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Regulating Death in China's Free Market: The Case of Mining Fatalities

Qi Li and Bill Taylor

Abstract

Although China has emerged as a major capitalist (or mixed) economy, there is much debate over the ability of the central government to institute a regulatory framework to both promote capitalist expansion and ensure some notion of social justice. This paper uses the case of coal mining accidents to illustrate an incentive structure which neglects workers' safety. Following a major increase in the number of coal mining accidents, the central government has developed many policies and directives to improve the mine safety record. These initiatives have been both comprehensive and diverse, and the figures are improving. The paper will show, however, a more complex picture, in which incentives create new problems, encourage under-reporting, and are not implemented because they conflate with higher economic priorities. Despite the drive to reduce accidents, the government institutionalises the priority of economic growth over miners' safety.[1]

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Keywords: PRC, coal mining, mining accidents, workers' safety, central-local relations

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Studie

Plangröße Tod in der Marktwirtschaft: Tödliche Grubenunglücke in China

Qi Li und Bill Taylor

Abstract

Obwohl China inzwischen zu einer größeren kapitalistischen (oder gemischten) Wirtschaft geworden ist, bleibt unklar, ob die Zentralregierung die Fähigkeit besitzt, einen rechtlichen Rahmen zu schaffen, der sowohl die weitere kapitalistische Entwicklung fördert als auch soziale Gerechtigkeit ermöglicht. Dieser Beitrag illustriert anhand der Unfälle im Kohlebergbau die Existenz einer Anreizstruktur, die systemisch zur Vernachlässigung der Sicherheit der dortigen Arbeiter führt. Zwar hat die Zentralregierung angesichts steigender Unfallzahlen zahlreiche Richtlinien erlassen, die die Sicherheitslage der Minen verbessern sollen. Und tatsächlich haben diese umfassenden und unterschiedlichen Initiativen zum zahlenmäßigen Rückgang geführt. Aber dennoch ist die Wirklichkeit komplexer und die Anreizstrukturen schaffen neue Probleme und ermutigen z.B. zum Verschweigen von Unfällen. Vor allem werden sie häufig zugunsten wirtschaftlicher Prioritäten nicht umgesetzt. D.h. die Regierung stellt auch weiterhin das Wirtschaftswachstum über die Sicherheit der Arbeiter.[1] (Manuskript eingereicht am 13.01.2008; zur Veröffentlichung angenommen am 28.01.2008)

Keywords: VR China, Kohlebergbau, Arbeitsunfälle, Arbeitssicherheit, Zentrale-lokale Beziehungen

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1 Introduction

At first sight, there appear to be a number of signs that the Chinese central government is attempting to balance the rush for economic growth with the protection and promotion of domestic labour interests. The success of union organising in Wal-Mart (by the All China Federation of Trade Unions, a branch of the government), the passing of the new Labour Contract Law and Law on Labour Dispute Mediation and Arbitration in 2007, the domestic outcry in the face of revelations of slave labour, and perhaps above all the promulgation of regulations to promote migrant labour interests appear to support such an assertion. While the various initiatives demonstrate a genuine desire to temper the rush for capitalist development with other social values, the government is unwilling to regulate the economy in practice. The paper will demonstrate that words (spoken and written) and actions differ markedly, using the painful case of the Chinese central government's attempts to control "accidents" in coal mines in the twenty-first Century.

The question is whether this reflects a weakness on the part of the central government in dealing with renegade provincial and city governments, or whether the central government has factions which side with regulated growth and those who wish to have economic progress at almost any cost. And whether the latter are more powerful and influential. There is a strong governmental desire to promote economic growth for political ends (Dorman 1996) to ensure legitimacy. The government has paid particular attention to reducing the arbitrariness of local governments' discretion over economic issues (Mertha 2005), but has left political and social control to local decision makers (ibid. 2005:804). Control is exercised through frequent changes in cadres in positions of power at the local level, and yet the most important factor in deciding promotion is economic performance (Guo 2007). Nevertheless, anything which shows workers being disadvantaged on the road to capitalism potentially damages the Chinese Communist Party's own legitimacy to rule, and coal mining accidents are such a phenomenon.

The coal industry is traditionally one of the most important sectors in industrial development and growth.[2] The UK Industrial Revolution was fuelled by coal

[2] Although the Industrial Revolution in Britain was associated with steam, international capital flows, and mass markets, coal was the central engine that enabled growth (Freese 2003:68-69). A plentiful supply of coal is a necessary but insufficient catalyst for industrialisation. Australia is a prime example for demonstrating that other factors are needed besides coal. The reverse,

(Ashworth 1986; Hatcher 1993), and all major industrialising economies since have depended on an ever greater capacity to extract coal (Freese 2003; Rui 2005). China has emphasised coal extraction as a part of economic development, and even during the Cultural Revolution, it was one of the first sectors where Mao called a halt to revolutionary fervour undermining coal production (Thomson 2003).

The growth of the Chinese economy since the 1980s has been legendary, and it remains strong. The GDP in 2007 was 24,661.9 billion CNY, up by 11.4 percent from, or 0.3 percentage points higher than, the previous year and representing a fifth successive year of growth over 10 percent (National Bureau of Statistics of China 2008). After a period of decline following the Asian financial crisis, coal consumption has been accelerated to meet renewed growth in domestic consumption, and in the period from 2000 to 2006 coal production almost exactly mirrored GDP growth, increasing by seven to nine percent per year after 2003. An extensive round of pit closures following falling prices and a glut of supply over demand in 1997, then in the three years to end-2003, total national production of raw coal rose by a cumulative 738 million tonnes, an increase of 74 percent from 1998 to 2003. Moreover, in 2004, raw coal output hit a high of 1.95 billion tonnes, an increase of 250 million tonnes over 2003. In 2005, the country's output reached 2.19 billion tonnes (China Coal & Mining Expo 2007:3; National Bureau of Statistics 2007), and in 2006 this increased to 2.33 billion tonnes, again resulting in excess supply (*Shanghai Daily* 2007) and the export of the surplus. Currently, 70 percent of China's energy requirements are met by coal, and although the plan is to reduce this to 50 percent by 2010 (ibid.), coal is set to remain the dominant form of energy. Unlike in Australia or the US, where most coal is mined via opencast methods, most of the coal in China is mined using shafts which, although they are less environmentally detrimental, are much more dangerous for miners.

Indeed, behind this rapid growth in coal production has been a dramatic rise in the number and severity of accidents in coal mines. During the period from 1990 to 2002, coal production and mining accidents grew in patterns that mirrored one another. However, from 2003 they started to diverge. Official statistics show that in the six years from 2000 to 2005, the number of deaths

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however, does hold: have been no significant cases of industrialisation where there was no access to coal.

resulting from coal mine accidents ranged from 5,700 to 6,900 a year. Although this number fell to 4,746 in 2006 (*Shanghai Daily* 2007; SAWS 2007), China still had the dubious distinction of achieving 80 percent of the world's mining accidents in 2006 (Tu 2007:38).

Officials of the various offices of the State Administration of Coal Mine Safety (SACMS), which catalogues, investigates, and seeks rectification of mining accidents, have been given an increasingly difficult role (particularly between 2004 and 2005), as the central government has, with unprecedented conviction, launched another overhaul of coal mine safety.[3] In the 56 years since the establishment of the Communist government, there have been 22 accidents in which more than 100 people died (Anonymous 2004; also see Appendix I). Eight of these occurred in the first five years of the twenty-first century, and of those, six occurred during the period from 2004 to 2005. It is this growing trend of major accidents that the government has been focusing on eliminating since 2004.

