

# **A STUDY OF IRON ORE PRICES IN THE CONTEXT OF THE ECONOMICS OF SPONGE IRON AND STEEL PRODUCTION**

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## ***PREFACE***

The rise of the minerals and minerals based industries in the past few years has involved national governments globally in serious policy debates and decisions on many contentious issues related to these inter-dependent industries. India has not been an exception to this trend. At a time when a new mineral policy is awaiting enactment, again on account of a lack of consensus on many critical matters, Indian policy makers have been engaged in the issues related to the external trade and domestic use of iron ore. At one level, the government looks at iron ore from a conservationist point of view in a longer term framework and at another and in the immediate , it is disturbed by the rise in steel prices causing inflation rate to rise to uncomfortable levels, seeking quick fix solutions. Surprisingly, the government is being made to believe that the raw materials such as iron ore and coal have been at the root of steel price rise and in turn is the prime mover of inflation in the country. Consequently, the government has taken strong fiscal measures to discourage iron ore exports. More such measures are being contemplated as per reports.

It is in this context, to unearth the reality and to have an objective view of the iron ore and steel ( and sponge iron/pig iron ) pricing scenario, Federation of Indian Minerals Industries (FIMI) sponsored this study, the report of which is here. We hope the study will provide a new perspective on the subject and help objective government policy decisions.

9 September, 2008

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## THE GLOBAL AND THE LARGER CONTEXT

1. Iron ore prices have risen globally as also in India due to higher demand from the steel/sponge iron industries. Steel demand and their prices have risen in turn from the unprecedented global economic growth driven largely by China, Middle East, EU and the USA. In the face of the huge growth in demand for steel, the steel and the raw materials industries related to this could not immediately and sufficiently raise supplies due to capacity constraints in plants, mines and infrastructure areas. It is worth remembering that investment in steel and especially in the major steel industry related mining such as for iron ore and coal slowed down in the face of low demand and excess capacity that had already been built up globally. The global steel industry was involved since 2001-02 in protracted dialogue to deal with the problem of excess capacity and find ways and means to cut capacities under the aegis of the OECD and the International Iron and Steel Institute (IISI) Even the Indian government and the industry participated in that dialogue. It is further to be seen that the surge in steel capacity/production was fundamentally driven by China who depended on the blast furnace route for steel making, leading to a rather more than proportionate demand for iron ore.

2. The global steel and commodity boom of the past few years was largely unexpected and it was so strong that despite excess capacities, the respective industries could not respond to the rise in demand in adequate measure.

Chart-1

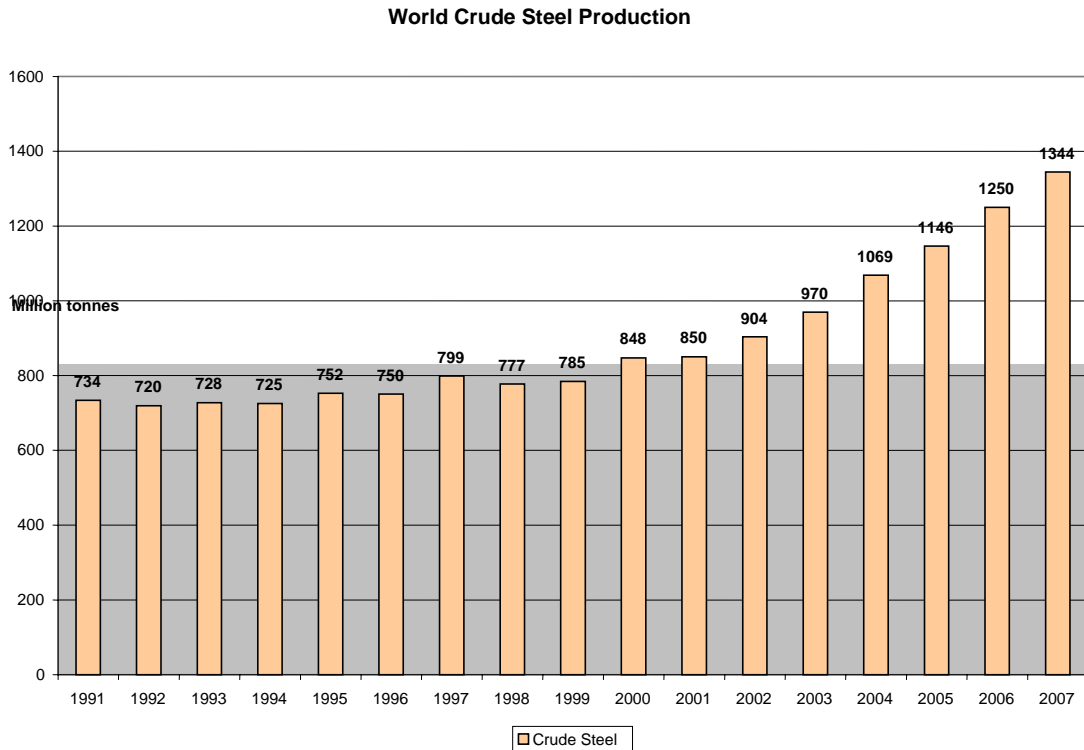
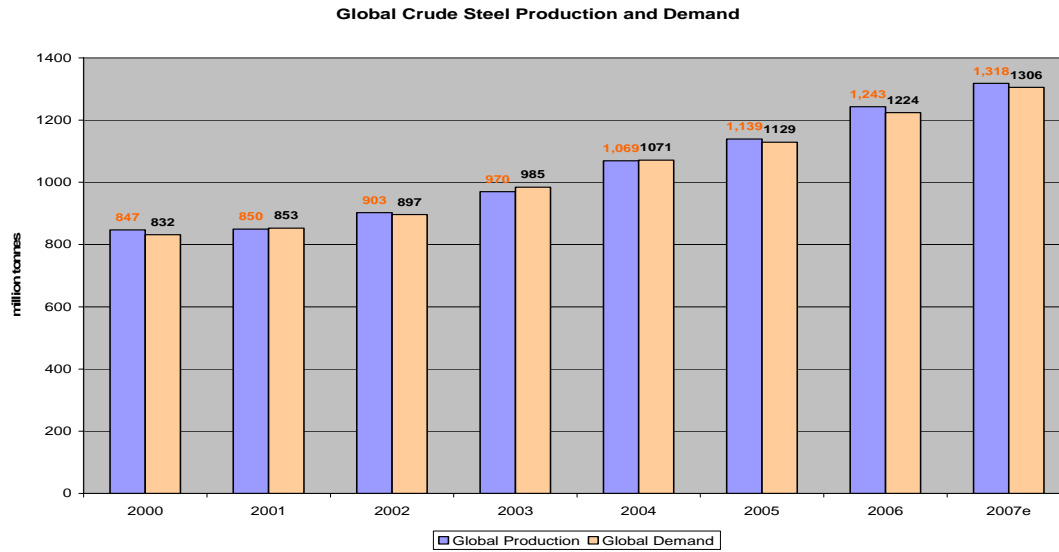


