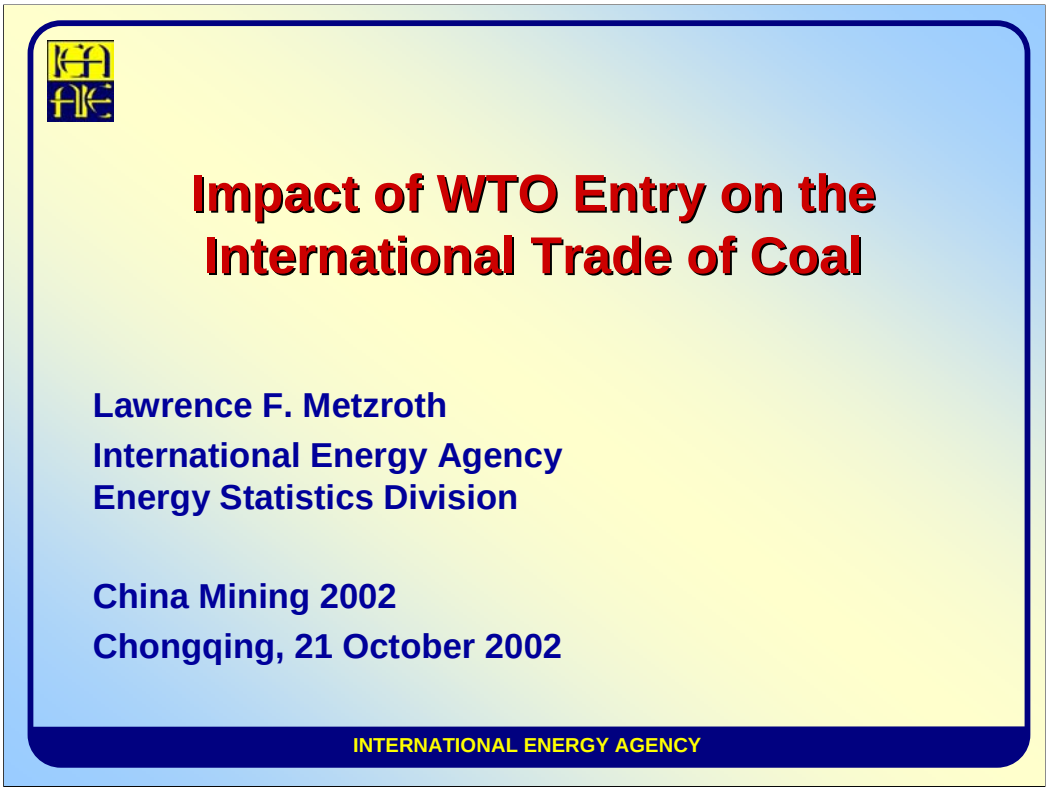


INTRODUCTION

I was asked to make a presentation to the China Mining 2002 Conference on the topic of "Impact of WTO entry on International Trade of Mineral Commodities." I have taken the liberty of modifying my assigned topic somewhat--to "Impact of WTO Entry on the International Trade of Coal," because that is where I have some experience and expertise. I hope that this modification will not let this panel on Opportunities and Challenges for China's Mining Industry down. I believe that there are lessons for all those active in the Chinese mining sector from the country's experience with the international trade of coal. Indeed, the expansion of the international trade of coal during the period when China's membership in the World Trade Organisation (WTO) was being finalised and adopted, suggests that the experiences of the Chinese coal industry in the international forum may be harbingers of those to come for other segments of the mining industry.

It is my hope that the other members of this panel can use some of the points raised in my presentation to underscore and reinforce points in their presentations, which will likely range into other segments of Chinese mining.

In this presentation, I will endeavour to follow this structure:

First, I will review Chinese international coal trade activity for the past few years with a focus on the export of steam coal;

Second, I will attempt to summarise some factors relating to practices in the Chinese export coal sector which grow in importance as full integration of China into the WTO is achieved.

Third, I will examine recent experiences with some of these factors and practices in China and in the coal sectors of countries which compete with China in the international steam coal trade.

Finally, I will speculate briefly on the way forward for Chinese international coal trade--and hopefully provide some grist for the mills of the other panellists.

CHINESE COAL EXPORTS

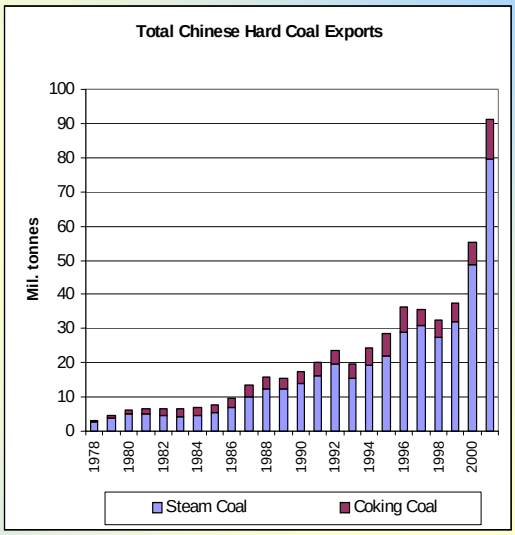
The surge of Chinese coal exports since 1998 has been one of the most dramatic developments in world energy markets, and has had an especially strong impact upon Asia/Pacific energy markets.

In 2001, Chinese coal exports reached a record of nearly 91 million metric tonnes, and based upon Chinese trade statistics, returned over US$ 2.5 billion of revenue to the country. The increase in 2001 over 2000 was 65.2%, from 55.1 Mt to 90.9 Mt.

When growth is viewed from the late-1970s to the present, the significance of recent increases is apparent. Chinese coal trade has moved from mainly trade with nearby countries governed by bilateral agreements to a strongly market oriented relationship where four government-owned Chinese trading companies bid on coal tenders published by public and private sector coal consumers throughout the Asia/Pacific region on a regular basis.

Chinese Hard Coal Exports are Expanding Rapidly

- Since the mid-1990s, Hard coal exports have increased at an annual rate of 18%
- In 2001, hard coal exports expanded 65.2%--from 55.1 Mt to 90.9 Mt
- Since 1994, China has moved from the 7th ranking to the 2nd ranking world coal exporter



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Coal Export trade has moved from less than 10 Mta before 1987, to the 25 Mta range between the late-1980s and mid-1990s, to over 30 Mta between 1996 and 1999. In 2000 and 2001, it increased sharply, taking China to the 2nd ranking world coal exporter from the 7th ranking exporter in only seven years.

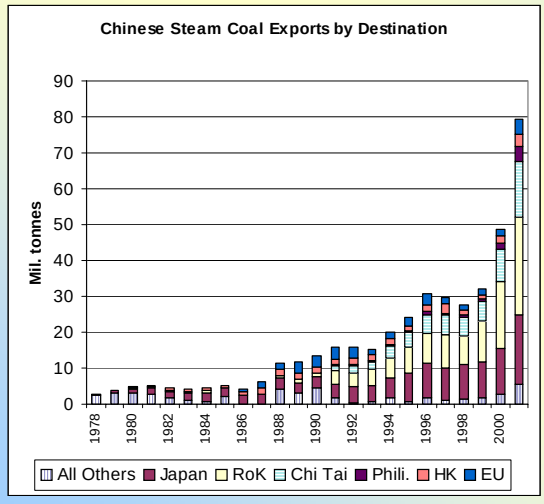
As the figure on this page indicates, by far the strongest increase has been experienced with steam coal exports; although coking coal exports have increased as well--especially in 2001 when they increased 78%.

The increase of steam coal exports mirrors strong growth in demand for steam coal in the past few years. The growth has been especially strong in the Asia/Pacific market where many countries have growing economies which has stimulated increased industrial coal demand, and especially increased demand for coal-fired electricity generation. In a sense, the Chinese coal industry was in the right place, at the right time to capitalise on this demand surge. After languishing throughout the late-1990s, world hard coal demand experienced the strongest growth in 2000 and 2001 since the first half of the 1990s.

Growth in key Asia/Pacific markets was particularly strong--reaching double digit proportions in many countries.

To some extent, it should be understood that this strong demand growth may have mitigated against disputes related to regulation and market practices in key competing countries. As the saying goes, “a rising tide floats all boats,” and indeed

Recent Efforts Focus on the International Steam Coal Market



- The vast majority of hard coal export volume is steam coal which increased 63.5% in 2001
- Although strong everywhere, the strongest effort is in the Asia/Pacific steam coal market
- The primary focus has been on five locations:

Location	Percent Growth 94-01	00-01
Japan	14.2	54.9
Rep. Of Korea	20.4	44.3
Chinese Taipei	21.7	74.0
Philippines	41.7	112.0
Hong Kong	13.2	78.0

INTERNATIONAL ENERGY AGENCY

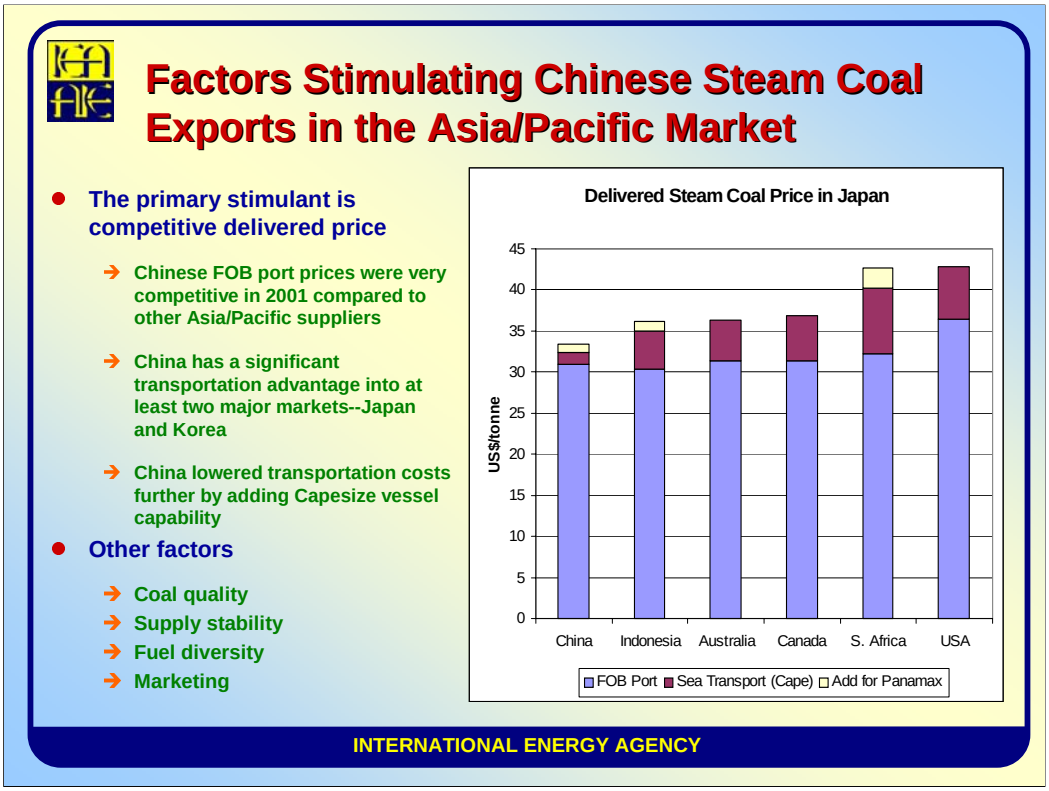
many of the major competitors in the Asia/Pacific steam coal market were too busy mining and shipping coal to pursue issues related to fair trade in 2000 and 2001.