The interest in reducing accidents may in part be influenced by the party elites' desire to avoid or placate international criticism, but this is not the whole story and is probably not of major significance. The latest mining safety initiatives have taken place in a context in which the government is embarking on a broader refocusing of development in order to give more attention to disadvantaged groups (*ruoshi qunti*) in society. In 2003, a new central government leadership was put in place, with the avowed aim of building a just and harmonious society where "putting people first" would be the guiding principle of government policy. Large mining accidents resulting in the annual injury and death of thousands of working-class men and women undermine the credibility of this new government orientation.

After outlining the changing composition of accidents, the paper will examine the causes of accidents and the responses taken by the government to reduce them. The paper will then provide two levels of analysis to evaluate the government response. It will highlight the fact that, at a technical level, some initiatives which reduce accidents in one area exacerbate the risk of accidents in others. More broadly, it will also demonstrate that the various levels of government in China

[3] For previous rounds, refer to Pringle & Frost (2003), Thomson (2003), and Wright (2004). There have been repeated attempts to reduce accidents ever since the foundation of Communist China, although the gap between concerted initiatives appears to have been three or four years from the early 1990s to today. This is up from the previous rate of one every decade or so.

are unwilling to genuinely sacrifice capitalist expansionism for worker interests, particularly for those workers in more isolated rural locations.

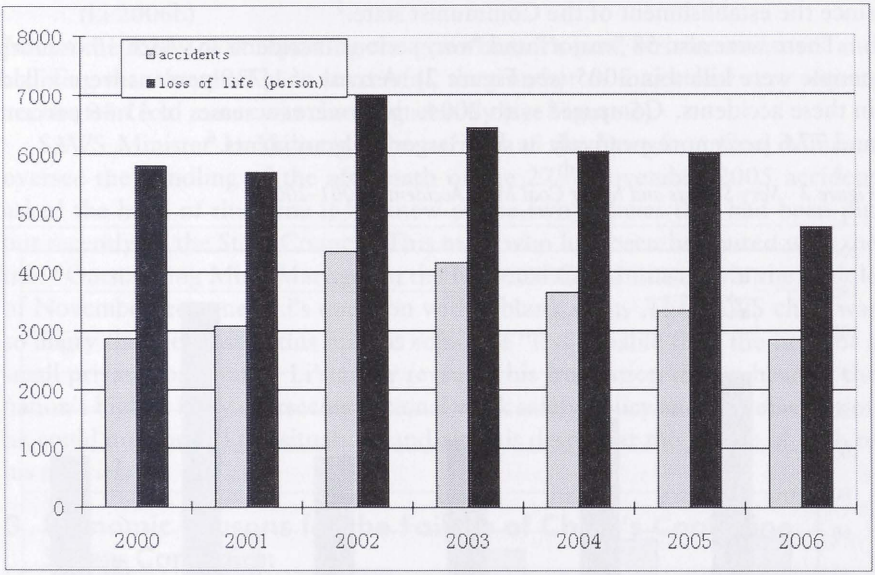
2 A Review of Coal Mine Safety Conditions and Management Policies

At the beginning of the twenty-first century, China's coal mine disasters captured both domestic and international media attention and were clearly one of the thorniest issues that the highest levels of the central government had been forced to address. As can be seen in Figure 1 below, official statistics released on those killed and injured in coal mine accidents leapt from 2,863 persons in the year 2000 to 4,344 in 2002.[4] However, this data excludes other forms of injury and death associated with mining. Sun et al. (1997:82) show that the life expectancy of an underground coal miner in Hunan Province during the 1980s was 49 years, whereas a surface worker could expect to live another 10 years. Moreover, the same study shows that whereas a surface worker would not contract pneumoconiosis (a dust-related respiratory disease), almost as many underground miners died of this disease as were killed in mining accidents, thus doubling the number of work-related deaths for the industry.

In March 2003, China's new central government came to office, led by President Hu Jintao and Premier Wen Jiabao. It was immediately forced to face the grim situation regarding coal mine safety and in that year began a programme to review and overhaul the industry. On 27 November, a terrible gas explosion occurred at the state-owned Dongfeng Coal Mine, part of the Qitaihe Mining Company of the Longmei Group in Heilongjiang, killing 171 miners. For the previous three years, this mine had been rated by the Heilongjiang provincial government as "a star mine" for its high safety standards. The central government's programme included a series of policy initiatives and adjustments to the structure of the government administration, all aimed at halting coal mine disasters and involving various agencies and departments. Some of these are listed in Appendix II. Official statistics show that starting in 2003, the number of coal mine accidents and the number of those killed in mine accidents began

[4] The accident statistics in China cover only those affected inside mines, and do not include those killed or injured on the surface. This is important, because in the UK, for example, an equal number of workers are injured by machinery at the pit head as actually in a mine. In China such accidents are not counted.

Figure 1 *Coal Mine Accidents in China (2000–2006)*



Source: Sorted according to SAWS (different years).

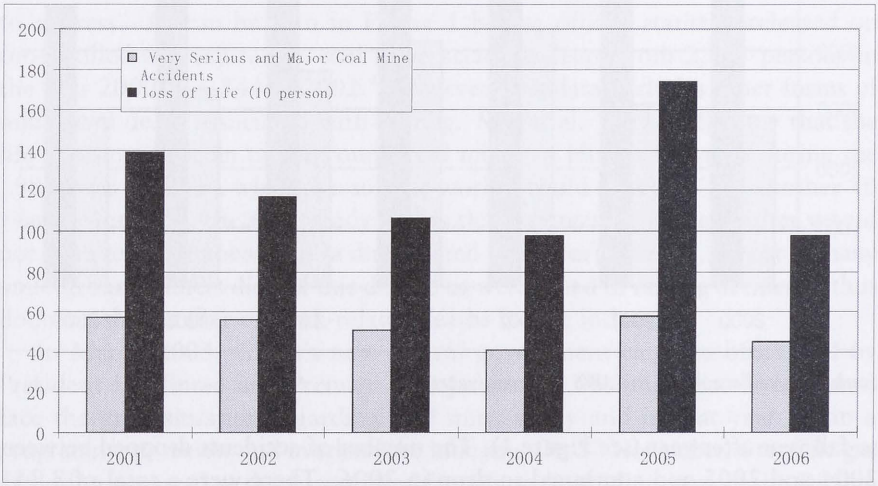
to fall year after year (see Figure 1). The number of accidents dropped between 2004 and 2005 and continued to drop in 2006. There were a total of 3,341 coal mine accidents across the country in 2005, in which a total of 5,986 people died. These official statistics show that compared with the previous year, the number of accidents declined by 8.2 percent and the number of deaths fell by 0.7 percent.

On 18 January 2005, the year in which the greatest effort was expended to institute coal mine safety, Liang Jiakun, one of three vice ministers in the State Administration of Work Safety, announced at a news conference held at the Information Office of the State Council that every effort would be taken in 2005 to reduce the number of deaths in coal mine accidents by three percent and to eliminate accidents in which more than 100 deaths occurred. However, within less than a month, on 14 February, a gas explosion occurred in the Fuxin Sunjiawan Coal Mine in Liaoning Province in which 214 miners were killed.

