

Repress or Redistribute? The Chinese State's Response to Resource Conflicts

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Abstract

It is widely assumed that authoritarian states tend to use repression to suffocate social conflicts that threaten regime stability. Focusing on the Chinese state's responses to resource conflict, a particular type of social conflict triggered by mineral resource extraction, this research argues that authoritarian regimes may prefer to use redistributive policies to defuse social unrest under certain circumstances. Through mixed methods combining qualitative research and statistical analysis, I find that local governments in resource-rich regions do not spend heavily on coercive state apparatus. Instead, they generously hand out social security benefits to appease aggrieved citizens. Furthermore, the Chinese state actively involves mining companies in the redistribution process and requires them to share the financial costs of relief policies. Therefore, when conflicts arise between specific social groups with conflicting interests, redistribution may be a more effective strategy to preserve regime stability.

Keywords: China; mixed research methods; redistribution; repression; resource conflicts

It is widely assumed that authoritarian regimes tend to rely heavily on repression to manage social unrest.¹ In response to rising social instability in China, the Chinese Communist party-state has used various coercive measures to keep its social volcanoes under control.² However, forceful repression damages regime legitimacy³ and may backfire by fuelling further resistance and threats to stability.⁴ Authoritarian regimes therefore require more sophisticated methods to handle social conflicts and maintain regime stability.

This research joins a growing body of literature that investigates the diverse strategies used by the Chinese government to handle social conflicts.⁵ It focuses

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1 Goldstone and Tilly 2001.

2 Yu 2007; Cai 2008a; Wang 2014.

3 Goldstone and Tilly 2001.

4 Gartner and Regan 1996; Tarrow 2011; Rasler 1996.

5 See, e.g., Zhou and Yan 2014; O'Brien and Deng 2015; Hu, Jieren, and Zeng 2015; Lee and Zhang 2013; Benney 2016.

on a particular type of social conflict, resource conflicts, which are conflicts that stem from the extraction of mineral resources. Developing countries with rich natural resources such as oil, minerals and gemstones are at higher risk of social conflicts and even civil wars.⁶ Although China has not suffered large-scale armed conflicts owing to resource extraction, previous studies find that resource-rich Chinese localities have suffered widespread social conflict and popular grievances.⁷ However, scant attention has been paid to how the Chinese state reacts to these problems. Therefore, it is not only theoretically relevant but also empirically significant to examine the strategies deployed by the Chinese party-state to address resource conflicts.

This research adopts a mixed research method, combining qualitative research and statistical analysis on Chinese provinces between 1999 and 2015, during which time China experienced a massive resource boom. Using field research and secondary data sources, I find that resource extraction triggers conflicts both within the resource sector and between the resource sector and local communities, and that local governments deploy both repressive and redistributive strategies to manage these conflicts.⁸ Next, I statistically test three hypotheses regarding the effects of resource extraction on local repressive and redistributive expenditures. Interestingly, the statistical findings reveal that resource-rich regions do not spend more heavily on enhancing coercive state apparatus, including law enforcement departments and armed police, in order to suppress social unrest. Instead, they generously spend on social security to appease disadvantaged citizens. Moreover, the Chinese state takes a corporatist approach by involving mining companies in the redistribution process and shifting the financial costs of redistributive policies onto large companies.

The rest of this article is organized as follows. The second section reviews the existing studies on authoritarian responses to social conflicts and highlights redistribution as an important strategy. The third section empirically examines the patterns of resource conflicts in China. The fourth section qualitatively analyses the Chinese state's coping strategies and mining companies' roles, and the fifth section statistically tests three hypotheses to generalize the findings. The last section concludes.

Authoritarian Responses to Social Unrest: Existing Studies

Studies abound on how states respond to social unrest. At the very least, states may tolerate or make concessions to movements when they are particularly disruptive⁹ or less transgressive,¹⁰ depending on the sociopolitical context. However,

6 Collier and Hoeffler 2005; Bannon and Collier 2003; Ross 2004; Klare 2001.

7 Zhan and Zeng 2017; Yang, Xiuyun, and Ho 2018.

8 Between 2010 and 2016, I visited multiple mining areas in Shanxi, Jiangxi, Henan, Inner Mongolia and Xinjiang, and conducted semi-structured interviews with more than 100 local officials, residents, and managers and workers of mining companies.

9 Piven and Cloward 1977.

10 Li 2019.

tolerance and concession create the perception of weak state capacity, which can encourage further demands for regime change.¹¹ Therefore, states, especially authoritarian states, which are less constrained by political institutions such as elections and the rule of law, more often use force to repress resistance.¹² The Chinese state has been observed to frequently use repression to stifle conflicts and preserve stability.¹³

Nevertheless, outright repression generates risks. For example, it damages regime legitimacy¹⁴ and may fuel more resistance.¹⁵ Regimes have thus devised more sophisticated tools to handle social unrest. Western democracies incorporate protracted popular struggles via institutional mechanisms¹⁶ and channel citizenship rights into political representation through elections and interest group politics.¹⁷ In autocracies, where incorporation is more restricted, the ruler may employ noninstitutionalized, circumstantial strategies to defuse popular contentions. For example, the Chinese state has been found to use pre-emption, persuasion, mediation, adjudication and relational repression¹⁸ as well as monetary incentives¹⁹ to dissuade collective protests.

In addition to repressive strategies, states may also use redistributive policies to prevent or mitigate popular contention. As Frances Piven and Richard Cloward argue, expansive relief policies are designed to mute civil disorders.²⁰ Empirical studies find that both democratic and authoritarian regimes have made use of redistributive policies to redress popular grievances and prevent aggrieved citizens from taking to the streets.²¹ Countries with rich natural resources have also been found to redistribute resource wealth, just in similar ways as other revenue sources, to stabilize the regime and buy peace when facing resource-triggered civil conflicts.²²

How authoritarian states select from among the diverse tools available to grapple with social unrest remains a big question. Different regime types prefer different survival strategies.²³ Single-party autocracies are found to be generally less repressive than other types of autocracies.²⁴ On the other hand, the origins and modes of social unrest, such as its forcefulness and the cost of concession, also influence the state response.²⁵ Therefore, it is theoretically interesting and

11 Lohmann 1994; Kuran 1991; Cai 2010.

12 Piven and Cloward 1977; 1993; Davenport 1995; Ekiert 1996.

13 Yu 2007; Cai 2008a; 2008b; Wang 2014; Chen, Xi 2017.

14 Goldstone and Tilly 2001.

15 Gartner and Regan 1996; Tarrow 2011; Rasler 1996; Cai 2010.

16 Acemoglu and Robinson 2006.

17 Tilly 1998; Piven 2006; Schmitter 1973; Chen, Feng, and Kang 2016.

18 Zhou and Yan 2014; O'Brien and Deng 2015; Hu, Jieren, and Zeng 2015; Zhuang and Chen 2015; Zhan and Zeng 2017; Elfstrom 2019.