This may not continue to be the case in the steam coal market, nor is it the case in the coking coal market. Indeed, because of its linkage to the integrated steel sector, coking coal demand is far less volatile than steam coal demand, and has experienced muted growth. A strong foray into this market by Chinese coal producers may serve as a catalyst to bring issues related to fair trade immediately to the top of the agenda among its competitors in world coking coal markets.

A comparison of the delivered price of spot steam coal into Japan from the major suppliers in the Asia/Pacific market in 2001, shown in the chart on the next page, underscores the price competitiveness of Chinese steam coal in this market.

At around US$31 per tonne, a 6,200 kcal/kg steam coal was the second lowest cost product available FOB port. Although it is about 2% above the FOB price of a comparable Indonesian product, it is 1.3% below comparable Australian and Canadian steam coals and 4.5% below a comparable South African steam coals. It is a whopping 18.5% below the FOB price of a comparable US steam coal.

When sea-going transportation costs are added, the competitiveness of the Chinese product is significantly enhanced. Even the addition of extra costs for shipping in smaller Panamax-size vessels, rather than capesize vessels,



does not impugn the delivered price competitiveness of the Chinese coal. China opened the door to capesize shipments in 2000 when the port of Qinhuangdao was upgraded to handle cape-size vessels. Plans are to upgrade at least two other ports in the next few years to handle capesize vessels. In the illustration above, Indonesia and South Africa are shown with the cost of smaller vessels indicated because some coal shippers must use facilities without capesize capability. In Australia, Canada and the US, all coal shippers would be able to use capesize if the coal consumer can receive these vessels.

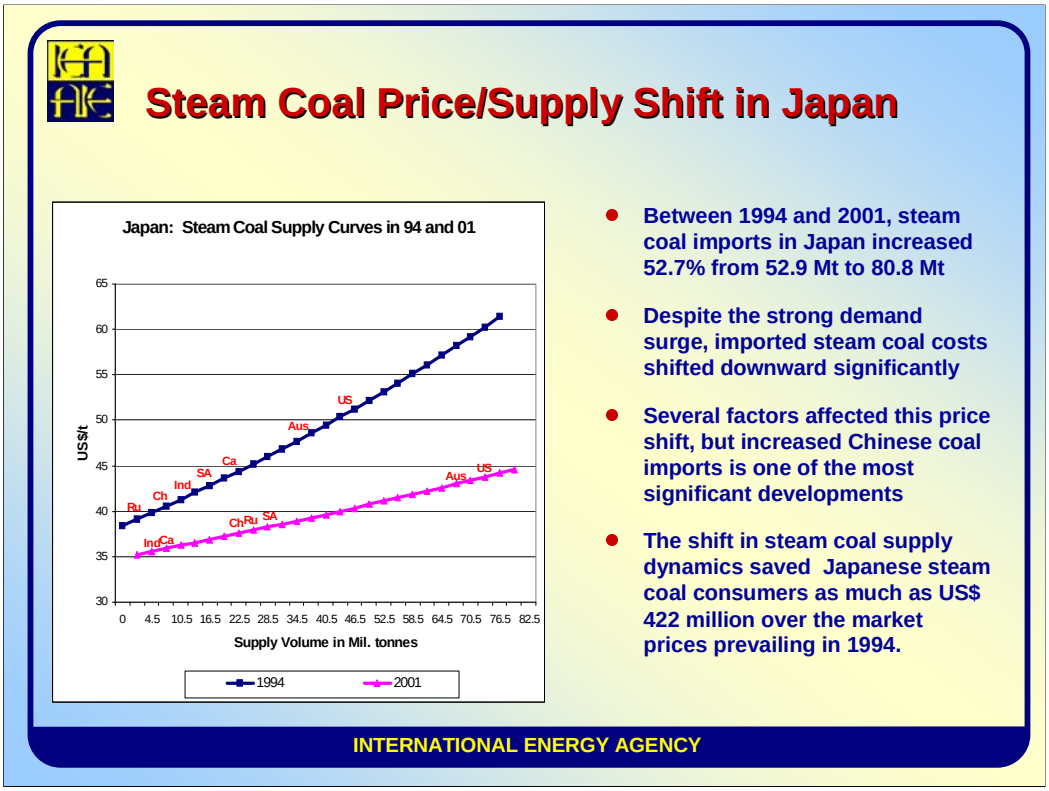
Coal Origin	Import Price	Difference from Chinese	% Difference
China	$33.42	$0.00	0.0
Indonesia	$36.09	$2.67	7.4
Australia	$36.35	$2.93	8.1
Canada	$36.94	$3.52	9.8
S. Africa	$42.73	$9.31	25.8
US	$42.82	$9.40	26.0

Although delivered price is, perhaps one of the most important factors affecting coal competitiveness, consumers also have other issues which can be addressed by Chinese coal producers. Perhaps the most important non-price issue is coal quality. The development of a production base of large, state-owned mines, with quality control procedures and state-of-the-art preparation plants has permitted the Chinese to improve coal quality and maintain it on a sustained basis.

Coal Origin	Cal. Value Kcal/kg	Sulphur (%)	Ash (%)
China	6,200	0.80	10.0
Indonesia	6,200	1.00	10.0
Australia	6,300	0.80	13.0
Canada	6,100	0.60	14.0
S. Africa	6,200	1.00	16.0
US	6,300	0.80	12.0

In addition to port expansion, Chinese coal producers have been supported by the state-owned railroad in securing adequate rolling stock and power to ensure that coal shipments are made on schedule, and are not disrupted by transport constraints. Further, many of the countries that have increased their Chinese steam coal imports have a desire to increase their coal supply diversity, and are amenable to moving business to new market entrants. Finally, the Chinese coal trading companies have maintained a sustained effort to participate in market activity, by bidding on supply opportunities, participating in conferences and other market events and by formally approaching major coal consuming companies active in international steam coal markets.

To further illustrate the impact that delivered, or landed price has on steam coal markets, I would like to look a two key markets in the Asia/Pacific region a little more closely. I do this because it is important to understand the affect that entry of a new low cost supplier into these markets has had on the relative position of other steam coal exporters.



Steam coal imports into Japan increased from 52.9 Mt in 1994 to 80.8 Mt in 2001. The increase was stimulated primarily by coal consumption for electric power generation.

In the face of sustained demand growth, the import price of steam coal into Japan declined steadily over the seven-year period, and was 13.5% lower in 2001 than in 1994. Most market analysts agree that the following factors militated toward price decline:

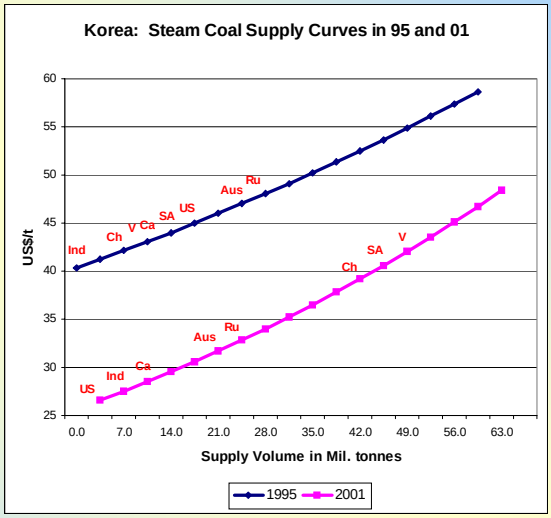
- A move away from "reference pricing" of Japanese steam coal imports
- An increase in the volume of imported steam coal purchased on the spot market
- Somewhat weaker world steam coal prices and lower freight rates
- An increase in the consumption of competitively priced Chinese coal

Although several factors affected this price decline, most analysts attribute a major part of the downward import price pressure to the increased availability of Chinese steam coal.

The competitiveness of Chinese steam coal resulted in the shift of the imported steam coal supply curve, as illustrated in the figure above. The downward shift of prices saved Japanese coal consumers as much as US$ 422 million in 2001 compared to the market price structure that existed in 1994. From a competitors perspective, other supplying countries are looking at a lower market price structure and more competition for market share when they approach the Japanese steam coal market.

Steam Coal Price/Supply Shift in Korea

- Between 1995 and 2001, steam coal imports in the Rep. of Korea increased 80% from 29.5 Mt to 46.6 Mt
- In the face of this demand surge, steam coal costs shifted downward significantly
- Increased Chinese coal imports were the most significant stimulant of this shift
- The shift in steam coal supply dynamics saved Rep. of Korea coal consumers as much as US$ 434 million over the market prices prevailing in 1995



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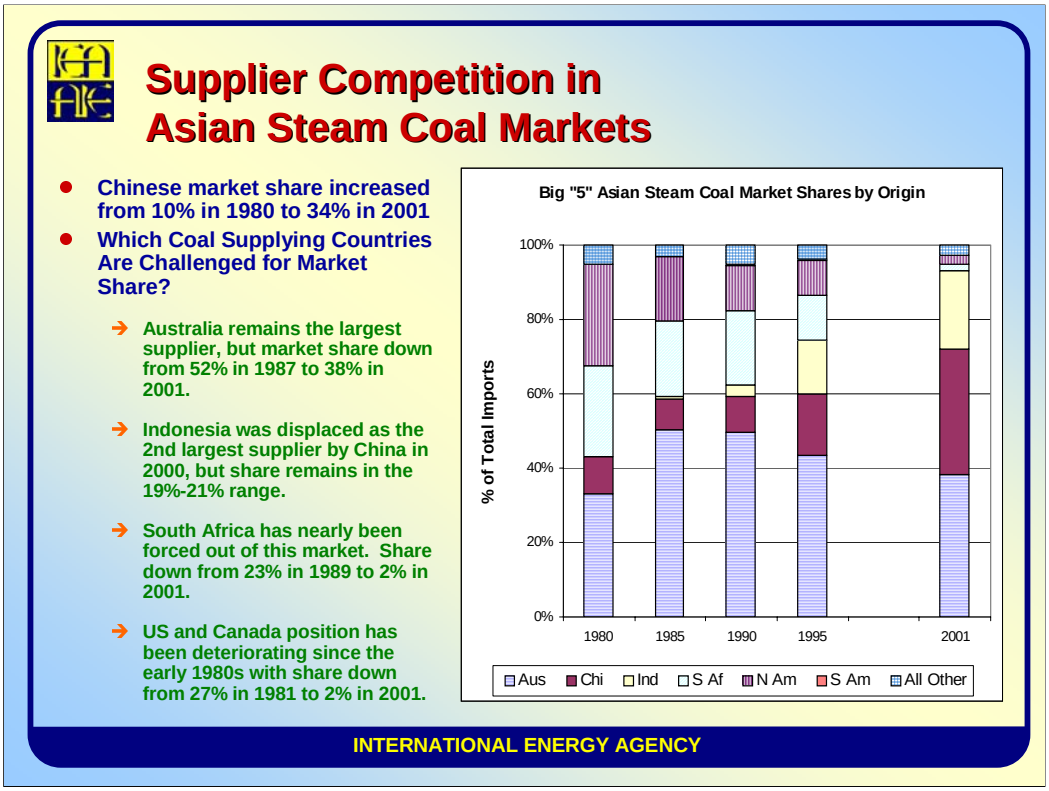
A similar comparison in the Republic of Korea (South Korea) shows an even more dramatic shift in the steam coal price/supply conditions.