This was the second-worst mining accident in terms of lives lost in the 56 years since the establishment of the Communist state.[5]

There were also 58 "major" and "very serious" accidents in which 10 or more people were killed in 2005 (see Figure 2). A total of 1,739 persons were killed in these accidents. Compared with 2004, these were increases of 41.46 percent and 77.6 percent respectively in such larger scale accidents.[6]

Figure 2 Very Serious and Major Coal Mine Accidents (2001–2006)



Source: Sorted according to SAWS (different years).

In his 2006 New Year's Day address, Li Yizhong, head of the State Administration of Work Safety (SAWS), acknowledged:

> the situation as regards work safety is still quite grim. These "major" and "very serious" accidents are still occurring with great frequency. The

[5] China's worst coal mine accident occurred on 9 May 1960 in the Baidong Coal Mine, a part of the Datong Mining Bureau in Shanxi Province, when a coal dust explosion killed 682 miners (Li 2006a).

[6] China divides coal mine accidents into four categories: A very serious accident is the worst or highest category, where 30 or more persons have died; a major accident is one in which 10 to 29 persons have died; a serious accident is one in which three to nine persons have died; and a minor accident is one in which one to two persons have died (State Council 2007).

> problems in coal mining and other major industries are still quite serious. (Li 2006b)

Just as the media was reporting the government's new, stricter measures and claiming that they had been successful, the number of major and very serious accidents in coal mines was climbing steadily (see Figure 2).

SAWS Minister Li Yizhong, who arrived at the Dongfeng Coal Mine to oversee the handling of the aftermath of the 27th November 2005 accident, asked the head of the mine if he knew of the two policies that had been put out recently by the State Council. This man, who had been honoured with the title "Outstanding Mine Manager in the National Coal Industry" in the middle of November, returned Li's question with a blank stare. The SAWS chief was so angry that he blasted this man as someone "less capable than the head of a small private coal mine". Li's anger revealed his frustration that as head of the nation's highest body overseeing national work safety policy and implementation he could not control the situation, and also his despair at the failure of each of his policies.

3 Economic Reasons for the Failure of China's Coal Mine Safety Campaign

The emergence of a capitalist market economy in China has meant that although coal is still heavily regulated by state mechanisms, as it is in most countries, the replacement of the socialist plans with indirect pricing and quota instruments has generated considerable economic interaction within the Chinese coal industry. The market system thus creates inevitable opportunities as well as incentives for ignoring the safe operation of mines. There is also a tendency to identify remaining problems as being caused by excessive government regulation (Andrews-Speed et al. 2003; Wang 2007) rather than as a consequence of capitalist greed.

3.1 Exceeding Production and Safety Equipment Capacities

Despite the ever-worsening safety situation in its coal mines, the central government has come under tremendous pressure, primarily from the coal market, for its policies and measures to improve safety (Coonan 2006). Since 2003, China's economy has maintained a growth rate of more than nine percent, while coal consumption has grown at a rate of seven to nine percent.

Growth in consumer demand has been the driving force behind the rise in coal production. From 2001 to 2003, raw coal production hit a cumulative total

of 738 million tonnes, yielding cumulative growth of 74 percent. In 2004, raw coal production climbed to 1.95 billion tonnes, an increase of 228 million tonnes or 13.2 percent over the previous year. Production then jumped to 2.19 billion tonnes in 2005, a rise of 9.9 percent over 2004.

According to media reports, the gains were achieved by mines exceeding their designated production capacity. In 2004, 20 of the nation's 27 coal-producing provinces and administrative areas exceeded the original capacities of their facilities, with 19 provinces and areas exceeding their production limits by 10 percent or more. At the extreme end, Fujian, Shaanxi, and Beijing all produced 50 percent more coal in 2004 than the designated capacities of their mines allowed (Lu et al. 2005).

In addition to exceeding their designated capacity limitations, these producers also exceeded their production safety limits. According to a SAWS survey, the nation's raw coal output in 2003 was 1.728 billion tonnes, but as of the end of that year, these mines, including opencast mines, had a safe production capacity of just 1.1 billion tonnes.[7] Thus, up to 628 million tonnes of raw coal were produced outside of safe limits. Raw coal production climbed to 1.95 billion tonnes in 2004, while the amount which could be produced in accordance proper safety infrastructure and practices was just 1.2 billion tonnes. Thus, the gap was growing: Coal produced without following proper safety practices had risen to 750 million tonnes (ibid.).

China's coal industry, particularly those state-owned coal mines which have better safety and production facilities, was hard pressed to meet the demands of China's rapid economic growth. This provided an opportunity for small mines to survive and develop. In 2005, China's small coal mines accounted for about 38 percent of the nation's total raw coal output (Pu 2005). While these small mines raised their output to meet market demand, they invested little or nothing for safety enhancements (Elegant 2007), with the result that they were able to produce and sell coal more cheaply than the state mines and, consequently, expanded rapidly. This in turn forced state-owned producers to cut investment in

[7] By "safe capacity" what is meant is that SAWS conducts an analysis of the operation of mines and sets a standard at which it is the maximum safe capacity to mine. Producing above the safe capacity, would result in strains on the mining equipment, procedures and miners, which would result in increased risk of accidents. This is a fairly standard safety measure, which can be seen for example, in the plaques listing the maximum number of persons allowed in an elevator.

safety infrastructure and raise their output above safe levels. Part of this increase in output was achieved through more intensive production, but also, as will be explained, through contracting out and hiring casual labour.

Beginning in August 2005, the government launched a nationwide programme to review the safety and production systems of small mines, closing those that did not meet the new requirements. This led to a rapid increase in the output of the large state-owned mines, which tried fill the supply gap left by the closure of the small mines. However, Zhao Tiechui, administrator of the SACMS, believed that the small coal mines were only producing about one-third of total domestic raw coal and that their closure would not have too great an impact on the coal industry. The gap left by their closure could be completely filled by the large state-owned producers raising their production capacity (Liang & Cao 2005). In fact, this kind of thinking put tremendous pressure on the state mines to raise their production capacity. It also gave them a good excuse to exceed their safety and production limitations and greatly increased the potential that these state-owned mines would experience a very large accident due to the development of imminent hazards. The coal dust explosion in the Dongfeng mine of the Qitaihe Company is an example of just such a situation.

3.2 Demand-driven Pressure for Coal Production

In seeking to manage energy policy, the central government has been faced with a number of competing demands and objectives. Like the governments of most political economies, it has sought economic growth as its primary objective. To achieve this, it needs ever-expanding sources of and provision of energy. At the same time, in the age of media and rapid communications, environmental degradation and poor production and consumption safety records damage its legitimacy and thus must be seen to be tackled if not actually reduced. As Liu et al. (2005) indicate, for China, the patterns of economic growth and decline are strongly correlated with work-related deaths. In order to provide cheap energy to facilitate economic expansion, the government has held down raw material prices, particularly that of coal (Wang 2007:4963). This in turn squeezes the profitability of mining while inducing demand for coal as a cheap resource.

At the regional and district level, the dynamics become more complex. In those regions which consume heavy amounts of energy, the demand is for low-priced electricity; however, in energy-producing locations, coal is the major source of government revenue. This is especially true in those depressed areas

which have few other natural resources. According to the preliminary results of a survey of the top 100 coal-producing counties in China, coal accounts for about 40 percent of the total industrial output of these areas, making it one of the pillar industries of their economies (Anonymous 2004).

