1 **Minerals and the State–Capital–Labor Triad**

Men of a fat and fertile soil are most commonly effeminate and cowards; whereas contrariwise a barren country makes men... careful, vigilant, and industrious.

— Jean Bodin (Six Books of a Commonwealth, 1967)

**China: An Atypical Resource-Rich Country**

After the wave of independence movements swept Africa and the Middle East in the 1950s and 1960s, the newly independent countries in the region were acclaimed and assumed to have a bright prospect of development ahead. One important reason for the optimistic outlook was that these countries are endowed with abundant oil and mineral resources, which were believed to provide raw materials and start-up funds crucial for industrialization and economic takeoff (Spengler, 1960). However, half a century later, the world has realized that instead of promoting growth, natural resources are oftentimes associated with sluggish economic development (Auty, 1993; Sachs & Warner, 1995) and low levels of human development (Blanco & Grier, 2012; Gylfason, 2001a). Moreover, resource-rich developing countries tend to suffer weak, nondemocratic political institutions (Collier & Hoeffler, 2005; Jensen & Wantchekon, 2004; Ross, 2015) and to experience high risks of civil conflicts (Fearon & Laitin, 2003; Klare, 2001; Ross, 2015). Scholars and policymakers have thus tried to unravel the paradoxical effects of mineral resources and embarked on a decades-long debate on the so-called curse of natural resources since the notion was first proposed in the 1990s (Auty, 1993, 1994).

Little noticed in the debate is that China, the world’s largest developing country that has undergone remarkable economic growth in the past four decades or so, is also a resource-rich country. As Chinese
children are proudly taught in school, China is a grand country with a vast territory and abundant natural resources (dida wubo 地大物博). Although internationally not known as an economy heavily dependent on resource exports, China is actually a major producer and consumer of a large variety of mineral resources, including fuels such as coal, oil and natural gas, metals such as iron and copper, and other nonmetallic minerals such as limestone. Since the turn of the millennium, China has experienced a sustained resource boom of more than one decade. As Figure 1.1 shows, the real mineral industrial output (in 1999 constant price) rose substantially between 1999 and 2017, the period under this study. At the peak of the resource boom, China’s mineral industrial output accounted for 7.84% of the national gross domestic product (GDP) in 2010. In resource-rich regions such as Shanxi Province, Qinghai Province, and Xinjiang Uyghur Autonomous Region, mineral industrial outputs constantly accounted for 20%–30% of the...
provincial GDP throughout the 2000s and 2010s,\textsuperscript{1} which makes these regions comparable to typical oil-rich countries such as in the Middle East and North Africa (MENA).\textsuperscript{2} Mineral resources not only prove crucial for the local economy of resource-rich Chinese localities, but are also indispensable for China’s overall industrialization and modernization.

Ironically, while generating national pride and economic dividends, mineral resources are often associated with negative news in China. For instance, a massive riot broke out in 2008 in Weng’an County in Guizhou, an underdeveloped province in southwest China. The riot involved more than twenty thousand participants and led more than one hundred government offices to be smashed and torched and the Chinese Communist Party’s (CCP) county headquarters to be completely burnt down.\textsuperscript{3} While triggered by rumors, this incident was later found out to be caused by the strong popular grievance accumulated during the chaotic exploration of rich phosphorus deposits in the county (Liu, 2009; Zhan, 2013). Such resource-triggered social conflicts and mass protests have broken out in other Chinese localities as well.\textsuperscript{4} By scouring three datasets on mass protests in China, including China Labour Bulletin (CLB) “Strike” dataset,\textsuperscript{5} the “Collective Incidents” dataset collected by the Chinese Academy of Social Sciences (CASS),\textsuperscript{6} and the “China Strikes” dataset (Elfstrom 2017), the national and provincial percentages are calculated based on statistics from China Land and Resources Statistical Yearbook (Guotu Ziyuan Tongji Nianjian) 2000–2016 and Statistical Yearbook of China (Zhongguo Tongji Nianjian) 2018.