Steam coal imports into South Korea increased from 22.5 Mt in 1994 to nearly 47.1 Mt in 2001. As in Japan, the increase was stimulated by a dramatic expansion of coal-fired electricity generation.

In the figure above prices and volume from 1995 are used to derive the earlier supply curve, because import price data are not available for 1994. In the face of demand growth of over 109% between 1994 and 2001, the import price of steam coal declined sharply between 1995 and 2001--by 21.8%.

The competitiveness of Chinese steam coal stimulated the shift of the imported steam coal curve as illustrated in the figure above. The resulting downward shift of prices saved South Korean steam coal consumers as much as US$ 434 million when compared to the market price structure that prevailed in 1995. Again, from a competitor's viewpoint, the South Korean market has moved to a lower price structure with more competition for market share.

These market dynamics have been repeated throughout the Asia/Pacific region, and especially in the key five markets that were mentioned previously. Chinese steam coal producers, shipping through ports on the northeast China coast, enjoy a significant transportation advantage over Australian and South African coal suppliers in all five markets. While China's transportation advantage is not so secure versus Indonesia, it does enjoy an advantage into at least three of the five locations, and a significant coal quality advantage over many Indonesia coal producers.



The figure above illustrates the impact that landed price competitiveness, along with subordinate market factors, has had on the position of Chinese steam coal suppliers in the Asia/Pacific market.

In 1980, this market was split between Australia, South Africa and North American coal suppliers. China's relatively small share was due mostly to bilateral trade agreements with Japan and a few other countries.

From the mid-1980's to the early-1990's, China's share in the market declined significantly as Indonesia entered the market and began taking market share from South African and North American suppliers. Australia's position as market leader grew stronger.

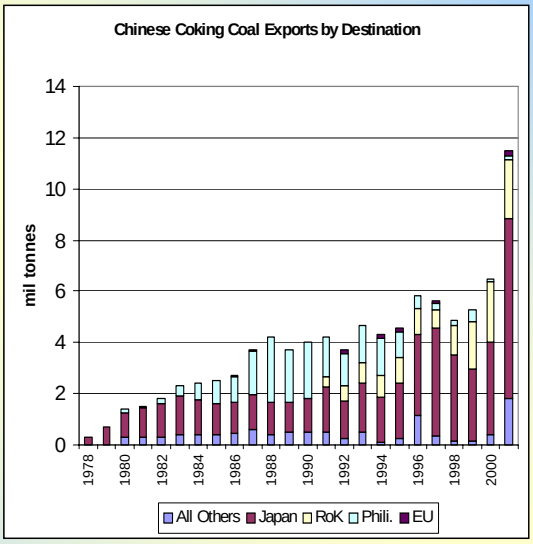
However, after the mid-1990's, China's surge into the Asia/Pacific steam coal market is dramatic. Although Australia clings to its position as market leader, China came within 4 percentage points of displacing it in 2001. North American and South African suppliers, suffering from the greatest transportation disadvantage, and relatively high FOB prices, have nearly been forced out of this market. Indonesia has expanded its market share, but much more slowly between 1995 and 2001 than between 1990 and 1995.

In the realm of WTO and "free and fair" trade then, the nations which are likely devoting the most scrutiny to the market dynamics today are Australia and Indonesia, since they are more likely interested in maintaining their respective market positions. South Africa and the United States have experienced declining market share even before China's recent foray into the market, and likely realise that their market share losses are due to factors other then China's entry into the market or trade practices.

Some Effort on International Coking Coal Markets

Coking Coal represents only 12.6% of the export volume, but.....

- **Coking coal exports increased faster in 2001-- 77.8% compared to 63.5%**
- **Several key Asian markets are large coking coal consumers**
- **Because of market dynamics, coking coal can serve to introduce Chinese coal in more diverse markets**



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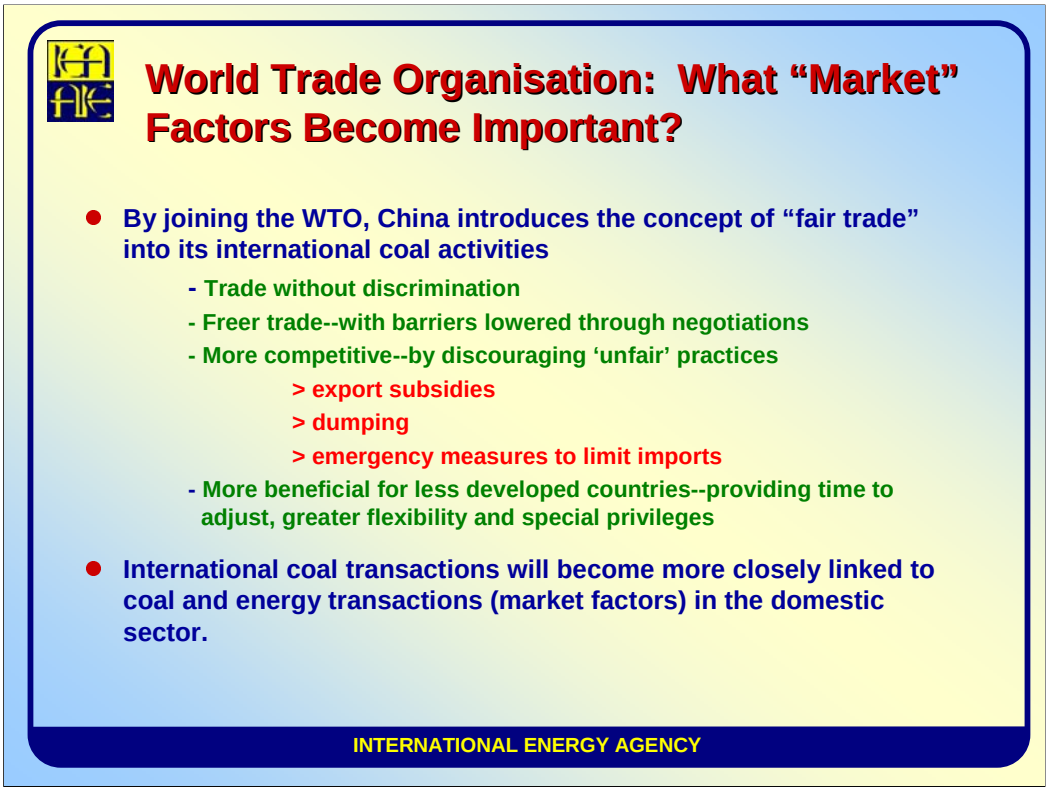
Although I don't want to spend very much time on coking coal, I believe that it is likely that unfair trade practices could be raised in the international market sector whether steam coal trade becomes an issue or not.

In 2001, Chinese coking coal exports increased by nearly 78% from 6.5 Mt to 11.5 Mt.

The greatest increases were in the Japanese and Korean markets, which heretofore have been dominated by coking coal suppliers in Australia and Canada.

Chinese coal producers have also shown interest in coking coal markets in India, Brazil and the European Union. These markets are currently supplied by Australia, Canada and the US.

Because coking coal markets are far more stable than steam coal markets, and do not exhibit the strong growth characteristics, coking coal producers tend to "guard" their coking coal markets more jealously. If a similar degree of market penetration by the Chinese occurs in the international coking coal sector, the issue of unfair trade practices in coal markets could rise quickly to the top of the agenda.



WTO PARTICIPATION AND KEY MARKET FACTORS

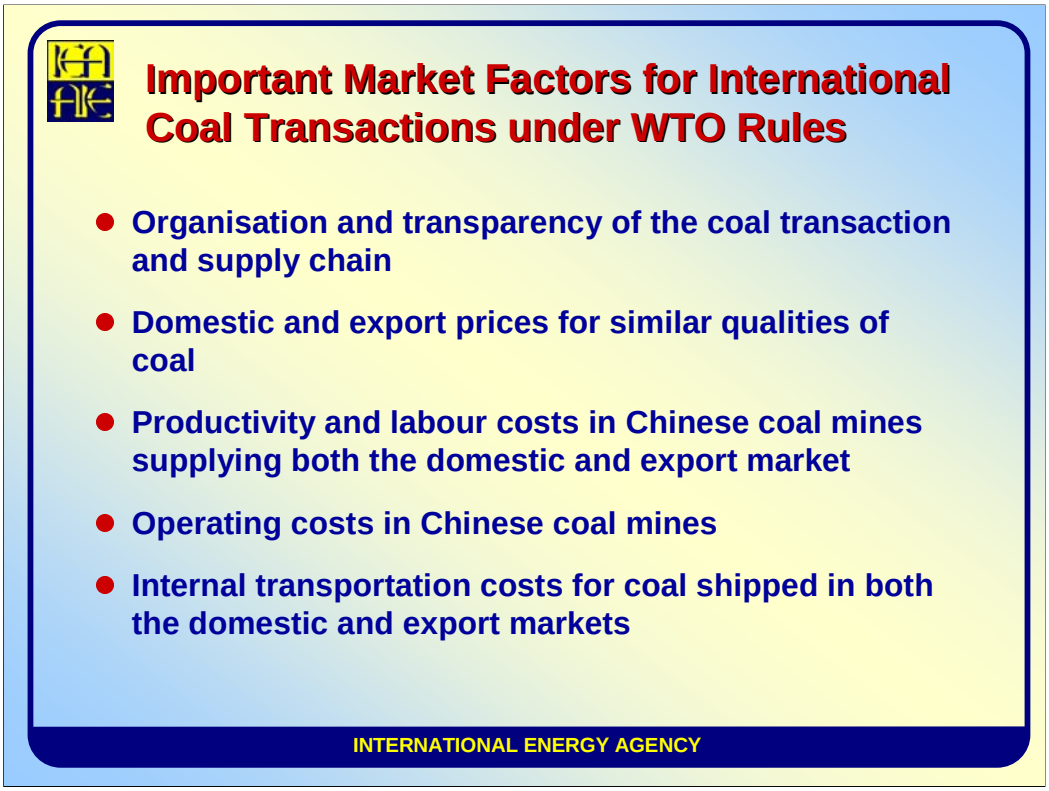
The accession of China to the WTO introduces the concept of "fair trade" into its international trade of mineral commodities generally; and, into its international coal activities specifically. Since the expansion of international coal trade pre-dated China's accession to the WTO and is ongoing as the country is integrated into the organisation, the coal industry may be considered a pioneer in China's era of free trade.