According to domestic media reports, in Shanxi Province, China's main coal-producing area, coal extraction and coking are the main sources of revenue of 80 percent of the counties. The Luliang area of this province is one of the 18 poorest areas in the country; the 10 counties in this jurisdiction are considered among the poorest in the nation, or the poorest in this province.[8] In these depressed counties, tax revenue from coal accounts for 70 to 75 percent of the government's total revenue (Gao 2001). The Liangjiahe Coal Mine in the Xi County of Shanxi Province is the only coal mine in this county. This mine, which suffered a major gas and coal dust explosion on 30 April 2004 (36 miners died), pays more than two million CNY each year in taxes to the county government, or about 14.2 percent of the county's total annual revenue of only 14 million CNY[9] (Wu et al. 2004). Daxing Coal Mine in Xingning City in Guangdong Province is one of the main sources of revenue for the local government. This mine is located in a poor mountainous area in the northern part of the province. The mine was flooded on 7 August 2005 (123 miners died). The mine owner, Zeng Yungao, had been honoured with the distinction of "Outstanding Contributor to the Development of the Economy of Xingning". His company paid annual taxes of 2.5 million CNY and Zeng himself had donated three million CNY to various public welfare business initiatives and educational facilities (Ju & Ma 2005). To ask the government in this depressed area to close down this mine and make it sort out its safety issues would be equivalent to asking it to cut off its economic lifeline.

Prior to the many serious accidents in state-owned coal mines in 2004 and 2005, government authorities in China, including those in the central government, targeted the thousands of small coal mines when drafting major policies aimed at improving coal mine safety. The usual approach was a thorough one: an across-the-board review and overhaul of all mines in a particular area. Following

[8] According to the poverty thresholds set by the central government in 1994, those counties with an average annual income of less than 400 CNY per capita were considered the poorest in the nation; in that year, 592 counties fell below this poverty line.

[9] One CNY equals slightly less than one EUR (CNY 1.0 = EUR 0.94).

a major accident in a local mine, all mines in the area would be ordered to halt production and review and rectify their safety systems (*tingchan zhengdun*). The geographic scope of the review was established based on the severity of the accident. If the accident was a minor one, then all the mines in a particular county or region were forced to halt production. If it was a major accident, then all the mines in a particular province (or autonomous region or specially administered municipality such as Beijing or Chongqing) would be affected. After July 2005 and in accordance with the State Council's "Urgent Notice on Determining the Overhaul or Closure of Coal Mines which have not Implemented Safety Practices and Facilities or are Otherwise Operating Illegally"[10] (*Guanyu jianjue zhengdun guanbi bu jubei anquan shengchan tiaojian he feifa meikuang de jinji tongzhi*) and the "Special Regulations on Preventing Coal Mine Accidents" (*Guanyu yufang meikuang shengchan anquan shigu de tebie guiding*), the geographic scope of this root-and-branch/across-the-board approach was expanded to include all small mines in the country.

Despite tremendous pressure from the upper levels of government, grass-roots officials still carried out their rectification campaigns based on the needs of their administration, that is, safeguarding revenue sources and avoiding any detrimental impact on economic development in their areas while implementing these new directives as a secondary objective. Thus, the method adopted to review and overhaul the safety procedures of the small mines was usually a perfunctory or superficial clean-up of safety practices and not the complete closure and overhaul as decreed by the higher authorities. This meant that the actual effectiveness of these orders was significantly weakened and in the end "faded out without a sound" (see also Wright 2007).

According to the regulations on halting production and overhauling safety systems in coal mines, after stopping production, the overhaul process should include the following: the owners of coal mines should set up a plan for addressing imminent hazards, should check and remove imminent hazards, and should at the same time arrange training programmes on occupational safety and health issues for the miners. However, the reality is that the "production halt and safety review and overhaul" is often just a work stoppage without any action on safety. In some areas, the mines will not even halt production.

[10] See Appendix II.

For example, on 26 July 2004, a major accident occurred in the Yinguangshi Coal Mine in Lianyuan City, Hunan Province (16 miners died). The Lianyuan city government requested that all mines in its jurisdiction halt production and review their safety systems. However, in interviews conducted after the accident, one reporter discovered that township governments and the owners of small mines in the area had come up with a way "to meet the needs and benefits of both sides". The government locked up the mine's hauling equipment, thus preventing the possibility of another accident occurring during the period. The mine owners gave the employees a holiday without pay to reduce their costs during the stoppage. According to reports, this is a very common way of dealing with government stoppage requests (Huang & Xiao 2004).

In fact, some of the "major" and "very serious" coal mine accidents occurred in unlicensed mines that had been ordered to halt production and overhaul their safety systems or in mines located in areas where all the mines had been ordered to halt production and conduct a safety review. Some even occurred after July 2005, when all mines nationwide, including state-owned enterprises, had been ordered to review and overhaul their safety systems. In a report by the Standing Committee of the National People's Congress on a review of the implementation of the Work Safety Law it was disclosed that during the six-week period from the beginning of July to the middle of August of 2005 there were 51 serious and major accidents in coal mines, 31 of which occurred in small mines which had already been ordered to close or halt production and review their safety systems (Ding 2006). In the middle of January 2006, an official from the National Development and Reform Commission pointed out that the number of mines in Hunan, Chongqing, Sichuan, Shaanxi, Gansu, Guizhou, Shanxi, Heilongjiang, and Yunnan that had been targeted for closure or revocation of their coal production permits fell short of the one-third targeted in proposals to the SAWS. In Fujian Province, not even one closure order or licence revocation had been undertaken (ibid.).

4 Politics of Collusion and Neglect

Around the world, coal mine accidents have been triggered by natural phenomena, such as a shift in pockets of gas in the mine shafts and tunnels or the movement of underground water which suddenly floods the mine area, as well as earthquakes and other natural disasters. However, the main reasons for many of China's coal mine accidents were not natural disasters but social and economic factors.

As Li Tieying, deputy chairman of the Standing Committee of the National People's Congress, pointed out: "From those cases that we have investigated, we can see there is some form of corruption behind every 'very serious' accident" (Anonymous 2005). It is just such factors that destroy a mine's carefully established prevention and readiness systems and precipitate a disaster. It is just such factors that block disaster prevention technology and equipment from getting to the mine, ensuring that an accident will occur sooner or later. And of course, it has been these same factors that have led to the failure in recent years of the central government's attempts to establish a complete system of review and rectification of the safety systems in coal mines and end coal mine accidents. Thousands of coal mine accidents have repeatedly demonstrated that collusion is the greatest obstacle to instituting safe practices in coal mines (Cody 2005). If money is the mortar used by the mining companies to build the stronghold which protects them from government orders, then the corrupt official authority is the iron rod at the heart of this structure. Thus, today's central government instructions have no possible hope of penetrating this fortress. It is precisely due to his understanding of the seriousness of this issue that Li Yizhong, head of the SAWS, stated in the harshest terms, "Collusion between government officials and businesses and between officials and the mine owners is so serious that it should be given more attention" (Renminwang 2005).

4.1 Contracting System Is the Catalyst for Collusion

In the 1980s and 1990s, the central government began a reform programme aimed at bringing the coal industry back to profitability. Setting aside all considerations of the special nature of this industry and the impact reforms would have on miners, the government began its programme of closing down some of the mines and contracting out, leasing, or auctioning off other small and medium-sized mines. These mines were sold to private individuals, which is how the extraction of a large and important part of the nation's coal resources came to be in private hands.

