tax burden for large non-SOEs. Both winners and the state are paying the price.

Tables 8 and 9 use the other two measures of laid-off SOE workers tabulated in Table 2. The results are consistent with Table 6. The results confirm Hypothesis 1 that the state’s redistribution policy is demand-driven by the scale of economic losers and does not rely on a particular measure or instrument.

Even if social security policy is demand-driven, is it mainly a “fire alarm” response to recent signals as the responsiveness literature would suggest? Or is it a case of a “mail

Table 3.8: Winners Do Not Get Tax Breaks

	<i>log(Tax per capita)</i>				<i>Non-SOE effective tax rate</i>			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	2004	2005	2006	2007	2004	2005	2006	2007
Layoffs	-0.234*	-0.237*	-0.206*	-0.254*	-0.004	-0.002	-0.003	-0.003
	(0.029)	(0.034)	(0.034)	(0.037)	(0.002)	(0.002)	(0.002)	(0.002)
Prefecture FE	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓
Observations	1740	1743	1766	1693	1741	1743	1766	1703
R-squared	0.842	0.829	0.822	0.809	0.468	0.451	0.466	0.476

Robust standard errors clustered around counties. Layoffs measured as share of total employee.

* $p < 0.05$

Table 3.9: Second Stage: Number of Laid-off Workers

	<i>Dependent variable: Non-SOE SSR</i>			
	(1)	(2)	(3)	(4)
	2004	2005	2006	2007
Log (layoffs)	0.008	0.016*	0.018*	0.013*
	(0.005)	(0.006)	(0.007)	(0.006)
Prefecture FE	✓	✓	✓	✓
Controls	✓	✓	✓	✓
Observations	1817	1814	1838	1767
R-squared	0.173	0.069	0.014	0.037

Robust standard errors clustered around counties.

* $p < 0.05$

Table 3.10: Second Stage: Laid-off Workers over Urban Population

	<i>Dependent variable: Non-SOE SSR</i>			
	(1)	(2)	(3)	(4)
	2004	2005	2006	2007
Layoffs over urban pop	0.255	0.506*	0.728*	0.498*
	(0.223)	(0.243)	(0.290)	(0.233)
Prefecture FE	✓	✓	✓	✓
Controls	✓	✓	✓	✓
Observations	1691	1682	1704	1632
R-squared	0.169	0.078	-0.012	0.042

Robust standard errors clustered around counties.

* $p < 0.05$

Table 3.11: Past Protest

	<i>Dependent variable: Non-SOE SSR</i>						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Past protest	0.011 (0.009)	0.010 (0.008)	0.012 (0.009)	0.013* (0.005)	0.011* (0.005)	0.013* (0.005)	0.011 (0.008)
Log (layoffs)	0.003* (0.001)			0.001 (0.001)			
Share of employee		0.014* (0.002)			0.005* (0.002)		
Share of urban pop			0.111* (0.037)			0.036 (0.024)	
L1.non-SOE SSR				0.538* (0.024)	0.525* (0.025)	0.535* (0.024)	
Constant	0.071 (0.283)	-0.043 (0.304)	0.028 (0.294)	0.173 (0.144)	0.034 (0.157)	0.168 (0.152)	0.003 (0.279)
Prefecture-Year FE	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓
Observations	7236	6960	6983	5346	5157	5162	7741
R-squared	0.426	0.439	0.428	0.594	0.594	0.593	0.429

Robust standard errors clustered around counties.

* $p < 0.05$

post” mechanism that incorporates prior information? The results demonstrate evidence for both mechanisms. Tables 11 (1)–(3) illustrate that demand-driven redistribution is mainly determined by prior information of laid-off workers instead of their protests *ex post*. After controlling for previous SSR levels in Tables 11 (4)–(6), past protests correlate with higher SSR in subsequent years, demonstrating responsiveness to fire alarms. These results confirm Hypothesis 2 that the number of laid-off workers determines baseline SSRs while experiencing protests should correlate with incremental changes in a locality’s SSRs as the local state calibrates its commitment to the welfare state according to the losers’ demands.

Because of the lack of protest data before social security collection, unobserved protests in earlier periods may stimulate the higher SSR level through the “fire alarm” mechanism. However, if the “mail post” mechanism can be explained away by earlier protests, then

past protests should have persisting effects on the SSR level. This is not the case, as seen in Table 11(7). Recent protests cannot explain baseline SSRs of 2004-2007 while sizes of organized economic losers in 1998 can. This confirms Hypothesis 3 that the surge of organized economic losers have persisting effects on the state's future collection of social security.

3.5 Conclusion

This chapter contributes to the literature in three main ways. First, it generalizes the literature on the responsiveness of states, which focuses on realized collective action or raised complaints. Authoritarian states follow a "demand-driven" strategy, and their willingness to compensate losers directly relates to the scale of *expected* collective action, not just realized action. The state responds to realized protests and potential collective action because it is in its interest to be forward-looking and preempt social unrest if it can. The state is also willing to pay a real price to appease grievance, sometimes at the expense of its overall extractions. In locating grievances, the state can use prior structural information to devise its targeted policy response in advance instead of waiting for signals. I call that the "mail post" approach, in contrast to a "fire alarm" approach or a "police patrol" approach. If the state has structural information, it can address mass grievances with *ex ante* programmatic arrangements. If the state has situational information provided by fire alarm-like protests or petitions, it addresses them *ex post* with particularistic compensation. The mail post approach also diverges from the police patrol approach as the former uses prior information to design the policy while the latter collects posterior information to safeguard the determined policy objective.

Second, this chapter contributes to the literature on authoritarian welfare states. It answers the puzzle of why authoritarian states move beyond providing club goods and expand the welfare state. If the welfare state is financed by expanding participation in the system, its continuing expansion is inevitable due to surges in benefits claims. In China's case, fiscally-constrained local administrations relied on the non-state economy's participation to fund the new system and continued to include more potential contributors.

Third, this chapter contributes to the political economy study of China's social security system and provides quantitative evidence for the causal link between laid-off workers and the establishment of a social security system. Using a novel measure of state effort of redistribution at the county level, the chapter finds more laid-off workers led to higher social security extraction from non-SOE firms. This clarifies our understanding of the winners and losers in the establishment of the Chinese welfare state. China's reform is praised for allowing markets to flourish outside the planned economy before merging the dual-track price systems I. Weber (2021, 7). Therefore, it is unsurprising that China set up a welfare state outside the existing institutions and used the resources generated in the market to replenish the SOEs. The old exclusive social security system did not have the internal dynamism or growth potential to accommodate laid-off workers and sustain itself. The state had to seek help from the margins of the system; that is, non-SOEs whose workers were excluded from the social security system and were becoming prosperous in the marketization.

Despite the preventive appeasement observed in this chapter, what should also be emphasized are the limitations of the "demand-driven" strategy of the state. In the example in this research, the state responded to the demands of citizens up to the point that so-

cial stability was maintained. The requirement of holding collective action at bay is a low standard for public goods provision. Consequently, the state failed to restrain economic winners enough to stop spikes in inequality, failed to accumulate a social security fund adequate for the aging population (Appendix 6.1), and failed to recognize players with less capability for collective action, such as migrant workers. Moreover, fragmented authoritarianism (Lieberthal and Oksenberg 1988) embedded in the centralized welfare state exacerbated these problems by building up vested interests among local urban workers to resist cross-region redistribution.

Considering the direction of redistribution analyzed in this chapter, who are the true winners and losers in the SOE reform and social security system? SOEs successfully got rid of the burdens of unwanted employees and the welfare promises of retirees. Local administrations and investors in the SOEs enjoyed higher valuation and profitability when the surviving SOEs later grew exponentially with preferential treatment and monopolistic status. Local administrations shouldered some welfare responsibilities but shifted the burden to non-SOE contributors with the pay-as-you-go social security system. Laid-off workers lost jobs and welfare and got partial coverage under the new social security system. Non-SOE owners flourished in the market reform but faced restraint and redistribution by being required by laws to fund the welfare of current urban workers. Non-SOE employees became eligible to enjoy the once-exclusive welfare state by contributing social security tax. Subsequently, the SOEs, which seemed to be the underdogs in the late 1990s, are now the true winners of the reform at the expense of laid-off workers and non-SOE owners.

Chapter 4

Supervised Autonomy: China's COVID-19 Lockdown

In the existing theoretical literature on principal-agents, multiple goals are generally associated with negative outcomes in delegation because of more opaque incentives and responsibilities and a greater need for monitoring (Wilson 1989; Miller 2005). In comparison, professionals who have only one task can be given autonomy to work within a certain budget without having to worry about trade-offs between multiple tasks (Holmstrom and Milgrom 1991; Dewatripont and Tirole 1999). This preference for single-task agency also echoes some classical features of Weberian ideal-typical bureaucracy: professionalization and task routinization (M. Weber 2013). Multitasking agents, however, need to be more closely monitored to avoid displacement of budgets in pursuing the more observable task (Dewatripont, Jewitt, and Tirole 1999; Rasul and Rogger 2018). Moreover, conflicting objectives, a particular form of multitasking, means resources spent would cancel each other out (Bolton and Dewatripont 2004). Instead of putting more effort into both tasks, conflicting goals exacerbate the unbalanced effort: courts let plaintiffs and defendants search separately for opposing arguments because an impartial party would have no incentive

to find conflicting arguments (Dewatripont and Tirole 1999). Top-down incentives are especially consequential for authoritarian bureaucracies because they are accountable only to their superiors. The necessary constraint naturally comes from superior governments through budget-setting and target-setting. The literature on contemporary China's bureaucracy identifies a variety of objectives that local officials are responsible for, including social welfare (Zuo 2015a), social stability (Bulman 2016a), economic development (Li and Zhou 2005; Jia, Kudamatsu, and Seim 2015; Landry, Lü, and Duan 2018), fiscal extraction (Lü and Landry 2014), poverty reduction (Donaldson 2007), and a clean environment (Chen, Li, and Lu 2018). These objectives compete for resources and even directly conflict with each other. According to the principal-agent literature, making officials generalists is neither efficient for social outcomes nor effective for political control. I argue that these conflicting objectives function as internal constraints on China's local officials who were otherwise prone to implement extreme policies for high-powered incentives, as in the Great Leap Forward (Kung and Chen 2011; Liu and Zhou 2021).

In contrast to the negative view prevalent in the literature, the main argument of this chapter is that trade-offs can play an important role in improving bureaucratic decision-making and curbing extreme policies. I theorize conflicting targets could prevent agents from pursuing single-target incentives at all costs and force them to balance trade-offs utilizing local information. Agents internalize the cost of spending too many resources on one goal because they would suffer if they spent too few resources on the other goal. Agents must weigh the trade-off of pursuing each goal to optimize overall performance rather than maximizing for a single goal.

The situation in China during the COVID-19 pandemic is an excellent example to ex-

amine how officials make political compromises under central party control. The party center of the Communist Party of China, despite its absolute control over local officials and the extreme importance of the issue, opted for a decentralized approach, leaving pandemic control to local discretion. In contrast to the autonomy granted, which allowed heterogeneous responses, strict political control was established by sanctioning officials who did not produce satisfactory results. After party center in Beijing sanctioned hundreds of officials in Wuhan for the initial outbreaks in January 2020, pandemic control became a pervasive threat to local officials' political survival.

With single-target survival incentives, officials were interested in pursuing extreme pandemic control measures to minimize career risks. Lockdowns have imposed huge socio-economic costs for rural communities (Huan Wang et al. 2021), urban economy (You et al. 2020), national economy (Jin et al. 2021), and global trade (Verschuur, Koks, and Hall 2021). These extreme measures were also accompanied by non-COVID-19-related deaths: the ratio of excess mortality to reported COVID-19 mortality was among the highest in the world for China's provinces outside the epicenter of Hubei, according to a Lancet article studying global excess mortality from 2020 to 2021 (Haidong Wang et al. 2022). Therefore, what prevented local officials from imposing more frequent and more draconian lockdowns is of substantive importance.

To empirically examine local lockdown and local responses to central orders, I created a novel dataset for 329 Chinese cities from January 1 to April 28, 2020, documenting the daily intra-urban mobility, COVID-19 cases, precipitation, and temperatures of these cities. In the early days of the pandemic, a concurrent and high-profile campaign to eradicate poverty allowed me to examine the drastic trade-offs faced by the authorities. I col-

lected an original poverty alleviation campaign dataset by reviewing dates of all public announcements of poverty alleviation progress of every city in 2020. I use difference-in-difference methods to analyze how conflicting targets impact officials' pandemic responses dynamically.

Local officials with poverty elimination targets sacrifice the economy and impose lockdowns in response to local outbreaks but reopen much faster than other officials after achieving zero-COVID. Conversely, when local officials achieved poverty elimination, they imposed stricter lockdowns, suggesting that they were holding off on the poverty target. Cities that just eliminated poverty imposed 68% more mobility restrictions than other low-income cities in response to local unit infection. The conflicting objective of poverty elimination mitigated poor cities' COVID-19 lockdown severeness by 40%. In summary, city officials achieved zero COVID with fewer closures and less harm to the economy, while other officials pursued minimal risks due to a focused survival incentive.

By shedding light on the constraining function of conflicting objectives, this chapter contributes to the literature on multitasking and principal-agent relations. It explains why conflicting objectives are still common in delegation despite their theoretical drawbacks. Although we use the COVID-19 pandemic as a case study, this chapter also contributes to the literature on bureaucratic governance in normal times. Conflicting goals are common practice in both China and developing countries with soft-budget bureaucracies. Linking these two aspects may have policy implications for bureaucratic control in weak institutions that fail to strengthen budgetary control. This chapter also relates to the growing literature on the economic impact of COVID-19 responses (Jin et al. 2021; Verschuur, Koks, and Hall 2021; Huan Wang et al. 2021; You et al. 2020), especially on inequality (Bonaccorsi

et al. 2020). This chapter shows that some of the effects have been mitigated by changing bureaucratic incentives in regions that most need them.

The chapter is organized as follows. Section I presents my theory and its position in the literature, section II describes decision making in local lockdown in China, and section III describes my research design and hypotheses. Section IV presents my empirical strategy and data, and Section V presents and discusses the results.

4.1 Theory

4.1.1 Principal-Agent Problems and Multitasking Bureaucracy

The central argument of this chapter is that conflicting goals can play an important role in improving bureaucratic decision making and constraining extreme policies. When a policy principal delegates a goal to its bureaucratic agents, it cannot directly control costs and must rely on the agents to contain costs. The principal may not be able to harden the budget because it does not know the expected cost of achieving the goal, so it allows for some overspending. The otherwise beneficial strong incentives and readily observable results then lead to overspending, with the excess costs ultimately borne by the principal. For example, local officials may borrow against government loans to boost local economic growth in the short term to make careers, and allow long-term growth to suffer. Conflicting objectives, however, force agents to internalize the costs of overspending in one objective by penalizing them through the other objective, without hardening the budget.

