Tim Wright

Price Reform in the Chinese Coal Industry

Working Paper No. 66
August 1996

The views presented in this paper are those of the author(s) and do not necessarily reflect those of the Asia Research Centre or Murdoch University.

© Copyright is held by the author(s) of each working paper: No part of this publication may be republished, reprinted or reproduced in any form without the permission of the paper’s author(s).

National Library of Australia.
ISSN: 1037-4612
The gradual and incomplete transformation of the Chinese economy from a planned system to one dominated by market forces is in the process of reshaping the political economy of the Asia-Pacific region. At the same time it is both the result and the cause of profound shifts in power relationships in China’s economy and society. New groups are emerging as important players in the Chinese economy, while some of the old power bases such as those in heavy industry are in decline.

Important manifestations of these changes have been the substantial shifts that have taken place in relative prices over the past fifteen years and the major political struggles that have underlain them. In turn these shifts were impelled to a large extent by government policies of price reform, which have been one of the two or three key planks of economic reform. Price reform has had two main aims: the readjustment of prices on the macro level, to make them more closely reflect supply and demand and, through this mechanism, to reallocate resources in the economy; and greater flexibility of prices so that enterprises can respond rapidly to changing economic conditions. Price reform has proved to be one of the most difficult aspects of reform to implement, particularly where a rise in the price of commodities or services threatened powerful interests.

The coal industry has been one of the most problematic areas for price reform. On the one hand, coal is one of the commodities that has historically been seriously underpriced in China. This has led to serious inefficiencies in resource distribution and in technology, and to large deficits for coal mining companies. As the World Bank wrote in 1985:

The most obviously distorted of all China’s producer prices are the state-set prices of energy and some raw materials — far below opportunity costs in domestic and world markets. But the sheer magnitude of these distortions makes them hard to correct: to introduce the required price adjustments at one stroke would involve dramatic changes in the financial circumstances of many enterprises and institutions.

Coal consumers, both households and enterprises, have become accustomed to cheap coal, and a major or rapid increase in price would threaten popular unrest and a boost to inflation. Thus a large proportion of coal circulated at the fixed price right into the 1990s. In 1993, however, the government announced its intention to decontrol the price of coal.
Price reform in general, and in the coal industry in particular, has not been a technical matter but rather inherently has involved a political struggle between competing interests, in which those interests with a stake in the old system were for a long period strong enough at least to delay progress towards reform. It is not easy to document this contention because the Chinese political system has tended to delegitimate the expression of sectional interests. At inner Party gatherings or work conferences, Party or government officials are more or less able to speak on behalf of the sector represented by their industry or enterprise, though less so to speak on behalf of a particular geographical area. However, it is still difficult for them to express any such opinions in the public arena, and therefore the delineation of the lines of conflict requires a lot of assumptions. Nevertheless the contention is well recognised in China; as Vice-Premier Tian Jiyun said in 1986: ‘The overall reform of the economic structure is, in a sense, a readjustment of power and interest, in which a large amount of contradictions exist’. Not only did the process of economic reform involve conflict between different interest groups, but it also itself created new social groups and forces with their own interests. Naturally the burgeoning private sector was one of the more important of these new groups. Despite this, however, the role of the state remains of central importance in China’s development, and processes of economic change were at least on the face of it initiated by the state, through its program of reform. As this program has proceeded, and as the role of the central government in economic management has receded, much of the slack has been taken up not by the market but by local governments at the provincial and lower levels. Any attempt to judge the degree of marketisation of the Chinese economy by the reduction in the scope of central government intervention has to be substantially discounted to take into account the growing importance of local government. This paper thus examines some of the issues, political and economic, that surround the attempts to change the price of coal, and to analyse some of the interests involved. The first section examines the process of price reform in general, while the second outlines the development of the coal industry and coal prices in the period of the planned economy, and the problems that arose as a result. Next, the paper looks at the dual track system and analyses the interests created and favoured by it, and the final section does the same for the more far reaching price reform proposed in the
mid-1990s. A conclusion asks what lessons can be drawn from this case study for the process of economic change in China.

**PRICE REFORM**

Price reform has been one of the key thrusts of reform in the post-Mao period. While it has had a number of aims, perhaps two have been paramount. First, price reform has been intended to adjust resource allocation as between sectors at the national level. Broadly there were three sectors where prices, during the Maoist period, fell furthest behind what would be dictated by market forces or supply and demand: agricultural procurement prices — the prices paid by the monopsonist state to the farm sector for agricultural products; urban food prices — the prices charged by the monopolist state to urban workers for basic foods; and raw materials and energy prices in the industrial sector.

These low prices caused a number of problems for the economy and for those specific sectors. The low procurement prices policy, on which low urban food prices were, of course, predicated, was one of the major factors leading to China’s poor agricultural performance in the Maoist period. In industry, low energy and materials prices acted as a disincentive for production of those commodities and, perhaps equally seriously, a disincentive to economise on their use.

While the problems caused by administered prices could be found in most sectors of the economy, they were particularly severe in extractive industries. Whereas in manufacturing, technological progress can generally reduce costs so that static prices can more easily be accommodated, in an extractive industry diminishing returns tend to mean that costs rise over time, so that such an industry is particularly seriously affected if government policy prevents it raising its prices.

In none of these cases has price reform been a matter of technical adjustment. In the first two, the old system had major beneficiaries in the form of the urban population as a whole. Fear of worker disturbances on the Polish model were an ever-present constraint on moves by the Chinese government to raise retail food prices in the urban areas. Nevertheless agricultural stagnation and growing demoralisation in the rural areas impelled the government to act by implementing a steep increase in procurement prices in 1979; this increase was followed by a rapid spurt in output. However, raising procurement prices while maintaining a cheap
food policy in the cities threatened to, and did, create massive budget deficits. Later, therefore, the government was much more cautious with procurement prices, and the resulting stagnation of prices throughout the 1980s was reflected in a much slower growth, especially of grain output in the latter part of the decade. On the consumption side, the central government tried to cut the deficits by decontrolling prices of many subsidiary foods in the mid-1980s, but in many cases municipal or provincial governments, fearing popular discontent, picked up the tab both in subsidising and controlling prices and in compensating workers for what increases did occur. It was only in the context of a relatively depressed economy at the very beginning of the 1990s that the government moved again to initiate thorough decontrol of basic food prices, and then, when inflation re-emerged from 1992-3, many localised price controls were re-established.