Under WTO agreements, countries cannot normally discriminate against trading partners by offering special favours. Further, trade barriers--both tariff and non-tariff barriers, like export and import licensing arrangements, are expected to move from being arbitrary and intrusive towards contingency and deactivation. Trade becomes bound to commitments to reduce barriers and increase market openings.

A key feature of "fair trade" is the introduction of competition by reducing unfair practices such as export subsidies and dumping to gain market share. Also, WTO members are encouraged to lower their reliance on measures to limit imports that may have previously been justified by national or regional employment disruption and other supply and demand related emergencies.

Finally, the WTO recognises some of the disadvantages that developing countries face over developed countries, and provides more time to adjust their markets by applying standards more flexibly and granting special privileges.

The net affect for Chinese international coal trade is that transactions in the international sector will be come more closely linked to coal and energy transactions and practices in the domestic sector.



This means that Chinese coal suppliers, and supporting industries and the Chinese government, will need to supply on a sustained basis, statistics which reveal the organisation and activities throughout the entire coal supply chain.

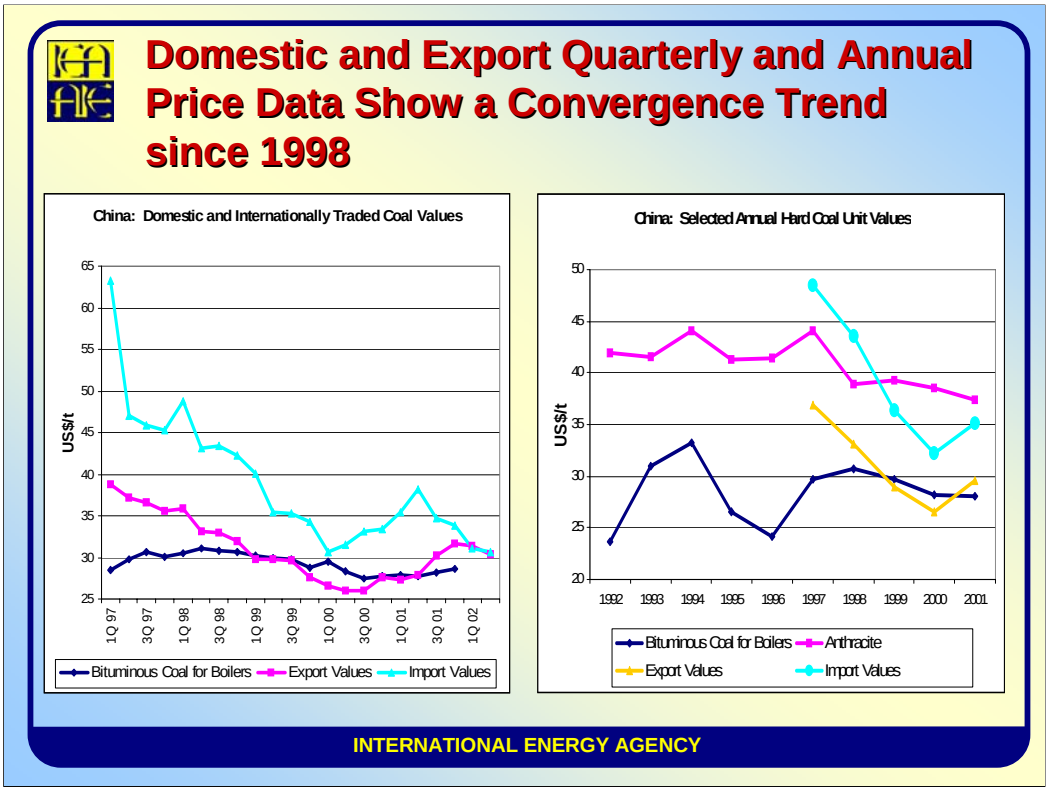
This will include, at a minimum:

- Domestic and export prices for similar qualities of coal
- Productivity and labour costs in mines supplying both domestic and export markets
- Operating costs in Chinese coal mines
- Internal transportation costs for coal shipped in domestic and export markets.

Safeguards against dumping, subsidies and "countervailing" duties, and emergency measures to limit imports requires that a body of statistical data be available to ensure some measure of market transparency.

Only with such data can such activities be proved or disproved.

I would like to examine, briefly, current practices in China, and correlate them with some "anecdotal evidence" that has been published in the popular and coal industry press to illustrate where changes may be required for China to fully comply with the spirit of WTO membership.



Price Comparisons

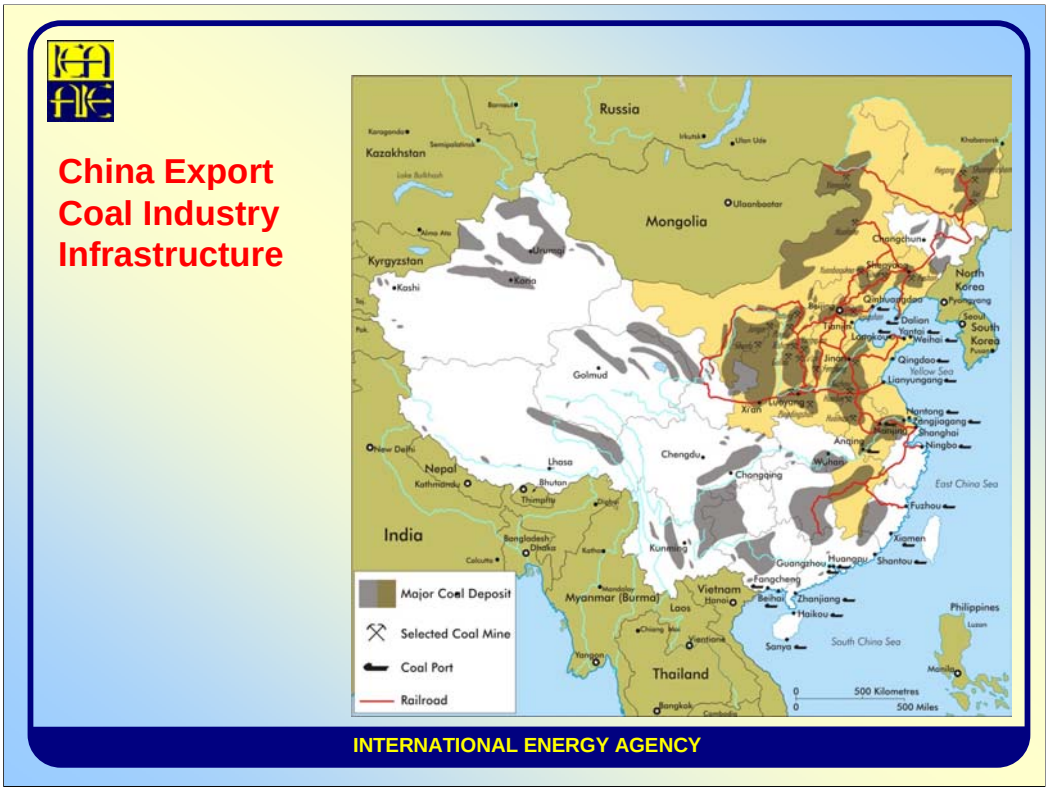
One calculation that can be used to validate or disprove a claim of dumping is based upon the price in an exporter's domestic market compared to the price it is charging in its export markets.

Price data on Chinese coal exports and imports are available on a monthly basis--although they are not separated into steam coal and coking coal categories. Quarterly domestic price data on steam coal for boilers and anthracite are also available from 1997, but the methodology of collection, point of measurement and the detail from which national level data are aggregated are unclear. Nevertheless, the data do offer an opportunity to compare domestic steam coal prices to coal export and import values.

The figure on the left above shows the quarterly trend since 1997 of import coal values, export coal values and domestic coal for boilers prices. The data show a clear trend to converge around US$ 30 per tonne--especially in 2001 when Chinese coal exports and imports surged.

The figure on the right shows the annual trend since 1992 of domestic bituminous coal for boilers and anthracite, and import and export coal values since 1997. On an annualised basis, the convergence of export values and and domestic bituminous coal are obvious beginning in 1998. The convergence of import values is not as strong, but is also present. The relationship of domestic anthracite prices to any of the other price trends is very weak.

While these data offer some potential for conclusive discussions about dumping, and suggest that China is moving into a relative "fairer" posture regarding coal exports, the lack of definition and scarcity of detail would mitigate against their sole use in WTO proceedings on Chinese coal trade.



Supply Costs

An alternative to comparing export values to domestic prices is to calculate a price based upon the exporter's production costs, other expenses and a normal profit margin. In the case of the Chinese coal industry, these costs and expenses would be derived from statistical data and anecdotal information on the country's coal industry infrastructure.