The moral hazard problem, in which agents' hidden actions affect the principal's inter-

ests, has been studied extensively in economics and political science under the principal-agent theory framework (Wilson 1989; Miller 2005). The principal-agent problem can either be solved through ameliorating information asymmetry or aligning principal-agent interests (Bendor, Taylor, and Van Gaalen 1987). A classical information-side solution to control costs is to let multiple potential agents bid for the contract. The principal can induce potential agents to reveal their expected costs (McAfee and McMillan 1986). However, bidding is usually nonviable for governance issues. After all, there is only one mayor for each city at a time, so there is only one bidder. Aligning the interests of the principal and agents is another solution. Jiang (2018) shows that patron-client relations can help align the interests of the political principle and the bureaucracy by introducing a repeated, personalized interaction and extending both parties' time horizons. The executive branch's appointment of like-minded agency heads also helps align interests between the elected head of state and the bureaucracy in democratic countries. However, patronage relationships are exclusive, so the informal mechanism can only cover a subset of actors.

I argue that conflicting goals force actors to balance efforts without hardening the budget. They complicate the otherwise monotonous conversion of inputs into output. More input in one goal is detrimental to the other goal, constraining the agents' optimization problem and making the agents responsible for the incurred costs. Agents must trade off the trade-off of pursuing each objective rather than maximizing a single objective and externalizing the cost. In fact, if the agents can externalize all costs while finishing the task, they would not need to use the local information to achieve the task cost-efficiently. Since the agents internalize the cost through the conflicting target, the agents will use their private information to mitigate the trade-off.

The principal agent literature generally favors single task assignment because specialized professionals can be given greater autonomy to work within budget and carefully execute their single task without worrying about trade-offs between multiple tasks (Holmstrom and Milgrom 1991; Dewatripont and Tirole 1999). Alternatively, multitasking agents need to be more closely monitored to avoid displacement of budgets in pursuing the more observable task (Dewatripont, Jewitt, and Tirole 1999; Rasul and Rogger 2015). Ting (2002) shows that multitasking is preferable only when payoffs on each task depend on other tasks' performance so efforts on all tasks are encouraged.

Moreover, if one task is detrimental to the other, then spending resources on both would cancel each other out (Bolton and Dewatripont 2004). Therefore, instead of trying harder to perform both tasks, conflicting tasks would incentivize unbalanced efforts: Courts let plaintiffs and defendants search separately for opposing arguments because an impartial party would have no incentive to find conflicting arguments (Dewatripont and Tirole 1999).

While the literature focuses on increasing agents' effort, this study focuses on limiting incentives for a single goal. In a classic example where the principal owns the returns from the machine and cannot observe the depreciation of the machine, the optimal contract would be a fixed price contract to discourage workers from abusing the machine and shirking the maintenance of the machine (Holmstrom and Milgrom 1991: 26). I argue that this effectively holds workers accountable to the conflicting goals of delivering a given amount of output and keeping the machine in an acceptable condition. Attempting to achieve these two goals, forces the agent to internalize the cost of depreciating the machine and find more efficient ways of producing it.

The prevailing argument against conflicting goals is still valid: if agents see a clear priority in a goal, they will still put unbalanced effort into it. This is a condition for competing goals to lead to a balance of effort: These goals must appear to have similar priorities. Appendix 6.2 constructs a model in which competing goals have symmetric priorities and proves that agents would use local information to balance their efforts. Otherwise, the agent would still single-mindedly devote all resources to one goal because the punishment for failing to achieve the other goal is dominated by the additional reward for better achieving one goal. Appendix 6.3 constructs a model for asymmetric goal conflict and proves that the more unbalanced the priorities, the less important local information is to agents' decisions. Therefore, opaque and paradoxical priorities can sometimes be to the principal's advantage.

In summary, when agents face a soft budget to achieve the goal, competing goals with similar priorities may discourage agents from pursuing incentives for a single goal and balance their efforts.

4.1.2 Bureaucratic Incentives and Conflicting Objectives in China

Bureaucratic incentives has always been an important part of governance since the founding of the People's Republic of China. As early as the first Five-Year Plan (1953–1958), the party center set specific production targets, from steel to sugar, and delegated to local governments both the authority and responsibility for carrying out the tasks.¹ In a central planning regime, these targets can be imperative such that targets themselves have

1. Report of the first Five-Year Plan for the national economic development of the PRC. www.gov.cn/test/2008-03/06/content_910770.htm

high-powered incentives. The result of one-sided incentives can be catastrophic: empirical studies on the Great Leap Forward movement show that radical grain yield targets closely predict excessive procurement and deaths due to famines afterwards (Liu and Zhou 2021), and career incentives lead to more radical enforcement of procurement (Kung and Chen 2011).

The legacy of bureaucratic control persisted after the 1978 market reform. The annual meeting of the National People's Congress in March continues to set socioeconomic goals for the following year, and the provincial People's Congress meets before that to set local goals. Although these goals are no longer as binding as they were in the planned economy, the setting of goals after the reform is supported by the Communist Party's personnel management system, in which the upper-level Party committee has the power to transfer, appoint, promote, and dismiss lower-level officials (Manion 1985). Superiors set higher targets for their preferred policy outcomes to convey their weights in performance evaluations, such that subordinates are incentivized to put in more effort (Li et al. 2019). Integrating targets into China's top-down incentive structure leads to a highly motivated bureaucracy to promote economic growth (Li and Zhou 2005; Jia, Kudamatsu, and Seim 2015; Landry, Lü, and Duan 2018; Jiang 2018) and fiscal extraction (Lü and Landry 2014), the most emphasized targets.

Bureaucratic incentives become more high-powered after Xi Jinping came to power in 2012. Massive crackdowns across the bureaucracy and centralization of power means the stakes of failing politically emphasized targets become much higher. Moreover, the party center introduced many regulations that sanctioned officials with unsatisfactory performance to increase accountability (Tu and Gong 2022). Worst outcomes shift from no pro-

motion to dismissal and demotion. From 1998 to 2007, only 2.2% of prefectural party secretaries ended their official terms with dismissal or demotion; most were either promoted or transferred (Landry, Lü, and Duan 2018). The ratio increased to 11% for prefectural party secretaries in 2013-2017 (Li and Manion 2019).² In 2020, 50,527 of 119,224 sanctioned officials were punished for “lazy governance” (懒政), which is the largest category among the eight categories.³ The incentive to survive is intrinsically high, and individual targets risk being pushed to extremes to cover officials’ insecurities. Without checks and balances outside the government, and with top-down accountability prevailing, the only way to limit the radical pursuit of targets is to set targets.

Despite the theoretical drawbacks of multitasking, local officials in China are not only expected to multitask but are also frequently assigned conflicting tasks. A much-studied policy trade-off in China is environmental protection and economic growth. After being included in civil servants’ performance appraisals in 2006, local officials sacrifice economic growth for less pollution (Chen, Li, and Lu 2018). However, local officials balance the trade-off by finding less-polluting ways to develop (Chen, Li, and Lu 2018; Du and Yi 2021; P. Zhang 2021). Instead of leading to fewer efforts, conflicting tasks can moderate single-target survival incentives and force the agents to balance the trade-off.

During the COVID-19 pandemic, political messaging was also filled with conflicting objectives. Xi Jinping urged all levels of the party-state to “balance the pandemic’s impact on the economy and strive for achieving socio-economic targets of the year”.⁴ Xinhua, the

2. “No change” is excluded from the calculation.

3. Central Commission for Disciplinary Inspection, January 26, 2021, www.ccdi.gov.cn/toutiao/202101/t20210126_234809.html.

4. *Xinhua*, February 10, 2020, www.xinhuanet.com/politics/leaders/2020-02/10/c_1125555826.htm

central news agency, summed the commands as “the dual victory” of pandemic control and socio-economic development in an article on February 13.⁵ Xi Jinping reiterated the point in March 2022, emphasizing to “get maximal pandemic control with minimal socio-economic costs.”⁶

4.2 China’s Localized Lockdown

China’s local governments have always been responsible for a variety of tasks, such as economic development, social stability, and environmental protection, but rarely have they been uniformly subjected to one task with such clarity: the elimination of COVID-19. The party center prioritized pandemic control as “the biggest political mission” in a document dated January 30, 2020.⁷ In contrast to the single zero-COVID target, China has never imposed a national lockdown. There are three arguments against a national lockdown: first, it removes decision-making power from agents and shifts responsibility for this costly decision to the principal; second, it negates the advantage of having multiple agents with better policy options competing against each other; third, it substitutes infections and mortality as policy targets for bureaucracy.

Variations in policymaking and enforcement were so apparent that ordinary citizens named some localities as different models. For example, some Henan cities were praised by millions of citizens online for their swift and strict measures to block traffic from Wuhan

5. *Xinhua*, February 13, 2020, www.xinhuanet.com/politics/2020-02/13/c_1125567472.htm

6. *Qiushi*, March 21, 2022, www.qstheory.cn/qshyjx/2022-03/21/c_1128489634.htm

7. “关于做好新型冠状病毒感染肺炎疫情防控和脱贫攻坚有关工作的通知,” State Council Poverty Alleviation Office, January 30, 2020.

as early as the end of December 2019⁸, while Shanghai was acclaimed for its precise and moderate pandemic control that did not disrupt daily lives.⁹ Common measures used to enforce lockdowns in China include closing street stores, extending winter breaks for schools, halting public transportation, restricting people from entering and leaving neighborhoods, and limiting factory production.¹⁰

Chinese local officials had few constraints in their lockdown decisions. First, local officials had an administrative autonomy: they were granted such unprecedented power in the name of pandemic control that they could lockdown cities with millions of people even with a single infection. Moreover, they had a soft fiscal budget to weather economic shocks brought by the lockdowns. The central government approved local governments to issue 3.75 trillion RMB special bonds (74% more than 2019's debt ceiling) and 1 trillion RMB pandemic special bonds.¹¹

Figure 4.1, based on the data collected, shows the seven-day moving average of mobility trends in China's cities. Each point represents a city. The horizontal axis ranges from January 1, 2020, to April 28, 2020, with most cities coordinating their closures in late January and beginning to reopen in mid-February. Points below zero indicate that cities have lower mobility than the previous day. By observing the distribution of points on each day, we can see the significant differences between cities in China. The dark blue line captures

8. Weibo. s.weibo.com/weibo?q=%23来抄河南的作业%23

9. "Catching Rats in a Ceramic Shop: Shanghai's Precise Pandemic Control." *Xinhua*, January 28, 2021, www.xinhuanet.com/local/2021-01/28/c_1127038607.htm

10. "应对新型冠状病毒感染的肺炎疫情I级响应措施," People's Government of Sichuan Province, January 25, 2020. www.sc.gov.cn/10462/c103046/2020/1/25/d154e6de18bf48d799be5b836226ef44.shtml

11. "2020年上半年中国财政政策执行情况报告," Ministry of Finance, August 6, 2020, www.gov.cn/xinwen/2020-08/06/content_5532865.htm

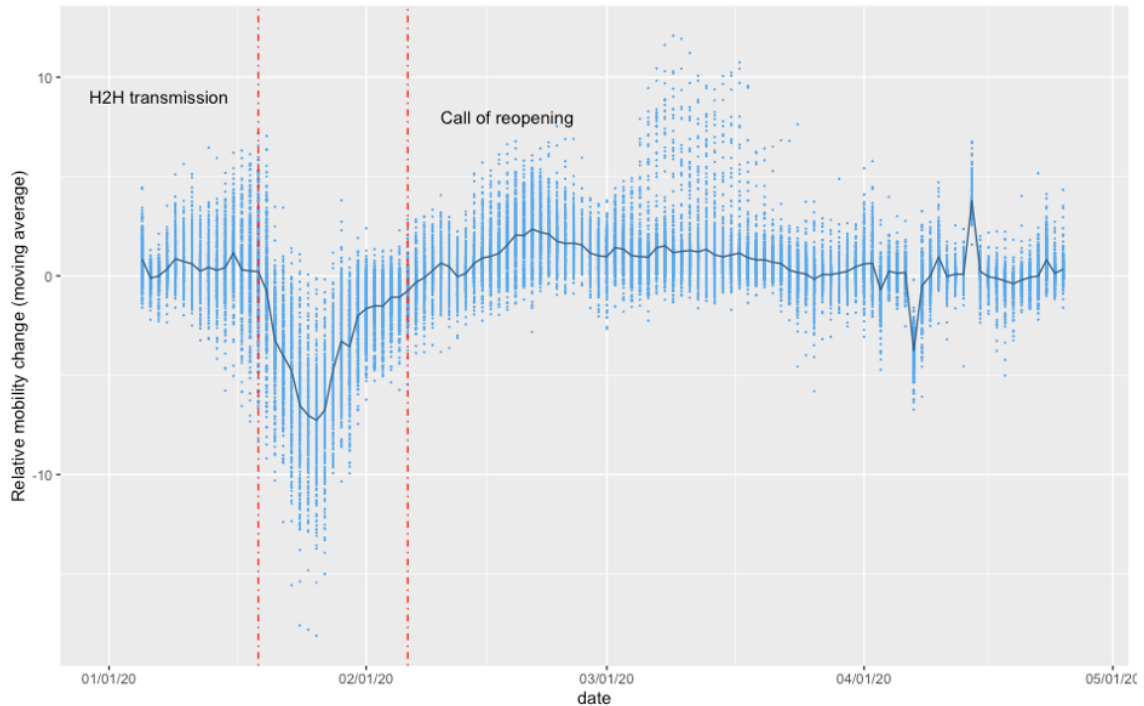


Figure 4.1: Mobility change of China’s cities from January to April 2020

the national mean and shows the variation over time in urban cordon measures.

Localized response is institutionalized in the Emergency Response Law, which requires that county governments and above take action to immediately contain the emergency and then report to higher level governments, bypassing the immediately higher level of leadership if necessary. This means local governments are granted on-the-spot discretion during crises and only ex-post upward reporting is required. I argue that the absence of upper-level approval is justified by the “ultimatum advantage” given by the time-sensitive nature of emergencies (Miller 2005). Because local officials always have an informational advantage of knowing the situation on the ground, the center relies on them to provide policy recommendations. The official can always submit the proposal advantageous to himself (“stack the deck”) to the principal as the impatient principal’s threat of rejection is

not credible (Bendor, Taylor, and Van Gaalen 1987). Upper-level approval would become a façade, with the center constantly approving lockdown proposals of risk-averse local agents who know the center cannot wait for better options.