In the case of industrial materials, the consuming industries formed a powerful lobby opposing price reform. Their cost structure and technology were all dependent on cheap materials, and they used the threat of inflation throughout the economy to argue against the imposition of market prices for their inputs. Expressions such as ‘coal is the food of industry’ were used to emphasise the way that price rises might affect the whole economy, making any rapid adjustment impossible.

The second fundamental aim of price reform was to encourage efficient resource allocation at the micro level of the firm, by providing management with ‘rational’ price signals on which to base decisions. Thus the old system, of low materials prices, but high consumer goods prices, meant that a manufacturer of, for example, television sets could hardly fail to be highly profitable, regardless of the efficiency of their operations. In contrast, a coal mine or iron ore mine was more or less doomed to loss-making by the low level of state-determined prices for their products. This meant there was little incentive for the latter to invest to increase production or to improve efficiency. Moreover, from the government’s point of view, there was again an increasing burden of subsidies whereby the state budget had to cover the deficits of loss-making enterprises. On the other hand, bureaucratic organs had an entrenched interest in the old system of administrative direction, rather than a system where enterprises responded autonomously to market signals. Here, too, then, powerful interests stood in the way of rapid or easy reform.
Central government perceptions, however, still regarded the problems created by the irrational price system as sufficiently serious to warrant action. While the state implemented price reform for some commodities by removing price controls and allowing the market to determine prices, in the cases of many important commodities, it first attempted a half-way house, of a dual price system, whereby commodities circulated both at state prices within the plan and at market prices for output produced outside the plan. In many cases there was in addition a negotiated price (or several negotiated prices) somewhere in between.

This system emerged on a de facto basis from the late 1970s, with a semi-legal black market operating alongside the planning system. The system was more or less recognised in 1984, with the Ten State Council Regulations for Industry, which said ‘prices of goods produced outside the state quota system may be manipulated within a range of 20 percent above or below state prices’. It was soon found that such a differential was insufficient to bring supply and demand for various commodities into balance and, from early the following year, enterprises were allowed to trade above-quota output at free market prices. These developments followed a common pattern in China whereby government policy largely recognised practices already in de facto operation.

Price reform remained highly contentious, however, and tended to slow in times of inflation, for instance in reaction to growing unrest among the urban population in 1985. In the late 1980s controversy took the form of a lively debate over the relative priority to be given to price reform and enterprise reform, with one side arguing that enterprise reform could be implemented with less disruption and avoiding some of the problems of inflation; the other side, however, argued that enterprise reform would be meaningless so long as enterprises faced an irrational price environment. Early 1988 saw Deng Xiaoping pressing for a rapid and comprehensive price reform, but this view was quickly succeeded by growing doubts as inflation increased rapidly; the ‘crash through or crash’ approach seemingly adopted by Deng but very much identified with Party General Secretary Zhao Ziyang crashed, and Zhao seems to have lost some of his control over the economy in the third quarter of 1988, as a more cautious group identified with Premier Li Peng came to the fore.
Zhao was, of course, completely forced from power after the events of April-June 1989, and more ‘conservative’ economic planners took over the policy reins. While it must be emphasised that there was no question of any return to the Maoist period, or even to the more fully planned economy of the 1950s (which had briefly been a model in the late 1970s and early 1980s), nevertheless it was clear that price reform in particular had been put on the back burner, with key leaders saying that it was on the agenda five years into the future. Many western economists, particularly those associated with the World Bank, however, believed that by 1991 the relatively depressed economy offered an ideal opportunity to free prices with minimum inflationary impact.

Reform tendencies were indeed strongly entrenched in the economy, and the early 1990s saw an acceleration of price reform. In May 1991 the government moved to raise the prices of basic foods, particularly grain and rice, to levels closer to their cost. Over the following three years, reform extended deeply into the industrial sector, with basic materials such as cement, oil and coal being successively targeted, with the aim expressed in the official press as to establish ‘a level playing field’. The story of the late 1980s was, however, to some extent repeated, as inflation, caused partly by decontrolling prices, but more by overheating of the economy, began to accelerate to levels of around 20% in 1993 and 1994. This trend led to renewed controls being placed, often by local governments, particularly on a variety of consumer goods and food. Grain prices were a target, and even reformer Zhu Rongji said that decontrol of grain prices did not mean the end of government control over the grain market; it remained the responsibility of the various levels of government to strengthen management of the grain market.

Thus, the general trend throughout the 1980s and 1990s has been to an expansion of the role of free market prices and a contraction of the role of planning: by 1990 retail sales at state controlled prices had fallen from 97% (in 1978) to under 30%, those at market prices had risen from 3 to 53%. The proportion of means of production sold at state prices had likewise fallen from 100% to under 45%, that of those at market prices had increased from zero to over 35%. This has not, however, been an easy or uncomplicated process, and the state at all levels has continued to see it as its duty to interfere in the market and control the level of prices. Moreover, the actual increase in the influence of market forces has not been as great as it might seem
from the reduction of central planning, because in many areas local governments and local economic planners have taken up much of the slack, rather than allowing the market free operation.

**COAL MINING DURING THE MAO ERA**

Under Mao, the coal mining industry was one of the pillars of the planned economy. Although the degree of control was not the same throughout the period, the major mines were coordinated at the centre by the Ministry of Coal or similar bodies. As such it was an integral part of the heavy industry bureaucracy, where a number of ministries responsible for heavy industries represented an extremely powerful pressure group protecting the interests of their subsidiary industries.

Price was not a major tool of resource allocation in the period of the planned economy under Mao. In fact, coal was one of the first commodities to be brought under the control of the state trading companies, whose monopoly allowed a growing divergence between prices and costs. In the Maoist period, coal was distributed directly through the planning institutions, and indeed was not even considered to be a ‘commodity’ which circulated through any sort of market. Later, however, it was seen as a ‘category one’ commodity, over which the state exercised particularly strong control.