19 Lee and Zhang 2013; Benney 2016.

20 Piven and Cloward 1993.

21 Boix 2003; Wintrobe 1998; Acemoglu and Robinson 2006; Thomson 2017; Wallace 2013.

22 Morrison 2009; Jensen and Wantchekon 2004.

23 Hendrix and Haggard 2015.

24 Davenport 2007.

25 Cai 2010; Li 2019.

empirically imperative to examine how the Chinese regime responds to resource conflicts.

Resource Extraction and Social Conflicts in China

Comparative studies find that developing countries with rich natural resources tend to be more at risk of civil war,²⁶ especially when relative deprivation is present.²⁷ Less noticed than armed conflicts are the less intense but more frequent social conflicts sparked by resource extraction. Mineral price shocks can lead to income instability, and the unequal distribution of resource wealth can generate tension between different social groups. Moreover, mineral resource extraction creates environmental hazards and economic disputes, which often trigger popular contention.²⁸

Mineral resource extraction contributes to social conflicts in China both within the resource sector and between the resource sector and local communities at large. Within the resource sector, labour disputes constitute a major source of conflict.²⁹ As mining is a capital-intensive industry with limited demand for labour, mine workers have weak bargaining power against mining companies in matters such as pay and working conditions. In addition, as the Chinese Communist Party (CCP) is extremely wary of autonomous labour unions, mine workers commonly lack the organizational capacity to collectively bargain for and protect their interests.³⁰ As a result, mine workers commonly endure substandard working conditions and are vulnerable to mining accidents and work-related diseases such as pneumoconiosis.³¹ Meanwhile, the resource sector is highly susceptible to price shocks. Mineral market downturns often lead to massive layoffs and wage arrears. Such circumstances inevitably result in labour disputes in Chinese mines. Disputes that cannot be settled peacefully between the workers and mining companies often escalate into collective protests requiring government intervention.³²

Mine-community conflicts (*kuangqun maodun* 矿群矛盾) frequently break out between the resource sector and local communities. Resource extraction imposes significant negative externalities on neighbouring areas, most notably environmental hazards. The mineral extraction process discharges large quantities of

26 Collier and Hoeffler 2004; Lujala, Gleditsch and Gilmore 2005; Buhaug and Rød 2006; Rustad and Binningsbø 2012.

27 Østby, Nordas and Rød 2009.

28 Klare 2001; Switzer 2001.

29 The contention over resource control rights is also a common cause of conflicts within the resource sector (see, e.g., Hu, Jingguo, and Tan 2011). However, because these conflicts are legally handled as criminal cases and are less threatening to regime stability, this research does not discuss them.

30 “Youxiao de gongren zuzhi: baozhang kuanggong shengming de biyou zhilu” (Effective labour organizations: necessary path to safety protection of mine workers). *China Labour Bulletin*, March 2006, <https://clb.org.hk/sites/default/files/archive/schi/File/No.6%20bloodycoal%28S%29.pdf>. Accessed 9 March 2020.

31 Author’s interviews in Jiangxi, June 2014, and Henan, November 2015.

32 Author’s interview and official documents obtained from Jiangxi, June 2014. See also Buckley 2016.

dust into the air and chemicals into rivers, groundwater and soil. Mining also drains groundwater and rivers. Extraction of large volumes of minerals from underground often leads to land subsidence or collapse, seriously impacting the safety and properties of neighbouring residents. These environmental hazards impose heavy costs on the health and livelihoods of the citizens nearby and undercut the productivity of agriculture, aquaculture and/or animal husbandry around the mining areas.³³ However, it is technically complicated to determine the liabilities of the damages and legally difficult to convict the responsible mining companies. Thus, when affected citizens are unable to settle disputes with the mining companies, they resort to petitions, protests and sometimes violent actions to vent their anger and demand compensation.³⁴

The unequal and unfair distribution of the costs and benefits of resource extraction has given rise to widespread popular grievances. The private exploration of mines, which were formerly collectively owned, creates a strong sense of deprivation among local citizens, who suffer the negative externalities but receive few of the benefits of the booming mining businesses. Moreover, the accumulation of huge resource wealth in the hands of a few mine owners strongly exacerbates social inequality in resource-rich areas.³⁵ A survey conducted by Shanxi Bureau of Environmental Protection showed that more than 80 per cent of local citizens believed that the environmental damage caused by coal mining adversely affected their livelihoods and seriously undermined social equality. The bureau attributed the sharp increase in the number of petitions in Shanxi since the early 2000s and the violent “mass brawls between villages and mining companies” (*cunkuang qun'ou* 村矿群殴) to such popular grievances.³⁶ Similarly, after investigating 26 mass protests within its jurisdiction, the CCP Commission for Discipline Inspection (CDI) of Lüliang City 吕梁 in Shanxi also pinpointed the mining industries as being the major cause of the protests.³⁷

The anecdotal evidence suggests that resource extraction has become a significant source of social unrest in resource-rich areas. In order to further examine the pervasiveness of resource conflicts, I conducted a search for data on collective incidents (*quntixing shijian* 群体事件) in China. As there are no accessible official data,³⁸ I used several unofficial datasets that relatively clearly document the nature and process of individual collective incidents.³⁹ These include the China

33 Author's interviews and observations in Shanxi, May 2012 and July 2016; Inner Mongolia, August 2012; Jiangxi, May 2015; Henan, November 2015. Also see Zhang, Huaiwen 2008; Zhan 2013; Zhang, Yulin 2014; Zhan and Zeng 2017; Yang, Xiuyun, and Ho 2018.