Lockdown enforcement is an excellent choice for comparisons among local decision makers for three reasons: salience, accountability, and measurability.

First, the political outcome of the lockdown is of great importance to local decision makers. Every city leader had to weigh this political decision because the pandemic could hit the city just as it devastated Wuhan. Failure to control the pandemic outbreak could result in immediate dismissal or suspension, while a prolonged lockdown could lead to widespread unemployment. Therefore, the decision is made after careful consideration, which should reflect a leader's interest in it.

Second, human mobility is more attributable to political will to implement than other policy outcomes, such as economic development. Like any policy outcome, human mobility is due to three factors: political will, implementation capacity, and subject compliance. Lockdown is a much easier task to implement than the more complex tasks of creating economic growth or building a "clean" government, where capacity requirements are higher. Moreover, public approval during the outbreak was high because the preferences of the public and the government on this issue were largely aligned.

Third, the outcome of the policy decision is very transparent: the mass mobility of people can be tracked with modern technology and is difficult to manipulate. This also allows identifiable comparisons between different places. Mobility-restricting measures ranged from month-long citywide lockdowns to targeted quarantines of specific buildings and were often communicated through local media or even area-coded text messages. Due

to the opacity of regulations and complexity of enforcement, mobility data is more accurate than formal announcements to measure local lockdowns.

With decentralized decision-making, we see various pandemic control approaches, from different localities down to villages. The mandated local discretion seems paradoxical, as the local agents in Wuhan were the ones who covered up the emergence of the infectious disease and did not report it in the first place. However, official discretion turns out to be an efficient solution to pandemic control. Just as the congressional control literature observes (Weingast and Moran 1983; McCubbins and Schwartz 1984), monitoring results alone enabled the party to induce a nationwide pandemic control response. If they could observe policy outcomes and punish lapses, they did not need to monitor action.

4.3 Research Design and Hypotheses

Examining how bureaucracies respond to conflicting goals, requires manipulating the goals and examining the changes in their decision making. In the early days of the COVID-19 pandemic, China provides a natural experiment in which local officials were granted autonomy in their lockdown decisions, and the existence of trade-offs changed according to local infections and the perceived priority of the economy.

4.3.1 Poverty Elimination as a Conflicting Target

The pandemic crisis freed local Chinese officials from various conflicting evaluation standards by rendering previous expectations and goals irrelevant.¹² The annual meeting of

12. As Table A.1 shows, nearly all target-setting provincial People's Congress convened before Wuhan lockdown on January 23.

the National People's Congress, which sets new socioeconomic guidelines for all levels of government, was postponed indefinitely (and will finally take place on May 22, 2020). As the most important policy task, pandemic control did not only serve officials' vested interest in preventing local outbreaks, but also provided them with a rare opportunity to narrow their generalist job to a single task: zero COVID.

While most officials were bound to the single task of zero COVID, there was a group of officials who had to perform two opposing tasks. In addition to fighting the pandemic, these local officials have another policy mission of paramount importance: eliminating poverty in their jurisdictions by the end of 2020, with the goal of eliminating all officially designated poor counties in their jurisdictions from the classification. The main metric to achieve before a county is no longer considered poor is to decrease the poverty incidence rate to below 2% (3% for the Western region).¹³ Identification of the population in poverty is based on a national poverty targeting campaign in 2014 that documented 89.2 million individuals living in poverty.

When Xi Jinping's signature campaign began in 2015, the heads of all levels of government signed a contract with their superiors to eradicate poverty in a timely manner. To ensure that county leaders bear the primary responsibility for eliminating poverty, the center stipulated that counties may not change jobs until the county has eliminated poverty: "No transfer until elimination."¹⁴ As Guizhou's provincial secretary Sun Zhigang phrased it: "The General Secretary [Xi Jinping] said this, you have signed the military pledge. There is no joking in the military. If you have not accomplished it (i.e., poverty elimination),

13. "贫困县退出专项评估检查实施办法（试行）," State Council Poverty Alleviation Office, September 30, 2017.

14. "脱贫攻坚责任制实施办法," General Office of the Chinese Communist Party, October 17, 2016.

bring me your head.”¹⁵ This figurative language shows that all levels of leaders were under massive pressure from the top. In particular, city leaders were responsible for coordinating, making policy, supervising, and reviewing the elimination of poverty to ensure that poor counties in their jurisdictions exited on time.¹⁶ In effect, poverty elimination had been a survival condition for these city leaders until the pandemic emerged.

Due to the urgency of the 2020 deadline, pandemic response measures, such as mobility restrictions, directly impact the opportunity for timely poverty eradication. Many poverty alleviation measures depend on labor mobility, such as nonfarm wage labor in urban areas and the resumption of production in local industries. According to Luo et al. (2020), 23 percent of households lifted from poverty perceived they would fall back to poverty due to COVID-19. More importantly, the poverty elimination campaign involves direct fiscal subsidies in the form of “agricultural subsidies, relocation compensation, the privilege to join in co-operatives, easier access to microfinance, and a higher reimbursement rate for medical treatment” (Zuo, Wang, and Zeng 2021: 7). Local governments rely on economic activity to generate transfer tax revenue, so prolonged closures are in direct conflict with poverty reduction. Party center, aware of this conflict, ordered all levels of government to suspend the review of progress on poverty reduction and focus on pandemic control at the beginning of the pandemic before resuming it on February 6.¹⁷

15. *Voice of China*, July 28, 2021. www.12371.cn/2021/07/28/VIDE1627437853420431.shtml.

16. “脱贫攻坚责任制实施办法,” General Office of the Chinese Communist Party, October 17, 2016.

17. “关于做好新型冠状病毒感染肺炎疫情防控和脱贫攻坚有关工作的通知,” State Council Poverty Alleviation Office, January 30, 2020.

4.3.2 Achieving Poverty Elimination

Poverty reduction is operationalized in such a way that all districts officially designated as poor in their jurisdictions are eliminated from the group. The Comprehensive Anti-Poverty Campaign collected information on 89.2 million people living in poverty and identified a total of 832 poor counties. As of January 1, 2020, 123 of China's 333 cities still had poor counties in their jurisdictions (then "poor city"), for a total of 391 counties, as shown in Figure 4.2.¹⁸ Lighter blue means the city has more jurisdictions designated as poor county.

The last of the procedures to opt out of being classified as a poor district is a public notification period of seven days. During this period, citizens may object to the approval of the designation. The public notification means that the provincial government is willing to approve the exit of these counties from the poverty group and is confident in communicating its intention to the public. Given the upward accountability and the lack of downward accountability, I consider the date of the public announcement as the time when the city leaders can be sure that the approval by their respective leaders will be prompt.

From January 1st to April 28th, 2020, 83 out of 121 poor cities were approved by provincial governments to claim poverty elimination. In addition, the center continued to reward poverty reduction beyond the cutoff: the party secretary of Lankao, the second poverty county claim poverty elimination in 2017, was promoted to be vice mayor in 2020 as Lankao reduced poverty incidence rate further 0.0012 %. Despite poverty reduction still being prioritized and generously rewarded, the approval marked a categorical difference for officials: poverty reduction was no longer a survival condition.

18. Cities that are not included in the China Data Lab COVID-19 case tally are shown as NA.

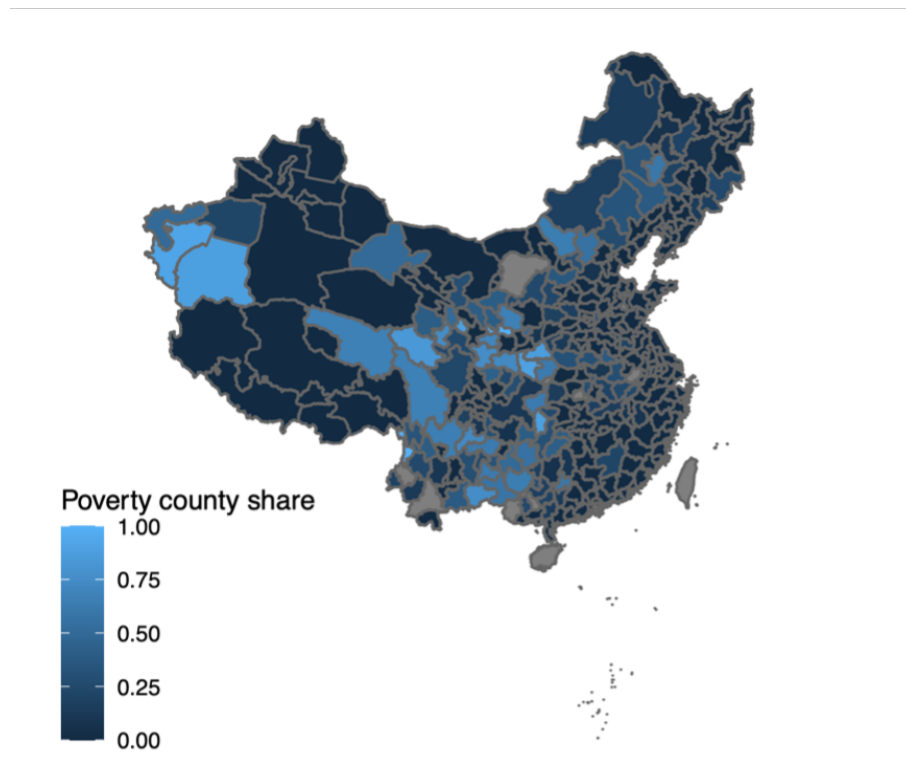


Figure 4.2: Poverty county share of China's cities on January 1, 2020

4.3.3 Identifying the Effects of Conflicting Targets

Given the two concretely conflicting goals of zero-COVID and poverty eradication, poor city officials are expected to moderate their policy response to both goals and take a more balanced approach to dealing with outbreaks. Ideally, one would examine the onset of each goal and analyze how the enforcement of each goal affects the decision making of the other goal. However, defining the onset of the two goals faces analytical challenges: The zero-COVID goal is enforced at the national level with no temporal or geographic variation, and the poverty eradication goal was prior to the pandemic and the analysis period. However, it is analytically equivalent to identifying the effects of the exit of each target. If officials change their decision-making after a conflicting target is eliminated, then it can be confirmed that the target impacted their decision-making before.

According to our theory, officials balanced their approaches to conflicting targets. Therefore, they should relapse to a one-sided approach once poverty cities achieve poverty elimination. Zero-COVID would become their only goal. Local officials are expected to return to minimizing pandemic risk without restriction, reversing the previous balanced approach to local outbreak control.

Hypothesis 1: Cities that recently completed the poverty elimination task will impose stricter lockdowns in response to local infections.

Since our theory makes no significant distinctions between targets, we should expect that achieving the zero-COVID target will also have a mirroring effect on poverty reduction. Once local infections have fallen to zero, poor cities should reopen more quickly than other cities. If this is the case, it would be evidence that the zero-COVID target has

suppressed poverty and that city officials are more eager to keep the economy going.

Hypothesis 2: Poor cities will reopen faster than other cities when they achieve zero COVID.

4.4 Empirical Strategy and Data

My unit of analysis is the day of the city. Since city leaders make their lockdown decisions based primarily on COVID-19 cases, my variable of interest is the interaction between new infections and poverty eradication status in the city. Hubei is left out of the analysis because the party center was very involved in its decisions. The analysis began from Jan 20, 2020, when human-to-human transmission of COVID-19 was publicly confirmed by the Chinese government. Thus, the sample comprises 316 cities observed over 99 days.

The main outcome variable is new lockdown measures, as measured by changes in urban mobility. When a city tightens its lockdown measures, urban mobility decreases and the change in mobility becomes negative. Note that in this construct, the level of lockdown measures is the first derivative of mobility and the change in lockdown measures over time is the second derivative of mobility. The reason of this choice is theoretical instead of methodological: mobility itself captures the result of lockdown, while mobility change captures new lockdown decisions made every day in reaction to new infections found. Since the chapter concerns bureaucratic decision-making, the latter is the more appropriate choice.

The change in mobility results from the interaction between the willingness of citizens to move and the degree of reopening allowed by the government (whichever is lower).

However, both the willingness of citizens to move and the restrictions imposed by the risk of infection should be captured. In addition, I control for citizens' willingness to move with precipitation and temperature. My independent variable of theoretical interest is whether higher-level governments approved the city's exit from classification as a poor county. The timing of the provincial government's announcement of approval is exogenous to city leaders and depends on the provincial government's agenda. Moreover, since the dates of the public announcement are used instead of the later official announcement of the phase-out, there is no significant difference between the timing before and after the public announcement, except for the expectation of the city government. Any discontinuity in mobility around the dates should be due solely to the information effect of the announcement on the decision making of the city leader.

The other variable of interest is whether the city has reached zero COVID. If the city has zero infections on three consecutive days after not having zero infections on the previous day, I define the first day with zero infections as the day the city reached zero-COVID infections.

Intracity mobility data is available on Baidu. Baidu uses location data from Baidu Location-Based Service (LBS), including Baidu Maps, a popular Chinese equivalent of Google Maps, and applications that collect and send users' location data to Baidu. The intensity of intra-city mobility is measured as the proportion of city residents who change their location, according to LBS. As the data only captures users with a GPS device, it is not a complete measure of the entire population. However, since the number of Chinese mobile Internet users was 932 million in 2020, the subset is large enough to represent most

of the population's mobility.¹⁹

Daily case data from COVID-19, precipitation, and temperature are from Harvard Dataverse's China Data Lab. I elicit the poverty exit announcement date for poor counties from January 1, 2020 to April 28, 2020. Poor cities often approve all poor counties in their jurisdiction to exit poverty on the same day. Therefore, the treatment level is actually at the city level. This feature fits our city-day data structure. Summary statistics are reported in Table A.5.

Authoritarian officials are found to report fake statistics and deceive both the public and their superiors (Wallace 2016). This is less of a concern for this chapter because the dependent variable, daily mobility, is collected and provided by a private company. Moreover, despite early cover-ups by local officials in Wuhan, it was extremely difficult to conceal COVID-19 infection cases as they eventually spread to other localities. Since each locality tracked the source of each case found, suppressed reports from neighboring localities would be easily uncovered. All countries experienced underreporting due to testing capacity during the pandemic, but all cities outside of Hubei suppressed daily cases below one hundred in the dataset, so testing capacity was never strained.²⁰ Finally, our theoretical interest is the announcement of poverty elimination as a measure of officials' conflicting objectives instead of substantive poverty incidence per se, such that we are not concerned with the authenticity of poverty progress.

19. "第46次中国互联网发展状况统计报告", CNNIC, www.gov.cn/xinwen/2020-09/29/5548176/files/1c6b4a2ae06c4ffc8bccb49da353495e.pdf.