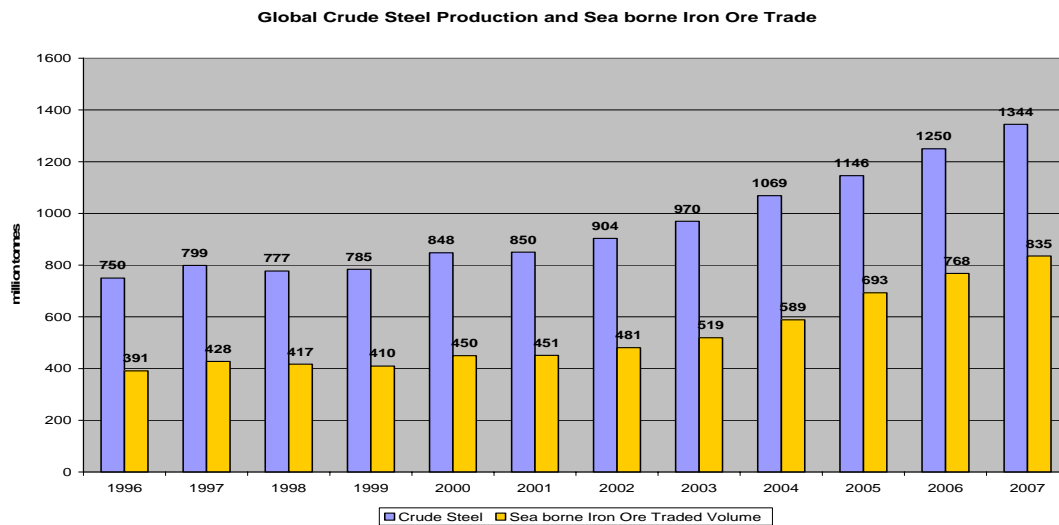
Chart -2



Source: Morgan Stanley Research and IISI ( Charts-1 and 2)

3. The sudden rise in steel demand from China could not be met from the global capacities in place and therefore the country took to huge capacity additions within the country despite the fact that they did not have sufficient iron ore.<sup>1</sup> ( Annexure-1 )This led to a sharp rise in demand for iron ore in the global market. While iron ore mining companies in many countries took the opportunity to raise production quickly to meet the rising Chinese demand, India, a traditional exporter of iron ore, was better placed to grab the opportunities in the spot market due to freight advantage over Brazil and the underutilized capacities already in place in the mines. As a result, India turned a significant exporter of iron ore fines in the world market with almost the entire quantity going to China. Much of the initial surge in exports was accounted for by stock of fines already lying with the miners.

Chart-3

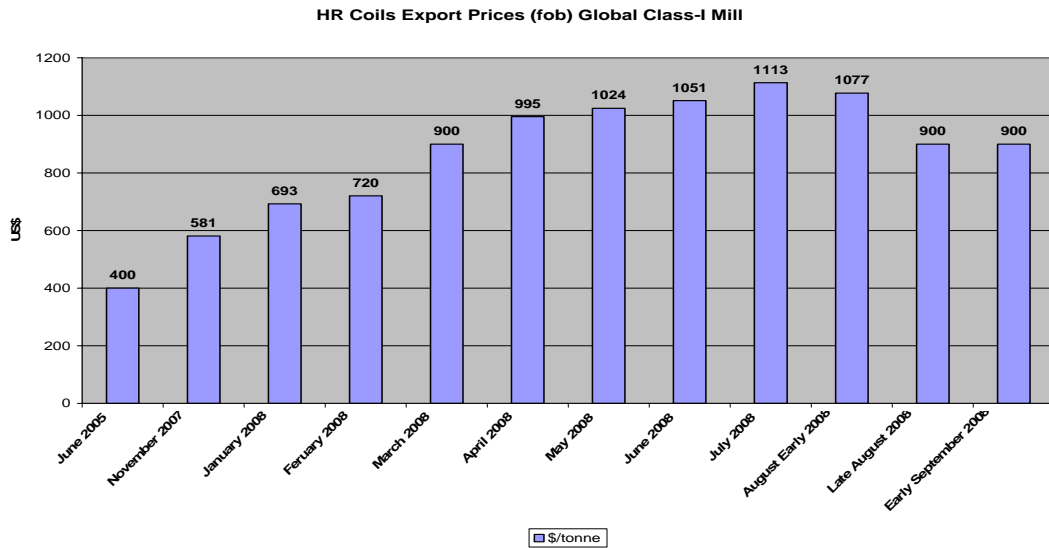


Source : IISI and Morgan Stanley Research

<sup>1</sup> China has extensive reserves of iron ore and in pure gross terms is the largest producer of the same. However, the quality and the ferrous content of the same are not good enough.

4. While supply constraints and uncertainties were responsible for the rise in iron ore prices globally, the fact remains that the steel prices rose to such an extent that it provided all the necessary space for the iron ore prices to rise also in tandem. ( Annexure-2) The iron ore price increases got easily absorbed in the incremental price gains the steel makers enjoyed in some of the best conditions of the steel market one has ever witnessed.