34 Author's interviews in Inner Mongolia, August 2012; Jiangxi, March 2012 and June 2014; Shanxi, May 2012. Also see Yang, Congming 2013; Yang, Xiuyun, and Ho 2018; Chen, Xiaoyan 2016.

35 Chen, Xiaoyan 2016, 46; Zheng 2011.

36 Zhang, Huaiwen 2008, 79.

37 Zheng 2011, 17–19.

38 According to my interview with a Chinese public security expert in November 2017, the Chinese Ministry of Public Security has internal statistics regarding collective incidents across China. However, such data are classified, and there is no basis on which to judge their validity.

39 I thank one anonymous reviewer for the suggestion and pointer to some of the datasets.

Labour Bulletin (CLB) “Strike” dataset,⁴⁰ the “China strikes” dataset constructed by Manfred Elfstrom⁴¹ and the “Collective incidents” dataset run by the Chinese Academy of Social Sciences (CASS).⁴² It is important to note that these datasets all rely on media reports as major sources of information.⁴³ However, media reports may not cover all collective incidents, especially those in remote, rural areas and those that took place in earlier years when social media usage was low.⁴⁴ Moreover, media reports on collective incidents are heavily censored in China. Hence, these datasets are likely to undercount actual incidents.⁴⁵ With this limitation in mind, I identified a total of 227 resource conflicts that occurred between 1999 and 2015, the period under study.⁴⁶ As [Table 1](#) shows, resource conflicts had multiple causes and occurred throughout China’s provinces, apart from Shanghai, Zhejiang, Hainan and Tibet.⁴⁷

Coping with Resource Conflicts: Local State and Mining Companies

Despite the alarming accounts of popular grievances and contention in mining areas, curiously China has not been faced with large-scale resource conflicts, even in the resource-rich Xinjiang Autonomous Region, which has experienced many violent ethnic conflicts.⁴⁸ The interesting question then is: how does the Chinese state contain resource conflicts and prevent them from escalating into major crises?

Repression and redistribution by the local state

As is well known, the CCP attaches top priority to maintaining social stability and, under China’s cadre management system, social unrest could easily jeopardize the political careers of local officials. Local governments in mining areas actively deploy both hard and soft strategies to resolve or prevent resource conflicts. Forceful repression and the detention of protest leaders are often used to

40 <https://maps.clb.org.hk/>. The CLB dataset has data on 5,367 labour strikes across China between 2011 and 2015.

41 <https://chinastrikes.crowdmap.com>. Elfstrom has data on 1,471 strikes between 2003 and 2012, some of which overlap with the CLB dataset.

42 I am grateful to Junyan Jiang for generously sharing this dataset. It has data on 871 collective incidents across China between 2006 and 2013. For detailed information about this dataset, see the supporting information in Jiang, Meng and Zhang 2019.

43 The CASS dataset uses internal government reports as one source, although it also heavily relies on media reports for information.

44 Göbel 2019.

45 CLB and Elfstrom both acknowledge the incompleteness of their datasets. Göbel and Steinhardt (2019) concur with the problem of underestimation of collective incidents. A check with my own observations shows that none of the incidents I collected from the fieldwork are included in these datasets.

46 Because the earliest year covered by the three datasets is 2003, no resource conflicts are recorded between 1999 and 2002.

47 Owing to the incompleteness of the data, we should refrain from taking the numbers as representing the full picture of resource conflicts in China.

48 Hong and Yang 2020.

Table 1: Reported Resource Conflicts in China, 1999–2015

Type of conflicts	Direct cause	Location	No. of incidents
<i>Labour disputes</i>	Wage arrears	Anhui, Beijing, Fujian, Gansu (2), Guangxi, Guizhou (3), Hebei (23), Heilongjiang (5), Henan (11), Hubei, Hunan (4), Inner Mongolia (6), Jiangsu, Jiangxi (3), Liaoning, Ningxia (5), Qinghai, Shaanxi (12), Shandong (15), Shanxi (28), Sichuan (9), Tianjin, Xinjiang (6), Yunnan (2)	143
	Layoff/ retirement pensions/ compensation	Anhui (2), Chongqing, Guangdong, Hebei, Heilongjiang, Henan (3), Hubei (2), Hunan (2), Jiangsu (2), Jilin, Liaoning, Shaanxi (2), Shandong (3), Shanxi, Sichuan (3), Xinjiang (3), Yunnan	30
	Unjust pay	Gansu, Henan (10), Hubei, Inner Mongolia, Shaanxi, Shandong (3), Shanxi (3), Sichuan, Xinjiang	22
	Mining accidents	Yunnan, Heilongjiang, Liaoning	3
	Other	Heilongjiang (2), Hunan, Qinghai, Shaanxi (2), Shanxi	7
<i>Mine-community conflicts</i>	Environmental damage	Shanxi, Yunnan (2), Chongqing, Guangdong (4), Inner Mongolia, Liaoning, Sichuan (2), Shandong, Qinghai	14
	Mine ownership disputes	Shanxi (2), Guangdong, Shaanxi, Jiangxi	5
	Other	Beijing, Jiangxi, Guizhou	3
Total			227

Source: CLB “Strike” dataset; “China strikes” dataset by Elfstrom; CASS “Collective incidents” dataset.

Note: Numbers in parentheses indicate the number of multiple collective incidents reported in the province. For provinces with no number attached, only 1 incident was reported.

suppress collective actions organized in response to mining issues.⁴⁹ The state usually deploys its coercive apparatus in the form of the police and armed police when aggrieved citizens stage radical actions such as blocking roads and assaulting mining companies, and protestors can be arrested for disrupting public order or even on unrelated charges.⁵⁰ According to the resource conflict datasets mentioned above, the police and/or armed police were reportedly deployed in 53 of the 205 labour disputes and in 18 of the 22 mine-community conflicts shown in [Table 1](#), accounting in total for 31 per cent of all incidents.⁵¹

It is worth noting that not all local governments automatically turn to the police to resolve resource conflicts in the first instance. While some localities may dispatch the police or armed police immediately when large-scale protests break out, others appear to be more cautious. For instance, the CDI of Lüliang City in Shanxi specifically cautioned against the use of police force when handling resource conflicts: “We must remain calm and use the police force cautiously. Deploying the police would only arouse more public resentment, and the public would misinterpret it as a sign of conflict escalation by the government. It could drive the participants of the incidents into desperation and confrontation and further provoke their anger. Therefore, do not get the police involved unless there is no other way out.”⁵²