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\textsuperscript{4} See, for example, Yan Dingfei, 2014. “Shifang houyizheng (In the aftermath of Shifang),” Nanfang Zhoumo (Southern Weekend), October 30, www.infzm.com/content/105194, accessed on March 24, 2020.


\textsuperscript{6} I am grateful to Jiang Junyan for generously sharing this dataset. For detailed information about this dataset, see the supporting information of Jiang et al. (2019).
I identify a total of 436 mining-related mass protests between 2005 and 2020, which are widely distributed across Chinese provinces. This suggests that the extraction of mineral resources has become an unneglectable source of social unrest in China.

Mineral resources also appear to be closely associated with corruption. For instance, since President Xi Jinping launched a high-profile anti-corruption campaign in 2012, Shanxi Province, the largest coal producing province in China, stood out as an exceptional hotbed of corruption. Thousands of Shanxi officials, including dozens of high-level cadres at the provincial and prefecture levels, were investigated and disciplined for corruption. The corruption cleanup led to a serious crisis for Shanxi local governments in 2014, as they scrambled to find suitable replacements for hundreds of suddenly vacated offices. Although many speculated on the power struggle behind the political earthquake in Shanxi, there is clear evidence linking the coal and related industries and revealed corruption cases. Similarly, Inner Mongolia, another major producer of coal, also discovered a large number of corruption cases in its coal mining industry between 2000 and 2020. Of its five provincial-level officials investigated for corruption since 2018, four of them are closely related to the coal industry.

Apparently mineral resources have generated devastating socio-political impacts in China, similar to those plaguing many other resource-rich developing countries. But interestingly, China has not seen the outbreak of large-scale violent conflicts or pervasive decay of political institutions, some common symptoms of the resource curse. Moreover,

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8 The downfalls of former top officials Zhou Yongkang and Ling Jihua as well as their associates are believed to have triggered the investigation of corruption cases in Shanxi Province.
the Chinese economy has grown continuously and strongly for decades, including in those resource-rich localities. These contradictory pictures thus raise intriguing and important questions: Why does China suffer some symptoms of the resource curse but not the others? Does the endowment of mineral resources affect local development and governance in China in similar ways as in other resource-rich countries that suffer the resource curse? If yes, at what levels and through which channels does the resource curse take place? If not, how does China contain the adverse impacts of natural resources and cope with the resource curse?

**The Exploration of Mineral Resources: What Has It Brought to China?**

Mineral resources have long played important roles in China’s industrialization and modernization since the Maoist era, providing over 90% of China’s primary energy, 80% of industrial raw materials, and 70% of agricultural inputs (Information Office of the State Council, 2003). After the start of the post-Mao reforms, the Chinese central government further encouraged the utilization of mineral resources by launching the policy of “speeding up the water flow (youshui kuailiu 有水快流)” in 1983, allowing non-state-owned enterprises to explore mineral resources that had been strictly controlled by the state under the planned economy (Dong, 2016, p. 33). While state-owned companies continued to control the larger, richer mines and oil fields and those of strategic importance, the smaller and strategically less significant ones were opened up to collective and private investors. With the flush of market forces, mineral production started to grow rapidly, and mineral prices were no longer artificially suppressed but gradually converged to market prices. Starting around the turn of the millennium and especially after 2003, the Chinese resource market experienced a “golden decade” with both demands and prices rising sharply. The national mineral production increased sharply from 357.3 billion yuan in 1999 to the peak of 3,231 billion yuan in 2010. Although mineral production declined slowly in the following years, it still remained at 2,428 billion yuan in 2017, according to the latest statistics.11

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11 Statistics are based on *China Land and Resources Statistical Yearbook 2000–2018* and *Statistical Yearbook of China 2018.*
At the national level China does not heavily rely on mineral production for its economy or exports, however, at subnational levels many Chinese localities produce massive amounts of minerals and are heavily reliant on the resource sector for their economic development and fiscal incomes. As Figure 1.2 shows, there exists wide cross-regional variation in resource endowment and exploration. While all provinces are engaged in mineral production to certain extents, the magnitude varies widely across provinces, with the major producers concentrated mostly in inland areas and the northern part of China. Between 1999 and 2017, the average share of mineral industrial output in
provincial GDP ranged between 0.4% and 30.4%, indicating vastly different levels of resource dependence across Chinese provinces as well. In the resource-rich regions, mining industries contribute significantly to local economic development and revenue generation. Moreover, mineral products are exported to other Chinese regions to meet their insatiable needs for energy and raw materials. Certain minerals, such as coal and oil, are also exported to other countries. Due to their important roles in the Chinese economy, mineral resources are indispensable for China’s remarkable economic growth and rapid industrialization in the post-Mao reform era.

