



The safety regulation of small-scale coal mines in China: Analysing the interests and influences of stakeholders

Xiaoqian Song^{a,b}, Xiaoyi Mu^{c,*},¹

^a School of Business Administration, Shandong Institute of Business and Technology, Yantai, China

^b MOE Key Laboratory of High Efficiency Mining and Safety for Metal Mines, University of Science and Technology Beijing, Beijing, China

^c Center for Energy, Petroleum and Mineral Law and Policy, University of Dundee, DD1 4HN, Dundee, UK

HIGHLIGHTS

- ▶ Small scale coal mines have played an important role in China's energy supply.
- ▶ We analyze the interests and influences of key stakeholders in the safety regulation of small coal mines.
- ▶ The mineworkers have the strongest interest but least influence.
- ▶ An effective regulation must engage the mineworkers, organize, and empower them.

ARTICLE INFO

Article history:

Received 16 December 2011

Accepted 26 September 2012

Available online 18 October 2012

Keywords:

Small scale mining

Safety

Stakeholder analysis

ABSTRACT

Small scale coal mines (SCMs) have played an important role in China's energy supply. At the same time, they also suffer from many social, economic, environmental, and safety problems. The Chinese government has made considerable efforts to strengthen the safety regulation of the coal mining industry. Yet, few of these efforts have proven to be very effective. This paper analyzes the interests and influences of key stakeholders in the safety regulation of SCMs, which includes the safety regulator, the local government, the mine owner, and mineworkers. We argue that the effective regulation of coal mine safety must both engage and empower mineworkers.

© 2012 Elsevier Ltd. All rights reserved.

1. Introduction

Coal has been a dominant fuel in China's primary energy supply mix for decades. Since China began its reform and opening policy in the late 1970s, coal has provided more than 70 percent of China's total primary energy supply and consumption, a substantial share of which is produced from small-scale coal mines (SCMs).² In 2008, the SCM output amounted to 1.02 billion tons, accounting for 37 percent of total coal output.³ On the one

* Corresponding author. Tel.: +44 1382 384843; fax: +44 1382 385854.

E-mail address: mxiaoyi@gmail.com (X. Mu).

¹ We thank Philip Andrews-Speed, Subhes Bhattacharyya, Melaku Desta, Stephen Dow, and two anonymous referees for helpful comments and discussions. All errors remain our own. Xiaoyi Mu acknowledged the Research Grant from the Carnegie Trust for the Universities of Scotland.

² According to the National Bureau of Statistics (NBS), the share of coal in China's total primary energy production and consumption is 74 percent and 72 percent respectively over the period of 1979 to 2008.

³ China Coal Industry Yearbook (2008), supplemental issue. SCMs refer to those mines with a production capacity below 300,000 t/year. Since most SCMs are township- and village-owned enterprises (TVE) and most TVE coal mines are SCMs, the term SCM and TVE mines will be used interchangeably throughout the paper.

hand, the SCMs have played an important role in China's energy supply and rural economic development; but on the other hand, they also suffer from numerous problems such as irrational locations, lack or low degree of mechanization, deficient safety protection and health care, low recovery rates, and heavy environmental pollution (see Andrews-Speed et al., 2005; Hentschel et al., 2002). For example, in 2008 a total of 3215 miners were killed in coal mines, 74 percent of which occurred in the SCMs.

Fig. 1A shows the fatality rate per million tons of coal produced in China's SCMs from 1990 to 2008. During this period, on average, 8.7 miners were killed for every million tons of coal produced in the SCMs.⁴ The record is not only notorious by international standard, but is also worse than those of the state-owned coal mines. During this period, the average fatality rate of the SCMs is seven times higher than that of the major state-owned mines and more than double the local

⁴ The figures shown in Fig. 1 are based on the Coal Industry Yearbook (2008). The China Statistical Yearbook (2010) revised the coal output by as much as 38 percent in 2000 and five percent in 2001 and another nine percent in 2005, which could actually lower the fatality rates during these periods. However, the fatality statistics have not been revised.

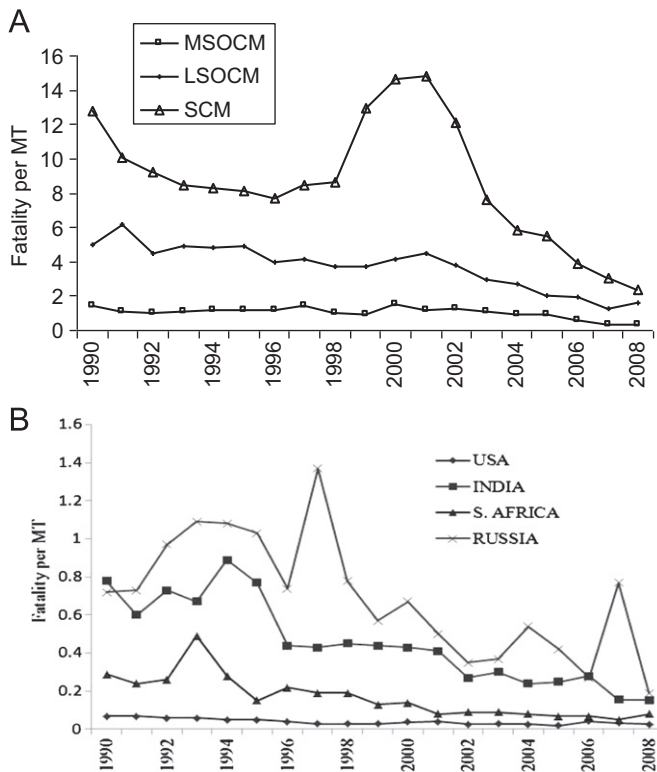


Fig. 1. (A) Fatality rates of different type of coal mines in China. Source: Coal Industry Yearbook (2008), supplemental issue. MSOCM, LSOCM and SCM refer to major state-owned coal mines, local state-owned coal mines and small-scale coal mines, respectively. (B) Coal mine fatality rates of major coal producing countries. Source: National Center for International Cooperation in Work Safety, Coal mine safety status and cases in major coal producing countries (2010).