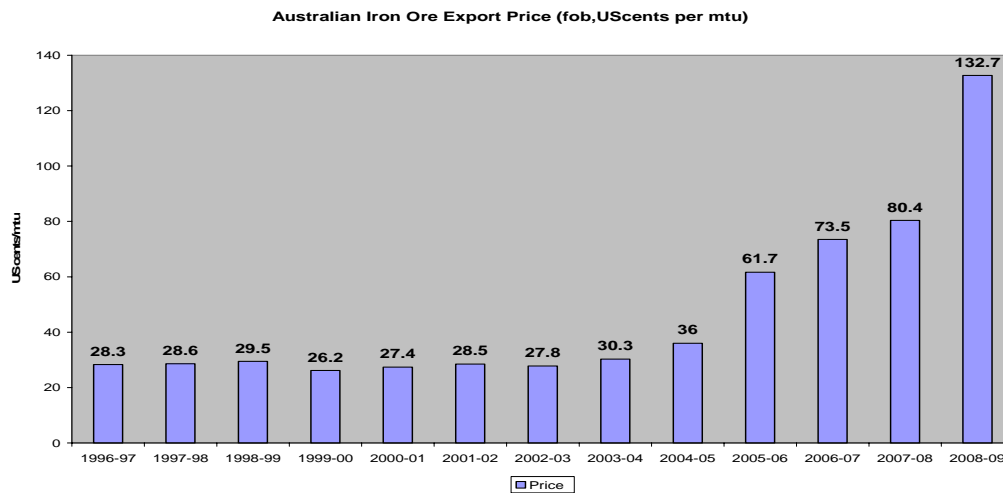
Chart-4



Source: World Steel Dynamics and Steel Business Briefings, Various Issues

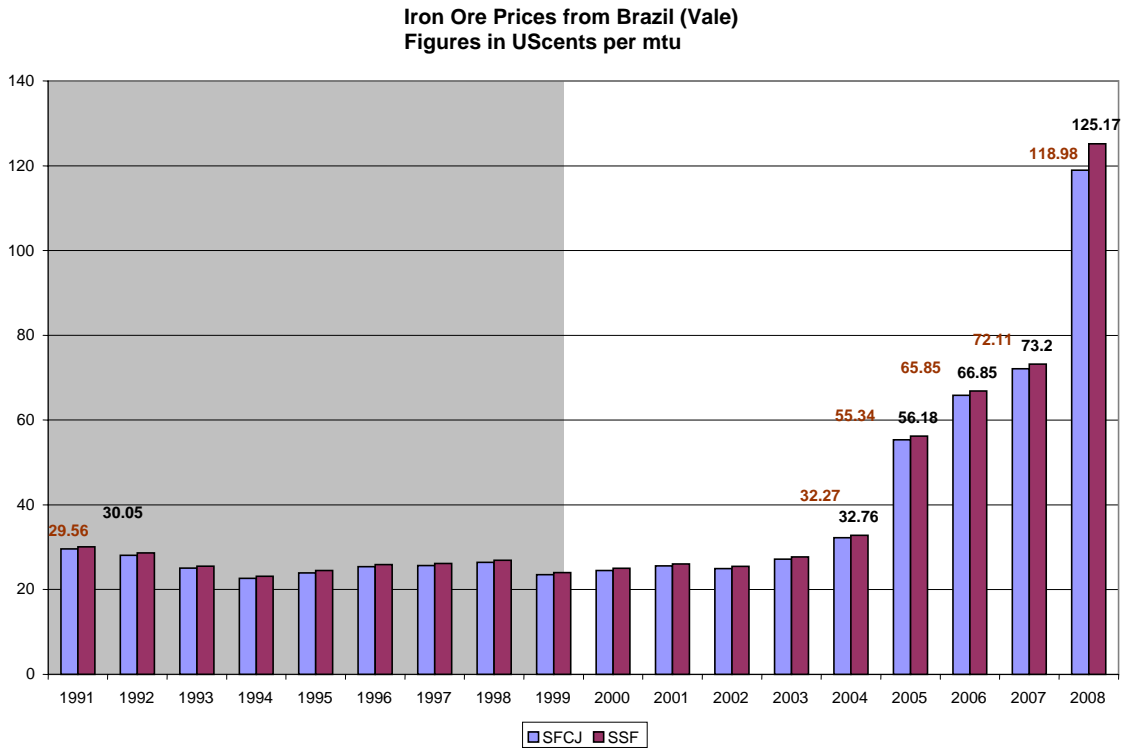
5. It is important to note that the iron ore contract prices were set, year after year, following thorough negotiations involving the top iron ore mining and steel companies. This clearly reflected the strong conviction of the global steel producers that the rise in costs on account of iron ore price increases could be passed on to the price of steel. Else, they would not have yielded ground.

Chart-5



Source : Steel Business Briefings and Tex Reports

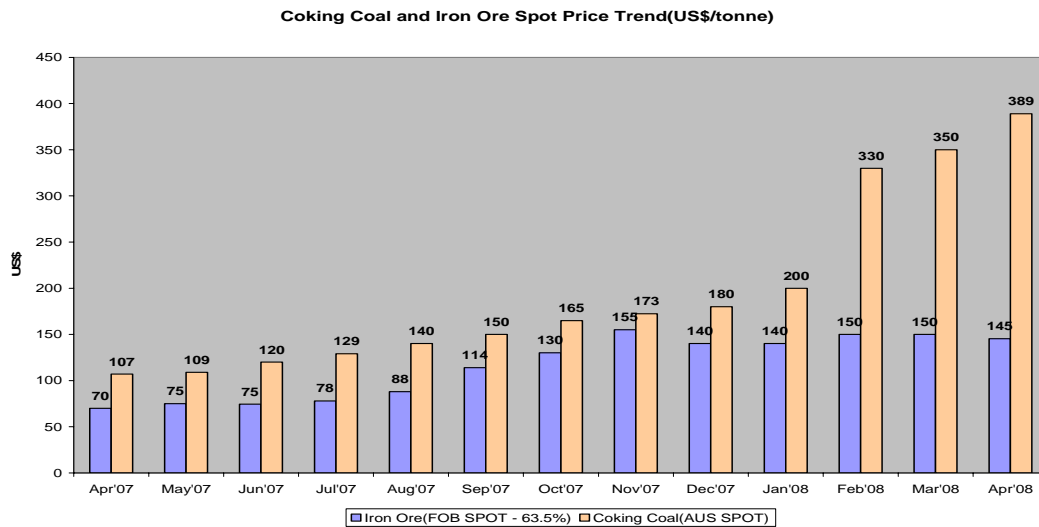
Chart- 6



Source : Steel Business Briefings and Tex Reports

6. The spot prices, which involved largely Indian private mining companies and Chinese steel makers, were based on (1) specific market conditions, (2) contract prices set and (3) the costs of shipping etc., apart from the marginal scarcity value the Chinese attached to this iron ore. In fact, rise in steel prices provided ground for massive increases in coking coal spot and contract prices as well. While contracts for 2008-09 were signed at over 200 per cent higher in most cases, the spot prices in absolute level have remained higher than the contract prices till the last reports came in.