Despite the fact that most resource allocation in the pre-reform period was by administrative means, with prices playing a relatively small role, the low price of coal was still an issue. The price of coal under Mao was low in comparison both with pre-war relative prices, and with the situation prevailing in the west. Chinese economists were aware of the depressing effect this had on production, and argued, when they could, for a rise in price in order to stimulate output. Low coal prices also affected profits and, as early as 1957, half of China’s coal mines were operating at a loss. As a result, there were a number of adjustments in the price of coal in that period. There was a 20% increase in price in 1958, a further 14% (for lump coal) in 1962, and another 10% in 1965. After that there was a long period of stability until a 31.8% price rise in 1979. While these adjustments eased the situation of coal mines in the short term, over the longer period prices rose more slowly than costs: at 2.7% per annum over the period 1950-1983, as against a 2.85% rise in costs. So, whereas
prices were 22% greater than production costs in 1950, the gap had narrowed to only 16% in 1983.

Price policy on coal was also seen as inadequate in a number of other respects. Perhaps most importantly coal prices, like prices in general, gave insufficient account of quality differences: this put downward pressure on the quality of coal in general, and discouraged value added processes like coal washing. Second, there was also a lack of distinction between prices in different regions: after the 1950s, when prices reflected different regional conditions, particularly different cost conditions, policy began from the 1960s to favour a single pit-head price, so that real regional differences were ignored. In addition, the price of transport was insufficiently reflected in prices at the port of destination, with the basis for most calculations being FOB (Free on Board) prices at the port of loading on to the railway. A number of proposals were made, especially in the late 1950s, to remedy some of these problems, but they remained an issue up to the late 1970s and beyond.

Because prices on the whole played a limited role, the history of coal mining, and the situation which the coal industry and coal markets reached during this period must be analysed mainly in different terms.

Growth of output, rather than any financial measure was the primary target under the planning system, and, as shown in Figure 1, the Maoist period saw substantial growth in coal output: from 66 million tonnes in 1952 to 483 million in 1976. Of the production in 1976, 274 million tonnes came from mines under the control of the central government and 208 million from local mines, of which 65 million came from township or village enterprises. The average growth rate overall was 8.8% per year (though only 4.7% between 1956 and 1976 after the early spurt of rapid growth) while township and village mines had grown by 24% per year between 1967 and 1976.
Almost by definition given the very small exposure to foreign trade, actual consumption grew at more or less the same rate, as imports and exports were negligible. By the mid-1970s, the consumption of coal was concentrated heavily in industry, with only 19% devoted to household use. The most important users included power generation (17.5%), metallurgical coke (9.7%) and railway transport (4.8%).

The key question for economic policy makers was whether the industry was expanding production sufficiently rapidly to meet the demands of economic growth. Throughout the period, coal was by far the most important provider of commercial energy in China, even though its share fell from around 96-97% at the beginning of the period to just under 70% in the mid-1970s. Thus the growth especially of the energy intensive industrial sector depended heavily on supplies of coal.

In fact, a number of measures make it clear that there were growing energy shortages in the economy by the 1970s. Production of primary energy was falling behind the growth of the economy as a whole, and many scholars believed that the coal industry had become a bottleneck largely because of the historical low-price policy. Key manifestations of this shortage of energy included the very low rate of utilisation of capacity in industry, which was often the result of unreliable and inadequate energy supplies. While energy shortages were at first limited to a few
industrial centres in the east and the north, over the 1970s and 1980s the problem became nation-wide.\textsuperscript{52}

An authoritative study compiled in the early 1980s and reflecting perceptions on the eve of reform argued that there was a structural imbalance as between the supply and demand for energy.\textsuperscript{53} In particular there was a severe shortage of energy for domestic use, especially in rural areas; there was no growth of per capita consumption for these purposes over the period of the Cultural Revolution.\textsuperscript{54} In industry, energy shortages brought serious problems, leading many factories to have to operate at far less than full capacity. Moreover, the low prices of energy offered little or no incentive for efficiency in use: China was a profligate user of energy, both because its overall industrial structure was biased towards heavy energy-intensive industries, and because low levels of technology meant that there was wasteful use of energy within a given industry.\textsuperscript{55}

Indeed, by the early 1980s, the government was identifying the energy sector as a serious bottleneck in relation to its plans for economic growth, and announced that it would give it priority in the allocation of investment.\textsuperscript{56} One way the problem was addressed was through the 32\% increase in coal prices in 1979, though the government stopped far short of the necessary thorough restructuring of prices.\textsuperscript{57}

\section*{THE DUAL TRACK SYSTEM}

The complexities involved in changing relative prices for important commodities in the economy led, in the case of coal, as in that of other commodities, to the emergence of a dual price system, whereby some coal circulated at market prices, other coal was distributed through the planning system at state prices. This system allowed the old interests embedded in the coal industry during the planning system to continue to benefit, while itself creating new interests and contradictions, which made further progress towards a market economy problematic.

The origins of the dual pricing system in coal lie in the late 1970s. Like many other things in China, changes began to be introduced unofficially into the system long before they became official policy. Thus there was a gradual rise in the proportion of coal sold at market prices from under 17 per cent in 1979 to around 25 per cent in 1984. This was mainly in the form of output from small mines outside central or provincial government control. The larger mines, however, saw a chance
for themselves to benefit, and their bureaucratic representatives argued for them also to be allowed to sell some of their output at market prices. Thus, in order to stimulate production, in 1982 the government allowed 22 mines to sell over-quota output at 25-50% over state prices.\textsuperscript{58}

This trend sharply accelerated after the central government began to authorise dual pricing on an official basis from 1984-1985 From October 1984, all non-state mines were allowed to sell their output at market prices, while local state mines were allowed to sell coal produced over their target quota at a premium. Similar concessions were made to the central state mines in 1986. This again was not a ‘technical’ initiative by the government, but the result of hard bargaining by the heavy industry ministries, which were being left behind in an environment of rising prices and free markets.\textsuperscript{59}

As a result, from 1985 around half of coal trade took place at market prices.\textsuperscript{60} While Chinese statistics do not allow a direct calculation of this proportion, the declining proportion of total output supplied by state mines and the increase in the share of township and village mines, which basically worked on market principles, gives an indication of the direction and scale of change. These changing proportions are shown in Figure 2. In fact, not all coal from non-state mines was sold on the free market — many local price authorities tried to control the prices of non-state mines in order to reduce excessive competition, particularly in the major mining areas of Shanxi and Heilongjiang; such restrictions mainly applied to coal shipped out of the area, and were in any case difficult to police.\textsuperscript{61} In addition, as outlined above, a growing, though limited, proportion of coal from the large state mines was sold on the free market.\textsuperscript{62}
The aim of the dual price system was to ensure that at the margin coal producers had a sufficient incentive to increase production and coal consumers faced more-or-less economic costs for coal consumption. In the sellers’ market which was developing from the late 1980s, it was possible to develop a market-oriented sector at the margin, while still maintaining previous levels of distribution under the state plan. The system was always seen as a transitional form, in the course of a gradual change from a planned to a market economy, even if the latter was to be a socialist market economy.