In fact, Chinese local governments widely implement redistributive policies to address the adverse impacts of mineral extraction and prevent the eruption of collective protests by aggrieved citizens. In an effort to avert and manage conflicts triggered by mining-induced environmental damage such as land subsidence and pollution, many resource-rich areas have set up official procedures and standards to compensate and relocate residents in affected areas. For instance, Shanxi launched a major relief policy in 2007 to relocate and compensate about 200,000 residents from 201 different villages. These villagers had suffered the effects of serious land subsidence caused by local mining but had failed to obtain compensation from the mining companies responsible. Shanxi allocated 1.19 billion yuan of subsidies,⁵³ with the provincial, prefecture and county-level governments splitting the costs in a ratio of 5:3:2.⁵⁴ Similarly, some local governments in Inner Mongolia handed out generous compensation packages to land-losing farmers and herdsmen in mining areas, including both one-off subsidies and monthly pension insurance. They also introduced social welfare programmes to cover the educational and medical expenses of local residents.⁵⁵

49 Author’s interviews, Jiangxi, June 2014. Also see Liu 2009.

50 Zhan and Zeng 2017.

51 Again, these are incomplete data on resource conflicts in China, and no reported police presence in the datasets does not necessarily mean that there was no repression of the incidents.

52 Zheng 2011, 24.

53 The exchange rate of Chinese yuan to US dollar fluctuated between 8.3 and 6.1:1 from the late 1990s till 2015.

54 Zhang, Yulin 2014, 82–83.

55 Official documents and author’s interview in Inner Mongolia, August 2012.

To appease mine workers and local citizens who become incapacitated owing to mining accidents or chronic diseases such as pneumoconiosis, some local governments arrange healthcare checks and subsidies.⁵⁶ More generally, low-income support, medical assistance, disability pensions, old-age benefits, etc. are offered to poor mine workers as well as residents in mining areas to alleviate hardship, and such relief policies often work in tandem with stability maintenance work.⁵⁷

Contributions from mining companies: size matters

The costs of such relief policies are not solely borne by local governments. Mining companies contribute various taxes to local governments as well as miscellaneous non-tax charges, such as environmental management fees, resource compensation fees and land compensation fees, which provide crucial financial support for the relief policies.⁵⁸ Moreover, local governments encourage or require mining companies to compensate local communities directly through charity work or public welfare provision.⁵⁹ Shanxi provides an innovative example in this regard. In response to clashes between mining companies and local citizens, in 2004 local governments in Shanxi launched a policy to “supplement peasants with coal” (*yimei bunong* 以煤补农), which required coal companies to compensate local communities for the negative externalities suffered by providing public goods such as paved roads and schools, and by creating employment opportunities in non-coal businesses. All coal mines in Shanxi had to set aside 15 yuan for each tonne of coal produced to put towards developing non-coal businesses that would employ local citizens, and another 15 yuan per tonne to sponsor social welfare projects.⁶⁰ In Lüliang alone, 250 mining companies had contributed more than 4.2 billion yuan under this scheme by 2010.⁶¹

Nevertheless, mining companies are not always willing or able to comply with local governments' requests for financial contributions to redistributive schemes. While some companies behave more generously towards local communities, others pay little heed to the negative impacts they cause and offer minimal compensation.⁶² The different attitudes and responses hinge on business calculations and individual characteristics, but the size of the mining companies seems to make an important difference. Compared to smaller mining companies, larger companies tend to be more willing to bear their share of the costs of the redistributive schemes. A company's financial capacity and relationship with the government may account for the differences in behaviour.

56 T Town Government, Jiangxi. “2013 work report on petitions.”

57 Author's interview in Jiangxi, June 2014.

58 Author's interviews in Inner Mongolia, August 2012; Shanxi, May 2012 and October 2013; Henan, November 2015.

59 Zheng 2011.

60 X County Government, Shanxi. 2004. “Opinions on the implementation of the ‘one mine – one business – one project’ policy.”

61 Zheng 2011, 135.

62 Author's interviews in Shanxi, June 2016.

Generally, larger mining enterprises have the financial capacity to provide better pay and working conditions for mine workers and to offer more generous compensation and social welfare benefits to affected citizens, which may decrease the likelihood of labour disputes and mine-community conflicts. Resource conflicts which disrupt business operations can prove costly for larger-scale companies. As such, these companies have the incentive and financial capacity to accommodate the requests of workers, affected citizens or local governments and to settle or prevent disputes. For example, a large coalmining company in Jiangxi with more than 10,000 employees enjoyed an annual production capacity of 2.8 million tonnes. In response to the pressure of frequent protests about the environmental damage inflicted by its operations, the coalmining company set up a public relations office to specifically handle conflicts with local residents and allocated around 10 million yuan annually to fund compensation.⁶³ Smaller companies can hardly afford such sums to settle or avert resource conflicts.

At the same time, larger mining companies are subject to tighter state monitoring and control, whereas smaller ones may evade regulation and taxation more easily, because it is time-consuming and not cost-effective for the government to chase after them. When local governments need financial resources for anything, relief policies included, large companies are usually the first ones they call upon. For instance, when local governments in Shanxi required mining companies to provide public goods for local communities under the “supplement peasants with coal” policy, they focused on large companies and assigned major tasks to them.⁶⁴ Moreover, as a legacy of the socialist command economy, large state-owned mining companies are expected to share the political task of stability maintenance in similar ways to government departments.⁶⁵ They are under strong pressure to support local redistributive policies financially in order to prevent resource conflicts from escalating into major upheavals.

In sum, compared to small, scattered mining companies, which are costly to regulate, larger enterprises are a more reliable and capable source of financial support for the local redistributive schemes aimed at resolving or preventing resource conflicts.