20. The only exception was the 201 cases reported by Jining city on February 20, 2020, due to a mass-spreading in prison.

4.5 Results

We examine whether poverty cities deal with the pandemic differently than they did in the past, after being designated as non-poverty cities. If the exogenous process of eliminating poverty status affects the response to the pandemic, then we can be sure that the goal of eliminating poverty affects the response to the pandemic.

We estimate the following model:

$$\begin{aligned} MobilityChange_{it} &= \theta_0 \log(infection)_{i,t-1} \\ &+ \sum_{\tau < -7, \tau = -7}^{+7, >7} \gamma_\tau \tau DaysAfterElimination_{it} \times \log(infection)_{i,t-1} \\ &+ X_{it} \beta + \eta_i + \lambda_t + \epsilon_{it} \end{aligned} \quad (1)$$

where τ days after elimination is a set of dummies for whether city i is τ days after its exit poverty announcement on date t . The elimination day is set as default. We expect dummies indicating days before poverty elimination not to influence mobility restrictions and dummies indicating days after poverty elimination to significantly accelerate the impositions of mobility restrictions. The city fixed effects η_i capture the time-invariant heterogeneity across cities, and the date fixed effects λ_t capture time-varying shocks that took place nationally, such as changing pandemic situation and national policies.

X is a vector of time-varying weather covariates, including change in daily precipitations and change in daily temperatures of city i on date t . They are included to control for non-policy-driven mobility change. Standard errors ϵ_{it} are clustered at the city level, the level of treatment.

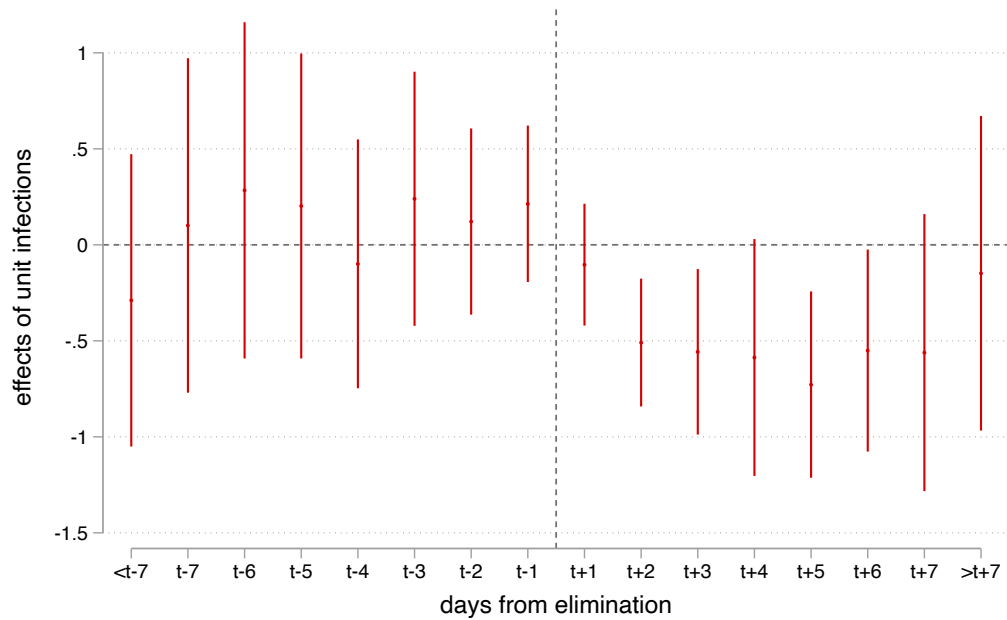


Figure 4.3: Quicker and more severe lockdown after poverty elimination

Figure 4.3 plots the dynamic effects estimated in the model (1). The cities that were granted poverty exit by the provincial government (“new graduates”) imposed similar lockdown measures as other poor cities in response to unit infection prior to poverty elimination. The pattern illustrates that the assumption of parallel trends between new graduates cities and other poor cities holds. Immediately after being approved to exit poverty, these cities imposed significantly stricter lockdown measures in response to unit infection in the first week. The significant difference between new graduates cities and other poor cities shows that the former impose lockdown measures more quickly after detecting unit infection.

It may be that other poor cities took smaller but more persistent steps to impose lockdown measures that cumulatively pushed mobility to similarly low levels. Figure 4.3 shows this is not the case. The difference in lockdown severity depends on whether the

area between the x-axis and the estimates is a net negative after t . Since new graduate cities consistently had more negative mobility changes than other poverty cities after discovering unit infection, the *area* is unambiguously negative, so new graduate cities did suppress mobility by more degrees. Note that new graduate could still have higher mobility than poverty cities, but mobility reduction in response to unit infection is more salient in new graduate cities.

Table 4.1: More Lockdown after Poverty Elimination

	D.Mobility			
	(1)	(2)	(3)	(4)
Previous day log(Infection)	-1.873*	-0.526*	-0.530*	-0.524*
	(0.181)	(0.067)	(0.066)	(0.066)
After Poverty Elimination	0.721*	0.106*	0.262*	0.249*
	(0.082)	(0.042)	(0.097)	(0.097)
Poverty Elim.*log(Infection)	0.274	-0.286	-0.360*	-0.355*
	(0.407)	(0.163)	(0.152)	(0.151)
Constant	-0.220*	-0.107*	-0.170*	-0.177*
	(0.055)	(0.022)	(0.041)	(0.042)
Date FE	No	Yes	Yes	Yes
City FE	No	No	Yes	Yes
Weather	No	No	No	Yes
Observations	11072	11072	11072	10874
R-squared	0.144	0.747	0.751	0.754
R-squared (Within)		0.034	0.033	0.049

Standard errors clustered around cities. Dates from Jan 21 to Apr 28. Hubei excluded.

* $p < 0.05$

According to the difference-in-differences estimation reported in Table 4.1, mobility level decreased with unit infection for all cities and poverty elimination exacerbated the decrease. Unit infection would lead to a 0.88 mobility reduction for new graduate cities, a 68% intensification from 0.52 mobility reduction before poverty elimination. In other words, poverty cities moderated their lockdown response by 40% due to the poverty elimination target. Once the conflicting target was gone, they adopted more one-sided measures to suppress local infections, as Hypothesis 1 predicts.

It is expected that unit infection's mobility reduction effect in new graduates cities will converge with that in the other cities after a few days of poverty elimination. This is because new graduate cities can only impose a certain level of new mobility constraints before they reach total lockdown, where the change in mobility trends upward to zero and mobility stabilizes at a lower level.

If we find that poor cities moderate their responses because of the trade-off of poverty reduction, do they respond differently to the pandemic than richer cities that had no political trade-off in the first place?

The second regression is formulated as follows:

$$\begin{aligned}
MobilityChange_{it} = & \theta_0 \log(infection)_{i,t-1} + \theta_1 ZeroCovid_{it} \\
& + \sum_{\tau=-3}^{+7} \gamma_{\tau} \tau DaysAfterZeroCovid_{it} \times PovertyCity_{it} \\
& + \sum_{\tau=-3}^{+7} \gamma_{\tau} \tau DaysAfterZeroCovid_{it} \times EconomicStructure_i \\
& + X_{it} \boldsymbol{\beta} + \eta_i + \lambda_t + \epsilon_{it} (2)
\end{aligned}$$

where $ZeroCovid_{it}$ denotes whether the city i achieved zero-COVID on date t , $PovertyCity_{it}$ denotes whether city i is a poor city at date t , and $EconomicStructure_i$ denotes a vector of time-invariant economic indicators like GDP per capita and service sector share. $\tau DaysAfterZeroCovid_{it}$ denotes whether date t is τ days after achieving zero-COVID. Poverty cities are likely to be categorically different from other cities. Since the poverty elimination target was a pre-treatment variable, we cannot test the parallel trends assumption.

tion. To control for mechanical factors for which different economic structures may lead to different COVID-19 responses, I include interaction terms of economic indicators and daily dummies to separate the effects of poverty city status itself.

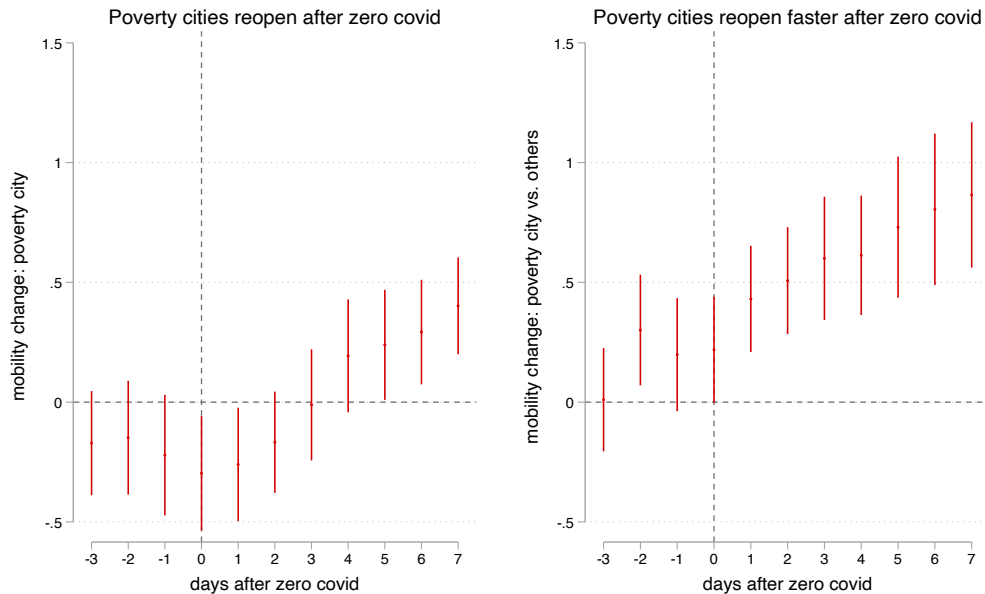


Figure 4.4: Mobility changes in poverty cities around zero-COVID day

Figure 4.4 shows the dynamic impact of the city’s poverty status on the change in mobility before and after the city reaches zero COVID. The figure on the left includes only poor cities in the analysis. It shows that despite the poverty target, poverty city officials sacrificed the economy and imposed mobility restrictions in response to local outbreaks. The figure on the right compares poor cities with others: When poor cities reach zero COVID, they reopen much faster than other cities, even after controlling for GDP per capita or service sector share (interacting with days before zero COVID). This suggests that leaders in poor cities were more willing to reflate the economy. In contrast, other city officials were cautious about relaxing lockdowns even when local infection was zero. Both

figures show poverty targets and pandemic control interfered with each other, and poverty objectives moderated the stringency and length of lockdowns.

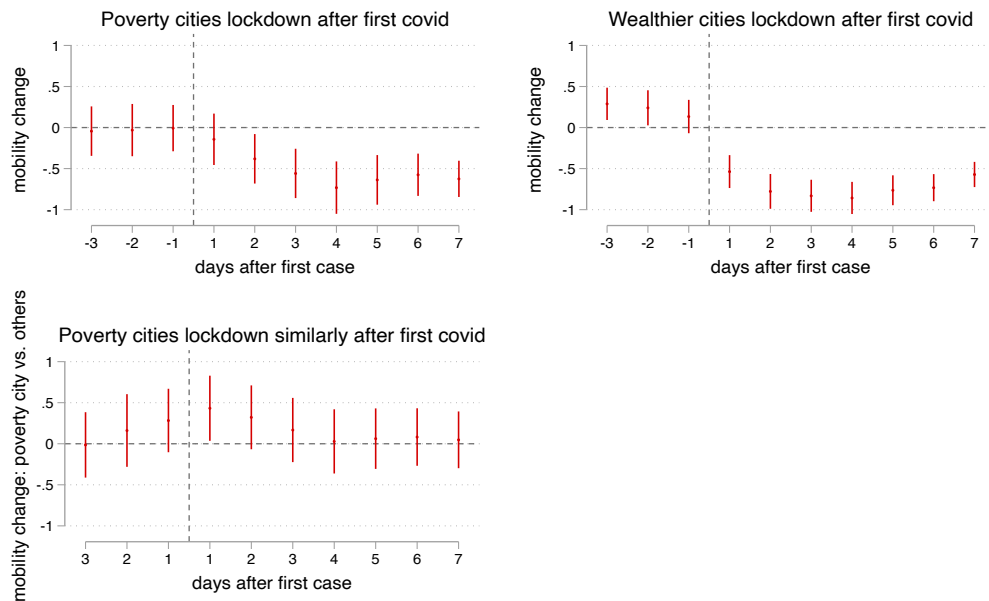


Figure 4.5: Responses after the first COVID-19 case

Similar results are found when the first COVID-19 case was detected in a city. Figure 4.5 shows that while there was no significant difference in mobility change before the first COVID-19 case, poverty cities lockdown less than wealthier cities immediately after the first case. As expected, the two groups of cities' responses converge afterwards. Since poverty cities consistently had more positive mobility changes than wealthier cities after the first case, the *area* between x-axis and the estimates is net positive, so poverty cities did suppress mobility less than wealthier cities after detecting the first COVID-19 case.

Taking Figure 4.3 and Figure 4.4 together, a recurring pattern of bureaucratic multitasking emerges—conflicting goals balance each other. Officials would sacrifice the economy to achieve the goal of zero COVID, and moderate closures to avoid sabotaging poverty

eradication too much. Moreover, despite the interference and moderation, poor cities in China achieved both goals without cutting corners: Poor cities achieved zero-COVID with fewer lockdowns. The existence of poverty elimination target became a blessing: poor cities that achieved poverty elimination targets later had higher GDP growth rates in 2020 (Table A.6). Conflicting targets force officials to implement more efficient policies that make the tradeoff between the economy and public health less astute.

Contrary to the theoretical expectation that conflicting goals are self-defeating and that agents would not distribute their efforts so that they cancel each other out, conflicting goals lead to more balanced implementation. Agents have an incentive to find better ways to offset the damage that one goal does to the other goal. Agents were forced to use local information to find an internal solution that mitigated the political trade-off between the two tasks.

4.6 Conclusion

Without budgetary oversight by elected representatives or social interest groups to check abuses of power, control over the Chinese bureaucracy can only occur within the hierarchy and incentive structure itself. This chapter argues that setting conflicting goals is an alternative way to consolidate the budget of the bureaucracy in an authoritarian state. It is also effective because it is built into the existing incentive structure. Using the example of local government responses to the COVID-19 pandemic, my empirical analysis shows that local officials who faced poverty reduction goals made only moderate use of their unprecedented lockdown authority, while those who did not imposed longer and stricter

lockdowns with fewer restrictions.