The dual price system was by no means a total failure. Most generally, despite the doom-laden predictions of many western economists, the Chinese economy continued to function very successfully with a dual price system for many years. The higher marginal price of coal also did seem to have the desired effect, both in providing an incentive for increased (see Figure 1) production and in holding back consumption. Thus output grew by 6.3% throughout the 1980s, a rate higher than the 4.7% at which it grew between 1956 and 1976. The system also fostered the growth of the township and village enterprises in coal mining and other sectors. Moreover, the economy registered ‘astounding’ declines in energy intensity at the same time. In fact, most of this decrease can be attributed to broader economic
policies of readjustment which directed more resources into light industry and cannot be seen as an achievement of price reform. Nevertheless it is likely that higher prices of coal at the margin did have some effect, both in encouraging a change in industrial structure and in promoting some technical progress in the use of coal.

How far growth in output and economies of consumption were sufficient to restore overall balance between supply and demand is more difficult to say. A number especially of longer-term studies continued to point to a chronic shortage of coal as a source of primary energy. A Party study in the early 1990s calculated average annual growth of output in the late 1980s at 26 million tonnes, but annual growth of consumption just by the electric power and steel industries and by household use amounted to 37 million tonnes, so that there was a growing shortfall. On the other hand and in the shorter term, in the relatively depressed conditions in the aftermath of the Tiananmen incident, coal demand and supply did reach a general balance and, by the early 1990s, it did not appear that there was a shortage in the supply of coal. Despite the long-term predictions that energy would be a key constraint on growth, the market for coal was not excessively strong in those years.

Despite some strengths, however, the dual price system failed to solve many of the central problems of the old system. Thus, it completely failed to stem the increasing losses of the state mines. This was partly the result of the greater degree of decontrol of the prices of production materials than of that of coal. In fact there was a clear worsening of the situation from 1985. According to China Commercial News, while costs of state mines had risen from 25.21 yuan/tonne to 65.07 yuan between 1984 and 1990, prices only rose from 22.73 to 30.58, so that the loss per tonne of coal increased from 2.48 yuan to 34.49 yuan. By the early 1990s, 86 out of 89 mines under central government control were making losses.

In the lack of any working law of bankruptcy, the ‘soft budget constraint’ meant that these losses had essentially to be covered by the state, and became an increasing burden on the government budget. For all state enterprises, these subsidies amounted to 45 billion yuan in 1988 and 60 billion in 1989. Subsidies specifically to coal mining enterprises increased from 300 million yuan in 1985 to over 4 billion in 1989.

Similarly, the level of coal prices was still simply insufficient to encourage investment. This had not mattered so long as investment funds were allocated free by
central authorities. But when in the reform era such funds were made available at least partly on the basis of profits or at partially realistic rates of interest, it became a major issue. So, in the short and medium term, output continued to expand, because large mines were able to make use of past investments, while the low-cost small mine sector expanded rapidly. In the longer term, however, the lack of investment in an industry which required a long lead time provided a poor basis for the continuing expansion of production.  

From the point of view of the economy as a whole, however, the major disadvantages of the dual price system were probably still on the side of demand. That is, low state prices of coal offered no real incentive for efficient utilisation of the resource: as a result, industrial boilers used very substantially more coal than was necessary with existing technology; similarly building insulation was seen as a low priority when coal for heating was cheaply available. One authoritative estimate had it that if coal reached a rational price level the return on energy economising investment would rise to 50% above the current normal return on investment, thus reversing the situation where it was not profitable to invest in energy saving technology.

Finally, the earlier problems of quality and regional distribution of coal remained serious up to the 1990s, further distorting the pattern of demand. Thus prices were still too uniform across the country, partly because of the low (subsidised) cost of coal transport, which inhibited the development of a rational pattern of coal production and consumption. Prices were also insufficiently differentiated by quality, with insufficient incentive, for example, to wash coal before transporting it; this led to waste of scarce transport capacity and failure to meet the needs of coal consumers.

In addition to the problems left over from the earlier period of the planned economy, the system engendered its own contradictions, especially in the area of corruption. First, it encouraged speculation because of the wide gap between the two prices. Private appropriation of state assets was too tempting for the good of the system, because of the profits that could be made by selling on the open market coal acquired within the plan. Indeed the World Bank saw the dual price system in general as the ‘economic basis’ of corruption.

Second, it encouraged ‘undesirable’ activities by state mines: it was obviously in the interests of any mining enterprise to sell the maximum proportion of its output
at the much higher market prices and to minimise the proportion which circulated within the plan. This directed an uneconomic amount of the enterprise’s time and energy towards negotiating its obligations under the plan (a common feature of the reform economy, though also of the planned economy), in order to maximise the returns to itself. In addition, the structure of prices, in which the ‘free market’ price was far above the marginal cost, the state price far below, did, as indicated above, provide an incentive to mines to increase output, but might have in fact provided too strong an incentive. Thus it encouraged mining enterprises to adopt a short-term perspective by mining their resources at maximum rates without concern for long-term conservation or environmental factors. Thus the planned output of the Xuzhou Mining Bureau in 1989 was under 10 million tonnes, but actual output was over 12 million.

Nor did the system seem to be functioning very well in promoting a transition to market prices; thus, the relationship between the market and planned price of coal showed at best a weak tendency to convergence. By contrast, other products showed a clear such trend. For consumer goods as a whole, free market prices declined from 80% above state prices in 1975, to 48% in 1980, 28% in 1985 and only 5% by 1991. Free-market coal prices, by contrast, increased from being 45% over plan prices in 1986 to a peak of 168% in 1989, before declining back to 70% over in 1991. These differentials influenced behaviour, as for instance in Shanxi, where the state purchasing price was around 80 yuan while the price in local cities was 130 and in Shanghai 260 yuan. Thus anyone who could manage to sell their coal outside the province did so.