This map shows coalfields in China and major ports of coal entry and exit. The light yellow shaded area indicates those provinces of China where most export steam and coking coal originate. The shaded area includes thirteen provinces which were responsible for 86% of Chinese coal production in 2001. The red lines indicate the rail routes that are employed to move coal from the producing sites to domestic markets and export points. Chinese export coal values are measured FOB at the port of exit, and include the following elements of the "coal chain:"

Production costs

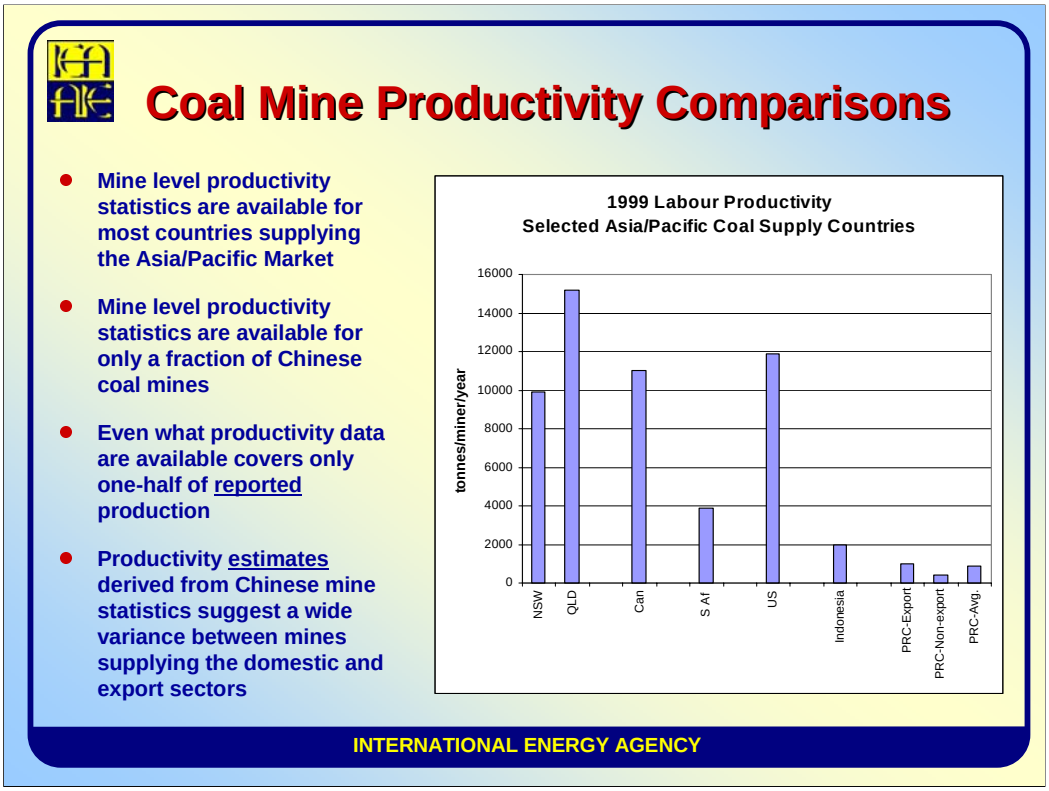
Rail costs

Port storage and handling costs

Details on each of these elements are required to calculate a "normal" price based upon supply costs and a profit.

Supply Costs--Mine Productivity

A key indicator of coal production costs is mine productivity--often expressed in tonnes/miner/shift, or tonnes/miner/year. To be valid for a thorough analysis of domestic and export coal costs and expenses, these productivity data should be provided on the mine level--i.e. productivity of each mine supplying coal to the domestic and export sector. Mine level productivity data are available

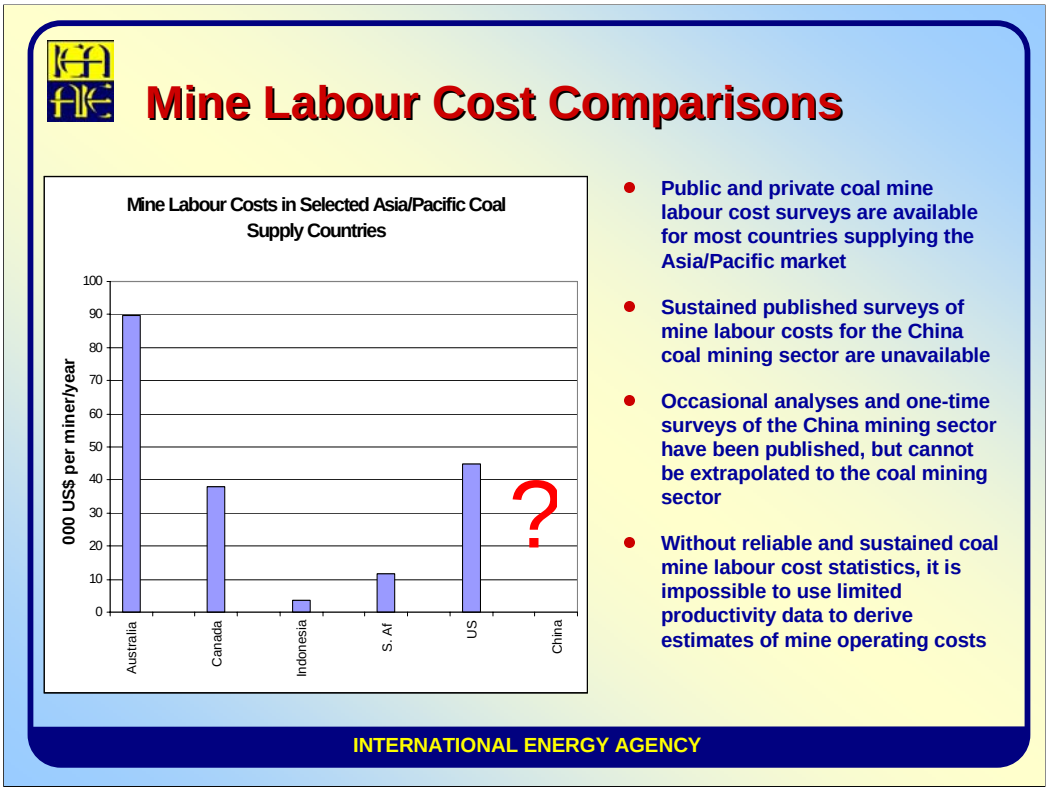


most countries supplying the Asia/Pacific market, including Australia, Canada, South Africa, the US, and Indonesia. These data have been collected regularly by several private, public and international agencies, including the IEA, which has published tonnage-weighted aggregated productivity data in ***Coal Information*** since 1994.

Incomplete productivity data are available on Chinese coal mines. Although aggregate production, and total workers data are published in the ***China Coal Industry Yearbook***, the methodology for calculating this changed in 1996, when only aggregate employment from state mines was reported. Prior to this, aggregate employment for all mines was reported. In 1999, mine level productivity data are published for 61 (out of an estimated total of 42,000!) mines. Province level productivity data are published for twenty provinces and regions (out of a total of 29 which report production). The province and regional level productivity data do not include all mines. Based upon the details of the tonnage reported in the ***China Coal Industry Yearbook***, coverage of productivity can be summarised as follows:

Summary of Coverage of 1999 Chinese Coal Mine Productivity Statistics

Provinces and regions reporting some productivity data	**Covered Prod.**	**Total Prod.**	**% Coverage**
	(million tonnes)		
Exporting (12 out of 13)	441.6	790.7	56
Non-exporting (8 out of 16)	77.0	252.9	30
Total China	518.6	1,043.7	50

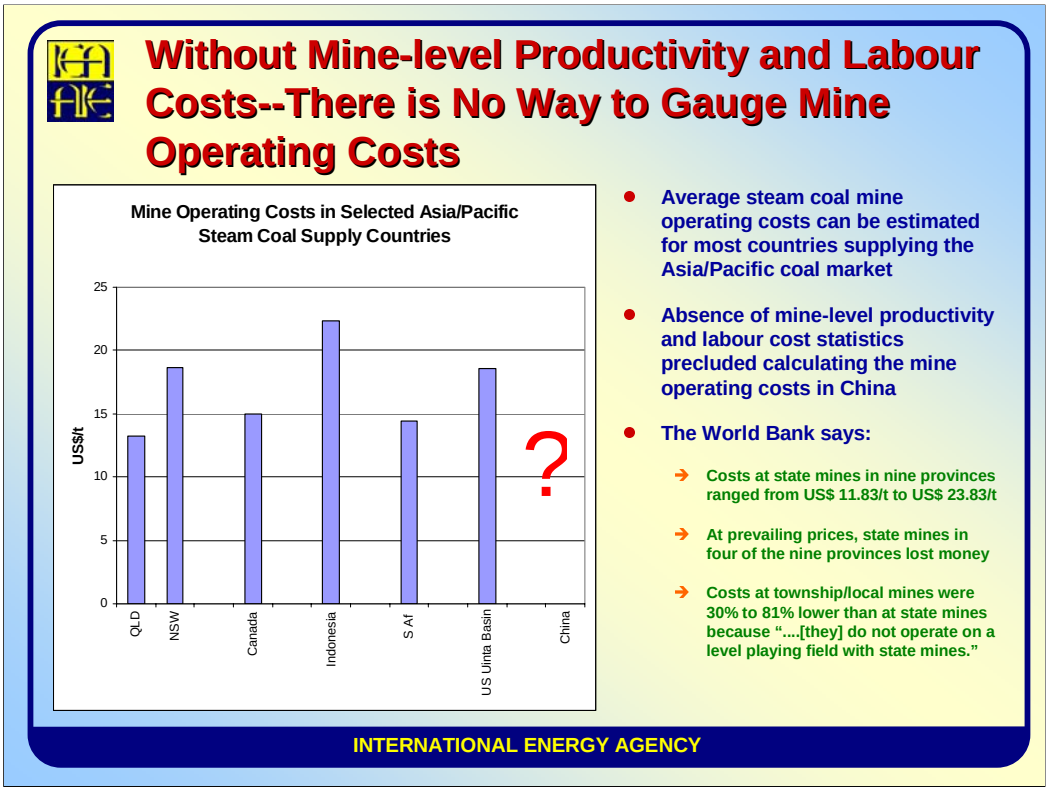


Thus, productivity coverage, even at the province and regional level is only for 50% of total production, although it is higher in exporting areas than in non-exporting areas. These incomplete data show the productivity difference between exporting and non-exporting areas to be significant--non-exporting areas have productivity some 132% below the exporting areas and 112% below the national average. On the surface, such a wide discrepancy would suggest that much higher cost production is being withheld from the export market, although this is difficult to substantiate with such limited data. At the very least, it underscores the problems that could occur unless current productivity data standards in China are improved.

Supply Costs--Mine Labour Costs

Most countries supplying the Asia/Pacific coal market provide statistics on mine labour costs. This is true of Australia, Canada, South Africa, the US and Indonesia. These data have been collected regularly by several private, public and international agencies, including the IEA, which has published average mine labour costs in ***Coal Information*** since 1994. These data for 2000 are summarised in the figure above.

While there are periodic data and estimates of coal mine labour costs available for China which have been published by the World Bank and the International Labour Office, these data are often on the mining sector as a whole (rather than just the coal mining sub-sector), or are based upon special one-time surveys or analyses. Although the ***Chinese Statistical Yearbook*** does report some wage and employment data on a regular basis, these data also cover the mining sector as a whole and cannot be used as reliable indicators of labour costs in the coal sub-sector. Absent the availability of any reliable, sustained statistics on Chinese coal mine labour costs, it is not possible to use even the limited productivity data to derive mine operating costs.



