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# Economic analysis of reform policies for small coal mines in China

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## Abstract

Over the last three decades, China's coal industry has achieved dramatic increases in coal production, both in absolute terms and relative to the world as a whole. This achievement is due largely to its coal policies. Yet facing increasing pressures of environmental sustainability and market transition, the Chinese government was forced to make deep reforms and adjustments to regulate the coal industry effectively. This paper presents an historical overview of China's coal economic policies, paying particular attention to the current reform policy of closing mines and restricting the yield for the small coal mines (SCMs) in the context of economic theories and methods. We argue that the SCM closure policy would not likely be efficiently enforced if a feasible market mechanism were not built up. The failure of closure policy is due largely to problems of property rights, coal pricing, ownership, and objectives.

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## Introduction

Coal has played an important role in China's economy over about five decades. The Chinese government treats it as a strategic resource and places high priority on the security of energy supply. However, the latest several years saw a sudden drop in demand for energy in China, and the coal industry was most heavily affected. Coal inventories grew drastically, and prices in the domestic market plummeted. In spring 1998, production from the state-owned coal mines (SOCMs) was suspended for two months to solve the oversupply problem. Nevertheless, it became apparent in late 1998 that this was not a temporary phenomenon and that urgent action was required to protect the interests of the SOCMs because large amounts of state investment had poured into these enterprises.

As a result, the Chinese government announced a radical reform policy on closing the small coal mines (SCMs) and restricting the yield, as well as closing up and making bankrupt a number of SOCMs. This programme planned to close some 25,800 illegal and "irrational" mines (mainly SCMs) by the middle of 2000 to cut annual output by 250 million tonnes (Mt) (Table 1). By July 2000, it was announced that this number of mines had already been closed, resulting in an effective reduction of less than 200 Mt. In addition to the SCMs, a number of larger mines near the end of their lives were also closed and some enterprises made bankrupt.

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<sup>1</sup> These included, for example, UNITAR International Conference on the Future of Small-scale Mining, Mexico, 1978; Workshop on Mineral Policy for Small-scale Mining, India, 1984; UNECA on the Enhancement of the Contributions of the African NON-fuel Mineral Sectors Towards the Region's Economic Advancement, Zimbabwe, 1990; UN Interregional Seminar on Guidelines for the Development of Small/Medium Scale Mining, Zimbabwe, 1993; World Bank Roundtable on Artisanal Mining, USA, 1995; Global Conference on Small/Medium Scale Mining, India, 1996.

Table 1  
Classification of illegal and irrational SCMs in China

Type	SCMs	Number of mines	Output (Mt)	How to handle
I	I <sub>1</sub> without both mining and producing licenses	11,200	63	Illegal mines. Must be cancelled <sup>b</sup>
	I <sub>2</sub> within the reaches of SOCM, after 1 January 1997 <sup>a</sup>	400	13	Illegal mines. Must be cancelled
II	II <sub>1</sub> within the reaches of SOCMs with mining licenses before 1 January 1997, while without coal producing licenses	6900	70	Must be closed <sup>b</sup>
	II <sub>2</sub> beyond the reaches of SOCMs with mining licenses, but without coal producing licenses	3400	41	Must stop producing in order to be consolidated. Those that could not meet the requirement of mining and producing licenses by the end of February 1999 were to be closed. This type of SCMs totalled to 31,900 mines with annual output of 259 Mt before the latest round of closures occurred, but only 3400 were to be closed
	II <sub>3</sub> with high sulphur and ash without protect counter-measures	600	5	
III	Within the limits of SOCMs, legally run with both mining licenses and producing licenses before 1 January 1997	3300	60	Legal but irrational distribution mines. To be closed up. Give appropriate compensation
Total		25,800	252	

Data source: Zhang (1998).

<sup>a</sup> The date when the amended Mineral Resources Law (PR China) entered into effect.

<sup>b</sup> A “cancelled” mine is different from a “closed” mine. Cancelled mines have their licences confiscated but their mine mouths may not be ruined. Closed mines have their mine mouths ruined by explosives or closed with the cement.

mining on their agendas. In 1995, the World Bank<sup>2</sup> hosted a seminal meeting on small scale and artisanal mining, including representatives from 25 countries. One of the key conclusions of this conference was the need for integrated solutions to the problems of the sector and improved co-operation between the various institutions. Further meetings respectively convened by United Nations Industrial Development Organisation (UNIDO) and International Labour Organisation (ILO) involving bilateral and multilateral institutions reiterated the need for a coordinated approach towards artisanal and small scale mining if significant progress was to be made<sup>3</sup>. However, almost no analysis has been conducted regarding economic dimensions of government policies designed for small-scale mining.

Small-scale coal mines have played an important role in China's economy because of the need for coal as an energy source and the promotion of rural development. However, the pressures from coal oversupply over many years and the concerns about environmental pollution

and resource damage from the SCMs have forced the central government to adjust its coal policy. Accordingly, the government decided to restrict the SCMs in a time of oversupply, the result of protecting the large SOCMs. As a result, whether the current policy on the SCMs has been effectively implemented caused wide debates in China. Some argued that the policy has achieved great progress since the reduction in coal oversupply has become obvious. Others suggested that the ultimate positive effects of the policy remain to be seen (Shi, 1999). From historical perspectives, there has been a lack of any clear long-term and relatively stable policies for the SCMs in China over the past decades.

The literature on government policies towards SCMs has focused respectively on the social (Jennings, 1999), financial (Kumar and Amaratunga, 1994), environmental (Simpson, 2000), and safety, legislative and political aspects (Bugnosen, 1998), paying relatively little attention to the economic policy evolution. One of the major objectives of this paper is to review the policy changes on China's coal industry over the past 50 years, particularly policy reforms affecting the SCMs and their economic situation. Another is to explore a feasible economic approach to compare the SCMs with the SOCMs and hence to identify some reasons why the current policy failed to regulate effectively the SCMs.

<sup>2</sup> Towards an integrated solution, see <http://www.ifc.org/mining/key/artisanal/artisanal.html>, para 2.

<sup>3</sup> See ILO communication (No. 30), July 1999, at <http://www.ilo.org/public/english/bureau/inf/magazine/30/mines.htm>.

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