However, the extraction and consumption of the mineral resources have generated profound socioeconomic and political consequences as well as serious environmental damages. Numerous journalistic reports have revealed mining-caused air, water, and soil pollution, health problems, labor disputes, mining accidents, popular protests against mining companies and local governments, etc. While environmental problems such as pollution, land loss, and depletion of resources have attracted worldwide attention in media, academia, and policy circles, the socioeconomic and political consequences, which involve constant contentions, negotiations, and compromises between different stakeholders, have not drawn sufficient attention from scholars or policymakers in and outside China.

Since the mid-2000s, some Chinese scholars have taken the first steps to assess the risks of the resource curse in China (e.g., Xu & Wang, 2006; Yang & Niu, 2009; Zhang et al., 2007). These scholarly efforts largely focus on the economic side of the story, namely the impacts of resource endowment on local economic performance. For example, some statistical analyses have revealed negative correlations between resource endowment and economic growth at provincial and prefecture levels (Fu & Wang, 2010; Xu & Wang, 2006) and in certain areas (Shao & Qi, 2008). Some have identified a subnational variant of the Dutch disease (Corden & Neary, 1982) in China and shown that resource boom suppresses per capita consumption growth by driving up local prices of non-tradable goods and damages the competitiveness of local firms (Zhang et al., 2007). However, the empirical evidence

remains ambiguous as to whether there exists a resource curse in China in economic terms (Zhang & Brouwer, 2020).

On the other hand, looking beyond the economics discipline, scant scholarly attention has been paid to the far-reaching and multifaceted political and social impacts of resources, such as corruption, political decay, and social conflicts, which have been well documented in other resource-rich countries and thoroughly examined by the comparative literature. With a few notable exceptions (e.g., Ho & Yang, 2018; Hong & Yang, 2018; Yang et al., 2017), there have been very limited efforts to examine, for example, how resource endowment affects the quality of political institutions, state–society relations, and social conflicts in China.

The massive resource boom since the turn of the millennium makes China an intriguing case to study the impacts of mineral resources on the society. Moreover, as Figure 1.2 shows, mineral resources are widely but highly unevenly distributed across Chinese localities. The cross-regional variations in resource endowment and dependence function as a natural experiment for researchers to investigate the socioeconomic and political effects of mineral resources through subnational comparison. By controlling for national-level institutional factors such as political regime, bureaucratic structure, and economic system, we can more closely and clearly examine the causal channels through which resources affect socioeconomic and political outcomes.

How Do Resources Affect Human Society? Existing Debates

In the past four decades or so, a growing body of literature has advanced numerous arguments on how mineral resources affect human society and why they appear to be counterproductive and even detrimental for the host countries, the vast majority of them being developing countries. After Corden and Neary (1982) proposed the Dutch disease theorem as a pioneering economic explanation of the resource curse, this paradoxical phenomenon started to attract growing scholarly attention from multiple disciplines. Auty (1993) first clearly proposed the resource curse thesis, and he further elaborated the ideas in his subsequent publications (Auty, 1994, 2001). Following the footsteps of Auty’s seminal works, scholars in economics, political science, and other disciplines have increasingly joined force and proposed a large number of theories from different perspectives to explain
the counterintuitive phenomenon. With the remarkable progresses since the 1990s, the discourse on the resource curse has by now gone far beyond purely economic theories, and has tapped on the rich intellectual reservoirs of different disciplines.