To a considerable extent, the overall coal market was distorted by the fact that a relatively high proportion of coal was still allocated through the plan. Because many large producers and consumers took little part in the market, the market was much smaller than it would otherwise have been and thus more vulnerable to temporary fluctuations up and down. By the same token, of course, the large profits available in these markets created interests with a stake in maintaining the system.

The central government was aware of these problems, and from the late 1980s looked for opportunities to raise the plan price of coal. By the early 1990s at the latest, opinion was hardening against the system and in favour of a reunification of the price of coal. While some still favoured a reunification to a state-determined price,
because of the central role played by coal both in industry and in the people’s livelihood, the logic of the system was increasingly in the direction of use of market prices. Certainly external advice, such as that of the World Bank, not surprisingly favoured the use of market prices. In 1992, the newly re-established Ministry of Coal was given the job of reforming the industry and wiping out the deficits, and immediately introduced a 20% increase in the price of state-allocated coal, looking to more general price deregulation in the near future.

Nevertheless, it proved to be difficult to mobilise the political will to implement reform. Most of the actual interests involved looked at reform with some trepidation. Even the interests of the big coal mining combines, which, on the face of it, stood to gain from an increase of coal prices to a level which made their operations economically viable, were not unambiguously in favour of reform.

Certainly, some large coal mine managers looked to price reform as a possible panacea for all the problems of their enterprises. However, in a general way, these big combines had long been pillars of the planned economy, and their leaders gained their prestige and position in that context not in that of a market economy. Thus the head of a huge combine like Kailuan in Hebei or Datong in Shanxi could expect a place at the table when major decisions were made. Whether managers in such positions would relish the greater risks, though greater benefits, available from the market might be questioned. Old bureaucratic habits of thought died hard, and advocates of reform saw one of the main aims of price deregulation as breaking the old model of the planned economy, and changing those old habits of thought.

Moreover, the state mines were, as suggested above, largely shielded from the effects of low prices by the fact that their resulting losses were on the whole met by the state. They were not fully independent accounting units responsible alone for their own profits and losses. Thus the pressure they were facing as a result of the low prices was nothing like as severe as it would be in a fully capitalist economy, again weakening the incentives for managers to support price reform. Indeed many managers believed that the state could never let such a basic industry sink, and so just sat and waited for more subsidies.

Nor were the workers likely to support the reform. Again, some aspects of reform offered benefits for workers. Wages in coal mines were low, and this had been identified as one of the major problems which might be addressed by higher prices.
Moreover, the financial difficulties of the mining enterprises had resulted in a widespread phenomenon of companies being unable to pay wages; by the end of 1993, 70 mining bureaux owed 2.5 million workers 1.6 billion yuan in wages.

Nevertheless, price reform could be expected to be accompanied by a broader market-oriented package. Another key aspect of such a package was the reduction of the scope of enterprise activities to economic activities alone. That is, the withdrawal of the enterprise from the many subsidiary services that contributed to the social wage of its workers and indeed kept many of its workers employed. The implications of the old system can be seen in the case of the huge Datong mine, which ran eighty-two schools with 90,000 students; it supported 35,000 retired workers, and in all spent over 700 million yuan on running welfare and similar organisations.96 Such services would be now commoditised, with workers having to pay for them out of their own income. Indeed, one mine manager suggested that a prerequisite for successful reform was ‘smashing the idea that state workers should be looked after by the enterprise from birth to death.’97 The deputy minister also pointed out that labour welfare payments at 4.8 billion yuan were more than two and a half times the net losses posted by the mines.98 Thus, both those representing the workers and those in management with a commitment to the old system could see benefits in the system of administered prices. Higher prices for coal produced would not necessarily be translated into higher or more secure incomes for workers.

Even the market-oriented small-mine sector could probably not be expected to be a powerful force pushing for reform. First, they did not have the political clout that the large mines, controlled by the major industrial ministries, had; rather they were scattered and in many ways vulnerable, economically to credit squeezes, politically to any change in policy.99 Second, they may well have also benefited from a dual price system: it created an (albeit large) niche market for them where they were protected from direct competition from the large mine sector and where prices may well have been somewhat higher than they would have been in a unified competitive market.

Coal consuming industries would be even less likely to support price reform, given that they would be the main initial losers.100 Geographically, coal mining tended to be concentrated in the interior, coal consumption along the coast. Thus increasing coal prices would benefit the interior at the expense of the coast, though on
the whole the coastal areas had provided much of the impetus for economic reform. (Some coastal areas such as Guangdong would be less seriously affected because they already acquired much of their coal through the free market or in the form of imports.) Many of the consuming industries were themselves locked in to state-determined prices, and so were not in a situation to absorb increased prices for one of their major inputs. Even before price deregulation, failure of consuming industries to pay for their coal was one of the most serious problems faced by coal mining enterprises, and one of the origins of the ‘triangular debt’ structure which plagued the whole state-owned sector and was particularly serious in coal mining. By the end of 1993 debts incurred by coal consumers to coal mines amounted to 19.1 billion yuan, of which 3.8 billion had been accumulated in the previous year; Shanxi mines alone were owed 5.6 billion yuan by enterprises outside the province.

Reluctance by consumers to pay higher prices was shown when the electric power industry complained even before deregulation that the rising cost of fuel was increasing their costs; on the other hand, the industry was limited in the degree it could raise its own prices, so that its profit rates were squeezed. Thus between 1978 and 1987 the average price for coal paid by the power industry rose from 31.27 to 79.46 yuan/tonne. As there were much more limited rises in electricity rates, this had to be absorbed by the power utilities, impelling them to seek technological solutions (which was, of course, one of the objectives of reform).

At first glance the state’s fiscal organs would appear to be major beneficiaries of any freeing of coal prices, given the massive subsidies that have had to be paid to keep coal mines afloat in the 1980s and 1990s. Thus the state had to allocate one billion yuan in 1994 solely for the purpose of allowing mining companies to pay their wage bills. On the other hand, however, these subsidies were to some extent balanced by increased remittances of profits from coal-using industries. Increasing the price of coal to an economic level would inevitably reduce profits in those industries, and thus reduce government income as well as expenditure.