Chart-7



Source : Mitsui and Company

7. Whether it is steel, intermediate products such as DRI/sponge iron and most or raw materials such as steel scrap, iron ore and coal, all have been driven by the specific conditions in their respective markets. Logically and most likely, one would expect in a globalised unrestricted market all the raw materials and finished products to follow a similar trend, albeit with varying degree of lags and response time due to specific serious situations related to flow of information and the dynamics of decision taking.

8. However, given the nature of the steel and its raw materials market, where the bulk of the raw materials are based on annual contract supplies, whereas the steel prices are significantly spot market based, one would expect the raw materials prices to follow the steel prices and not the other way round. A study of the trend this year of iron ore spot prices ( landed cost of import at port ) in comparison with the trends in spot prices of pig iron, scrap and various steel products show that iron ore was the least responsive to the trends in the other products. This means the iron ore supplies were sufficient worldwide and the prices remained under pressure despite the rise in the prices of products which use them. This is evident from the chart below and does not require further substantiation. This comparison has been taken only as an example. The same results will be visible even if the context is changed.

Chart-8



Source : Mysteel and Mitsui Research

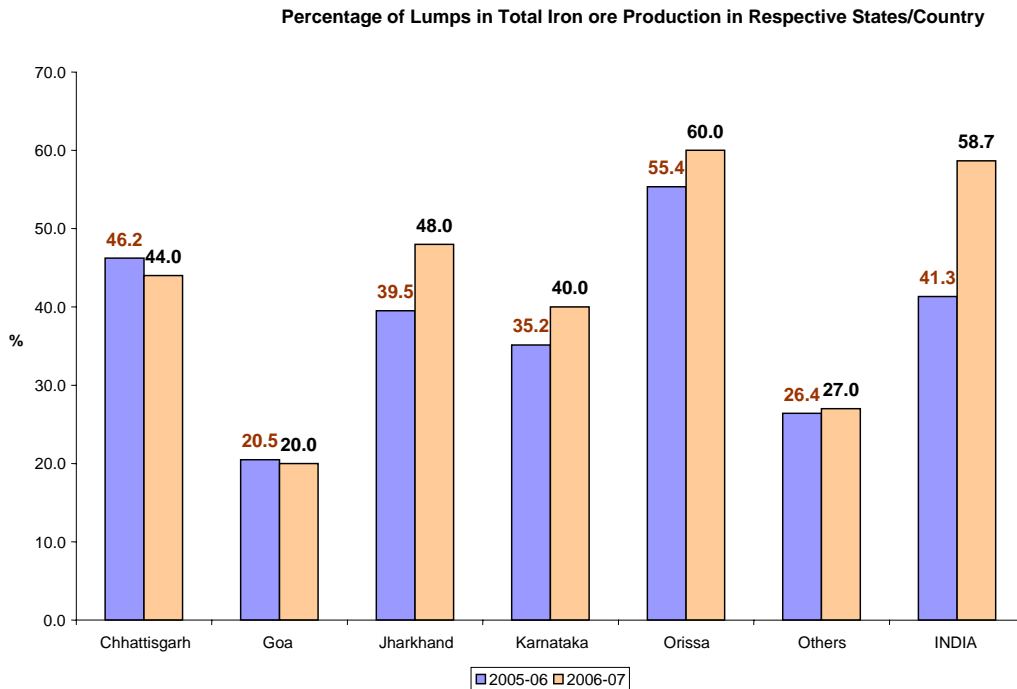


## IRON ORE MARKET IN INDIA

9. The iron ore market in India could not entirely be seen in isolation from the global developments. However, considering specific structural characteristics of the market both in the demand and supply sides and the divergence of market forces working there, the pricing conditions in India did not replicate the global experiences. This is elaborated in paragraphs below.

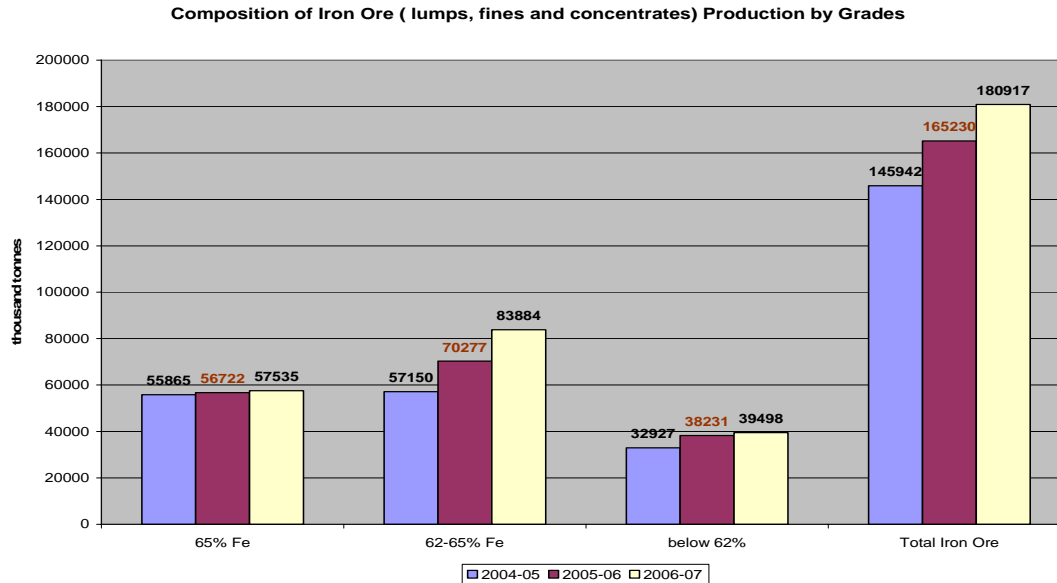
10. ***On the supply side***, the Indian iron ore industry was characterized by significant captive mining (estimated to be at least 40 million tonnes of annual production), state ownership of mining assets, such as with mining companies like NMDC, OMC, OMDC, Kudremukh (currently closed), Mysore Minerals, etc., high degree of differentiation of product quality in terms of grade and the regional dispersion of mines. The industry has also faced differentiated policy regimes in respect of exports and domestic trading. This point is important in the context of the charge very often levied on the Indian iron ore mining industry that the domestic iron ore prices have been strategically manipulated to the level of international prices through a process of cartelization. In fact, it would not have been possible for the local iron ore mining companies to adjust domestic prices to the prices they export at.