Statistical Analysis: Hypotheses, Methods and Findings

Based on the qualitative evidence of the Chinese state’s two-pronged strategy to handle resource conflicts and mining companies’ involvement in the redistributive schemes, this section statistically tests the following hypotheses:

***Hypothesis 1:** regions with more resource extraction spend more on repressive state apparatus to stifle resource conflicts.*

***Hypothesis 2:** regions with more resource extraction design more redistributive policies to appease aggrieved citizens.*

63 Author’s interviews in Jiangxi, March 2012.

64 Zheng 2011, 256.

65 Zeng, Xia and Liu 2014.

Hypothesis 3: *the concentration of resource extraction in large companies decreases local governments' expenditures on redistributive policies.*

A complexity in testing the causal link between resource conflicts and state responses is that resource conflicts are difficult to measure quantitatively. As discussed earlier, the accuracy of the available data on the number of collective incidents that occur in China is marred by the underreporting of actual events.⁶⁶ Moreover, even if accurate statistics of resource conflicts were available, they would suffer the methodological problem of reverse causality, because observed resource conflicts are influenced by the state's coping strategies. For example, coercion or redistributive policies may prevent certain conflicts from breaking out. Therefore, regressing the state response on resource conflicts could lead to biased estimates. To circumvent these issues, I use resource extraction instead of resource conflicts as the key predictor of interest. As discussed earlier, resource extraction causes resource conflicts, but it should be exogenous to the Chinese state's repressive or redistributive strategies, so using it as a proxy of resource conflicts bypasses the endogeneity issue.⁶⁷

This method assumes that resource extraction is positively correlated with resource conflicts. To test the validity of this assumption, I use the resource conflict data as presented in [Table 1](#). Although certainly an underestimation of actual incidents, the statistics allow us to gauge the intensity of resource conflicts in different regions. [Figure 1](#) shows the number of reported resource conflicts and the magnitude of resource extraction for each province, measured by average annual provincial sales income from mineral products between 1999 and 2015. The two variables are highly positively correlated, with a Pearson correlation coefficient of 0.73 (p-value=0.000). Given the limited data on resource conflicts, resource extraction appears to be a proper proxy.

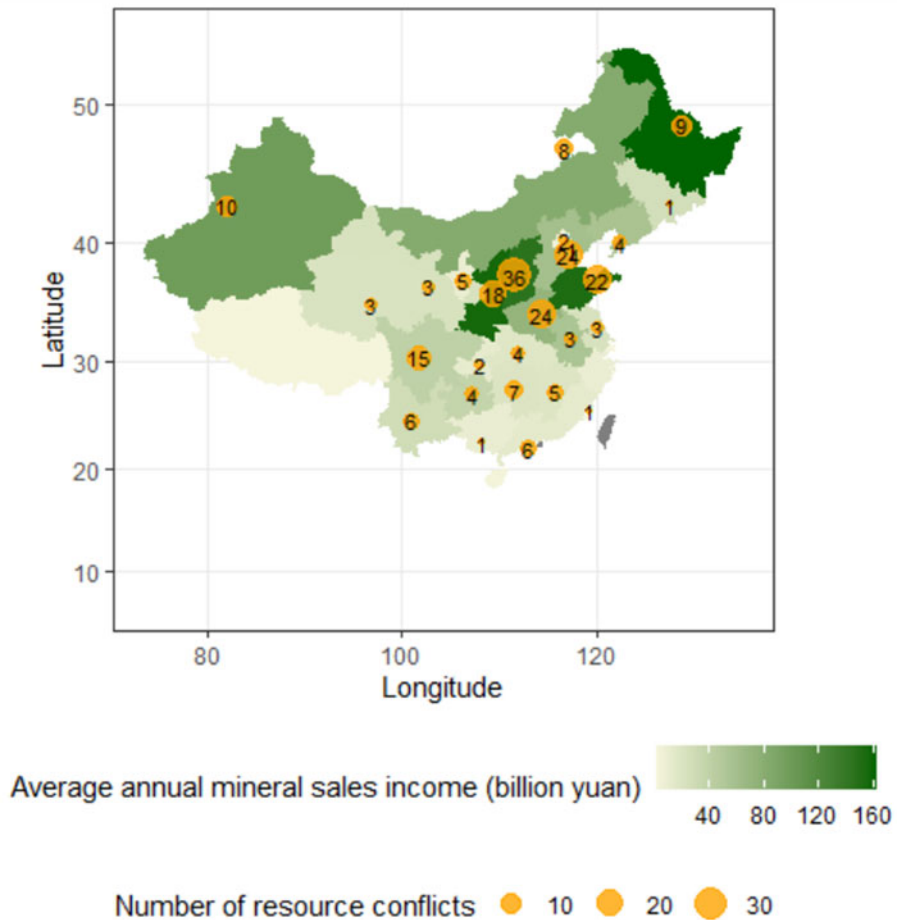
Therefore, I use annual per capita mineral sales income to measure of the magnitude of resource extraction in each province. In addition, I use the percentage of mineral industrial output in total GDP as a measure of the weight of resource extraction in the overall economy. The two indicators are significantly positively correlated with a Pearson correlation coefficient of 0.77 (p-value=0.000), suggesting that resource-rich regions also tend to be economically dependent on extractive industries. Between 1999 and 2015, there were huge temporal and spatial variations in resource extraction, which allow us to examine how resource extraction affects state responses to resource conflicts.

For the dependent variables, I use provincial fiscal expenditures to measure how Chinese localities distribute fiscal revenues to build up their repressive muscle and to devise redistributive policies, both of which are decentralized decisions

⁶⁶ Göbel and Steinhardt 2019.

⁶⁷ The endowment of mineral resources is obviously exogenous to state actions. Although the extraction of resources may be affected by macroeconomic policies, it is unlikely to be influenced in any significant way by the state's use of coercive or redistributive measures.