Supply Costs--Mine Operating Costs

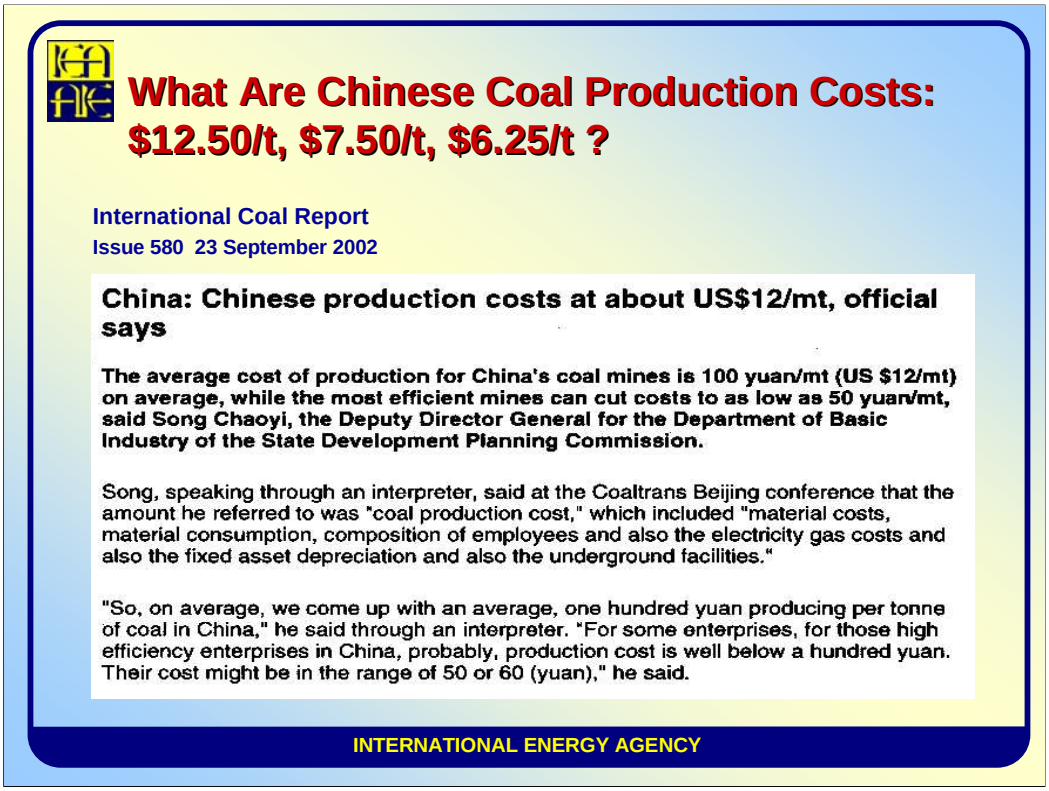
Coal mine productivity and labour cost statistics can be used to calculate mine operating costs. When those data are available at the mine level, a supply curve can be derived, and tonnage weighted average mine costs can be calculated.

Numerous private, public and international agencies calculate these mine operating costs, including the IEA, which has retained a consultant to calculate the mine operating costs and published the results in ***Coal Information*** since 1993.

The figure above summarises the mine operating costs for steam coal producers in countries that are key Asia/Pacific market suppliers. The figure illustrates the relatively wide range of operating costs which can exist among the key suppliers in a market and still permit them to be competitive when advantages and disadvantages in other parts of the coal "supply chain" are combined with the costs.

Since China does not routinely provided mine level productivity statistics, nor estimates of coal mine labour costs, there is insufficient data available to estimate costs at Chinese steam coal mines.

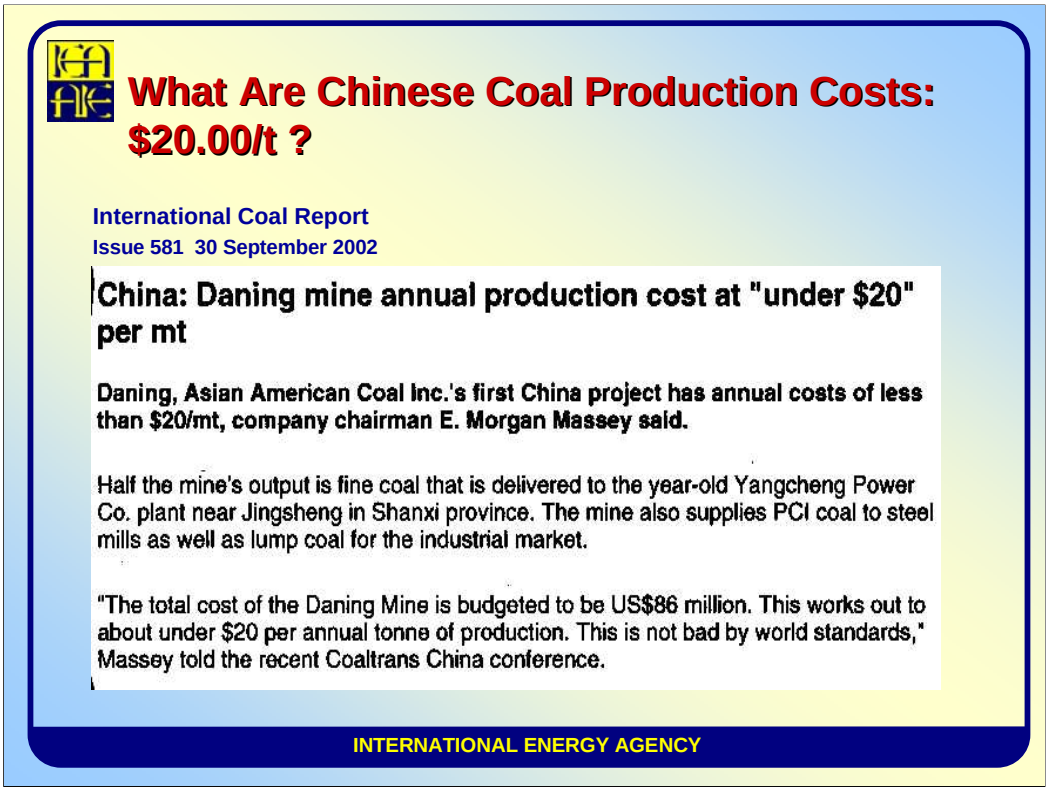
An ongoing World Bank study on clean coal technology deployment in China contains an informative section on coal production and distribution in China. Costs and prices at the provincial level are estimated for both state and township (small local) mines in nine provinces and regions. Seven of the nine areas are included in the provinces and regions that are designated as "exporting" provinces and regions used for the productivity analysis summarised in slide 15.



Cost and Price Differences Between State and Township [Coal] Mines

Province	Avg. Production Cost US$/t	Average Price US$/t	Difference
		State Mines	
Anhui	20.68	23.24	2.56
Guizhou	16.21	17.88	1.67
Hebei	19.23	15.96	-3.27
Heilongjiang	17.75	17.22	-0.53
Inner Mongolia	11.83	11.17	-0.66
Shaanxi	12.16	11.70	-0.46
Shandong	23.83	27.28	3.45
Shanxi	14.50	16.07	1.57
Sichuan	20.28	20.97	0.69

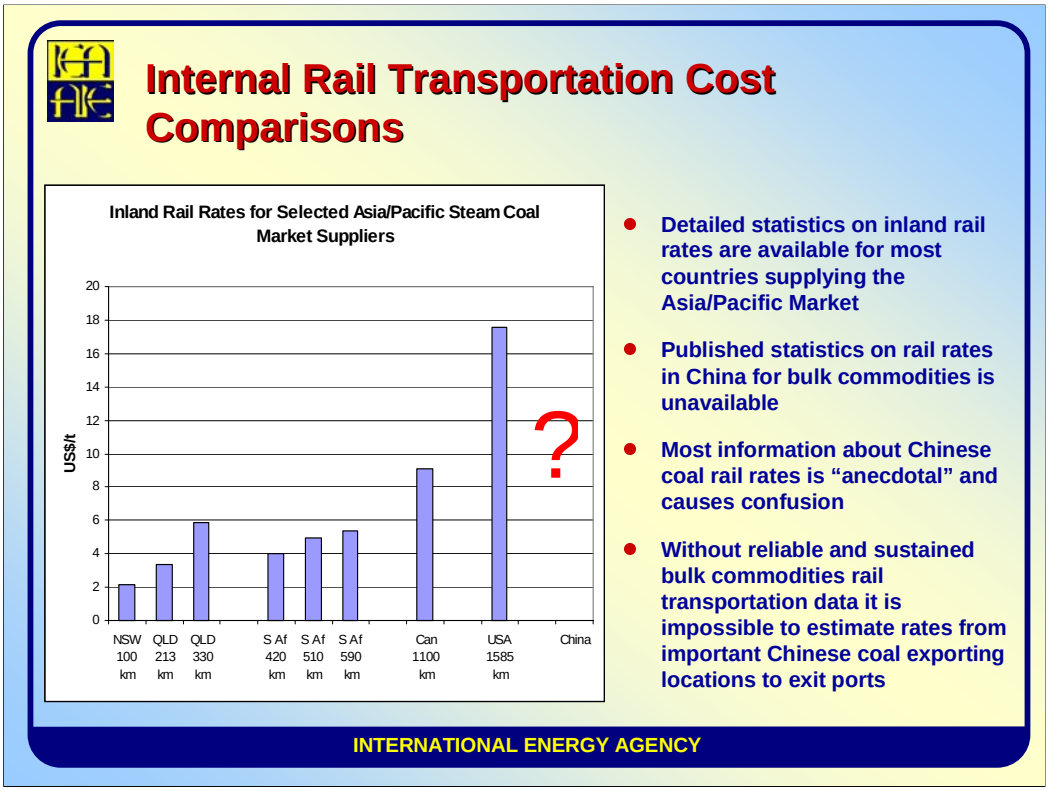
The source of the tables on state and township mines shown on this and the following page is cited as a “survey of township mines conducted by Ministry of Coal Industry” using 1995 data. Although the data are an interesting picture of production costs and prices in 1995, they do not fully cover exporting or producing provinces and regions. In fact, the provinces covered are responsible for less than 66% of 1995 production. Further, the data represent a period when Chinese coal exports were 28.6 Mt--about 31% of the level they reached in 2001.