Chart-8



Source : FIMI and IBM

Chart-9

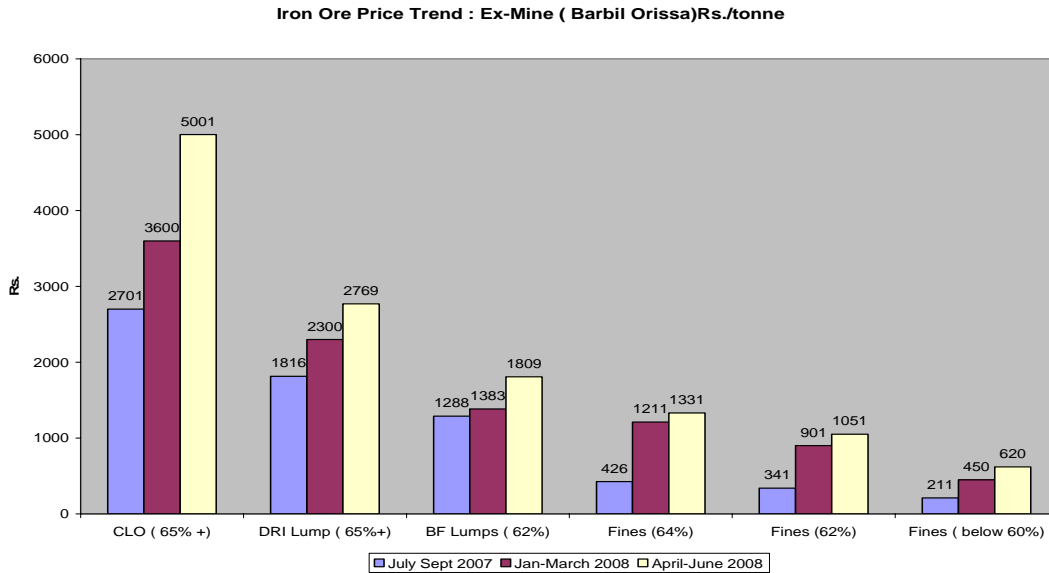


Source : FIMI and IBM

**II.** This would not have been possible also due to the fact that *on the demand side* too, the homogeneity was not to be seen in the pattern of consumption due to the existence of various steel making technologies such as the blast furnace route for iron making that uses largely sinter fines ( and lumps/pellets), sponge iron units that use largely high quality lump ores (preferably CLOs and some pellets) and Corex units that use lumps/fines and pellets. The iron ore fines needed for pellets and sinter feeds are somewhat different. Even BF and DRI grade pellets prefer different grades of iron ore fines. Whereas substitutability is possible in many such cases, economics of production and final uses may lead to very specific demand for iron ore. Each unit of significant capacity prefers maintaining a uniform blend of quality of iron ore and in many cases prefers materials in specific size, shapes and chemistry. High proportion of customized products in the total sales also forces the sellers to be sensitive to the buyers. **A uniform chemistry and physical properties of iron ore help smoother operation and ensure lower costs of production. The users are ready to pay for this with the acceptance of the fact that supply in specific quality and grade cost the supplier a significant sum of money. It may be noted that about 2.5 tonnes of iron ore are required to produce a tonne of CLO. The rest are fines or low grade concentrates which are to be sold out cheap.**

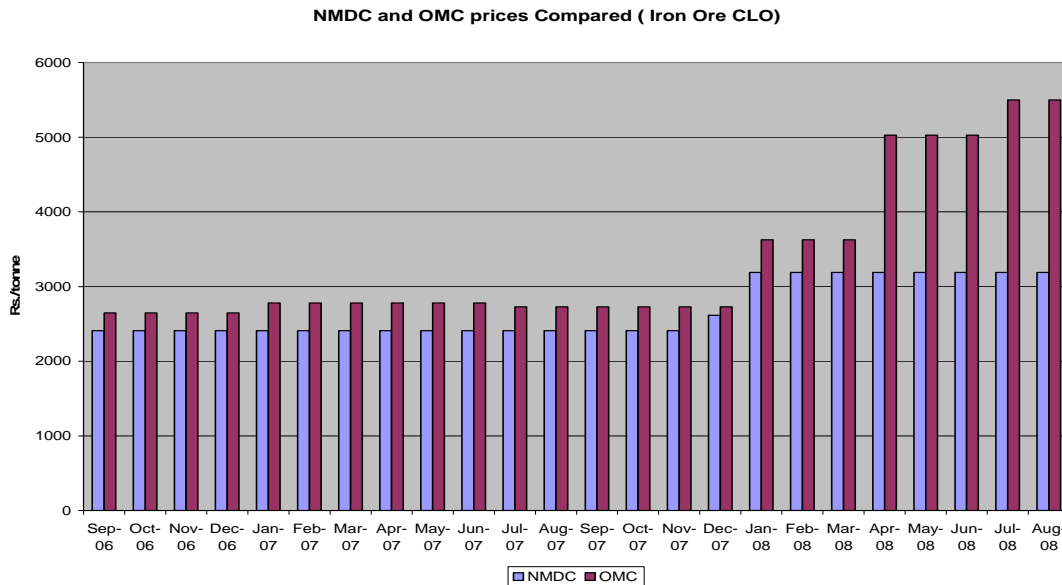
12. While the structural differences on the supply and demand side prevented an equalisation of the domestic price to the export or international price, the Indian merchant mining companies, including NMDC, raised domestic prices to the extent possible considering also the limitations of specifics within the Indian market. The NMDC price increases for the domestic supplies have been usually in the same proportion as that for exports. Only in 2008 that the company has not till date increased prices for domestic sales under government pressure. They are likely to do so for exports by over 95% and it is learnt that they will do that for domestic sales as well in the same proportion but by considering the interim increase they had put into effect towards the end of 2007.