In the economic arena, Corden and Neary (1982), as the pioneers, argue that resource abundance gives rise to the so-called Dutch disease, which undermines the non-resource sectors through direct and indirect deindustrialization and thus hurts the long-term prospect of development. Since then a voluminous literature in economics has empirically tested the effects of mineral resources, especially petroleum, on economic performance and advanced multiple causal mechanisms for the resource curse, which often go beyond economic factors such as deindustrialization, exchange rate and trade and are intertwined with political factors such as the quality of political institutions, corruption, and civil conflicts, as will be discussed below. However, controversies persist regarding whether or not natural resources pose a curse on economic performance. Different studies, all with supporting empirical evidence, show contradictory findings about whether resource endowment hampers economic development (e.g., Alexeev & Conrad, 2009; Brunnschweiler & Bulte, 2008; Butkiewicz & Yanikkaya, 2010; Lederman & Maloney, 2008; Michaels, 2011; Sachs & Warner, 1995) and whether the effects vary between different time periods in history (Andersen & Ross, 2014; Gerelmaa & Kotani, 2016). And looking at the short- versus long-term effects of resources may also lead scholars to arrive at different conclusions (Allcott & Keniston, 2018; Michaels, 2011). Therefore, no consensus has been reached on the effect of natural resource abundance on economic development and the underlying mechanism (Havranek et al., 2016).

Political scientists pay more attention to the political foundations of the resource curse, such as weak political institutions, lack of democracy, and epidemic corruption in resource-rich countries. The rentier state theory argues that as rentier states derive a dominant share of their revenue from resource rent rather than taxation on productive activities, they have less obligation to respond to citizens’ demands (Brautigam et al., 2008; Mahdavy, 1970); the citizens also have less

13 For some detailed reviews of the economic literature on the resource curse, see Wick and Bulte (2009) and van der Ploeg (2011).

14 For an excellent survey of the political science literature on the resource curse, see Ross (2015).
incentive to create mechanisms of accountability and to closely monitor the government and public officials (Ross, 1999, 2001). Thus rentier states commonly suffer weak political institutions based on patronage instead of electoral competition, scrutiny, and civil rights (Collier & Hoeffler, 2005), and experience enduring autocratic rule and difficulty in democratic transition (Aslaksen, 2010; Barro, 2009; Tsui, 2011). Resource-rich countries also tend to lack socially intrusive and elaborate bureaucracies (Fearon & Laitin, 2003), state capacity to provide public goods to the general population (Ross, 2003), and the ability to maintain law and order and resolve social conflicts (Karl, 1997; Reno, 1998). However, these arguments are empirically contested. For example, some studies find that resource discovery or boom can strengthen regime stability and capacity (Côte & Korf, 2018; Smith, 2004) and fasten democratization under certain conditions (Dunning, 2008; Markus et al., 2012), while some statistical studies find no correlation between oil wealth and democracy (Haber & Menaldo, 2011). Therefore, resource does not necessarily undermine political institutions or democracy, which is rather contingent on the power, incentive, and strategy of relevant social and political actors.

Another stream of research on resources and political institutions argues that resource windfalls create both economic opportunities and temptations for corruption (Bulte et al., 2005; Caselli & Michaels, 2013; Franke et al., 2009; Karl, 1997; Leite & Weidmann, 1999; Robinson et al., 2006). Meanwhile, the fierce competition for powerful political positions that control the resource rents fuels political corruption in such forms as vote buying in elections and patronage networks (Caselli & Cunningham, 2009; Franke et al., 2009; Kolstad & Søreide, 2009; Vicente, 2010). But other studies dispute the linkage. For instance, Bhattacharyya and Hodler (2010) argue that resources feed corruption only in countries without democratic institutions, and good-quality democracies appear immune to this problem. Treisman (2000) finds that countries where fuel, metals, and minerals take up larger shares in exports tend to have higher corruption, but when economic development and democracy are controlled for, this effect disappears.

Socially speaking, resource abundance is believed to arouse civil conflicts due to grievance and greed.15 The resource economy often creates grievance among local population due to unequal distribution

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15 For a careful review of the relevant literature, see Ross (2015).