Figure 1: **Mineral Production and Resource Conflicts by Province, 1999–2015**



Source:

Based on statistics taken from *China Land and Resources Statistical Yearbook 2000–2016*; CLB “Strike” dataset; “China strikes” dataset; CASS “Collective incidents” dataset. The different shades demonstrate the average annual sales income of mineral products including oil, gas and solid minerals between 1999 and 2015. The bubbles and the figures inside indicate the number of resource conflicts recorded in each province. No resource conflicts were reported in Shanghai, Zhejiang, Hainan and Tibet. Data exclude Taiwan, Hong Kong and Macau.

made by local governments.⁶⁸ To measure the efforts in building repressive state apparatus, I use two indicators: per capita fiscal expenditure on public security and per capita fiscal expenditure on armed police. Public security expenditure in China covers the police, courts, procuratorates and other law-enforcement

68 Indeed, provincial and sub-provincial governments all implement their own policies and bear the ensuing fiscal expenditures. Unfortunately, no systematic fiscal data are available below the provincial level, so I use provincial fiscal expenditure, which is the sum of the expenditures of the provincial and sub-provincial governments, to examine each province as an aggregate.

bodies that serve to maintain public security.⁶⁹ I assume that the more fiscal expenditure a local government allocates to its law enforcement departments, the more importance it attaches to building its coercive capacity. Furthermore, I use per capita expenditure on the armed police – China's paramilitary force with the formal authority to respond to riots, terrorist attacks and other emergencies – to more explicitly measure the local government's coercive capacity.⁷⁰ According to Hypothesis 1, resource extraction increases local expenditure on public security and armed police. It is worth noting that local governments may use informal ways to suppress resource conflicts, such as relational repression⁷¹ and outsourcing coercion to extra-legal forces,⁷² the costs of which may not show up in budgets. Thus, a limitation of these expenditure measures is that they only represent formal repression by state forces and do not consider informal repression.

I measure a local government's redistributive efforts with per capita fiscal expenditure on social security, which is the most important tool that the Chinese state uses to provide a safety net for vulnerable social groups such as the unemployed, people with disabilities and senior citizens. Social security expenditure in China covers the costs of subsidies for citizens on a low income, retirement pension subsidies, social insurance subsidies, medical assistance, unemployment welfare, disaster relief and pensions for disabled citizens and veterans, as well as the operating expenses of departments of civil affairs, which handle social security issues, and of other public service bodies, such as the Red Cross, which provide relief to needy citizens. I assume that social security expenditure positively measures a local government's redistributive efforts. According to Hypothesis 2, resource-rich regions should spend more on social security.

To test Hypothesis 3, I consider the scale of mining industries. All mines in China are classified into four categories according to their annual production capacity: large, medium, small and small-scale mines, with the vast majority being small and small-scale mines.⁷³ Normally, larger companies operate larger mines. I use two indicators to measure the concentration of extractive activities in large companies: the share of large and medium mines, and the number of large and medium mines per million people in a province. The ratio of large and medium mines remains low. But owing to the launch in 2005 of a government policy to merge smaller mines into larger ones, which was partly to address the negative impacts of mining activities such as mining accidents and

69 On average, about half of public security expenditure goes to the police, while the courts, procuratorates, departments of justice and the armed police account for the other major components of public security expenditure.

70 Unlike the other items of fiscal expenditure, Chinese official sources only release systematic statistics on armed police expenditure at the provincial level up to 2009. Thus, this variable has a shorter time span.

71 O'Brien and Deng 2015.

72 Chen, Xi 2017; Ong 2018.

73 See Ordinance No. 208, issued by the Ministry of Land and Resources in 2004, for detailed classification standards.

environmental damage,⁷⁴ the number of large and medium mines increased sharply in the mid-2000s, and the share of these mines grew continuously from 6.6 per cent in 2005 (when the statistics first became available) to 13.2 per cent in 2015. According to Hypothesis 3, the concentration of mining activities should decrease redistributive expenditure as well as reduce the impact of resource extraction on redistributive expenditure.

In addition to the predictors of interest, some other factors may influence local fiscal expenditures. First, public goods provision is highly decentralized in China. For example, 85.5 per cent of public expenditure, including public security and social welfare benefits, occurred at provincial and sub-provincial levels in 2015.⁷⁵ Local governments' ability to provide public services is significantly constrained by the availability of financial resources. Therefore, I include per capita budgetary revenue of each province to control for local financial capacity.

Second, the central government has set up top-down fiscal transfers to encourage local provision of public goods such as social welfare. Therefore, I control for central fiscal transfers. To avoid the endogeneity problem caused by the possibility that the central government may make fiscal transfers in response to local needs for public services, I use the one-year lag of per capita central transfer, which arguably influences current public expenditures but should not suffer reverse causality.

Third, demographic factors may also affect fiscal expenditures. Economies of scale may decrease the unit cost of public services as the population density grows.⁷⁶ Therefore, I include population density, i.e. total population divided by the geographical area of a province, as a control variable. Besides, the notorious urban–rural divide in China may distort the provision of public services in favour of urban citizens. I use the rural share of employed persons to measure the weight of the rural population. For purposes of national unity and security, ethnic minorities usually receive special treatment from the Han-dominated government, so I control for the share of ethnic minorities in the total population.⁷⁷

To offset the effects of inflation and ensure that the statistics in monetary terms are comparable across years, all the monetary values are deflated by annual provincial inflation rates (with 1998 as the base year). All statistical data are taken from *China Land and Resources Statistical Yearbook*, *Statistical Yearbook of China*, *China Data Online*, *Finance Yearbook of China*, *China Population Statistics Yearbook*, *China Population and Employment Statistics Yearbook* and *China's Ethnic Statistical Yearbook*. The summary statistics are presented in [Table 2](#).

74 State Council 2005.

75 Calculated based on reports in 2016 *Statistical Yearbook of China*.

76 Wu and Wang 2013.

77 Considering the varying needs for public goods by different age groups, I have also tried controlling for the percentage of the population under age 15 and the percentage at or above 65, but this does not affect any of the dependent variables significantly, and the inclusion or exclusion of these controls does not affect the findings on other variables. Thus, I exclude them in the discussion below.

Table 2: Summary Statistics

Variable	N	Mean	Std. Dev.	Min	Max
<i>Dependent variable</i>					
Real per capita expenditure on public security	527	265.5	249.9	28.77	2,265
Real per capita expenditure on armed police	341	5.84	10.07	0	151.4
Real per capita expenditure on social security	527	532.9	452.16	25.92	2,598
<i>Predictor of interest</i>					
Magnitude of resource extraction	527	1,053	1,516	2.34	8,581
Weight of resource extraction in GDP	527	6.74	8.74	0.04	94.62
Ratio of large and medium mines	341	13.46	13.71	1.00	64.97
Large and medium mines per million people	341	8.32	6.43	0.12	32.46
<i>Control variables</i>					
Real per capita budgetary revenue	527	2,329	2,771	180.8	18,040
Lagged real per capita central transfer	527	1,950	2,449	146.2	23,630
Population density	527	403.1	568.1	2.08	3,826
Weight of rural population	527	66.09	16.09	11.33	88.51
Ethnic minority ratio	527	12.64	21.37	0	99.99