Chart-10



Source :OMC Web site

Chart-11



Source : OMC website and Sponge Iron Industry Source

13. The point to be noted in the context of the NMDC's pricing decisions is that they were following identical policy as other miners in the private or the public sector. Various statements emanating from the company sources indicate their desire to raise iron ore prices to the global levels.

14. Their decision to hold down prices even when the global prices increased sharply needs scrutiny. It was very clear that high global prices indicated shortages and provided signals for fresh investment to add capacity from the profits one could expect from the boom in the iron

ore market. By not increasing prices even to the extent possible on the domestic market, the company acted against the interests of other players in the industry.

15. **This pricing behaviour of the company should be seen in the context of the existing competition laws in the country.** NMDC can be charged with pre-empting the growth of other players in the market with the backing of public money by predatory pricing as per Clause 4 ( 1 ) and (2) of the Competition law. . Also, with the government as the owner and ready to accept lower profits from the company's operations, NMDC was put in a comfort zone without any accountability in regards to inadequate improvement in the value of the stakes held by others. What is shocking from the competition point of view is the measure under consideration that the company will be exempted from payment of export duty on their iron ore exports and that all the duty paid so far will be reimbursed to them. The relevant newspaper report is annexed.

16. **It is more serious a matter because it is the largest single iron ore producer in the country and by holding down iron ore prices below the market levels ( after being adequately subsidized by the government if the proposal discussed earlier is through) they have been merely subsidizing the user steel industries and that too selectively ( only their buyers ) as a significant number of steel makers are buying iron ore at market prices.**

17. There has been a tendency within the government, as also within the industry, to compare iron ore prices across regions, among individual miners, etc. only on an ex-mine basis. The ex-mine based price comparisons are definitely strong indications of market trend, but, sole dependence on it is also not correct. First, what matters to the user is the cost at plant. Second, the seller, in the absence of local sales, has to adjust prices necessarily to account for the freight so that the delivered costs remain competitive. While there has been always a tendency for the iron and steel industry to set up basic iron/steel making closer to the source of raw materials such as coal and iron ore to take advantage of the favourable freight economics, the iron ore or coal industries, while competing regionally to sell the excess of what the local demand will permit tend to keep prices lower than those they would charge to the customer next door. However, the end result of such selling intentions will be shaped by the bargaining power of the respective sides. The point made is that the iron ore prices are to be compared keeping the specific market context in sight and not doing it overlooking the specific economics involved.

18. More important is to keep the products grades taken for comparison in sight. Prices of iron ore are specific to the chemistry ( mainly the Fe content ) and size and shapes. One has to see if one is buying ready to use materials ( such as CLO of 5-18 mm size ) or those which needs further processing ( such as lumps in 10-180mm ) involving an additional cost. The price differential is determined not by the additional costs involved in supplying ready to use materials but also the value it provides to the buyers. In many cases, the steel or the sponge iron producers use very high grade CLOs merely as a sweetening agent so as to raise the average grade and quality of an otherwise inferior stock and bring them up to usable and more efficient levels. ( this point has been discussed earlier also ) This specific point is ignored in many serious policy issue discussions within the government leading to erroneous view taken on critical matters related to iron ore.

19. Therefore, it is important that NMDC's or for that matter any other producer's ( such as Rungtas , Sesa Goa, Essel Mining, etc.. ) prices need not be taken as the absolute reference to understand the dynamics of pricing iron ore in India or to take a comparative view on the open market prices.

20. In India, SAIL, Tata Steel, JSPL and JSW ( through JV with Mysore Minerals ), among the major producers have captive access to iron ore. In the case of JSW Steel their captive supplies account for only about 20-30 per cent of the total requirement whereas it is total in the case of others. There are several small and medium size iron and steel companies at the moment who have captive iron ore. Many more such units are coming up with captive resources. These units are completely or partially insulated from the dynamics of the iron ore market and have no reasons to justify their pricing decisions blaming it on the cost increases on account of iron ore.

21. The government also must consider, from a long term policy perspective that most of the large and significant reserves of iron ore have been increasingly leased out to either government owned companies or to steel makers on captive basis. This will reduce the space available for the domestic merchant private iron ore miners in the days to come in a relative as also in absolute sense when their reserves will be depleted.

22. While discussing iron ore in the context of its contribution to inflation, the quantities of iron ore that do not get into the market are accounted for in the weight whereas the fact that these are not sold and the cost of producing them is way below the market price is ignored. This inflates the overall impact of iron ore prices on WPI. The government, thus, projects an adverse scenario, especially exaggerating the impact of the open market transactions in iron ore on the estimation of WPI.<sup>2</sup>

23. NMDC supplies iron ore to all the major iron and steel companies such as Ispat Industries, Essar Steel, JSW Steel, Vikram Ispat. Their supplies may not have fully covered them in all cases forcing these companies to depend on the open market for their marginal requirement. Given the quantities involved, it is easily understandable that the costs on account of these quantities presumably at higher prices are not critically relevant to the overall economics of these companies.

24. In fact, the steel makers, even those dependent on purchased iron ore, saw in most cases the rising costs on account of iron ore prices getting more than neutralized by the increases in the prices of steel. For example, in the case of Ispat Industries, with their plant located on the western coast, the total expenses on iron ore ( pellets, lumps and fines ) grew only by 22.93 % on an increased volume in 2007-08 over the previous year. This as a percentage of the total net income of the company increased only marginally from 18.97 % in 2006-07 to 22.93 % in 2007-08. Earlier, the total iron ore cost increased by 4.1% from 2005-06 to 2006-07. In fact, this as a percentage of the total net income of the company had fallen significantly from 27.65 % in 2005-06 in the following year as shown above. Even the share of total raw materials consumption in total net income fell from 52.15% in 2005-06 to 47.97% in 2006-07 and the rose marginally to 52.07% exhibiting significant stability in cost of raw materials in relation to the net income of the company.<sup>3</sup>

25. For JSW Steel, located in the iron ore belt of Karnataka, about 20 per cent of their requirement come from captive mines ( in 2007-08) and the rest either through the long

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<sup>2</sup> The methods used to estimate WPI especially the products chosen with their weights in the case of iron ore, ferro-alloys and steel etc.. are completely nonsensical and depicts clear lack of understanding of the iron and steel industry in the country. It is surprising how the government continues to follow this system and more importantly base major policy decisions on them.