ones.⁵ For comparison purposes, in Fig. 1B, we show the fatality rates of a few other major coal-producing countries. Even the major state-owned mines (which are the best performing category of Chinese mines), have a worse safety record than Russia and are more than ten times worse than in the United States (US). Partially driven by these worsening safety records, the Chinese government has made considerable efforts to strengthen the safety regulation of coal mines. For example, the regulation of both general workplace safety and coal mining safety was separated from local governments and placed in a line of authority leading directly to the central government after 1998. From the late 1990s, the government has launched several campaigns to close and/or consolidate illegal and irrational SCMs.⁶ Nevertheless, few of these efforts have proven effective in adequately securing workplace safety in the SCMs, which still puts millions of mineworkers' lives at risk.

This paper analyses the interests and influences of key stakeholders of the safety regulation of China's SCMs, including the regulator, the local government, the SCM owner and mineworkers, with an aim to suggest a direction of improvement for safety regulation. As argued in Andrews-Speed et al. (2003), one of the main barriers preventing an effective regulation and management of

SCMs in most countries is the vested interests of various stakeholders and therefore a successful policy must adequately address the interests of all relevant parties. By examining the interests and influences of each of these key stakeholders, we argue that an effective regulation of China's SCMs must engage the coal mineworkers, and must educate, and empower them. Studies on the efficacy of the unionization of miners in reducing accident fatalities in the mining industries of the US, the United Kingdom (UK), and other countries provide empirical support for the idea that engaging workers in work place safety regulations is essential.⁷

There is a relatively large literature on government policies towards small-scale mines. However, much of the literature has focused on the social, economic, and environmental issues relating to these types of mines.⁸ With respect to SCMs in China, Philip Andrews-Speed and his co-authors analysed the difficulties in regulating the township and village coal mines arising from the complex nature of institutional structure, and the reasons why the SCM closure policy was successfully implemented in certain areas but not in others (Shen and Andrews-Speed, 2001; Andrews-Speed et al., 2003, 2005). Shen and Gunson (2006) reviewed the role of artisanal and small-scale mining on China's economy and argued that the contributions of these mines outweigh their negative impacts and that the government should strengthen the regulation to create a fair and sound environment for their operations. Wright (2004) analysed the political economy of coal mining accidents in China and argued that the problem of coal safety is not solvable until the rural population has "other, better and safer, ways to increase their family incomes". In a similar vein, Wright (2007) studied China's central government policy of "closing the pits and reducing coal production" of and concluded that the state capacity in implementing its policies are hampered by a coalition of local government cadres, mine bosses, and workers. Andrews-Speed and Ma (2008) considered China's township and village coal mines as a case study of social marginalization and argued that this marginalization arose from deficiencies in mining regulation and labour rights protection. However, none of the existing studies have systematically examined the interests and influences of the key stakeholders in the safety regulation of the SCMs. This paper seeks to fill this gap in the literature.

This study focuses on the safety regulation of SCMs in China, but given the wide-spread of small-scale mining activities in the world and the prevalence of environmental, health and safety problems associated with this sector, the issues analysed in this paper and the policy suggestions could have implications beyond the country border and industry definitions.⁹

The remainder of this paper proceeds as follows. The next section provides an overview of the regulatory regime, including the legal framework relevant to coal mine safety in China. Section 3 briefly reviews stakeholder theory and its application in public policy analysis. In Section 4, we analyse the interests and influences of key stakeholders. Concluding remarks are offered in Section 5.

2. The regulatory regime for coal mine safety in China

The current regulatory framework for coal mine safety was established in the 1998 to 2000 governmental reform. Before 1998, the regulation of coal mine safety was part of the functions of the Ministry of Coal at the central government and the Departments

⁵ The spike in the fatality rates between 1999 and 2002 could be partially attributable to government restructuring, which created a gap in the safety regulation regime and legal system. The spike could also be explained by inaccurate statistics as demonstrated in the recent revision of coal output by the China Statistical Yearbook.

⁶ Consolidation refers to the process in which the owners of the SCMs are forced to sell their shareholdings to the large, and typically, state-owned companies. A coal mine is said to be 'irrational' if it has licenses that are required for operation, but is located within the area of a state-owned mine.

⁷ For example, see Boal (2009) and Reilly et al. (1995).

⁸ For example, see Jennings (1999), Kumar and Amaratunga (1994), and Simpson et al. (2000).

⁹ For an overview of the global artisanal and small-scale mining (ASM) sector, see Hentschel et al. (2002).

Download English Version:

<https://daneshyari.com/en/article/7405338>

Download Persian Version:

<https://daneshyari.com/article/7405338>

[Daneshyari.com](https://daneshyari.com)