The results of this chapter have important implications for understanding bureaucratic control in China. Strong incentives have contributed to China's development and to many tragedies in the country's modern history. Even during the country's rapid development, incentives aimed at a single goal and the short-term growth interests of local officials have caused many social problems, such as environmental degradation, increasing local government debt, and wasteful construction of empty cities. Many of these problems are due to local governments' lack of constraints: Local officials can still borrow against government loans to fund inefficient projects and easily develop beyond environmental carrying capacity. A more binding budget alone is unlikely to solve the problem: The central government lacks local information to micromanage local budgets. Instead, we see more and more objectives are added into the evaluation of official performance, from pollutant reduction (Chen, Li, and Lu 2018) to welfare provision (Zuo 2015a), making monitoring harder and incentive murkier. These potentially conflicting objectives change the local official's single-target incentives by manifesting the center's multi-dimensional preference. While hard budgets impose external constraints to official action, conflicting objectives impose internal constraints.

This chapter's findings also highlight the question of evaluating China's historic zero-COVID policy. China's nationwide lockdown has been instrumental in controlling the pandemic within its border. Complaints about draconian measures used in lockdowns in China periodically surfaced on Chinese social media and these measures themselves have caused loss of life,²¹ and its zero-COVID approach became a formidable institution hard to

21. "Anger at Xi'an Lockdown Spreads in China," *Wall Street Journal*, Jan 5, 2022,

change, even when the rest of the world opened its borders. Were all lockdowns necessary, given their immense social costs? The results of this chapter show that even officials with the fewest resources were able to impose fewer lockdowns and succeed in controlling the outbreak, and that biased survival incentives rather than public health knowledge dictated some lockdown decisions.

Chapter 5

Conclusion

Since 2012, China has undergone drastic political centralization in absolute personnel control over subnational officials and better information transmission through more direct inspections, surveillance, and advanced technologies. At first glance, this should lead to less autonomy for subnational officials. This dissertation recognizes that these changes may reduce illegitimate forms of exercising local autonomy, namely activities contrary to the interests of the central state, such as corruption and collusion. However, this dissertation argued that political centralization can sometimes increase legitimate spaces of autonomy that allow for policy variations to adapt to local conditions. Absolute personnel control makes the central state's threat to punish undesirable outcomes more credible, so that subnational officials become more aligned with central goals. The central state can trust subnational officials more ex-ante when they experiment with unorthodox policy choices.

Similarly, better information transmission makes policy outcomes more transparent to the central state that it can delegate the policy-making process ex-ante while controlling the

results ex-post. Both could lead to a willing delegation of tasks by the central state. Greater perceived divergence of interests between the central state and its subnational actors leads to less delegation, while less ability to monitor outcomes leads to greater monitoring of subnational actions and process control.

The second chapter contained a typology that maps different central-local dynamics to different configurations of interest alignment and information structure. In particular, it theorized that when central-local interests are aligned, more autonomy is granted.

The third chapter demonstrated that even when the central state could not punish the weak implementation of the central policy of social insurance collection, subnational officials nevertheless developed social policies that reflected the core interests of the state: the maintenance of social stability. Using a novel measure of state redistributive efforts at the county level, this chapter finds that more laid-off workers lead to higher Social Security extractions from firms that are not SOE. Local states adopt a “demand-driven” strategy, and their willingness to compensate economic losers is directly related to the extent of expected collective action, not just realized action. The social insurance system becomes a flexible tool for local governments to extract resources to preempt collective action despite national policies governing the extent of collection.

The fourth chapter analyzed an extreme case of political centralization—the central state readily wields the tool of punishment to pressure subnational officials to implement a zero COVID policy. Simultaneously, the contagious nature of COVID-19 makes the outcome of the policy immediately transparent to the central state. Owing to the alignment of interests and information symmetry, officials at the subnational level are given substantial autonomy in shaping local COVID-19 policies. A wide range of policy variation can be

observed, and subnational officials have been highly responsive to changing local priorities despite a stable national zero COVID policy. Cities that had poverty alleviation as a goal moderated their lockdowns to accommodate the conflict between pandemic control and economic development. They did not double the lockdown until the local poverty reduction goal was met.

As authoritarian states around the world become more sophisticated and technologically advanced, officials at the subnational level become more legible and accountable to the regime. As this dissertation argues, political centralization does not necessarily deprive subnational officials of agency. Conversely, they are likely to be granted more autonomy to develop the differentiated policies required by the pervasive heterogeneity and complexity of the populations and localities they govern.

Appendix

A.1 Sustainability of China's Social Security System

China has one of the highest social security rates (SSR) worldwide. As of 2018, it requires employers to contribute 28% of an employee's salary to social security. In comparison, in the U.S., the FICA rate for employers is 7.75%. Even Sweden has a lower SSR (17.2 % in 2018). Despite the high SSR and a relatively young population, China's social security system faces a substantial deficit (fiscal transfer to social security funds amounts for 1.2 trillion yuan in 2017, 24% of the total expenditure).¹ Pressure on the social security system has worsened as the labor force began to shrink in 2012. Meanwhile, the Chinese state is not perceived as fiscally incapable. The Chinese state's overall fiscal extraction accounted for 36.7 % of GDP in 2014 and 35.7% in 2017 (including general fiscal revenue, state-managed funds revenue, state-owned capital revenue, and social security fund revenue). Even with the help of fiscal transfers, the social security accumulation is inadequate. Contextually, the U.S. Social Security Trust has a fund asset that can support 288% of its annual outgoing payments in 2018,² that is 34.6 months. Its trustees estimate it to be unsustainable and to

1. Ministry of Finance, 《关于2017年全国社会保险基金决算的说明》

2. US Social Security Administration. <https://www.ssa.gov/policy/trust-funds-summary.html>

be depleted by 2035. In comparison, according to data collected in 2016, only two out of 31 of China's provinces have sufficient funds to support periods of payment longer than 34.6 months (the national average is 17.2). In summary, China's social security system is unprepared for long-run demographic challenges.

A.2 Symmetric Contract

The principal assigns two tasks A and B to a single agent. The principal commits to a contract that rewards the agent with an ex-post payment after the completion of the two tasks.

According to Bolton and Dewatripont (2004: 224) the optimal contract should be: $\Gamma = \{\gamma^{00}, \gamma^{01}, \gamma^{10}, \gamma^{11}\}$ with $\gamma^{11} > \gamma^{00} = \gamma^{01} = \gamma^{10} = 0$ where γ^{00} denotes the ex-post payment for failing both tasks, γ^{01} denotes the payment for failing task 1 and succeeding task 2, γ^{10} denotes the payment for failing task 2 and succeeding task 1, and γ^{11} denotes the payment for succeeding both.

The contract is symmetric, such that both tasks have the same priority and failing either one means zero reward.

The agent chooses a policy p from a policy space $[0, 1]$ to maximize the expected ex-post payment $E(y|p)$. The probabilities of completing A or B are functions of p . A and B are conflicting tasks such that p affects them in opposite directions. Since the budget is soft, the maximization of the probabilities of completing A or B is not subject to any external

constraints.

Let

$$\alpha = Pr(A|p) = \theta p^a, \quad (5.1)$$

$$\beta = Pr(B|p) = \delta(1-p)^b, \quad (5.2)$$

where $a < 1, b < 1, \theta \in N, \delta \in N$ are local information parameters.

Then the expected payment is:

$$\begin{aligned} E(y|p) &= \alpha\beta\gamma^{11} + \alpha(1-\beta)\gamma^{10} + (1-\alpha)\beta\gamma^{01} + (1-\alpha)(1-\beta)\gamma^{00} \\ &= \alpha\beta\gamma^{11} \end{aligned} \quad (5.3)$$

The agent chooses p to maximize $E(y|p)$:

$$\max_p E(y|p) = \alpha(p)\beta(p)\gamma^{11} \quad (5.4)$$

The first order condition is:

$$\frac{\partial E(y|p^*)}{\partial p} = \left(\frac{\partial \alpha}{\partial p} \beta + \alpha \frac{\partial \beta}{\partial p} \right) \gamma^{11} = 0 \quad (5.5)$$

$$\frac{\frac{\partial \alpha}{\partial p}}{\frac{\partial \beta}{\partial -p}} = \frac{\alpha(p^*)}{\beta(p^*)} \quad (5.6)$$

Note that $\alpha(p^*)$ and $\beta(p^*)$ are equilibrium success rates of task A and B while $\frac{\frac{\partial \alpha}{\partial p}}{\frac{\partial \beta}{\partial -p}}$ is the substitution rate between A and B.

Substituting equations (1) and (2) into the (6) to solve p^* :

$$\frac{\frac{\partial \alpha}{\partial p}}{\frac{\partial \beta}{\partial -p}} = \frac{a \theta}{b \delta} \frac{p^{a-1}}{(1-p)^{b-1}} = \frac{\theta}{\delta} \frac{p^a}{(1-p)^b} = \frac{\alpha(p)}{\beta(p)}$$

$$\frac{1-p}{p} = \frac{b}{a}$$

$$p^* = \frac{a}{a+b}$$

$$1-p^* = \frac{b}{a+b}$$

Therefore, the optimal policy choice for the multitask agent is to prioritize the task with higher return to the policy. Deducing from the first-order condition of compensation maximization, the equilibrium success rates of the two tasks should reflect the substitution rate between them.

For the optimal solution p^* , the agent needs to use local information parameters, such as a and b , tasks A and B's returns to the policy p . A2 shows that an asymmetric contract would make conflicting objectives less effective to balance efforts and force the agents to use local information.

A.3 Asymmetric Multitask Contract

An asymmetric multitask contract $\Gamma = \{\gamma^{00}, \gamma^{01}, \gamma^{10}, \gamma^{11}\}$ satisfies $\gamma^{11} > \gamma^{10} > \gamma^{01} = \gamma^{00} = 0$. This means that the principal will still reward the completion of only task A but will not reward the completion of task B only. A clear priority is assigned to task A.

$$\begin{aligned} E(y|p) &= \alpha\beta\gamma^{11} + \alpha(1-\beta)\gamma^{10} + (1-\alpha)\beta\gamma^{01} + (1-\alpha)(1-\beta)\gamma^{00} \\ &= \alpha\beta\gamma^{11} + \alpha(1-\beta)\gamma^{10} \end{aligned} \tag{5.7}$$

The agent chooses p to maximize $E(y|p)$:

$$\max_p E(y|p) = \alpha(p)\beta(p)\gamma^{11} + \alpha(p)(1-\beta(p))\gamma^{10} \tag{5.8}$$

The first order condition is:

$$\frac{\partial E(y|p^*)}{\partial p} = \left(\frac{\partial\alpha}{\partial p}\beta + \alpha\frac{\partial\beta}{\partial p}\right)\gamma^{11} + \frac{\alpha}{p}\gamma^{10} + \left(\frac{\partial\alpha}{\partial p}\beta + \alpha\frac{\partial\beta}{\partial p}\right)\gamma^{10} = 0 \tag{5.9}$$

$$\beta = \frac{\frac{\partial\beta}{\partial p}}{\frac{\partial\alpha}{\partial p}}\alpha - \frac{\gamma^{10}}{\gamma^{11} - \gamma^{10}} \tag{5.10}$$

To have an internal solution that exploits the local information of substitution rate $\frac{\frac{\partial\alpha}{\partial p}}{\frac{\partial\beta}{\partial p}}$

and actually multitask, β needs to be greater than zero or equal to it.

$$\frac{\frac{\partial \beta}{\partial p}}{\frac{\partial \alpha}{\partial p}} \alpha - \frac{\gamma^{10}}{\gamma^{11} - \gamma^{10}} \geq 0 \quad (5.11)$$

$$\frac{\frac{\partial \beta}{\partial p}}{\frac{\partial \alpha}{\partial p}} \alpha \geq \frac{\gamma^{10}}{\gamma^{11} - \gamma^{10}} \quad (5.12)$$

Substituting equations (1) and (2) into (12):

$$\frac{b\delta}{a} \frac{p^*}{(1-p^*)^{1-b}} \geq \frac{\gamma^{10}}{\gamma^{11} - \gamma^{10}} \quad (5.13)$$

The principal does not possess local information $\frac{\frac{\partial \beta}{\partial p}}{\frac{\partial \alpha}{\partial p}}$ when they design the contract Γ . Therefore, they have to set γ^{10} low enough to ensure the agent multitask and exploit local information. As $\gamma^{10} \rightarrow \gamma^{11}$, $p^* \rightarrow 1$, rendering local information parameters in equation (13) trivial. In the other words, asymmetry in the contract is distorting the agent's informed decision-making according to the local conditions. This also confirms that the principal should set γ^{10} to zero in an optimal contract.

A.4 Provincial People's Congress Dates

As shown in Table A.1, provincial approval may be issued during important political gatherings, such as plenary meetings of the provincial People's Congress. Therefore, the timing of provincial approval may coincide with other political decisions, such as political turnover and the setting of developmental targets for the following year instead of the de-

parture of poverty counties. The analysis of the plenary meetings of all provincial People's Congress in 2020 revealed that all of them (except for Sichuan Province) took place before January 21, 2020. Therefore, other political decisions could not explain the variation between local responses after Wuhan lockdown on January 23.

A.5 Figures and Tables

Table A.1: Opening Dates of Meetings of Provincial People’s Congress in 2020

Xinjiang	1/6	Shanxi	1/13
Hebei	1/7	Guangdong	1/14
Tibet	1/7	Liaoning	1/14
Gansu	1/10	Tianjin	1/14
Henan	1/10	Guizhou	1/15
Chongqing	1/11	Jiangsu	1/15
Fujian	1/11	Jiangxi	1/15
Anhui	1/12	Qinghai	1/15
Beijing	1/12	Shaanxi	1/15
Guangxi	1/12	Shanghai	1/15
Heilongjiang	1/12	Hainan	1/16
Hubei	1/12	Yunnan	1/17
Inner Mongolia	1/12	Shandong	1/18
Jilin	1/12	Ningxia	1/20
Zhejiang	1/12	Sichuan	5/9
Hunan	1/13		

Table A.2: Second stage: With Current SOE Presence Controlled

	<i>Dependent variable: Non-SOE SSR</i>		
	(1)	(2)	(3)
log(layoffs)	0.016*		
	(0.006)		
share of employee		0.037*	
		(0.016)	
share of urban pop			0.479*
			(0.242)
current SOE employee share	0.011	0.014	0.015
	(0.008)	(0.008)	(0.009)
Prefecture FE	✓	✓	✓
Controls	✓	✓	✓
Observations	1814	1685	1682
R-squared	0.071	0.113	0.085
Cragg-Donald Wald F statistic	58.3	86.9	59.2
Kleibergen-Paap rk Wald F statistic	36.8	66.6	53.0
Kleibergen-Paap rk LM statistic	34.0	69.6	54.7

Robust standard errors clustered around counties.