<sup>3</sup> Based on the information provided in the Annual Report 2006-07. Ispat Industries.

term contracts from NMDC and MoUs signed with local miners. For them, their total expenses on raw materials as a percentage of their total net income rose from 46.34% in 2006-07 to 51.52 per cent. The corresponding figure for iron ore rose from 7.37% in 2006-07 to 12.77% in the year next. This increase was mainly due to their increased dependence on the market and the rise in the prices effected by NMDC. This increase also incorporated the hike effected in railway freight during this time.

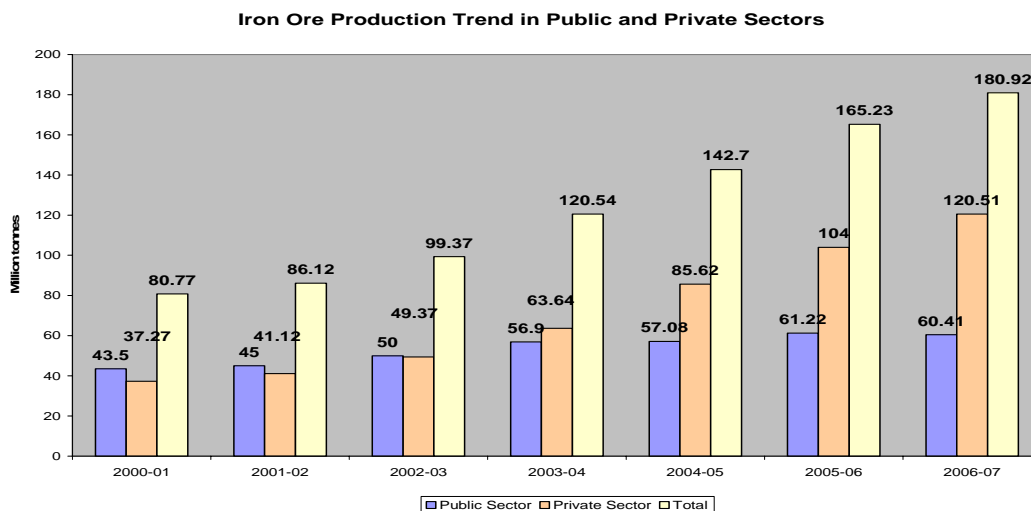
26. Therefore, it clear that the concern over iron ore cost and prices raised by those who have to depend on the market is largely exaggerated.

27. There has been inadequate attention to the fact that the iron ore industry in India is more in private hand today than it used to be in the past. High degree of lethargy, leading to stagnation in investment for new capacity despite having access to massive resources has been a common observation. All this happened at a time when the private sector despite limitations of resources raised production through investment has reduced the share of the public sector and also of the captive mines in the overall production and capacity of iron ore mining in India.

28. While making these points, at the cost of minor deviation, it is clarified that this note does not support any government action, other than waiver of import duty, taken on iron and steel, especially those which involved direct intervention of the government on pricing matters, in the context of its concern over inflation and steel price rise.

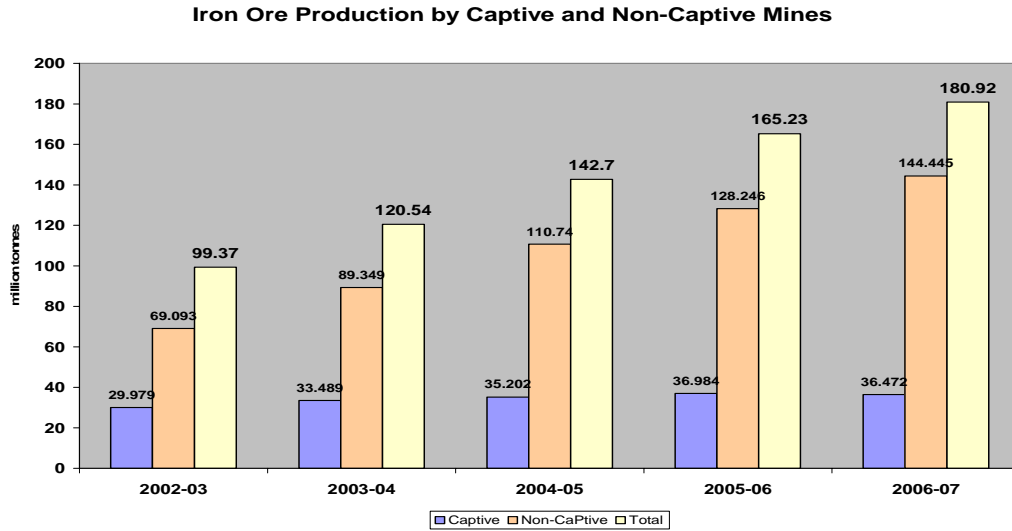
29. It is not so much in the revenue foregone by the industry ( a matter to be discussed further ) but the policy mindset that seems to be driving many of the government actions in the recent times, especially in the iron and steel sector. The government, in this new situation, has to look beyond the old mindset of regulation which was which was associated with and characterized by a system with the public sector holding the critical share in business. It will be a more progressive and economically sustainable act if the government allows the more efficient private merchant industry to grow so that the steel industry can really can benefit from the resources within the country. Steel industry's competitive advantage cannot be stored up in untapped mines.