There are about 23,000 small coal mines which were previously owned by township and village governments and which have now been contracted out to private individuals (Yan 2006). In recent years, 70 percent of all accidents and 80 percent of all major and very serious accidents that have occurred each year have taken place in these mines. The contractors become mine owners and they hire other contractors. They divide the entire operation into different tasks and

subcontract each one to a different person, referred to as a labour contractor, who in turn employs migrant workers to dig the coal.

In other cases, the contractor might turn the entire operation over to other people. Thus, when an accident occurs, it is often very difficult to find the original contractor in the immediate aftermath. Even state-owned mines, including major state-owned coal producers, have been or are using the contracting system to produce coal. After the gas explosion in the Sunjiawan coal mine of the Liaoning Coal Mining Holding Co., it was found that the company had contracted out some of the extraction operations to different contractors, who in turn had contracted the work out to different engineering teams (SAWS 2005). According to the local miners on the job, the subcontracting company charged contractors according to the length and size of tunnel that they were contracted to cut. The contractor then hired miners to dig the coal.

Given the high subcontracting fees and the multiple layers of subcontractors, the main concern of the mine owners, the subcontractors, and the labour contractors was to extract as much coal as possible in as short a time as possible. No one concerned themselves with safety issues and no one wanted to invest any money in safety equipment and infrastructure. With each post-accident work stoppage and system overhaul, the subcontractors all developed a strong sense of impending doom, worried about their investment. This compelled them to push harder to recover their money within the contract period. To make the greatest profit and cut capital expenditure, they pushed the miners to work harder and lengthened the working hours. If one were to say that the contracting system led to subcontractors becoming short-sighted about work safety, it would also be true to say that shutting down the mines for safety system checks and overhaul was another step that led to subcontractors ignoring work safety issues.

The adoption of the contracting system in the coal mining industry was an important turning point in the evolution of collusion between officialdom and the coal mining companies. After contracting out the operations of the coal mine to an individual, officials in various departments in charge of issuing the operator's licence, work safety inspection certificates, and local public security bureau approval would then openly, in their own names, or indirectly, using the names of relatives and family members, invest in the operations of the subcontractors or buy shares in a particular mine shaft or those which would give them dividends. The benefits awarded to the local government or to specific officials in a certain department by these subcontractors, holding companies, or the purchasers of

the mine were a kind of exchange whereby they received protection from the local government and officials. In this way, the subcontractors of the small coal mines could brazenly plunder the nation's coal resources while at the same time disregarding the lives of the miners that they employed. Liu et al. (2005:509) indicate that the result of this practice was that for every 100 million tonnes of coal mined in 1996, death rates were 1.17 in major state-owned mines, 4.02 in local state-owned mines, and 7.7 in township and village coal mines respectively. Overall, SAWS Minister Li Yizhong said that China's death rate for every one million tonnes of coal produced in 2004 was three persons (Li 2005), and in 2006 this number was 2.041 (Li 2007).

4.2 Complicity in Hiding the Truth about Mine Accidents

Local governments around China have adopted very serious measures and punishments to prevent coal mine accidents. For example, the Communist Party committee and the provincial government in Shanxi have stated that any coal mine which suffers a mine accident in which there is a loss of life must pay compensation of not less than 200,000 CNY for each individual death. (This sum includes all types and categories of insurance.) Village and township mines must cease operations, close down the mine, and be auctioned off if three or more people are killed in an accident. Any coal mine which has not obtained a work safety certificate must halt production; failure to meet any work safety requirement is sufficient to force the mine to halt production. According to the central government's requirements and regulations, an accident in which between 10 and 29 persons are killed is considered to be a major accident and will be investigated by the provincial government; an accident in which 30 or more persons are killed is considered a very serious accident and will be investigated by the State Council. However, some mine owners have failed to report accidents when they have happened in order to avoid these sanctions and investigations and to evade their legal responsibilities.

According to media reports, coal mine accidents commonly go unreported in China. This means that it is very difficult to determine the true number of accidents, the deaths and injuries in these accidents, and the gap between the government's statistics and the true situation. Following a "minor" accident in a small mine in which one or two persons are killed, the mine owners often take radical measures to conceal the true picture; they block any information from getting out and hide the truth from the authorities, for example, by listing

the cause of death as illness (Leizi 2004). The owners of the small coal mines have many more contemptible ways of hiding the truth and escaping punishment. However, these tactics can only be used when a "minor" accident occurs in which just a few people have died. In major and very serious accidents, the mining company will have greater difficulty covering up the accident. They must have the complicity of the local government to keep it under wraps. The local government will also want to keep the accident out of the news, in order to prevent reports on the failures of its administration.

4.3 Difficulties in Ending Collusion

The contracting system provided the opening for collusion between officialdom and the mining companies, which then led to the flow of activity between them. On that foundation, the phenomenon of "corruption with Chinese characteristics" emerged, which is very difficult to clean up. It has become one of the fundamental reasons for the high incidence of coal mine disasters and the biggest obstacle to the implementation of every policy put forth by the central government to manage coal mine safety.

In 2005 SAWS head Li Yizhong concluded that there were five ways that this corruption had manifested itself:

1) Government officials or the heads of state-owned enterprises invested directly in small coal mines and planned illegal ways to make profits.
2) Government officials secretly invested directly in coal mining operations or provided an umbrella of protection to their relatives who had illegal coal mines.
3) Government officials approved licences for mines that had not gone through the proper procedures, then extorted money or took bribes from the mine owners.
4) Government officials connived and protected coal mines which conducted illegal production.
5) Government officials participated with, or tacitly permitted or sheltered, mine owners who covered up coal mine accidents.

Once such collusion has become a common occurrence and the fortress of complicity has been well established, it is difficult to tear it down overnight. It is not a clean-up job that can be accomplished with severe fines and other punishment. On 30 August 2005, the Central Commission for Discipline Inspection of the CPC, the Ministry of Supervision, the State-owned Assets

Supervision and Administration Commission of the State Council, and the SAWS jointly issued a notice requiring that all officials of the CPC and government organisations who had invested in shares of coal mining companies must divest all their shares before September 22. Chen Changzhi, vice minister of the Ministry of Supervision, speaking at a news conference at the Information Office of the State Council on 23 December, said that up to that point, a total of 4,878 persons, either staff of a government office or heads of state-owned enterprises, had divested their investments in coal mining operations. However, at the same time, SAWS head Li Yizhong believed this group represented just a portion of the government officials with such interests: "From certain leads that we have at present, we believe there are even more hidden from sight, buried deeper than these". One official overseeing these matters in Shanxi Province said that based on reports from government officials themselves, most of the officials with such investments were from the township governments, whereas most of the information from other public sources showed involvement by top-ranking officials in county-, city- and even provincial-level government positions. Many had used the names of family members or other representatives to acquire a stake in the mining operation. Some had not used their own names and did not actually make any investment at all, but had offered protection services in exchange for the right to receive "dividends" (Xue 2005).