Cost and Price Differences Between State and Township [Coal] Mines (cont'd)

Province	Avg. Production Cost US$/t	Average Price US$/	Difference
		Township (local) Mines	
Anhui	14.63	21.25	6.62
Guizhou	3.13	5.01	1.88
Hebei	8.75	12.50	3.75
Heilongjiang	8.91	7.93	-0.98
Inner Mongolia	3.68	5.00	1.32
Shaanxii	3.19	8.75	5.56
Shandong	17.50	21.88	4.38
Shanxi	5.07	6.26	1.19
Sichuan	8.37	11.10	2.73

The data provide some evidence to support the speculation in the coal industry press that costs range from US$ 6.25 per tonne to US$ 20 per tonne as illustrated in the previous figure and the figure above, but they do little to support estimates of costs and prices in 2001. From another perspective, they also indicate that the Ministry of Coal Industry conducted provincial and regional level cost and price surveys--even disaggregated into two categories of mines. However the report does not provide background on the methodology, frequency and availability of the survey statistics.



Two other conclusions that can be drawn from the statistics and narrative in the World Bank study are that some state mines were losing money at price levels prevailing in the domestic market in 1995. This suggests some level of subsidisation--indeed the study states that "...many mines sell coal at a loss, or at prices lower than the production costs. This difference if made up by government subsidies...." Secondly, the study concludes that small, local township mines do not operate on a level playing field with state mines, thus enabling them to sell coal at very low costs. Specific expenses that township mines avoid are: workman's compensation, safety rules, environmental rules, royalties, coal conservation costs, and many transport and access infrastructure costs which the state mines must cover. This suggests that not only is there subsidisation of the state mines, but cross-subsidisation from the state mines to the local township mines. Any, or all of these suggestions lend credibility to a claim that domestic and export pricing may not have been established on an equivalent basis--at least in 1995.

Supply Costs--Inland Transportation

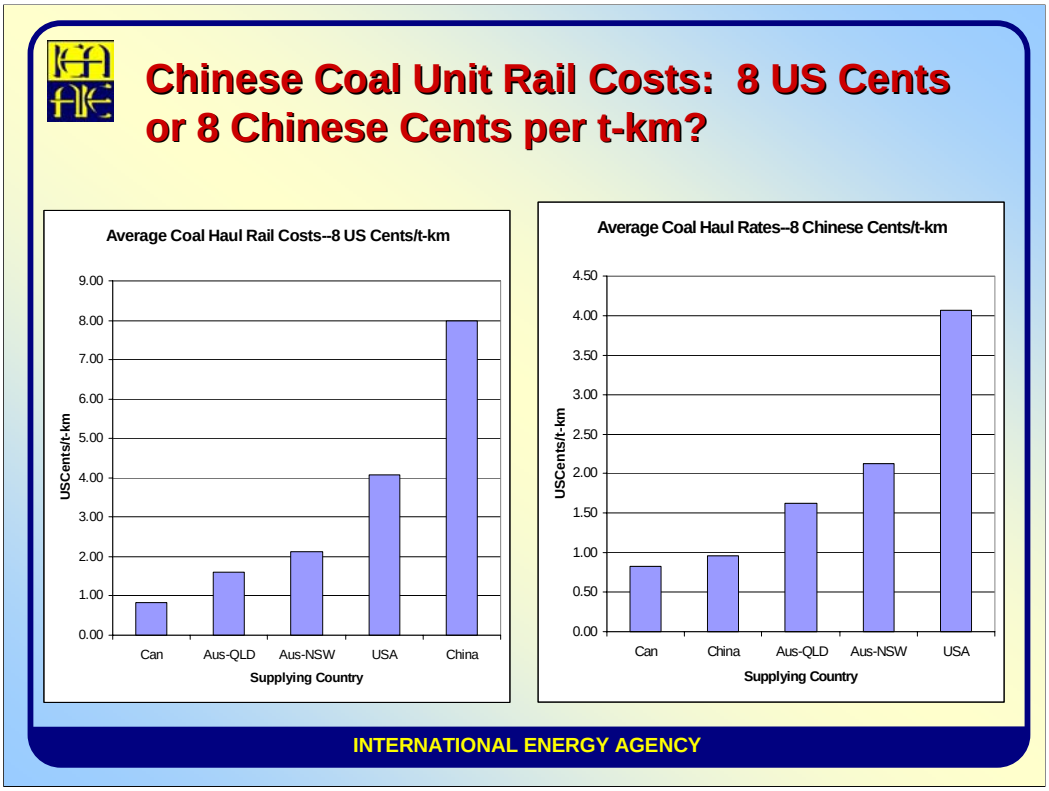
Another important part of the export coal supply chain consists of transport of the coal--usually by rail--to ports of exit. In some cases, the cost of transporting coal can equal or exceed the cost of producing it. While this causes inherent disadvantage, it may still be possible to compete effectively in international coal markets if other advantages like short ocean haul distances, coal quality, or low mine operating costs offset the inland transportation costs.

A survey of the inland transportation costs of most countries supplying the Asia/Pacific coal market is conducted by the IEA and has been published in ***Coal Information*** since 1994. Data from the survey for 2000 are summarised in the slide above. It is often unlikely that a single rail rate will apply to all coal movements in the export sector.

This is because the haulage distances from export mines often differ significantly, and one of the determinants of the transportation rate is haulage distance. Other significant factors are the difficulty of the terrain, the capacity of the rolling stock and power, costs and benefits for labour, the level of traffic on main export lines and fuel and maintenance of way costs. All of these factors, combined with haulage distance determine the final magnitude of the rail rate. As the slide on the previous page illustrates, some Asia/Pacific coal suppliers like Australia have the advantage of mines being located relatively close to the ports of exit resulting in lower cost rail hauls. Indonesia is not shown on the chart because many of the export mines are located adjacent to the sea and can load ocean going vessels after a short conveyor, truck or barge haul. Conversely, some shippers face haulage distances in excess of 1,000 km. If haul distances for the 13 regions and provinces shown on the map in slide fourteen are examined, Chinese coal exporters face a wide range of transportation distances. These haulage distances are summarised in the table the next page.

As the table suggests haul distances for Chinese export coal can vary from as little as 80 km to over 2,000 km. Clearly, if costs are reflected in the rail rates that apply to these haulage distances, they will vary significantly.

Unfortunately, there is little but anecdotal evidence, such as that which appears in the excerpt above from a coal industry publication, to estimate rail rates. Rail rates are derived from tariffs, railroad financial documents, official rail mileage tables and many other sources. In China it is nearly impossible to find any rail rate or costs statistics but for anecdotal information based upon speculation in the industry press and inarticulate pronouncements.



Estimated Haul Distance in km from Chinese Coal Mines to Exit Ports

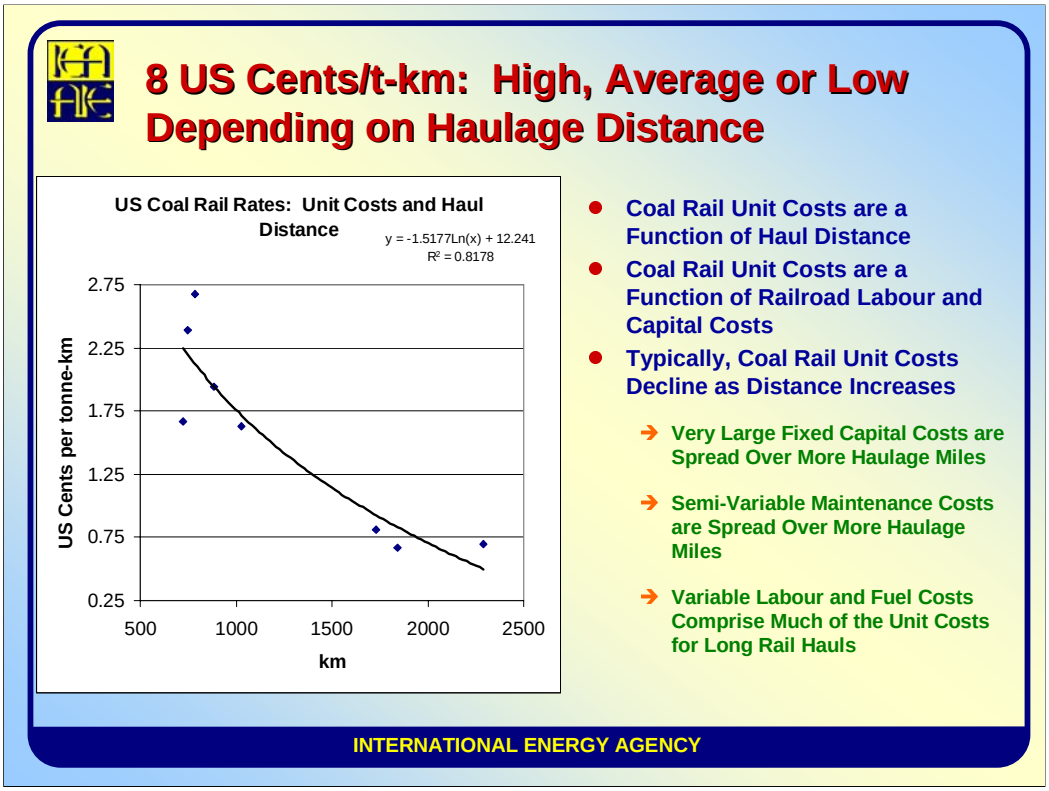
Region or Province	Low	High
Anhui	290	545
Beijing	125	225
Hebei	205	1,065
Heilongjiang	875	1,725
Henan	788	1,000
Inner Mongolia	1,100	1,350
Jiangsu	200	315
Jiangxi	700	950
Liaoning	450	650
Ningxia Hui	2,090	2,190
Shaanxi	1,215	1,590
Shandong	80	480
Shanxi	813	1,435

This information creates more confusion about Chinese coal transportation costs rather than clarifying the cost structure. For example, the statement attributed to a deputy director of the Railway Ministry in the previous slide suggests that 8 US Cents/tonne-km is the rate. However, if this rate is applied to some of the longer haul distances above, it yields rail rates above US$175 per tonne. Conversely, if it is applied to the shorter haul distances, it yields rates in the US$ 6 to US$ 10 per tonne range.

Although these rates are high in unit cost terms compared to the rates of other major Asia/Pacific coal exporting countries, they are, at least, believable. The two charts in the slide on the previous page are provided to illustrate the difference if the Railway Ministry official was misquoted (as sometimes happens in media reports). If Mr. Shi meant 8 Chinese Cents per tonne-km (equivalent to US Cents 0.0096) then the unit costs would be the second lowest of the major Asia/Pacific market suppliers. Such a unit cost would yield a rate of about US$ 21.11 for the longest haul distance listed in the table on the previous page. It would yield rates of US$ 10 to US$ 12 for hauls from some of the largest coal producing regions, and US$ 13 to US$ 15 from some of the most rapidly expanding coal producing regions. If, however, he meant 8 US Cents per tonne-km, it is by far the highest unit cost among the supplying countries--nearly double the next closest unit cost derived from US statistical data.

As the excerpt in the slide above indicates, 8 US Cents per tonne-km and 8 Chinese Cents per tonne-km could both be right. Given the wide variation in haul distances, a wide range of unit costs is to be expected.