* $p < 0.05$

Table A.3: Relaxing Exclusion Restriction

	2004		2005		2006		2007	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
layoffs over employee	0.002	0.013	0.021	0.032*	0.027*	0.037*	0.021*	0.030*
	(0.009)	(0.014)	(0.011)	(0.016)	(0.010)	(0.014)	(0.008)	(0.012)
Prefecture FE	✓	✓	✓	✓	✓	✓	✓	✓
Method	uci	ltz	uci	ltz	uci	ltz	uci	ltz
Observations	2222	2222	2200	2200	2245	2245	2123	2123
R-squared	0.005		0.026		0.022		0.025	

Robust standard errors clustered around counties. Union of confidence interval (uci) of the instrument's independent coefficient γ on the dependent variable is set as $[0, 0.018]$. Local to zero (ltz) approximation assumes γ to follow the Gaussian distribution of $(0.01, 0.008^2)$.

* $p < 0.05$

Table A.4: Placebo Test: 2SLS Estimation of SOE SSR

	<i>Dependent variable: SOE SSR</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
log(layoffs)	0.027*	0.034				
	(0.011)	(0.052)				
share of employee			0.194	0.311		
			(0.176)	(0.312)		
share of urban pop					0.340	0.191
					(1.187)	(1.477)
Prefecture FE	✓	✓	✓	✓	✓	✓
Controls		✓		✓		✓
Observations	2298	1758	2121	1636	2086	1629
R-squared	-0.002	0.001	-0.007	-0.010	-0.001	0.003
Cragg-Donald Wald F statistic	588.1	55.2	159.8	82.0	70.3	52.5
Kleibergen-Paap rk Wald F statistic	509.6	34.6	124.8	64.4	64.8	46.7
Kleibergen-Paap rk LM statistic	249.4	32.2	123.1	67.7	66.3	49.3

Robust standard errors clustered around counties.

* $p < 0.05$

Table A.5: Summary Statistics of Chapter 4

VARIABLES	N	Mean	SD	Min	Max
Change in 7-day M.A. in rel. mobility	33957	-0.07	2.36	-18.11	12.09
D.Precipitation (inches)	31383	0	0.33	-5.51	5.91
D.Temperature (Fahrenheit)	31383	0.31	5.08	-29	24.8
log(infections)	31522	0.15	0.47	0	5.31
Active poverty city	33957	0.16	0.37	0	1
After poverty elimination	33957	0.14	0.35	0	1
Achieve zero COVID	33957	0.02	0.13	0	1
log(GDP/capita)	25641	11.07	0.58	6.88	12.29
Service sector share	26037	51.34	10.02	26.54	80.98

Table A.6: Lockdown Dampened 2020 GDP Growth

	GDP Growth			
	(1)	(2)	(3)	(4)
Poverty City	-0.002 (0.007)	0.042* (0.007)	0.037* (0.008)	0.033* (0.009)
Poverty Elim. before April 28		-0.053* (0.011)	-0.050* (0.011)	-0.045* (0.011)
log(GDP/capita)			-0.009* (0.004)	0.001 (0.005)
Service Share				0.006* (0.003)
Agr. Share				0.008* (0.003)
Industrial Share				0.006* (0.003)
Constant	1.027* (0.003)	1.027* (0.003)	1.125* (0.045)	0.396 (0.313)
Observations	286	286	261	259
R-squared	0.000	0.057	0.059	0.073

Standard errors clustered around cities.

* $p < 0.05$

Bibliography

- Barnett, Doak A. 1967. *Cadres, Bureaucracy, and Political Power in Communist China*. New York: Columbia University Press.
- Bendor, Jonathan, Serge Taylor, and Roland Van Gaalen. 1987. "Stacking the Deck: Bureaucratic Missions and Policy Design." *The American Political Science Review* 81 (3): 873–896.
- Bernstein, Thomas P., and Xiaobo Lü. 2003. *Taxation without Representation in Contemporary Rural China*. Cambridge Modern China Series. Cambridge: Cambridge University Press.
- Bolton, Patrick, and Mathias Dewatripont. 2004. *Contract Theory*. Cambridge, MA, USA: MIT Press, December 10, 2004.
- Bonaccorsi, Giovanni, Francesco Pierri, Matteo Cinelli, Andrea Flori, Alessandro Galeazzi, Francesco Porcelli, Ana Lucia Schmidt, et al. 2020. "Economic and social consequences of human mobility restrictions under COVID-19." *Proceedings of the National Academy of Sciences* 117, no. 27 (July 7, 2020): 15530–15535.
- Brownlee, Jason. 2007. *Authoritarianism in an Age of Democratization*. Cambridge: Cambridge University Press.
- Bueno De Mesquita, Bruce, Alastair Smith, Randolph M. Siverson, and James D. Morrow. 2005. *The Logic of Political Survival*. MIT Press, January 14, 2005.
- Bulman, David J. 2016a. *Incentivized Development in China: Leaders, Governance, and Growth in China's Counties*. Cambridge: Cambridge University Press.
- , ed. 2016b. "Paths to Promotion: The Inconsistent Importance of Economic Performance." In *Incentivized Development in China: Leaders, Governance, and Growth in China's Counties*, 151–192. Cambridge: Cambridge University Press.
- Burki, Talha Khan. 2022. "Omicron variant and booster COVID-19 vaccines." *The Lancet Respiratory Medicine* 10, no. 2 (February): e17.
- Cai, Hongbin, and Daniel Treisman. 2006. "Did Government Decentralization Cause China's Economic Miracle?" *World Politics* 58, no. 4 (July): 505–535.

- Cai, Hongbin, and Daniel Treisman. 2009. "Political Decentralization and Policy Experimentation." *Quarterly Journal of Political Science* 4, no. 1 (March 18, 2009): 35–58.
- Cai, Yongshun. 2000. "Between State and Peasant: Local Cadres and Statistical Reporting in Rural China." *The China Quarterly*, no. 163, 783–805.
- . 2002. "The Resistance of Chinese Laid-off Workers in the Reform Period." *The China Quarterly* 170 (June): 327–344.
- . 2008. "Local Governments and the Suppression of Popular Resistance in China." *The China Quarterly*, no. 193, 24–42.
- . 2010. "Collective Resistance in China: Why Popular Protests Succeed or Fail." *Stanford University Press* (February 1, 2010).
- Chen, Donglin. 2003. *San xian jian she: bei zhan shi qi de xi bu kai fa*. 1st ed. Beijing: Zhong gong zhong yang dang xiao chu ban she.
- Chen, Jidong, Jennifer Pan, and Yiqing Xu. 2016. "Sources of Authoritarian Responsiveness: A Field Experiment in China." *American Journal of Political Science* 60 (2): 383–400.
- Chen, Jie, and Narisong Huhe. 2013. "Informal Accountability, Socially Embedded Officials, and Public Goods Provision in Rural China: The Role of Lineage Groups." *Journal of Chinese Political Science* 18, no. 2 (June): 101–116.
- Chen, Ting, and J. K. -S. Kung. 2016. "Do land revenue windfalls create a political resource curse? Evidence from China." *Journal of Development Economics* 123 (November 1, 2016): 86–106.
- Chen, Xi. 2009. "The Power of "Troublemaking": Protest Tactics and Their Efficacy in China." *Comparative Politics* 41 (4): 451–471.
- . 2011. *Social Protest and Contentious Authoritarianism in China*. Cambridge: Cambridge University Press.
- Chen, Yvonne Jie, Pei Li, and Yi Lu. 2018. "Career concerns and multitasking local bureaucrats: Evidence of a target-based performance evaluation system in China." *Journal of Development Economics* 133 (July 1, 2018): 84–101.
- Chung, Jae Ho. 2000. *Central control and local discretion in China: leadership and implementation during post-Mao decollectivization*. Studies on contemporary China. Oxford ; New York: Oxford University Press.
- Conley, Timothy G., Christian B. Hansen, and Peter E. Rossi. 2012. "Plausibly Exogenous." *Review of Economics and Statistics* 94, no. 1 (February): 260–272.

- Davies, Gloria, and Gaby Ramia. 2008. "Governance Reform Towards "Serving Migrant Workers": The Local Implementation of Central Government Regulations." *The China Quarterly*, no. 193, 140–149.
- Deacon, Bob. 2000. "Eastern European Welfare States: the Impact of the Politics of Globalization." *Journal of European Social Policy* 10, no. 2 (May 1, 2000): 146–161.
- Deng, Yanhua, and Kevin J. O'Brien. 2013. "Relational Repression in China: Using Social Ties to Demobilize Protesters*." *The China Quarterly* 215 (September): 533–552.
- Deuchert, Eva, and Martin Huber. 2017. "A Cautionary Tale About Control Variables in IV Estimation." *Oxford Bulletin of Economics and Statistics* 79 (3): 411–425.
- Dewatripont, Mathias, Ian Jewitt, and Jean Tirole. 1999. "The Economics of Career Concerns, Part II: Application to Missions and Accountability of Government Agencies." *The Review of Economic Studies* 66, no. 1 (January 1, 1999): 199–217.
- Dewatripont, Mathias, and Jean Tirole. 1999. "Advocates." *Journal of Political Economy* 107 (1): 1–39.
- Dickovick, J. Tyler. 2011. *Decentralization and recentralization in the developing world: comparative studies from Africa and Latin America*. OCLC: 670238220. University Park, Pa.: Pennsylvania State University Press.
- Dickson, Bruce J., Pierre F. Landry, Mingming Shen, and Jie Yan. 2016. "Public Goods and Regime Support in Urban China." *The China Quarterly* 228 (December): 859–880.
- Dimitrov, Martin K. 2015. "Internal Government Assessments of the Quality of Governance in China." *Studies in Comparative International Development* 50, no. 1 (March): 50–72.
- Ding, Yi, Alexander McQuoid, and Cem Karayalcin. 2019. "Fiscal decentralization, fiscal reform, and economic growth in china." *China Economic Review* 53 (February 1, 2019): 152–167.
- Distelhorst, Greg, and Yue Hou. 2014. "Ingroup Bias in Official Behavior: A National Field Experiment in China." *Quarterly Journal of Political Science* 9, no. 2 (June 18, 2014): 203–230.
- . 2017. "Constituency Service under Nondemocratic Rule: Evidence from China." *The Journal of Politics* 79, no. 3 (May 9, 2017): 1024–1040.
- Dixit, Avinash. 2002. "Incentives and Organizations in the Public Sector: An Interpretative Review." *The Journal of Human Resources* 37 (4): 696.

- Donaldson, John A. 2007. "Tourism, Development and Poverty Reduction in Guizhou and Yunnan." *The China Quarterly* 190 (June): 333–351.
- Du, Juan, and Hongtao Yi. 2021. "Target-setting, political incentives, and the tricky trade-off between economic development and environmental protection." *Public Administration* (August 2, 2021): padm.12768.
- Eaton, Sarah, and Genia Kostka. 2014. "Authoritarian Environmentalism Undermined? Local Leaders' Time Horizons and Environmental Policy Implementation in China." *The China Quarterly*, no. 218, 359–380.
- Economy, Elizabeth. 2010. *The river runs black: the environmental challenge to China's future*. 2nd ed. OCLC: ocn541833119. Ithaca, N.Y: Cornell University Press.
- Edin, Maria. 2003. "State Capacity and Local Agent Control in China: CCP Cadre Management from a Township Perspective." *The China Quarterly*, no. 173, 35–52.
- Elfstrom, Manfred. 2019. "Two Steps Forward, One Step Back: Chinese State Reactions to Labour Unrest." *The China Quarterly* (March 12, 2019): 1–25.
- Elfstrom, Manfred, and Sjaak van der Velden. 2016. "China, 2004-2015." *IISH Data Collection, datasets.iisg.amsterdam/dataset.xhtml?persistentId=hdl:10622/EAASRV* (June 24, 2016).
- Epstein, David, and Sharyn O'Halloran. 1999. "Asymmetric Information, Delegation, and the Structure of Policy-Making." *Journal of Theoretical Politics* 11, no. 1 (January): 37–56.
- Frazier, Mark W. 2011. *Socialist Insecurity: Pensions and the Politics of Uneven Development in China*. Cornell University Press, March 15, 2011.
- Fu, Diana. 2017. *Mobilizing without the masses control and contention in China*. Studies of the Weatherhead East Asian Institute, Columbia University. Cambridge, United Kingdom ; New York, NY: University Printing House.
- Gallagher, Mary E. 2017. *Authoritarian Legality in China: Law, Workers, and the State*. 1st ed. Cambridge: Cambridge University Press.
- Gandhi, Jennifer. 2008. *Political Institutions under Dictatorship*. Cambridge: Cambridge University Press.
- Gao, Qin. 2010. "Redistributive Nature of the Chinese Social Benefit System: Progressive or Regressive?" *The China Quarterly*, no. 201, 1–19.
- Gao, Qin, Sui Yang, and Fuhua Zhai. 2019. "Social Policy and Income Inequality during the Hu–Wen Era: A Progressive Legacy?" *The China Quarterly* 237 (March): 82–107.

- Geddes, Barbara. 1999. "What Do We Know About Democratization After Twenty Years?" *Annual Review of Political Science* 2, no. 1 (June): 115–144.
- Geddes, Barbara, Joseph Wright, and Erica Frantz. 2018. *How dictatorships work: power, personalization, and collapse*. OCLC: 1040115977.
- Gehlbach, Scott, and Philip Keefer. 2011. "Investment without democracy: Ruling-party institutionalization and credible commitment in autocracies." *Journal of Comparative Economics* 39, no. 2 (June 1, 2011): 123–139.
- Ghanem, Dalia, and Junjie Zhang. 2014. "'Effortless Perfection:' Do Chinese cities manipulate air pollution data?" *Journal of Environmental Economics and Management* 68, no. 2 (September): 203–225.
- Giraudy, Agustina, Eduardo Moncada, and Richard Snyder, eds. 2019. *Inside Countries: Subnational Research in Comparative Politics*. 1st ed. Cambridge University Press, June 13, 2019.
- Greitens, Sheena Chestnut. 2017. "Rethinking China's Coercive Capacity: An Examination of PRC Domestic Security Spending, 1992–2012." *The China Quarterly* 232 (December): 1002–1025.
- Guaitoli, Gabriele, and Roberto Pancrazi. 2021. "Covid-19: Regional policies and local infection risk: Evidence from Italy with a modelling study." *The Lancet Regional Health – Europe* 8 (September 1, 2021).
- Han, Li, and James Kai-Sing Kung. 2015. "Fiscal incentives and policy choices of local governments: Evidence from China." *Journal of Development Economics* 116 (September 1, 2015): 89–104.
- Harasymiw, Bohdan. 1969. "Nomenklatura: The Soviet Communist Party's Leadership Recruitment System." Publisher: Canadian Political Science Association, *Canadian Journal of Political Science / Revue canadienne de science politique* 2 (4): 493–512.
- Heberer, Thomas, and René Trappel. 2013. "Evaluation Processes, Local Cadres' Behaviour and Local Development Processes." *Journal of Contemporary China* 22, no. 84 (November): 1048–1066.
- Heilmann, Sebastian. 2008. "Policy Experimentation in China's Economic Rise." *Studies in Comparative International Development* 43, no. 1 (March): 1–26.
- Hellman, Joel S. 1998. "Winners Take All: the Politics of Partial Reform in Postcommunist Transitions." *World Politics* 50, no. 2 (January): 203–234.
- Holland, Alisha C. 2016. "Forbearance." *American Political Science Review* 110, no. 2 (May): 232–246.