In areas that are rich in coal, there are quite a number of officials involved in the coal business. These officials have a kind of pact with the coal mining companies and at the same time form a network wherein officials protect each other and "where one loses, all will lose". An official with the Shanxi Provincial Development and Reform Commission believes that from the top ranks in the provincial and municipal governments through to positions in the townships, many officials come from the coal industry. Thus their interests are all interrelated. These officials, who are involved with the mining companies, all help each other. Trying to break through this network would be like trying "to take the pelt from the tiger itself". Moreover, Shanxi Governor Yu Youjun has said that it is not unusual to find that an illegal coal mine, in order to survive, has at least seven or eight "protective umbrellas". More than 10,000 government officials may be involved in the protection of the 3,000 to 4,000 illegal coal mines in the province. Those in the industry have suggested that the governor's numbers might not be the most accurate, since his statements are based on the number of illegal mines on record and no one can really give accurate figures for the number of illegal

coal mines in Shanxi Province (Li Yuxiao 2005).

Despite all the evidence that such an approach is ineffective, the central government is still using traditional administrative methods to try to solve this crisis in the coal mining industry. The top levels of government issue directives and the lower levels are then charged with the clean-up and punishment of law breakers, despite the cruel reality that we have already seen. These government officials, who are asked to manage and supervise themselves, are highly unlikely to dismantle this stronghold of collusion. However, in actual fact, the reality is that if this collusion were eventually to involve a large portion of the officials in a certain area, the clean-up and punishment of these officials would impact on the normal operations of the government and could be highly destabilising for society in that particular area. For this reason, those senior officials responsible for work safety in the central government must continue to use this ineffective, outdated method and continue to harbour high hopes for its success.[11]

In the collusion between officials and the mining companies, the officials are completely on the side of the coal mine owners and have entered into an alliance with them. They act together to resist orders from higher levels of government. For these officials, the coal mines are the source of revenue for the local government and where their individual financial benefits lie. When the "protection" of the illegal mining operations of these local mines becomes the responsibility of these government officials, it is not strange that this collusion, which has become corruption "with Chinese characteristics", overflows into official circles. There is no way that this kind of corruption which has penetrated to the foundation of government can be controlled by an accountability system for officials or by other measures such as work safety control standards.

4.4 Organised Labour Ignored in Work Safety Regimes

Since the Industrial Revolution, the experience of developed and developing countries has shown again and again that as regards work safety systems, the

[11] Li Yizhong (2006c), head of the SAWS, stated in an interview in February 2006 that in the multifaceted work of tackling and halting coal mine accidents, the administration "must rely on local governments, and on each and every department, [including] the public inspection agencies, the statistical records bureaus, and the supervision agencies (i.e., as public security organs, procuratoral agencies, people's courts, CCP commission for inspecting discipline and departments of work safety) working together to uphold the law".

position and role of the worker should be at the core of the system (Bonner & Harrison 2004; Campbell et al. 1995). The current central government leadership in China has also brought forth the core concept of "putting people first" in work safety systems. However, it is regrettable that the concept of "putting people first", which appeared in the State Council's Decisions on the Development and Strengthening of Work Safety (*Guanyu jinyibu jiaqiang anquan shengchan gongzuo de jueding*), issued on January 9, 2004, did not state how workers would participate in safety supervision. In this document, which has been called "the guiding principles for work safety in the new era", the central government views the successful undertaking of work safety as the government's fundamental responsibility as regards "carrying out social governance and market supervisory functions". It positions the enterprise as the "focal point" of work safety and only later includes the worker in the statement "the safety of the assets and lives of all the people".

In this 5,500-word document, regulations on workers' participation have been simplified to state that "all branches of All-China Federation of Trade Unions and Communist Youth League which are focusing on work safety, should seek to develop their strong points and set up activities for the development of work safety", a total of about 30 words. Repeated throughout the various documents coming from the government on work safety are phrases such as "guarantee work safety during the period of the two congresses",[12] "create a peaceful holiday atmosphere", and "maintain social stability". However, a major problem with these sentiments is how they are is put into practice. The emphasis is placed on quantified targets or indices, which, as the authors have argued elsewhere in relation to the establishment of labour unions in China (Taylor & Li 2007), seriously undermines the qualitative nature of the good intent and encourages a distortion in the motivation of the relevant cadres away from meaningfully improving safety and towards to completing work which can be represented in indices. Once completed, such indices can be disregarded or neglected (Anonymous 2004).

In the "Decisions on Further Improving Work Safety" (*Guanyu jinyibu jiaqiang anquan shengchan gongzuo de jueding*) issued by the State Council on 9 January 2004, the idea of setting up a system of national and provincial indices on

[12] The "two meetings" refers to the meetings of the National People's Congress and the Chinese People's Political Consultative Congress, held each year in the spring.

work safety was raised. These indices would assess work safety in terms of units of output. Beginning in 2004, the governments of every province (including autonomous regions and directly administered municipalities) were required to produce annual work safety indices and follow through with inspections, supervision, and an assessment. This system of six indices on work safety cover

1) the death rate, including national and provincial figures;
2) the number of deaths per every 100 million CNY GDP generated;
3) the number of deaths per every 100,000 persons, including national and provincial figures;
4) the number of deaths in industry and mining;
5) the number of deaths in coal mining enterprises; and
6) the number of deaths in coal mines per million tonnes of coal mined.

The fact that China does not have a union organisation that truly represents workers' rights and is independent of the employer explains why government policies on overhauling coal mine safety systems exclude workers, why these policies lack community involvement in both oversight and supervisory roles in occupational safety systems, why coal mine owners can neglect the safety of their miners' lives, and why a fortress of collusion between officialdom and mining companies can be formed. Following the creation of the employer-employee relationship, any attempt by workers to organise their own union has been suppressed. Fledgling organisations have been repeatedly eradicated by the government and labelled as "destabilising to society". In Chinese society, individual coal miners have no means to confront mine owners and no way to use effective, legal measures to organise themselves. They have no means to act as a group to pressure mine owners to improve safety systems to protect their own lives. Therefore, within this stronghold of collusion, the mine owners have no need to consider the lives of their miners. They think of them only as a kind of "instrument for the creation of exorbitant profit", and thus, there is no way that all these measures for overhauling coal mine safety will produce the expected results.

5 Conclusion

China's road to capitalist development has encouraged all levels of government to pursue economic growth. The management of mining accidents provides an illustration of a case where one can examine whether the government seeks to pursue simple accumulation or some version of welfare capitalism. Although the

regulations, policies, and public declarations of government officials demonstrate a welfarist intention, there is little evidence that such an intention is a fundamental precept of government ideology. It is possible to argue that the central government has little control over the local cadres, and it is possible to argue that factional politics exist between ministries at central and provincial levels. However, there appears to be no political will or intention to take the steps to fundamentally reduce mining accidents, which would require replacing economic incentives for coal production with incentives to produce coal safely. China is not alone in such disregard; it is endemic to all capitalist economies. The difference is that organised labour has historically forced political elites to temper industrial growth with workers' interests, and workers' safety has in the end always formed an important plank in the platform for wider workers' rights. In China, thus far, there is no such countervailing point of pressure against those taking the capitalist road.