Nevertheless, the broader inefficiencies introduced by the price distortions persuaded most leaders and institutions in the government of the necessity to address the price question.
PRICE REFORM IN 1993-1995

After a long period during which thorough price reform in the energy sector seemed to be too difficult, the government began to move from the second half of 1992 when, in addition to decontrolling steel and oil prices, it designated the Zaozhuang mine in Shandong for a small-scale trial in decontrolling coal prices. It stepped up the pace of change from 1993, by freeing up the price of coal for power generation and metallurgical use, as well as decontrolling prices in 11 provinces and regions. In the middle of that year, the new Minister for Coal, Wang Senhao announced a plan fully to decontrol coal prices and to overcome the industry’s losses within the following three years. At the end of 1993 the Ministry announced that, from the next year, most coal would be sold on the open market, and soon thereafter the price of all coal would be freed.

The timing of this change was both problematic and propitious. The negative aspect was that 1993-1994 was a period of increasing inflation in the economy in general. Thus there was concern that it was not an appropriate time to introduce a wide-reaching price reform which could easily flow throughout the whole economy. For a considerable period many observers had feared the inflationary repercussions of freeing coal prices and price rises in raw coal were one of the factors behind increasing inflationary expectations among the people in 1993.

On the other hand, demand for coal was not very strong in this period, and stocks were relatively high, although transport problems limited the utility of stocks at the mine. Thus from late 1989 the basic situation was one of a buyers’ market, as indicated by a rise in reserves of coal to around 17%, as against the 14% level which indicated a rough balance in the market. Even in 1993, while there was feverish demand for other industrial materials, the coal market remained, on the whole, quiet.

This buyers market meant that trends following decontrol of prices were somewhat contradictory. Prices rose for a while quite steeply in the middle of 1993 as prices began to be decontrolled, and there certainly seems to have been some rise of price (accelerated by seasonal factors, in that price decontrol was introduced in winter) at the beginning of 1994. A newspaper article said that China’s largest mine, Datong in Shanxi, raised its price from 90 to 135 yuan overnight after the freeing of prices. In Guangxi in early 1994 free coal prices resulted in a 20-30
yuan per tonne rise in most coal prices, though the official media quoted approvingly the Youjiang Mine, which considered the ability of the consumers to pay and only raised its prices by 10 yuan.\textsuperscript{120}

On the other hand, prices seem to have settled down quite quickly, as a result partly of general market conditions and partly of efforts by all levels of the state to control inflation. Thus prices were in general stable during the first half of 1994, and indeed beyond. While by August 1994 there was some strength in the market for high quality coal, the market for ordinary coal was still weak, and prices still stable.\textsuperscript{121} In early 1995, prices of some coals rose quite strongly, partly because the railways were giving priority to the transport of coal for power generation and other coal produced within the plan; thus supplies of coal outside the plan became tighter, forcing prices up.\textsuperscript{122} Prices began to rise on a general basis from mid-May, causing alarm among many authorities.\textsuperscript{123}

Part of the reason for the price stability lay in the fact that there had by no means been total decontrol of the market. The state had other interests to consider, most notably maintaining some allegiance among the urban population. In an inflationary environment, therefore, neither central nor local organs were prepared completely to allow prices to find their own level. Fears over inflation held back reform and, despite Ministry pronouncements, coal was still listed well into 1994 as a commodity whose price was controlled by the state.\textsuperscript{124} In general, even official economists admitted that ‘to meet this year’s inflation target, the government has held up all necessary price deregulation programs’.\textsuperscript{125} A 1995 study also identified government anti-inflation policies as one reason not to expect major rises in the coal price in 1995:

Coal is a major material that affects the national economy and people’s livelihood and changes in its price can lead to the effect of ‘pulling one hair and affecting the whole body’. If the price of coal rises too much, beyond a certain level, on the one hand it will influence the state’s macroeconomic regulation target of strictly controlling prices, and on the other hand, because it is beyond the capacity of consumers to absorb, it might lead to a series of problems which affect social order and unity, so that the state would have to interfere and adopt control measures.\textsuperscript{126}

The state retained strong levers to influence outcomes, for instance through its control over allocation targets, although it reduced the amount subject to central allocation by
70 million tonnes.\textsuperscript{127} In late 1994, the government indicated that the total amount of coal allocated through the plan would remain the same in 1995 as it had been in 1994, but that priority would be given to power production, metallurgy and chemical fertilisers, forcing some other sectors to increase their exposure to the market.\textsuperscript{128} It also retained more direct price controls in specific areas, most notably in the key area of electricity generation.\textsuperscript{129} Moreover, the government still saw itself as having a guiding role. Thus a State Planning Commission order in 1994 said that, while prices should be determined by supply and demand, prices should not rise too rapidly (up to about 4% was permitted) in order not to affect downstream consumers too seriously. Moreover the planning commission indicated that consumers were not allowed to raise their own prices in order to recover the increased costs. Coal sold for household use was also controlled in accordance with the State Council policy on prices for daily necessities.\textsuperscript{130}

In addition state intervention remained at lower levels, as with so many other aspects of Chinese economic reforms. Indeed the State Planning Commission called for local price authorities to strengthen their supervision of coal prices.\textsuperscript{131} Thus, the Fujian provincial government encouraged cartelisation among the province’s mines in order to avoid excessive competition and price cutting.\textsuperscript{132} Similarly, the Yunnan provincial government set a hard and fast mandatory price for coal supplied to the power or fertiliser industries and an indicative price elsewhere.\textsuperscript{133}

As suggested in the previous section, even state coal mining enterprises were ambivalent about price reform, and some companies at least supported continued regulation. A member of staff of the Datong Coal Mining Bureau, China’s largest, called for the ‘comprehensive use of economic, legal and administrative methods to strengthen [government] management of the post-decontrol coal price’, and drew a sharp distinction between a market economy and a laissez-faire economy.\textsuperscript{134}