The chart on the next page illustrates one of the principles of bulk commodities haulage--i.e. as haulage distances increase, unit costs of the haul decrease. The statistics used to construct the trend curve in the chart represent coal hauls in the US in 2000. As the trend suggests unit costs decline as haul distances increase because fixed and semi-variable costs, which represent a huge portion of total railroad operating costs, are spread over more tonne-km of haulage. Thus, although transportation costs increase as distance increases, they increase at a slower and slower rate.



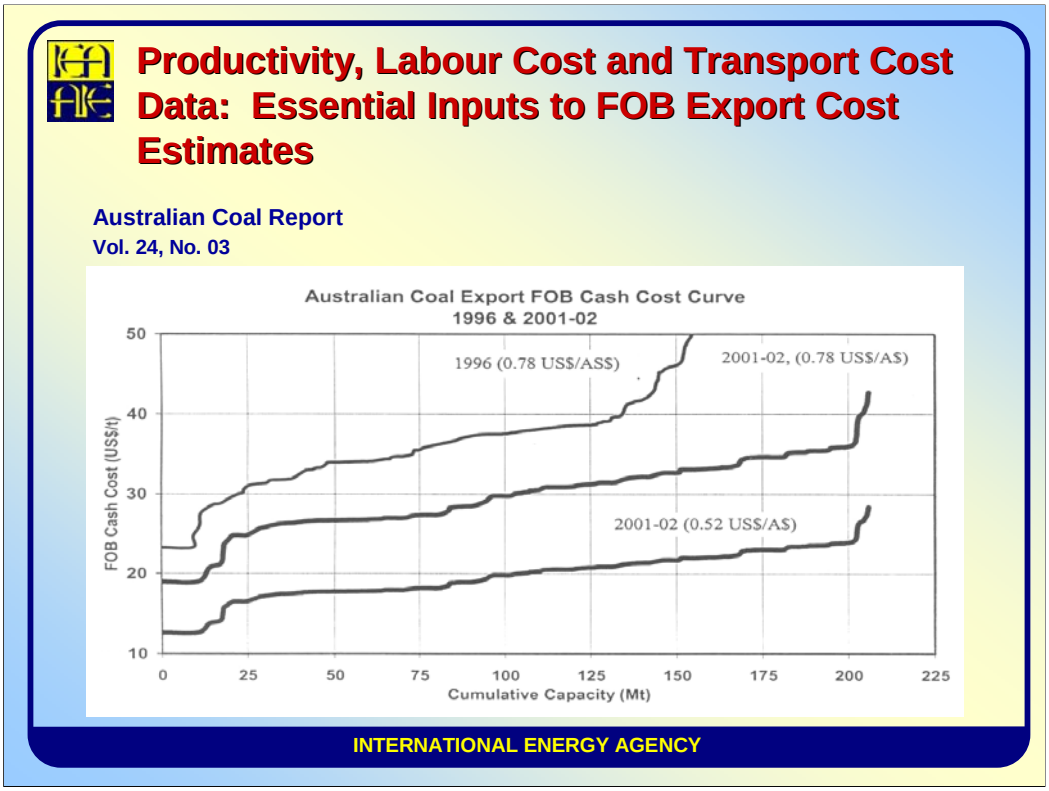
Although the trend curve above is not applicable to the Chinese rail conditions, such a trend curve can be derived if the appropriate statistical data are provided. As mentioned previously, these statistics should be available in railroad financial documents, tariffs, mileage tables and from surveys of coal shippers and port operators.

Although the focus of my discussion of information necessary to examine compliance with WTO anti-dumping, subsidy, countervailing duties and emergency measures to limit imports safeguards has focused upon prices, mine costs and inland transportation costs, several components in the coal supply chain could be examined, and a more thorough discussion of this is beyond the scope of this presentation. However, some areas which may be open for examination are:

- Port Handling and demurrage charges,
- Taxation and royalties
- Price differentiation related to coal quality
- "Normal" profit margins in domestic and export business
- Wheelage and other access charges
- Fluctuations in currency exchange rates

These are just a few of the issue areas which may come up in a proceeding to examine compliance with WTO safeguards.

I have provided the next slide to illustrate the value, and overall picture that good quality data and analysis can bring to a discussion of competitiveness and evolution of relative competitive advantage.



The chart above was developed by the publisher of the Australian Coal Report, Barlow Jonker Pty Ltd. to illustrate the affects that productivity improvements, lower rail charges and currency exchange rate movements had on the FOB cost of export coal in Australia. The difference between the top line and the middle line illustrates that productivity and transport improvements reduced the costs between 1996 and 2001 by A$ 4 to A$ 8 per tonne. Further, depreciation of the Australian dollar over the time period further reduced the costs in the world market.

These supply curves were derived using mine-level productivity, mine labour cost and mine-level transport cost data to respective ports of exit. These statistics are available from Australian state and federal government sources, coal industry groups, surveys of mine, railroad and port operators, and possibly some anecdotal information. However, reliance on anecdotal information is limited often to setting the tone of the findings and conclusions. Such an analysis rests on the availability and analysis of detailed and extensive market statistics that can be gathered from published sources and through routine surveys. As I have stated repeatedly, this information is available in most countries which export coal in the Asia/Pacific market.

Barlow Jonker Pty Ltd. also operates a consulting subsidiary that is recognised as a leader, and is especially competent to offer conclusions on Asia/Pacific coal markets. It will be a firm like this that puts together the case for another exporter who wants to rely on WTO safeguards to protect their coal exports from unfair trade practices. These consulting companies are good, and they will win if the Chinese side has insufficient reliable statistics and information to make its case.

My focus in this presentation has been relatively narrow, and mainly devoted to Chinese steam coal export activity, and some impacts to it from WTO entry. To sum up in this area, I think I can state a few conclusions I have drawn from my short, but intensive search into recent Chinese coal export activities.

I think the sharpness of the international steam coal market expansion in the last two or three years has precluded any high profile fair trade controversy because there has been sufficient business for most market players. However, fair trade could become and issue as expansion slows down due to economic dislocation, more stringent environmental regulations or other factors.

Domestic, import and export price data that are available from China provide some evidence that Chinese coal exporters have been moving toward fair trade as they expanded their market presence.

However, the picture provided by other statistics and informational sources leaves the issue unclear.

Lack of mine-level productivity data and labour cost statistics makes it extremely difficult to make defensible estimates of mine operating costs, and what little operating cost data I have found--albeit dated--suggests that some subsidisation is ongoing.

Finally, lack of statistical data on rail transport of bulk commodities makes it nearly impossible to accurately estimate coal rail rates.

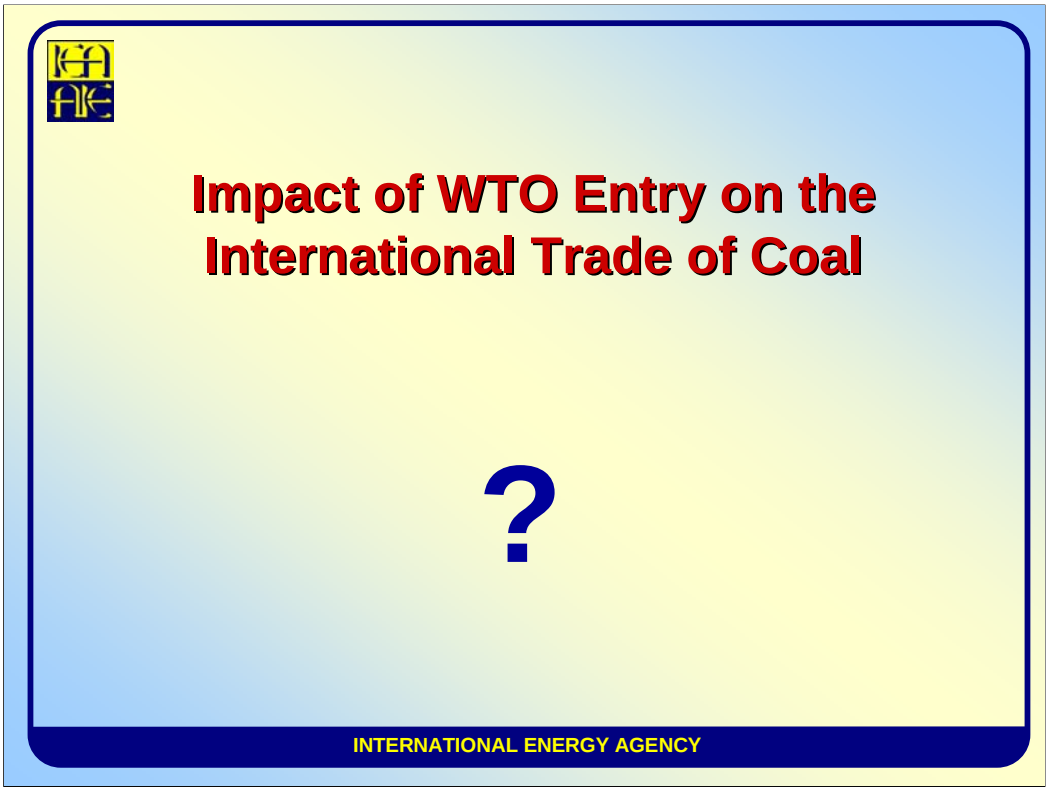
Before moving to suggestions about the way forward, I want to acknowledge that I accepted this engagement because it represented an opportunity to strengthen communication with principals of the Chines mining sector.

I am hopeful that a number of them will approach me and point out the error of my ways, and provide lists of statistical sources that will remedy the problems identified in this presentation.

I would say that remedy lies in increasing the transparency and the number of participants in the coal export sector. More coal trading companies should be licensed as an interim measure, and eventually, coal producers should be permitted to bid directly for export business. Coal trading companies should be required to list the producers that they buy coal from, so that analysts know what rail haul distances and provincial productivity rates apply. Again, this should be considered an interim measure while the coal mine record keeping system is refined to provide mine level production and employment statistics.

Along with refining the record keeping system, mine labour cost studies should be conducted, and indices for components of mine labour costs should be published regularly to help gauge changes in labour costs. In addition, a whole raft of data on rail costs, tariffs, origin points and haulage distances should be made public. Finally the publication of annual and quarterly financial documents of companies involved in the coal export chain would add a lot of transparency to this sector.

I hope that these comments are useful to you and the members of the panel. By focusing on the coal export sector, I have ignored other huge impacts related to WTO entry that will affect foreign investment in the domestic mining sector, deployment of advanced mining and commodity consumption technologies--I am particularly thinking of clean coal technology here--and promoting regional development in China. It is my hope that the other panellists can use my remarks to segue into these areas.



Thank you, and I will be happy to answer questions as the panel chairman directs.