- Holmstrom, Bengt, and Paul Milgrom. 1991. "Multitask Principal-Agent Analyses: Incentive Contracts, Asset Ownership, and Job Design." *The Journal of Law, Economics, and Organization* 7 (special issue 1991): 24–52.
- Huang, Haifeng. 2013. "Signal Left, Turn Right: Central Rhetoric and Local Reform in China." Publisher: SAGE Publications Inc, *Political Research Quarterly* 66, no. 2 (June 1, 2013): 292–305.
- Huang, Xian. 2015. "Four Worlds of Welfare: Understanding Subnational Variation in Chinese Social Health Insurance." *The China Quarterly* 222 (June): 449–474.
- . 2020. *Social Protection under Authoritarianism: Health Politics and Policy in China*. New York: Oxford University Press.
- Hurst, William. 2004. "Understanding contentious collective action by Chinese laid-off workers: The importance of regional political economy." *Studies in Comparative International Development* 39, no. 2 (June): 94–120.
- Hurst, William, and Kevin J. O'Brien. 2002. "China's Contentious Pensioners." *The China Quarterly* 170 (June): 345–360.
- Jensen, Michael C., and William H. Meckling. 1976. "Theory of the firm: Managerial behavior, agency costs and ownership structure." *Journal of Financial Economics* 3, no. 4 (October): 305–360.
- Jervis, Robert. 1992. "Political Implications of Loss Aversion." *Political Psychology* 13 (2): 187–204.
- Jia, Junxue, Qingwang Guo, and Jing Zhang. 2014. "Fiscal decentralization and local expenditure policy in China." *China Economic Review* 28 (March 1, 2014): 107–122.
- Jia, Ruixue, Masayuki Kudamatsu, and David Seim. 2015. "Political Selection in China: The Complementary Roles of Connections and Performance." *Journal of the European Economic Association* 13, no. 4 (August): 631–668.
- Jiang, Junyan. 2018. "Making Bureaucracy Work: Patronage Networks, Performance Incentives, and Economic Development in China." *American Journal of Political Science* 62 (4): 982–999.
- Jiang, Junyan, and Yu Zeng. 2019. "Countering Capture: Elite Networks and Government Responsiveness in China's Land Market Reform." *The Journal of Politics* 82, no. 1 (July 26, 2019): 13–28.
- Jie, Gao. 2015. "Political rationality vs. technical rationality in China's target-based performance measurement system: The case of social stability maintenance." *Policy and Society* 34, no. 1 (March 1, 2015): 37–48.

- Jin, Huajie, Haiyin Wang, Xiao Li, Weiwei Zheng, Shanke Ye, Sheng Zhang, Jiahui Zhou, and Mark Pennington. 2021. "Economic burden of COVID-19, China, January–March, 2020: a cost-of-illness study." *Bulletin of the World Health Organization* 99, no. 2 (February 1, 2021): 112–124.
- Kahneman, Daniel, and Amos Tversky. 1979. "Prospect Theory: An Analysis of Decision under Risk." *Econometrica* 47 (2): 263–291.
- King, Gary, Jennifer Pan, and Margaret E. Roberts. 2013. "How Censorship in China Allows Government Criticism but Silences Collective Expression." *American Political Science Review* 107, no. 2 (May): 326–343.
- Knutsen, Carl Henrik, and Magnus Rasmussen. 2018. "The Autocratic Welfare State: Old-Age Pensions, Credible Commitments, and Regime Survival." *Comparative Political Studies* 51, no. 5 (April 1, 2018): 659–695.
- Kornai, János, Eric Maskin, and Gérald Roland. 2003. "Understanding the Soft Budget Constraint." *Journal of Economic Literature* 41, no. 4 (December): 1095–1136.
- Kostka, Genia. 2016. "Command without control: The case of China's environmental target system: China's environmental target system." *Regulation & Governance* 10, no. 1 (March): 58–74.
- Kostka, Genia, and Jonas Nahm. 2017. "Central–Local Relations: Recentralization and Environmental Governance in China." *The China Quarterly* 231 (September): 567–582.
- Kostka, Genia, and Chunman Zhang. 2018. "Tightening the grip: environmental governance under Xi Jinping." *Environmental Politics* 27, no. 5 (September 3, 2018): 769–781.
- Kung, James Kai-Sing, and Shuo Chen. 2011. "The Tragedy of the Nomenklatura: Career Incentives and Political Radicalism during China's Great Leap Famine." *American Political Science Review* 105, no. 1 (February): 27–45.
- Kung, James Kai-sing, and Chicheng Ma. 2014. "Can cultural norms reduce conflicts? Confucianism and peasant rebellions in Qing China." *Journal of Development Economics*, Special Issue: Imbalances in Economic Development, 111 (November 1, 2014): 132–149.
- . 2018. "Friends with Benefits: How Political Connections Help to Sustain Private Enterprise Growth in China." *Economica* 85 (337): 41–74.
- Kuran, Timur. 1997. *Private Truths, Public Lies: the Social Consequences of Preference Falsification*. 1st ed. Cambridge: Harvard University Press.

- Lal, Apoorva, Mackenzie William Lockhart, Yiqing Xu, and Ziwen Zu. 2021. *How Much Should We Trust Instrumental Variable Estimates in Political Science? Practical Advice based on Over 60 Replicated Studies*. SSRN Scholarly Paper ID 3905329. Rochester, NY: Social Science Research Network, December 21, 2021.
- Landry, Pierre F. 2008. *Decentralized Authoritarianism in China: The Communist Party's Control of Local Elites in the Post-Mao Era*. Cambridge: Cambridge University Press.
- Landry, Pierre F., Xiaobo Lü, and Haiyan Duan. 2018. "Does Performance Matter? Evaluating Political Selection Along the Chinese Administrative Ladder." *Comparative Political Studies* 51, no. 8 (July): 1074–1105.
- Lee, Ching Kwan. 2007. *Against the law: labor protests in China's rustbelt and sunbelt*. OCLC: ocm70676500. Berkeley: University of California Press.
- Lee, Hong Yung. 2000. "Xiagang, the Chinese Style of Laying Off Workers." *Asian Survey* 40 (6): 914–937.
- Levitsky, Steven, and Lucan Way. 2015. "The Myth of Democratic Recession." *Journal of Democracy* 26 (1): 45–58.
- Levy, Jack S. 2003. "Applications of Prospect Theory to Political Science." *Synthese* 135, no. 2 (May 1, 2003): 215–241.
- Li, Hongbin, and Li-An Zhou. 2005. "Political Turnover and Economic Performance: the Incentive Role of Personnel Control in China." *Journal of Public Economics* 89, no. 9 (September 1, 2005): 1743–1762.
- Li, Pei, Yi Lu, and Jin Wang. 2016. "Does flattening government improve economic performance? Evidence from China." *Journal of Development Economics* 123 (November 1, 2016): 18–37.
- Li, Wanxin. 2011. "Self-Motivated versus Forced Disclosure of Environmental Information in China: A Comparative Case Study of the Pilot Disclosure Programmes." *The China Quarterly* 206 (June): 331–351.
- Li, Xing, Chong Liu, Xi Weng, and Li-An Zhou. 2019. "Target Setting in Tournaments: Theory and Evidence from China." *The Economic Journal* 129, no. 623 (October 1, 2019): 2888–2915.
- Li, Zeren, and Melanie Manion. 2019. "The Impact of Political Purge on Political Decisionmaking: Political Selection Under Extreme Uncertainty." *SSRN Electronic Journal*.
- Lieberthal, Kenneth. 2007. "China's Governing System and Its Impact on Environmental Policy Implementation." *Woodrow Wilson Center, Washington, DC, China Environment Series*.

- Lieberthal, Kenneth, and Michel Oksenberg. 1988. *Policy making in China: Leaders, structures, and processes*. Princeton University Press.
- Lin, Jing, and A. Dale Tussing. 2017. "Inter-Regional Competition in Retirement Benefit Growth — The Role of the Sub-National Government in Authoritarian China." *Journal of Contemporary China* 26, no. 105 (May 4, 2017): 434–451.
- Lin, Jing, and A. Dale Tussing. 2017. "Inter-Regional Competition in Retirement Benefit Growth—The Role of the Sub-National Government in Authoritarian China." *Journal of Contemporary China* 26, no. 105 (May 4, 2017): 434–451.
- Liu, Chang, and Li-An Zhou. 2021. "Radical Target Setting and China's Great Famine." *The Journal of Law, Economics, and Organization* 38, no. 1 (December 23, 2021): 120–160.
- Liu, Dongshu. 2019. "Punish the Dissidents: The Selective Implementation of Stability Preservation in China." *Journal of Contemporary China* 28, no. 119 (September 3, 2019): 795–812.
- Liu, Lillian. n.d. "Social Security for State-Sector Workers in the People's Republic of China: The Reform Decade and Beyond." *Social Security Bulletin* 54 (10): 15.
- Liu, Mingxing, Zhigang Xu, Fubing Su, and Ran Tao. 2012. "Rural tax reform and the extractive capacity of local state in China." *China Economic Review* 23, no. 1 (March 1, 2012): 190–203.
- Lorentzen, Peter L. 2013. "Regularizing Rioting: Permitting Public Protest in an Authoritarian Regime." *Quarterly Journal of Political Science* 8, no. 2 (April 10, 2013): 127–158.
- Lü, Xiaobo. 2015. "Intergovernmental transfers and local education provision — Evaluating China's 8-7 National Plan for Poverty Reduction." *China Economic Review* 33 (April 1, 2015): 200–211.
- Lü, Xiaobo, and Pierre F. Landry. 2014. "Show Me the Money: Interjurisdiction Political Competition and Fiscal Extraction in China." *American Political Science Review* 108, no. 3 (August): 706–722.
- Luo, Ren-fu, Cheng-fang Liu, Jing-jing Gao, Tian-yi Wang, Hua-yong Zhi, Peng-fei Shi, and Ji-kun Huang. 2020. "Impacts of the COVID-19 pandemic on rural poverty and policy responses in China." *Journal of Integrative Agriculture* 19, no. 12 (December 1, 2020): 2946–2964.
- Magaloni, Beatriz. 2008. "Credible Power-Sharing and the Longevity of Authoritarian Rule." *Comparative Political Studies* 41, no. 4 (April): 715–741.
- Malesky, Edmund, and Paul Schuler. 2010. "Nodding or Needling: Analyzing Delegate Responsiveness in an Authoritarian Parliament." *American Political Science Review* 104, no. 3 (August): 482–502.

- Malesky, Edmund J., Cuong Viet Nguyen, and Anh Tran. 2014. "The Impact of Recentralization on Public Services: A Difference-in-Differences Analysis of the Abolition of Elected Councils in Vietnam." *American Political Science Review* 108, no. 1 (February): 144–168.
- Manion, Melanie. 1985. "The Cadre Management System, Post-Mao: The Appointment, Promotion, Transfer and Removal of Party and State Leaders." Publisher: Cambridge University Press, *The China Quarterly*, no. 102, 203–233.
- . 2015. *Information for Autocrats: Representation in Chinese Local Congresses*. Cambridge: Cambridge University Press.
- Maskin, Eric, Yingyi Qian, and Chenggang Xu. 2000. "Incentives, Information, and Organizational Form." *Review of Economic Studies* 67, no. 2 (April): 359–378.
- McAfee, R. Preston, and John McMillan. 1986. "Bidding for Contracts: A Principal-Agent Analysis." *The RAND Journal of Economics* 17 (3): 326.
- McCubbins, Mathew D., and Thomas Schwartz. 1984. "Congressional Oversight Overlooked: Police Patrols versus Fire Alarms." *American Journal of Political Science* 28 (1): 165–179.
- Meltzer, Allan H., and Scott F. Richard. 1981. "A Rational Theory of the Size of Government." *Journal of Political Economy* 89 (5): 914–927.
- Meng, Tianguang, Jennifer Pan, and Ping Yang. 2017. "Conditional Receptivity to Citizen Participation: Evidence From a Survey Experiment in China." *Comparative Political Studies* 50, no. 4 (March): 399–433.
- Miller, Gary J. 2005. "The Political Evolution of Principal-agent Models." *Annual Review of Political Science* 8, no. 1 (June 15, 2005): 203–225.
- Montinola, Gabriella, Yingyi Qian, and Barry R. Weingast. 1995. "Federalism, Chinese Style: The Political Basis for Economic Success in China." *World Politics* 48 (1): 50–81.
- Murtazashvili, Jennifer Brick. 2016. *Informal Order and the State in Afghanistan*. Cambridge: Cambridge University Press.
- Naughton, Barry. 1988. "The Third Front: Defence Industrialization in the Chinese Interior." *The China Quarterly*, no. 115, 351–386.
- Nielsen, Ingrid, and Russell Smyth. 2008. "Who bears the burden of employer compliance with social security contributions? Evidence from Chinese firm level data." *China Economic Review* 19, no. 2 (June 1, 2008): 230–244.