Appendix I

Table 1.a Brief Summary of Larger Coal Mining Accidents (2003-June 2007)

Date	Location	Death toll	Cause of accident	Remarks
2003				
22/03/03	Mengnanzhuang Coal Mine, Yima, Xiaoyi City, Shanxi Province	72	Gas explosion	Certification complete (production licence expired); before the accident, the mine had been ordered to cease operations by the district production safety supervision bureau.
30/03/03	Mengjiagou Coal Mine, Xinbin County, Fushun City, Liaoning Province	25	Gas explosion	Certification complete; gas detection and alarm systems fully installed.
17/10/03	Sanhuiyi Coal Mine, Tianfu Mining Bureau, Chongqing, [Sichuan Province]	10	Collapse & fire	State-owned mine; work at affected coalface had been subcontracted to various construction companies without coal-digging capabilities.
2004				
06/01/04	Luobuyuan Coal Mine, Meitian, Yizhang County, Hunan Province	10	Gas explosion	Certification complete; after the accident, the mine operator and township government conspired to under-report the number of people killed.
23/02/04	Baixing Coal Mine, Jixi Mining Corporation, Jixi City, Heilongjiang Province	37	Gas explosion	Certification complete; before the accident, local production safety authorities had discovered eight hidden safety hazards at the mine and had given it notice to cease production and take corrective measures.
30/04/04	Liangjiahe Coal Mine, Xi County, Shanxi Province	36	Gas and coal dust explosion	State-owned regional mine
03/06/04	Hongda Coal Mine, Kangzhuang, Handan County, Hebei Province	14	Fire	Certification complete; after the accident, the mine operator and township government conspired to under-report the number of people killed.

Table 1.b Brief Summary of Larger Coal Mining Accidents (2003-June 2007)

26/07/04	Yinguangshi Coal Mine, Anping, Lianyuan City, Hunan Province	16	Collapse & fire	Certification incomplete; before the accident, local production safety authorities had repeatedly given notice to the mine to cease production.
20/10/04	Daping Coal Mine, owned by Zhengmei, Henan Province	148	Gas explosion	Priority state-owned mine; since 1999, nine accidents have occurred at Zhengmei's coal mines..
28/11/04	Chenjiashan Coal Mine, Tongchuan Mining Bureau, Shaanxi Province	166	Gas explosion	Priority state-owned mine
2005				
14/02/05	Sunjiawan Coal Mine, Fuxin Coal Industry Group, Liaoning Province	214	Gas explosion	State-owned mine
09/03/05	Xiangyuangou Coal Mine, Lingdi, Jiaocheng City, Shanxi Province	29	Gas explosion	Certification incomplete; before the accident, local mine safety officials had ordered the mine to cease production seven times.
19/03/05	Xishui Coal Mine, Baitang, Pinglu District, Shuozhou City, Shanxi Province	72	Gas explosion	Certification incomplete (lacked production safety licence); in November 2004, the mine was told by local authorities to cease production and take corrective measures.
12/05/05	Jinjiang Panhai Coal Mine, Renhe District, Panzhihua City, Sichuan Province	21	Gas explosion	Certification complete
19/05/05	Nuanerhe Coal Mine, Chengde City, Hebei Province	50	Gas explosion	Certification incomplete (lacked production licence); before the accident, local mine safety bureau issued three notices ordering cessation of production, the last being in the middle of May.
02/07/05	Jiajiabao Coal Mine, Yangfangkou,Ningwu County, Shanxi Province	36	Gas explosion	No certification; after the accident, mine operators and local government officials conspired to under-report the number of people killed.

Table 1.c Brief Summary of Larger Coal Mining Accidents (2003-June 2007)

11/07/05	Shenlong Coal Mine, Fukang City, Xinjiang Province	83	Gas explosion	Certification incomplete (lacked safety licensing)
14/07/05	Fusheng Coal Mine, Luogang, Xingning City, Guangdong Province	16	Water leakage / Flood	Certification complete
07/08/05	Daxing Coal Mine, Huanghuai, Xingning City, Guangdong Province	123	Water leakage / Flood	Certification incomplete; no operating or mining licence for six years.
27/11/05	Dongfeng Coal Mine, Qitaihe branch of Heilongjiang Longmei (Group), Heilongjiang Province	171	Coal dust explosion	State-owned mine; before the accident, this mine had been designated a "star mine" by Heilongjiang Province for three years running for the high quality of its safety standards. The manager had just been given a national coal industry award for excellence, in the middle of the month.
2006				
13/03/06	Rongsheng Coal Mine, Etuokeqi (Otog Banner), Inner Mongolia	21	Gas explosion	Certification incomplete (no mining safety production licence)
18/05/06	Xinjing Coal Mine, Zhangjiachang, Zuoyun County, Shanxi Province	56	Water leakage / Flood	After the accident, the mine operator absconded, and local government officials conspired to under-report the number of people killed.
15/07/06	Pianpoyuan Coal Mine, Bayang, Ziyun County, Anshun City, Guizhou Province	18	Water leakage / Flood	All six licences needed by management to begin coal mining operations had been obtained.
05/11/06	Jiaojiazhai Coal Mine, Xuangang Coal-fuelled Electricity Co., Tongmei Group, Shanxi Province	47	Gas explosion	State-owned mine, fitted with first-class ventilation and advanced gas detection and monitoring system.
25/11/06	Changyuan Coal Mine, Housuo, Fuyuan County, Qujing City, Yunnan Province	32	Gas explosion	At the beginning at 2006, No.2 shaft of this mine had already been listed in a third round of pit closures by SACMS.

Table 1.d Brief Summary of Larger Coal Mining Accidents (2003-June 2007)

26/11/06	Luweitan Coal Mine, Hedi, Yaodu District, Linfen City, Shanxi Province	24	Gas explosion	This mine had been earmarked by the local government for consolidation, and certification had been withdrawn.
2007				
28/03/07	Yujialing Coal Mine, Yipingyuan, Yaodu District, Linfen City, Shanxi Province	26	Gas explosion	Six mandatory mining and operating licences had all expired.
05/05/07	Pudeng Coal Mine, Pu County, Linfen City, Shanxi Province	30	Gas explosion	On 24 April, Pu County government authorised Pudeng mine to carry out reinstatement works and corrective measures. On 29 April, county officials found seven problems at the mine after conducting checks prior to resumption of production. The mine was asked to take immediate corrective measures and, at their completion, had been barred from relaunching production pending a formal check and approval.

Sources: Reports carried on PRC government websites and compilations of accident statistics on the SAWS website (http://www.chinasafety.gov.cn/)

Appendix II

Table 2.a Major Policies and Measures by Central Government to Improve Coal Mine Safety (2003-June 2007)

2003		The new central government addresses the dire safety situation at Chinese coal mines, and later unveils a series of policies and administrative measures to reduce accidents.
March	SAWS	established under the State Economic and Trade Commission, is upgraded into an organisation under the direct control of the State Council.
2 Jul.	SAWS	promulgates Basic terms and regulations for safe production at coal mines (Meikuang anquan shengchan jiben tiaojian guiding) (enacted August 1), making extraction, production, and operating licensing mandatory for mine management.
27 Aug.	State Council	At an executive meeting, the State Council decides to earmark 2.2 billion CNY in funding from government bonds for improvement of safety technology at state-owned mines in 2004, as a follow-up to a similar 4 billion CNY completed investment in 2002 and 2003.
29 Oct.	Safe Production Commission	Announcement of the establishment of Safe Production Commission, under the State Council, tasked with conducting research and taking needed measures, and guiding coordination of production safety measures all over China. Research focuses are major policies and measures for production safety nationwide, and finding solutions to major problems in implementation of production safety measures.
2004		Central government standardises examination/approval and mine-operation procedures, using mainly administrative legislation.
9 Jan.	State Council	The State Council promulgates its Decision to further strengthen production safety work (Guanyu jinyibu jiaqiang anquan shengchan gongzuo de jueding) and proposes establishment of systems for production safety licensing, production controls and quotas, and risk deposits, as well as raising the monetary compensation standard for accidents leading to injury or death.
16 Feb.	State Council	Premier Wen Jiabao convenes an executive meeting of the State Council to study issues related to further strengthening mine safety work; the meeting decides to immediately conduct a major nationwide safety inspection.