I use the fixed effects model to conduct the panel data analysis with the following formula:⁷⁸

$$Y_{it} = \gamma R_{it} + \Pi' X_{it} + \lambda_i + \zeta_t + \varepsilon_{it}$$

where i ($i=1,2,\dots,31$) indicates the 31 provinces and t ($t=1,2,\dots,17$) indicates the 17 years from 1999 to 2015. The dependent variable includes real per capita expenditure on public security, armed police and social security, respectively.⁷⁹ R is the predictors of interest, including the magnitude/weight of resource extraction, ratio/number of large and medium mines, and their interaction terms. X is a vector containing the abovementioned control variables. The variable λ is the region-specific effect, and ζ the time-specific effect. The error term ε captures the effects of other disturbances on the dependent variable. The highly skewed variables, including the dependent variables, predictors of interest and some control variables, are normalized by taking a natural log. Different statistical models have been tried out, and they yield largely consistent results. Owing to limitations on space, only the parsimonious models, which include the key predictor of interest and per capita budgetary revenue,⁸⁰ and the comprehensive models, which include all the independent variables, are presented in Tables 3 and 4.

The statistical analysis reveals a series of interesting findings. First, there is no empirical support to Hypothesis 1, which predicts that resource-rich regions

78 Although random effects model may be more efficient, it does not pass the Hausman test in all the regression models and is not used.

79 I also run regression analyses with total expenditures on public security, armed police and social security (logged) as the dependent variable. The statistical findings on the predictors of interest are highly similar to those presented in Tables 3 and 4.

80 Because resource extraction directly influences fiscal revenue (the Pearson correlation coefficient between per capita budgetary revenue and the magnitude and weight of resource extraction is 0.14 and -0.4, respectively, with p-values both smaller than 0.001), I include both variables in the parsimonious models to avoid biased estimation of the effects of resource extraction.

Table 3: Resource Extraction and Coercive Expenditure

	Public Security (1999–2015)				Armed Police (1999–2009)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Magnitude of resource extraction (ln)	-0.041*** (0.013)	-0.073*** (0.007)			0.073 (0.053)	-0.032 (0.052)		
Weight of resource extraction (ln)			-0.034* (0.015)	-0.087*** (0.007)			0.066 (0.058)	-0.068 (0.057)
Real per capita budgetary revenue (ln)	0.559*** (0.024)	0.644*** (0.027)	0.539*** (0.030)	0.585*** (0.027)	-0.064 (0.085)	1.165*** (0.179)	-0.021 (0.106)	1.089*** (0.193)
1-year lag of real per capita central transfer (ln)		0.237*** (0.020)		0.248*** (0.020)		-0.380* (0.149)		-0.387** (0.149)
Population density (ln)		-0.075*** (0.012)		-0.080*** (0.011)		-0.722*** (0.079)		-0.739*** (0.079)
Percentage of rural population		-0.002* (0.001)		-0.002. (0.001)		0.026** (0.008)		0.024** (0.008)
Ethnic minority ratio		0.005*** (0.001)		0.005*** (0.001)		-0.008. (0.005)		-0.009. (0.005)
R ²	0.575	0.911	0.572	0.917	0.011	0.314	0.009	0.316
Degree of freedom	478	474	478	474	302	298	302	298

Notes:

Significance codes: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; . $p < 0.1$. The numbers in parentheses are the standard errors of the estimates.

spend more on coercive apparatus including the police, courts, procuratorates and armed police. As [Table 3](#) shows, both the weight and magnitude of resource extraction are negatively correlated with per capita expenditure on public security, and the coefficient is statistically significant in all the models.⁸¹ Based on the estimate in Model 2, all else being equal, the most resource-rich region would spend only 55 per cent of the public security expenditure of the least resource-rich region. Focusing on the expenditure on armed police, which is the major coercive force deployed during regime-threatening social conflicts, neither the magnitude nor the weight of resource extraction has significant effect, and the estimated effect is unstable across models. Therefore, there is no evidence that resource-rich regions heavily increase their coercive capacity to suppress resource conflicts.

This finding differs notably from the Chinese state's repressive responses to social instability identified in previous studies, such as when dealing with the massive layoffs by state-owned enterprises (SOEs).⁸² This divergence may be owing to the different natures of the conflicts. Whereas SOE layoffs are largely the result of state policies to reform SOEs, it is irresponsible company behaviour and market fluctuations that lead to resource conflicts and, particularly, labour disputes about wage arrears, layoffs, etc. The mining companies, and not the government, are viewed as the primary perpetrators in resource conflicts. Perceiving resource conflicts as less threatening to regime legitimacy, the Chinese state may have less incentive to use coercive means to manage such protests.

In comparison, resource-rich regions tend to hand out more social welfare benefits to local residents. Resource extraction is significantly positively correlated with per capita expenditure on social security in most of the models in [Table 4](#), which lends strong support to Hypothesis 2. Based on the estimate in Model 4, all other things being equal, the most resource-rich region would spend 82 per cent more on social security than the least resource-rich region. This finding is in sharp contrast to the findings of existing studies which suggest that resource-dependent local governments are less inclined to spend on such public services as education and healthcare.⁸³ This implies that resource-rich regions are not necessarily interested in improving the well-being of local citizens; they are more concerned about appeasing the disadvantaged and the aggrieved with social security expenditures in order to prevent popular discontent from threatening regime stability.

81 Could the observed negative correlation be because declines in resource extraction increase labour disputes with mining companies regarding wage arrears, layoffs, etc., which drive up public security expenditure? To test this possibility, I statistically examine the relations between declines in resource extraction, public security expenditure and numbers of resource conflicts (particularly labour disputes that may arise when mineral production goes down), as shown in [Table 1](#). It turns out that declines in resource extraction are positively correlated with the magnitude of extraction, which more robustly accounts for the occurrence of labour disputes, while labour disputes are negatively correlated with public security spending. Therefore, we can rule out the abovementioned explanation for the negative correlation between resource extraction and public security expenditure.