- Nyland, Chris, Russell Smyth, and Cherrie Jiuhua Zhu. 2006. "What Determines the Extent to which Employers will Comply with their Social Security Obligations? Evidence from Chinese Firm-level Data." *Social Policy & Administration* 40 (2): 196–214.
- Nyland, Chris, S. Bruce Thomson, and Cherrie J. Zhu. 2011. "Employer attitudes towards social insurance compliance in Shanghai, China." *International Social Security Review* 64 (4): 73–98.
- O'Brien, Kevin J., and Lianjiang Li. 2006. *Rightful Resistance in Rural China*. Cambridge Studies in Contentious Politics. Cambridge: Cambridge University Press.
- O'Brien, Kevin J., and Lianjiang Li. 2005. "Popular Contention and its Impact in Rural China." *Comparative Political Studies* 38, no. 3 (April 1, 2005): 235–259.
- Olson, Mancur. 1993. "Dictatorship, Democracy, and Development." *The American Political Science Review* 87 (3): 567–576.
- Ong, Lynette H. 2018. "'Thugs-for-Hire': Subcontracting of State Coercion and State Capacity in China." *Perspectives on Politics* 16, no. 3 (September): 680–695.
- Pan, Jennifer. 2020. *Welfare for Autocrats: How Social Assistance in China Cares for its Rulers*. Oxford: Oxford University Press.
- Pan, Jennifer, and Kaiping Chen. 2018. "Concealing Corruption: How Chinese Officials Distort Upward Reporting of Online Grievances." *American Political Science Review* 112, no. 3 (August): 602–620.
- Pepinsky, Thomas B. 2019. "The Return of the Single-Country Study." *Annual Review of Political Science* 22, no. 1 (May 11, 2019): 187–203.
- Pepinsky, Thomas B., Jan H. Pierskalla, and Audrey Sacks. 2017. "Bureaucracy and Service Delivery." *Annual Review of Political Science* 20 (1): 249–268.
- Perry, James L., and Annie Hondeghem. 2008. "Building Theory and Empirical Evidence about Public Service Motivation." *International Public Management Journal* 11, no. 1 (March 5, 2008): 3–12.
- Persson, Petra, and Ekaterina Zhuravskaya. 2016. "The Limits of Career Concerns in Federalism: Evidence from China." *Journal of the European Economic Association* 14 (2): 338–374.
- Przeworski, A., S.C. Stokes, and B. Manin. 1999. *Democracy, Accountability, and Representation*. Vol. 2. Cambridge: Cambridge University Press.

- Puddington, Arch, Sarah Repucci, Jennifer Dunham, Bret Nelson, and Tyler Roylance, eds. 2017. *Freedom in the world 2016: the annual survey of political rights and civil liberties*. Freedom in the World. New York, NY : Lanham, Maryland: Freedom House ; Rowman / Littlefield.
- Qian, Yingyi, and Barry R. Weingast. 1996. "China's transition to markets: market-preserving federalism, chinese style." *The Journal of Policy Reform* 1, no. 2 (January 1, 1996): 149–185.
- . 1997. "Federalism as a Commitment to Perserving Market Incentives." *The Journal of Economic Perspectives* 11 (4): 83–92.
- Qian, Yingyi, and Chenggang Xu. 1993. "Why China's economic reforms differ." *Economics of Transition and Institutional Change* 1 (2): 135–170.
- Qian, Zhihong, and Tai-Chee Wong. 2000. "The Rising Urban Poverty: A dilemma of market reforms in China." *Journal of Contemporary China* 9, no. 23 (March): 113–125.
- Qiao, Baoyun, Jorge Martinez-Vazquez, and Yongsheng Xu. 2008. "The tradeoff between growth and equity in decentralization policy: China's experience." *Journal of Development Economics* 86, no. 1 (April 1, 2008): 112–128.
- Qin, Bei, David Strömberg, and Yanhui Wu. 2017. "Why Does China Allow Freer Social Media? Protests versus Surveillance and Propaganda." *Journal of Economic Perspectives* 31, no. 1 (February): 117–140.
- Ran, Ran. 2013. "Perverse Incentive Structure and Policy Implementation Gap in China's Local Environmental Politics." *Journal of Environmental Policy & Planning* 15, no. 1 (March): 17–39.
- Rasul, Imran, and Daniel Rogger. 2015. "The Impact of Ethnic Diversity in Bureaucracies: Evidence from the Nigerian Civil Service." *American Economic Review* 105, no. 5 (May 1, 2015): 457–461.
- . 2018. "Management of Bureaucrats and Public Service Delivery: Evidence from the Nigerian Civil Service." *The Economic Journal* 128, no. 608 (February): 413–446.
- Ratigan, Kerry. 2017. "Disaggregating the Developing Welfare State: Provincial Social Policy Regimes in China." *World Development* 98 (October 1, 2017): 467–484.
- Remmer, Karen L., and Erik Wibbels. 2000. "The Subnational Politics of Economic Adjustment: Provincial Politics and Fiscal Performance in Argentina." *Comparative Political Studies* 33, no. 4 (May): 419–451.
- Rickne, Johanna. 2013. "Labor market conditions and social insurance in China." *China Economic Review* 27 (December 1, 2013): 52–68.

- Rithmire, Meg E. 2014. "China's "New Regionalism": Subnational Analysis in Chinese Political Economy." *World Politics* 66, no. 1 (January): 165–194.
- Rooij, Benjamin van. 2006. "Implementation of Chinese Environmental Law: Regular Enforcement and Political Campaigns." *Development and Change* 37, no. 1 (January): 57–74.
- Rooij, Benjamin van, Qiaoqiao Zhu, Li Na, and Wang Qiliang. 2017. "Centralizing Trends and Pollution Law Enforcement in China." *The China Quarterly* 231 (September): 583–606.
- . 2017. "Centralizing Trends and Pollution Law Enforcement in China." *The China Quarterly* 231 (September): 583–606.
- Rudra, Nita. 2002. "Globalization and the Decline of the Welfare State in Less-Developed Countries." *International Organization* 56 (2): 411–445.
- Serra, Narcís, and Joseph E. Stiglitz. 2008. *The Washington Consensus Reconsidered*. Oxford University Press, April 24, 2008.
- Shi, Yaojiang, and John James Kennedy. 2016. "Delayed Registration and Identifying the "Missing Girls" in China." *The China Quarterly* 228 (December): 1018–1038.
- Shih, Victor. 2004. "Factions matter: personal networks and the distribution of bank loans in China." *Journal of Contemporary China* 13, no. 38 (February 1, 2004): 3–19.
- Shin, Kyoung. 2017. "Neither Centre nor Local: Community-Driven Experimentalist Governance in China." *The China Quarterly* 231 (September): 607–633.
- Shleifer, Andrei. 1985. "A Theory of Yardstick Competition." *The RAND Journal of Economics* 16 (3): 319–327.
- Simpser, Alberto. 2013. *Why Governments and Parties Manipulate Elections: Theory, Practice, and Implications*. Cambridge: Cambridge University Press.
- Snyder, Richard. 1999. "After Neoliberalism: The Politics of Reregulation in Mexico." *World Politics* 51, no. 2 (January): 173–204.
- . 2001. "Scaling Down: The Subnational Comparative Method." *Studies in Comparative International Development* 36, no. 1 (March 1, 2001): 93–110.
- Solinger, Dorothy J. 2002. "Labour Market Reform and the Plight of the Laid-off Proletariat." *The China Quarterly*, no. 170, 304–326.
- Spence, Michael. 1973. "Job Market Signaling." *The Quarterly Journal of Economics* 87 (3): 355–374.

- Stock, James, and Motohiro Yogo. 2005. "Testing for Weak Instruments in Linear IV Regression." In *Identification and Inference for Econometric Models*, edited by Donald W. K. Andrews, 80–108. Backup Publisher: Cambridge University Press. New York: Cambridge University Press.
- Suárez Serrato, Juan Carlos, Xiao Yu Wang, and Shuang Zhang. 2016. *The Limits of Meritocracy: Screening Bureaucrats Under Imperfect Verifiability*. Working Paper 21963. National Bureau of Economic Research, February.
- Svolik, Milan W. 2012. *The Politics of Authoritarian Rule*. Cambridge Studies in Comparative Politics. Cambridge: Cambridge University Press.
- Ting, Michael M. 2002. "A Theory of Jurisdictional Assignments in Bureaucracies." *American Journal of Political Science* 46 (2): 364–378.
- Treisman, Daniel. 2007. *The Architecture of Government: Rethinking Political Decentralization*. Cambridge: Cambridge University Press.
- Tsai, Lily L. 2017. "Bringing in China: Insights for Building Comparative Political Theory." *Comparative Political Studies* 50, no. 3 (March): 295–328.
- Tu, Wenyan, and Ting Gong. 2022. "Bureaucratic Shirking in China: Is Sanction-based Accountability a Cure?" *The China Quarterly* 249 (March): 259–274.
- Verschuur, Jasper, Elco E. Koks, and Jim W. Hall. 2021. "Global economic impacts of COVID-19 lockdown measures stand out in high-frequency shipping data." Edited by Bing Xue. *PLOS ONE* 16, no. 4 (April 14, 2021): e0248818.
- Vis, Barbara. 2011. "Prospect Theory and Political Decision Making." *Political Studies Review* 9, no. 3 (September 1, 2011): 334–343.
- Waldner, David, and Ellen Lust. 2018. "Unwelcome Change: Coming to Terms with Democratic Backsliding." *Annual Review of Political Science* 21, no. 1 (May 11, 2018): 93–113.
- Wallace, Jeremy L. 2016. "Juking the Stats? Authoritarian Information Problems in China." *British Journal of Political Science* 46, no. 1 (January): 11–29.
- Wang, Haidong, Katherine R Paulson, Spencer A Pease, Stefanie Watson, Haley Comfort, Peng Zheng, Aleksandr Y Aravkin, et al. 2022. "Estimating excess mortality due to the COVID-19 pandemic: a systematic analysis of COVID-19-related mortality, 2020–21." *The Lancet* (March): S0140673621027963.
- Wang, Huan, Markus Zhang, Robin Li, Oliver Zhong, Hannah Johnstone, Huan Zhou, Hao Xue, et al. 2021. "Tracking the effects of COVID-19 in rural China over time." *International Journal for Equity in Health* 20, no. 1 (December): 35.

- Weber, Isabella. 2021. *How China escaped shock therapy: the market reform debate*. Routledge studies on the Chinese economy. Abingdon, Oxon ; New York, N.Y: Routledge.
- Weber, Max. 2013. *Economy and society. volume 2: Economy and society: an outline of interpretive sociology / Max Weber ; edited by Guenther Roth and Claus Wittich ; with a new foreword by Guenther Roth*. Edited by Guenther Roth and Claus Wittich. Berkeley Los Angeles London: University of California Press.
- Weingast, Barry R. 1995. "The Economic Role of Political Institutions: Market-Preserving Federalism and Economic Development." Publisher: Oxford Academic, *The Journal of Law, Economics, and Organization* 11, no. 1 (April 1, 1995): 1–31.
- Weingast, Barry R., and Mark J. Moran. 1983. "Bureaucratic Discretion or Congressional Control? Regulatory Policymaking by the Federal Trade Commission." *Journal of Political Economy* 91 (5): 765–800.
- White, Stephen. 1986. "Economic Performance and Communist Legitimacy." *World Politics* 38 (3): 462–482.
- Whitford, Andrew B. 2002. "Decentralization and Political Control of the Bureaucracy." *Journal of Theoretical Politics* 14, no. 2 (April): 167–193.
- Whiting, Susan H. 2001. *Power and wealth in rural China the political economy of institutional change*. OCLC: 1127527202. New York: Cambridge University Press.
- Wibbels, Erik. 2006. "MADISON IN BAGHDAD?: Decentralization and Federalism in Comparative Politics." *Annual Review of Political Science* 9, no. 1 (June 1, 2006): 165–188.
- Wilson, James Q. 1989. *Bureaucracy: what government agencies do and why they do it*. New York: Basic Books.
- Wong, Christine, and Valerie J. Karplus. 2017. "China's War on Air Pollution: Can Existing Governance Structures Support New Ambitions?" *The China Quarterly* 231 (September): 662–684.
- Wood, B. Dan. 1988. "Principals, Bureaucrats, and Responsiveness in Clean Air Enforcements." *The American Political Science Review* 82 (1): 213–234.
- Xu, Chenggang. 2011. "The Fundamental Institutions of China's Reforms and Development." *Journal of Economic Literature* 49, no. 4 (December 1, 2011): 1076–1151.
- Xu, Xu. 2021. "To Repress or to Co-opt? Authoritarian Control in the Age of Digital Surveillance." *American Journal of Political Science* 65, no. 2 (April): 309–325.

- Yan, Xiaojun. 2016. "Patrolling Harmony: pre-emptive authoritarianism and the preservation of stability in W County." *Journal of Contemporary China* 25, no. 99 (May 3, 2016): 406–421.
- Yang, Dali L. 1997. *Beyond Beijing: liberalization and the regions in China*. Routledge studies in China in transition 2. London ; New York: Routledge.
- Yao, Yang, and Muyang Zhang. 2015. "Subnational leaders and economic growth: evidence from Chinese cities." *Journal of Economic Growth* 20, no. 4 (December): 405–436.
- Ye, Bing, and Ling Lin. 2020. "Environmental regulation and responses of local governments." *China Economic Review* 60 (April 1, 2020): 101421.
- You, Shibing, Hengli Wang, Miao Zhang, Haitao Song, Xiaoting Xu, and Yongzeng Lai. 2020. "Assessment of monthly economic losses in Wuhan under the lockdown against COVID-19." *Humanities and Social Sciences Communications* 7, no. 1 (December): 52.
- Zhang, Han, and Jennifer Pan. 2019. "CASM: A Deep-Learning Approach for Identifying Collective Action Events with Text and Image Data from Social Media." *Sociological Methodology* 49, no. 1 (August 1, 2019): 1–57.
- Zhang, Pan. 2021. "Target Interactions and Target Aspiration Level Adaptation: How Do Government Leaders Tackle the "Environment-Economy" Nexus?" *Public Administration Review* 81, no. 2 (March): 220–230.
- Zhang, Xuehua. 2017. "Implementation of Pollution Control Targets in China: Has a Centralized Enforcement Approach Worked?" *The China Quarterly* 231 (September): 749–774.
- Zhou, Xueguang. 2010. "The Institutional Logic of Collusion among Local Governments in China." *Modern China* 36, no. 1 (January 1, 2010): 47–78.
- Zuo, Cai. 2015a. "Promoting City Leaders: The Structure of Political Incentives in China*." *The China Quarterly* 224 (December): 955–984.
- . 2015b. "scaling down: subnational comparative case studies in comparative politics and chinese politics." *European Political Science* 14, no. 3 (September 1, 2015): 318–339.
- Zuo, Cai, Zhongyuan Wang, and Qingjie Zeng. 2021. "From poverty to trust: Political implications of the anti-poverty campaign in China." *International Political Science Review* (June 22, 2021): 01925121211001759.

Biography

Hongshen Zhu is a Ph.D. Candidate in Political Science at Duke University. He obtained an M.A. in Economics from Duke University and a B.A. in Philosophy, Politics, and Economics from the University of Warwick. His research interests lie at the intersection of comparative political economy and bureaucracy. From front-line bureaucrats to provincial governors, he examines the political and economic factors that drive the covert behaviors of the bureaucracy and their implications for governance.