How far has the, albeit limited, price deregulation succeeded in meeting the aims of the state, and how did it affect key interest groups involved? Certainly it did not over night solve the problems of the state enterprises, in terms of either persuading them to embrace the market or getting rid of the deficits. After the implementation of price reform, one commentator suggested that the state mines had been ‘pushed into’ reform, while many, instead of embracing market ideas, just took a very passive attitude and waited for developments.\textsuperscript{135} Another suggested that many
enterprises were still looking at government help — such as protection or tax holidays — and administrative measures to get them out of their difficulties, rather than embracing innovation and cost-cutting in the market.\textsuperscript{136}

In the short term price reform did have some success in reducing the massive losses made by the coal mines. This was partly done through a reduction in output and sales by state mines (who were making a loss per tonne produced and sold), and total losses in the industry were reduced by 30\% in 1993.\textsuperscript{137} Further progress was made in cutting losses in 1994, with a 2 billion yuan reduction, and a further 2 billion planned for 1995.\textsuperscript{138} On the level of individual mines, the Datong mine increased its 1993 profit of 560 million \textit{yuan} to 720 million in 1994; this was partly because of a decline in output from 38 to 36 million tonnes.\textsuperscript{139} Nevertheless government sources warned against any expectation that the freeing up of prices would automatically lead to the end of coal mining deficits, and pointed out that these deficits were inherited from history and could not be overcome in the short term.\textsuperscript{140} Nor were enterprises able yet to pay their wages in full: in 1994, although only 50 bureaux were behindhand, slightly fewer than in 1993, the amount owed had increased to 2.2 billion \textit{yuan}, affecting 1.6 million workers; in these companies, wages were on average three months behind.\textsuperscript{141}

Gains were limited partly by the fact that the degree to which mines were able to increase their prices so as to cover costs was limited by the overall balance between supply and demand in the market. Thus early in 1994 mines took advantage of the freeing of prices to raise coal prices to try to cover rising costs; they had not been able to do this in 1993 because of unfavourable market conditions.\textsuperscript{142} But, as shown above, prices soon stabilised in 1994.

Coal mining enterprises, who were net creditors in the so-called ‘triangular debt’ situation, where there was a gridlock of mutual debts among state enterprises, also tried to promote their own financial health at the expense of other sectors, and began to refuse to deliver coal to enterprises except with guaranteed payment; in this way by late 1994 they were beginning to make some dents in the huge debts run up by their customers.\textsuperscript{143} This policy was part of a general move to deal with the debts incurred by Chinese state enterprises, which were threatening to bring the system to a halt. There are different figures for these debts; a deputy minister of the Ministry of Coal put the figure at 3.4 billion yuan at the end of 1992, 7.4 billion at the end of
1993 and 13.4 billion by October 1994. Other sources suggest that by November 1994, coal mines were owed by their customers as much as 29.1 billion yuan, and themselves owed their suppliers 16.4 billion; thus they were owed a net amount of 12.7 billion by other sectors.

In 1995 the Ministry of Coal introduced a policy known as the “three-noes” to try to solve the problem --- that is, no issue of coal to enterprise users who do not pay; no issue of coal if no bank draft is available; and no issue of coal if debt-ridden enterprises fail to pay back their debts owed to the coal production enterprises’. This had the effect of reducing stocks held by consumers and distributors, concentrating stocks at the mines, and thus tightening the market for coal and increasing prices. It had a notable effect on coal shipments, adversely affecting Shanghai’s only publicly listed shipping company. Nevertheless it is questionable whether such a policy can be a success in isolation, without broader measures to tackle the ‘triangular debt’ problem.

So, price reform did not by any means act as a panacea for the state-owned sector. Despite the fact that it had long advocated higher prices, its situation immediately after the freeing of prices remained ‘difficult’. This of course was partly because market conditions and government policies would not allow too great a rise in price; thus mines did not get the revenue flow to begin to solve their problems. Indeed some mines complained that their prices actually fell, a situation made more serious by the steep rises in the cost of many of their inputs.

Predictably, consuming industries resisted increases in price. The electric power industry, the largest consumer of coal, had long opposed price rises. Thus the pilot decontrol project in Shandong led to an increase in costs to the electricity industry, and later power interests argued, ‘If the price of coal rises and electricity prices are not allowed to rise with them, who will be able to guarantee electricity generation?’ The living quarters at Datong suffered their first electricity black-out two days after the mine had raised its coal prices. Shandong chemical fertiliser plants were forced from a situation of profit to one of loss by the 1992 experiment in coal price decontrol.

A more general aim of the state in promoting price reform in the coal sector was to help secure adequacy of energy supplies for China’s development, by providing incentives both to mines to increase output and to consumers to economise
on use. It is much too early to judge its success in this respect, but some points are worth noting.

First, even before price reform, a sharp decline in the early 1990s in the elasticity of coal consumption vis-a-vis growth in the national economy indicates a trend towards economy in use, whether through the economy adjusting to less energy-intensive industries, or through technological progress in the use of energy in existing industries. Thus, whereas in the 1980s for each 1% increase in the size of the national economy, there was a 0.5% increase in the use of coal, by the early 1990s, this ratio had been reduced to 0.1-0.2%.

Nevertheless, the costs to the economy of wasteful use of coal remained a major concern. An authoritative article argued that by reducing the input coefficient of coal to 6 tonnes per 1000 yuan, over 200 million tonnes a year of coal could be saved. The main targets were the heavy industrial users of electric power, metallurgy, chemicals and construction materials, as well as some heavy users in light industry.

Second, price reform further contributed to providing adequate supplies of coal by encouraging the growth of the small mining sector, and a continued shift in the pattern of output towards that sector, which was the most dynamic sector of the industry as well as the most price responsive and most fully oriented towards the market. One article concluded that the small mine sector would be able to meet any conceivable increase in the demand for coal. Growth in this sector is, however, not without problems, in terms of a very poor safety record and possible damage to the long-term conservation of China’s resources.

Again, this illustrates the way in which partial reform — and in particular the more rapid reform of commodity than of factor prices — creates interests which may not be favourable to the continuation of that reform. Thus many small mines benefited from the decontrol of prices, but were still not obliged to pay full cost for the resources they used. Until a realistic price for resources is built into the system, small mines as well as large will be tempted to over-use limited resources and to work on a very short-term time horizon.