Table 2.b Major Policies and Measures by Central Government to Improve Coal Mine Safety (2003-June 2007)

17 May	SAWS	promulgates the Safe production licensing method for coal mining enterprises (Meikuang qiye anquan shengchan xukezheng shishi banfa) (effective immediately).
21 May	various	Ministry of Finance, National Development and Reform Commission, and SACMS promulgate their Management method for sourcing and use of funding for mine production safety (Meitan shengchan anquan feiyong tiqu he shiyong guanli banfa) and ask coal mining companies to source from costs safety expenses and funding for investment in production safety infrastructure, based on actual raw coal production volumes.
2005		After launching systemic improvements, central government steps up initiatives across the board to overhaul the coal mining sector. It positions its crackdown on collusion between officials and mine operators as a priority task in its party and government reform drive, to try to stem the appalling frequency of mining accidents.
2 Jan.	Premier Wen Jiabao	goes to the Chenjiashan state-run mine in Tongchuan, Shaanxi Province, to offer condolences to the families of victims of the disaster there. "We are determined to get to grips with mine safety", he pledges. "We cannot allow this kind of tragedy to happen again. We owe it to the miners, the people and later generations."
21 Feb.	Safe Production Commission	The office of the Safe Production Commission under the State Council promulgates its Circular regarding the carrying out of major inspections into coal mine production safety (Guanyu kaizhan meikuang anquan shengchan dajiancha de tongzhi) with a focus on 45 priority state-owned mines.
28 Feb.	SAWS	is upgraded to full ministry status, and SACMS is set up under its management, to bolster the authority of supervisors and strengthen enforcement of mine safety supervision.
16 June	various	SAWS, SACMS, the National Development and Reform Commission, the Ministry of Land and Resources, and the State Administration for Industry and Commerce promulgate the Circular on stamping out illegal production activities at coal mines (Guanyu yanli daji meikuang weifa shengchan huodong de tongzhi). This measure demands corrective action at mines that do not meet safe production standards and requires closure, by law, when safe production standards are missed, even after corrective measures.

Table 2.c Major Policies and Measures by Central Government to Improve Coal Mine Safety (2003-June 2007)

13 July	SAWS and SACMS	promulgate the emergency Circular on licensing for safe production at coal mines (Guanyu meikuang anquan shengchan xuke gongzuo de jinji tongzhi). This measure, effective the following day, requires production to cease and corrective measures to be taken at all mines which have not applied for licensing, have had an application rejected, or have been turned down after acceptance of an application.
21 July	various	SAWS, SACMS, the National Development and Reform Commission, the ministries of Finance of Land and Resources, and the State Administration for Industry and Commerce hold a nationwide teleconference on joint legal enforcement of a crackdown on illegal coal production.
Aug.	various	From the end of the month, nine joint inspection teams with legal enforcement powers, from SAWS, All China Federation of Trade Unions (ACFTU) and five other branches of government and ACFTU, are assigned to mining areas all over China to investigate progress in the legal enforcement of the crackdown on illegal extraction and production at coal mines, as well as progress in the Five Reorganizations and Four Closures (Wu zhengtun, si guanbi) (82) campaign and research into sourcing and use of funding for production safety at mine enterprises.

Table 2.d Major Policies and Measures by Central Government to Improve Coal Mine Safety (2003-June 2007)

22 Aug.	State Council	The General Office of the State Council promulgates Urgent circular on resolutely overhauling and closing down mines that do not meet production safety conditions and illegal mines (Guanyu jianjue zhengtun guanbi bu jubei anquan shengchan tiaojian he feifa meikuangde jinji tongzhi). The office requires immediate suspension of production and corrective action at mines in breach of safe production standards, and allows them a single opportunity to take the necessary measures. All mines that do not meet standards for production safety licensing and all illegally operated mines are to be shut down by law and given until the end of the year as a final deadline for taking remedial action after cessation of operations. All mines with incomplete certification that refuse to cease production; mines that continue unlicensed production; mines that have already been closed but continue production illegally; mines which remain closed during the day but which operate covertly at night, or which have closed without taking any corrective action; and mines which still do not meet safety standards even after corrective measures shall be immediately shuttered and taken out of commission by law. At the same time, investigations shall be required into neglect or dereliction of duty compromising production safety and leading to accidents, and into instances of corruption such as collusion between officials and mine operators.
30 Aug.	various	A circular is jointly issued by the Central Commission for Discipline Inspection, the Ministry of Supervision, the State-owned Assets Supervision and Administration Commission, and SAWS requiring the withdrawal by 22 September 2005 of all investments in mine stock by employees of CCP and SOEs at all levels, citizens' organisations and enterprises (like NGOs), and employees of mines in which officials of state enterprises have invested money.
3 Sept.*	State Council	A five-point Special regulation regarding prevention of mining accidents (Guanyu yufang meikuang shengchan anquan shigu de tebie guiding) is promulgated by the State Council, proposing inter alia that production be stopped immediately at all mines where major hidden defects could cause accidents, that such defects be eliminated; and that mining enterprise superintendents and production managers should serve in rotation as foremen at the coalface.*date: 31 Aug.05 according to Note 17 ref to this regulation.

Table 2.e Major Policies and Measures by Central Government to Improve Coal Mine Safety (2003-June 2007)

2006		Central government approves measures for consolidation in the coal sector and for closure of small coal mines in an effort to stem the increase in accidents with severe or exceptional loss of life.
25 Mar.		A federation of 11 organisations including SAWS and the National Development and Reform Commission promulgate Certain Opinions on Strengthening Coal Mine Work Safety and Standardising the Integration of Coal Resources (Guanyu jiaqiang meikuang anquan shengchan gongzuo, guifang meitan ziyuan zhenghe de ruogan) [see p.11]. The document proposes closing down coal mines with annual production capacity of less than 30,000 tonnes.
29 May		The office of the Safe Production Commission under the State Council promulgates its Guiding opinion on drawing up a three-year plan for coal mine integration and closure (Guanyu zhiding meikuang zhengtun guanbi gongzuo sannian guihua de zhidao yijian) and sets basic targets for this work, which it divides into three phases between July 2005 and June 2008.
28 Sept.	State Council	The General Office of the State Council reissues the Opinion on undertaking further corrective measures and closures in the mining sector (Guanyu jinyibu zuohao meikuang zhengtun guanbi gongzuo de yijian), released by 12 branches of government including SAWS, and proposes closure of 16 types of pit shaft.
2007		
Jan.-June		Central government continues its policies of coal-sector integration and closure of small mines.
18 April	Safe Production Commission	The office of the Safe Production Commission under the State Council issues its summary of coal-sector consolidation and closure operations in 2007 (2007 nian meikuang zhengtun guanbi gongzuo yaodian) and requires that the basic tasks of coal-sector consolidation be completed before the end of 2007. This document also clearly delegates responsibilities among various branches of government for identifying mineshafts of the 16 types earmarked for closure.

Source: compiled from various sources by the authors.

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