82 Wang 2014.

83 Zhan, Duan and Zeng 2015; Hong 2018.

Table 4: Resource Extraction and Redistributive Expenditure, 1999–2015

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Magnitude of resource extraction (ln)	0.114*** (0.016)	0.024* (0.011)	0.026 (0.032)	0.073*** (0.022)				
Weight of resource extraction (ln)					0.149*** (0.017)	0.052*** (0.012)	0.029 (0.026)	0.086*** (0.020)
Ratio of large and medium mines (ln)			-0.031 (0.081)				-0.078*** (0.017)	
No. of large and medium mines per million people (ln)				-0.001 (0.046)				-0.110*** (0.017)
Interaction of resource extraction [^] and large and medium mines \blacktriangle			-0.008 (0.013)	-0.018* (0.008)			-0.003 (0.010)	-0.014* (0.007)
Real per capita budgetary revenue (ln)	0.363*** (0.029)	-0.103* (0.042)	0.135** (0.048)	0.178*** (0.049)	0.486*** (0.034)	-0.062 (0.043)	0.145** (0.048)	0.210*** (0.049)
1-year lag of real per capita central transfer (ln)		0.476*** (0.032)	0.631*** (0.037)	0.620*** (0.036)		0.468*** (0.032)	0.621*** (0.038)	0.597*** (0.036)
Population density (ln)		-0.069*** (0.018)	-0.055** (0.021)	-0.087*** (0.021)		-0.053** (0.018)	-0.048* (0.020)	-0.082*** (0.021)
Percentage of rural population		-0.020*** (0.002)	-0.014*** (0.002)	-0.012*** (0.002)		-0.021*** (0.002)	-0.015*** (0.002)	-0.013*** (0.002)
Ethnic minority ratio		-0.008*** (0.001)	-0.009*** (0.001)	-0.010*** (0.001)		-0.008*** (0.001)	-0.009*** (0.001)	-0.010*** (0.001)
R ²	0.258	0.730	0.804	0.807	0.298	0.738	0.805	0.813
Degree of freedom	478	474	296	296	478	474	296	296

Notes:

Significance codes: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; $p < 0.1$. The numbers in parentheses are the standard errors of the estimates. [^] Magnitude of resource extraction for Models 3 and 4; weight for Models 7 and 8. \blacktriangle Ratio of large and medium mines for Models 3 and 7; number per million people for Models 4 and 8.

Meanwhile, the statistical results in Table 4 support Hypothesis 3. The concentration of mining industries not only decreases social security expenditure but also weakens the impact of resource extraction on social security expenditure. The effects are statistically significant, especially in models regressing on the weight of resource extraction. Based on the estimates in Model 8, all else being equal, when the per capita number of large and medium mines increases from the minimum to the maximum, social security expenditure decreases by 46 per cent and the effect of resource dependence on social security expenditure decreases by 8 per cent. Therefore, the concentration of resource extraction eases the pressure on local governments to spend on redistributive schemes. Larger mining enterprises can provide social welfare benefits to local citizens directly, thereby reducing the need for relief policies to mitigate resource conflicts.

Among the control variables, central fiscal transfer and local budgetary revenue are significantly positively correlated with public security and social security expenditures in most models, confirming the importance of financial resources for these expenditures, although the expenditure on armed police is a murkier story. Regarding the demographic factors, the consistent negative effects of population density suggest economies of scale in all three expenditures. Rural population is significantly negatively correlated with public security and social security expenditures but positively correlated with armed police, which reveals interesting patterns in the urban–rural divide. Last, there is more spent on public security but less on social security and armed police for ethnic minorities. These findings deserve further exploration and explanation.

Conclusion

Mineral resource extraction gives rise to widespread conflicts between the resource sector and its employees as well as between the resource sector and local communities. This research investigates how the Chinese state uses repression and redistribution to cope with resource conflicts. Although both strategies have been observed empirically, the Chinese state relies more on redistributive policies for stability maintenance. As the statistical analysis on provincial fiscal expenditures between 1999 and 2015 reveals, resource-rich regions spend more generously on social security to appease disadvantaged citizens and are less inclined to spend heavily on building up coercive state apparatus such as law enforcement departments and the armed police.

This study sheds new light on the variety of authoritarian responses to social unrest. The Chinese state's preference for a redistributive strategy in this case has to do with the very nature of resource conflicts. Unlike protests triggered by government policies, such as SOE layoffs⁸⁴ and exorbitant rural taxation,⁸⁵ resource conflicts occur between specific social groups, i.e. mining businesses,

84 Cai 2002.

85 Berstein and Lü 2003.

mine workers and local citizens, owing to the uneven and unfair distribution of the benefits and costs of resource extraction. From the perspective of the state, which is not a direct target of such grievances, redistribution may be a more sensible and effective strategy for removing the sources of contention. Instead of siding with one party and suppressing the other, which may provoke more resistance, the state appears as a saviour by mediating between the parties and transferring resource wealth from the winners to compensate the losers.

Moreover, the state takes a corporatist approach by actively involving mining companies in the redistribution process. The state uses its control over the mining companies to mobilize them to compensate the victims of the resource sector, which not only lightens the financial burden of redistribution on government budgets but also enhances regime legitimacy. By consolidating mineral exploration and merging smaller mines into larger ones, the state has been able to identify the winners in the resource economy more easily and make the redistributive strategy more cost-effective.

Overall, this research shows that authoritarian regimes do not always prefer to use brutal repression to stifle conflicts. Depending on the sources of contention, they may well adopt redistributive strategies to mediate conflicting interests between different social groups and preserve regime stability. This research also advances the debate on the resource curse by arguing that resource-rich states are not bound to suffer the adverse effects of resources on social stability but can devise non-confrontational means to cope with resource conflicts.

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Conflicts of interest

No.

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摘要: 威权国家通常被认为会通过镇压社会冲突来维护政权稳定。但是通过研究中国对矿产资源开发引起的社会冲突的回应, 本文认为在一定条件下威权国家会更倾向于使用再分配政策来化解社会不安。结合定性与定量的研究方法, 本文发现中国资源丰裕地区的地方政府会大力增加社会保障支出来安抚受到矿产开发负面影响的民众, 而不是增加公共安全支出

来压制资源冲突。而且中国政府积极将矿企纳入再分配过程，使之分担政府救助政策的财政成本。因此，这项研究说明当特定社会群体之间的利益冲突造成社会不稳定时，再分配可能是比镇压更有效的维稳策略。

关键词: 中国; 混合研究方法; 再分配; 镇压; 资源冲突

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