Third, despite encouraging signs, Chinese observers still predict a tightening of the coal market in the second half of the 1990s, with growth in production lagging behind the needs of the economy as a whole. A conference of the Ministries of Industry and of Coal in early 1995 foresaw increasing shortages. In late 1995, coal
shortages were responsible for electric power generation falling as much as 20 per cent short of demand.\textsuperscript{162}

Finally, it is questionable whether price differentials yet sufficiently reflect quality differentials. Thus many sources point out that in 1995 any shortages or tightness in the market for coal were concentrated in the market for good quality coal — especially coking coal and anthracite; supplies of poorer quality coal remained plentiful.\textsuperscript{163} Nevertheless press reports suggested that customers were becoming much more discriminating in respect of quality, and the old days when any type of coal would do were long past.\textsuperscript{164}

\textbf{CONCLUSION}

The case of coal well illustrates the complexity of the process of economic reform in China, not so much in a technical sense, more so in the sense that the planned economy created key interests groups with a stake in its continuation. Moreover the transitional arrangements, notably the dual price system, put in place as a transition to a market economy, themselves brought forth new groups which benefited specifically from them and which in turn had a stake in their continuation.

Given the difficulties this created for moving towards a market economy, many Western economists have advocated the ‘big bang’ approach — an immediate or very rapid decontrol of prices and privatisation of industrial enterprises. This advice has been listened to in Eastern Europe, where many governments have instituted such a rapid transition but, at least from the perspective of 1995, it is difficult to say that these policies have been a success.\textsuperscript{165}

Rather, the recent history of the coal industry suggests the very considerable success of the Chinese government in gradually moving towards a market economy with ‘rational’ prices, while not undermining the continuity and on-going viability of the economy. Of course this incrementalism is not simply a matter of conscious policy choice, but also reflects that nature of the decision-making process in the Communist political system.\textsuperscript{166}

The relative success of incrementalism in post-Mao China’s coal industry has been heavily dependent on the fact that in this sector, as in others, economic reform has consisted primarily, though not exclusively, in the emergence of a semi-private market-oriented system \textit{alongside} the old state enterprises operating under planning.
In the medium term, however, it is likely that the problems of the state enterprises themselves will have to be addressed, in order to avoid massive social dislocations and huge burdens on the state budget. This may present the state with even greater challenges.
This research has been undertaken with the aid of a grant from the Asia Research Centre on Social Economic and Political Change at Murdoch University. I would also like to thank Zhu Xiaoyang and Him Chung for their help in collecting the materials for this study, and the participants in the Asia Research Centre seminar for useful comments and suggestions.


As Susan Shirk wrote, ‘A transformation of the economic structure involves redistributing authority and rewards among sectors, bureaucratic agencies and regions ... The groups who were favored and protected by the old command economy and who feel threatened by changes in the economic system resist the reforms or fight to retain as much of their original privileges as they can.’ See Susan L. Shirk, 1992, ‘The Chinese Political System and the Political Strategy of Economic Reform’, in Kenneth G. Lieberthal and David M. Lampton eds, Bureaucracy, Politics and Decision Making in Post-Mao China, Berkeley and Los Angeles: University of California Press, p. 59.


This is not to say that the state was a completely autonomous actor. It itself was responding to fundamental problems in the economy and pressures from different social groups.


For a brief discussion by an authoritative Chinese economist, see Xue Muqiao, 1981, China’s Socialist Economy, Beijing: Foreign Languages Press, pp. 143-4.


Nicholas R Lardy, 1983, Agriculture in China’s Modern Economic Development, Cambridge: Cambridge University Press, 1983, pp. 89-92. Of course there were other factors involved, notably the organisational change in the form of the abolition of the communes and the establishment of the production responsibility system, and on the other hand the growth of chemical fertiliser production.


See Xue Muqiao, China’s Socialist Economy, p. 153.


Findlay and Jiang, ‘Interest Group Conflicts’, p. 27.

See e.g. Fewsmith, Dilemmas of Reform, pp. 225-30.

There were even calls for a returned to planned prices. See Zhang Zhuoyuan, ‘Jiushi niandai Zhongguo jiage gaige zhanwang’, p. 272.

E.g. Hu Ping, the Minister of Commerce, see Reuters Money Report, 3 November 1990; Yao Yilin was already earlier winding down reform, see Fewsmith, Dilemmas of Reform, p. 226.


See e.g. Fewsmith, Dilemmas of Reform, pp. 225-30.

There were even calls for a returned to planned prices. See Zhang Zhuoyuan, ‘Jiushi niandai Zhongguo jiage gaige zhanwang’, p. 272.

E.g. Hu Ping, the Minister of Commerce, see Reuters Money Report, 3 November 1990; Yao Yilin was already earlier winding down reform, see Fewsmith, Dilemmas of Reform, p. 226.


59 Guo, Price Reform in China, pp. 113-7.

60 Tian and Qian, Zhongguo jiage gaige yanjiu, p. 362.


64 For a discussion of the strengths and weaknesses of the system see Zhang Zhuoyuan ed, 1992, Zhongguo shengchan ziliao jiage gaige (Reform of prices for production materials in China), Beijing: Jingji kexue chuban she, ch. 5.


66 Zhang Zhuoyuan, Zhongguo shengchan ziliao jiage gaige, p. 96.


68 Zhongguo shehui diaocha suo, Zhongguo guoqing baogao, pp. 172-3.


71 Zhu Yanfu, ‘Tongpei meikuang mianlin de kunji ng yu duice’ (The difficulties facing the state coal mines, and policies to deal with them), Zhongguo nengyuan 1993.7, July 1993, 12.


74 Hu Changnuan, ‘Meitan jiage de kaocha’, p. 149.

75 Tian and Qiao, Zhongguo jiage gaige yanjiu, p. 363; Zhang Zhuoyuan, Zhongguo shengchan ziliao jiage gaige, p. 181.


77 Tian and Qiao, Zhongguo jiage gaige yanjiu, p. 363

78 Tian and Qiao, Zhongguo jiage gaige yanjiu, pp. 360-3.

79 Albouy, Coal Pricing, pp. 8-9.


83 Kumar, China: National Market Development and Regulation, p. 33.

84 Ibid, p. 34.


For an extended discussion of this, and a comparison with the Chinese situation, see Ha-Joon Chang and Peter Nolan, eds, 1995, The Transformation of Communist Economies: Against the Mainstream, Houndmills: Macmillan Press.