Chart-12



Source : IBM and FIMI

Chart-13

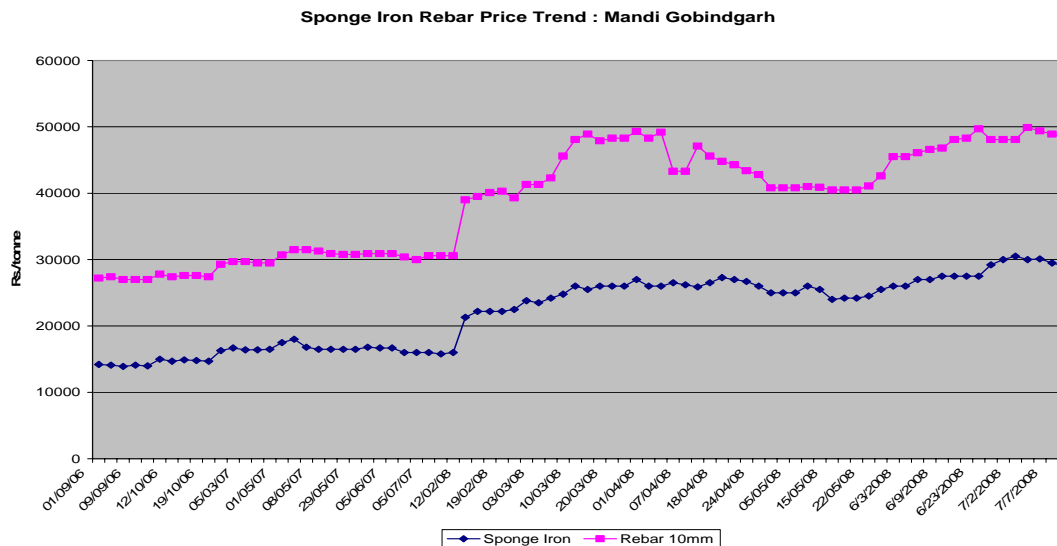


Source : IBM and FIMI

### IRON ORE ECONOMICS IN THE CONTEXT OF THE VIABILITY OF THE SPONGE IRON UNITS

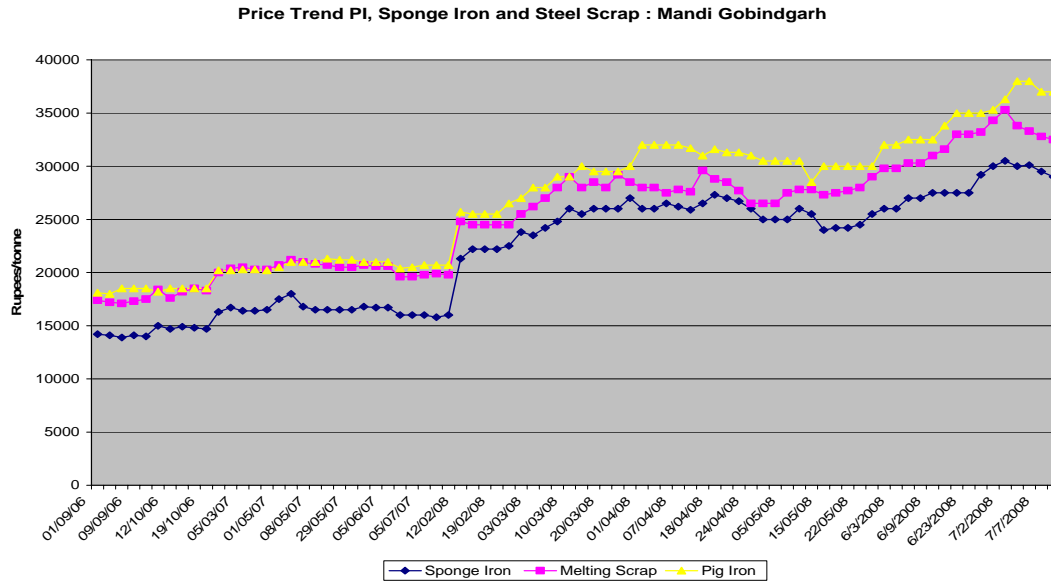
30. Sponge iron is used almost entirely in steel making and in India bulk of the sponge iron sales are to companies engaged in the production of long products. These units are selling their output directly or through traders in the open market. The price trend in the open market for long products indicates no restraints shown by any as demand for them increased continuously. *The prices of metallics, sponge iron, scrap and pig iron, have all followed the same trend. If the entire line of products in the vertical chain or the substitutes have followed a given market trend the rationale for restricting the price of the basic input iron ore needs to be carefully studied.*

Chart-14



Source : Steel Trade Intelligence and Steel Town Data

Chart-15



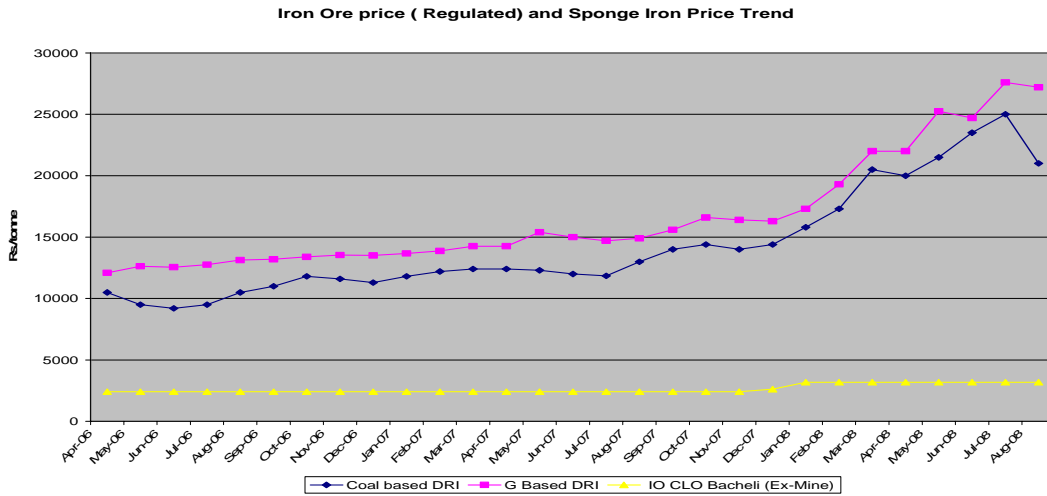
Source : Steel Trade Intelligence and Steel Town Data

31. An argument is very often being advanced saying that the products lower in the vertical chain trigger price increases in the products at the higher end of value addition through cost increases inflicted on the producers in the intermediate or final stages. This is not a correct proposition especially in the context of the fact that, globally, as also in India, steel has led the show from the front and the raw materials prices continuously followed them.

32. As can be seen from the Charts below, the prices of gas based ( as also coal based ) sponge iron rose, understandably based on the market conditions, despite the fact that they were literally hundred per cent supported by stagnant iron ore prices. *This point is being made only to support an argument that it is not correct to accept that iron ore prices are root cause for the rise in sponge iron prices or that they are drivers of end products prices.* It is certainly true that on the spot market, iron ore prices may very quickly adjust to the rising prices of sponge iron. It is further possible that in very specific cases, the iron ore prices may rise to the potential/anticipated rise in end products prices. *But, the overall trend, as evident from the market data, the sponge iron or the steel market is more volatile and responsive to the market demand and supply conditions and they are the ones who send the necessary price signals to the iron ore market.*

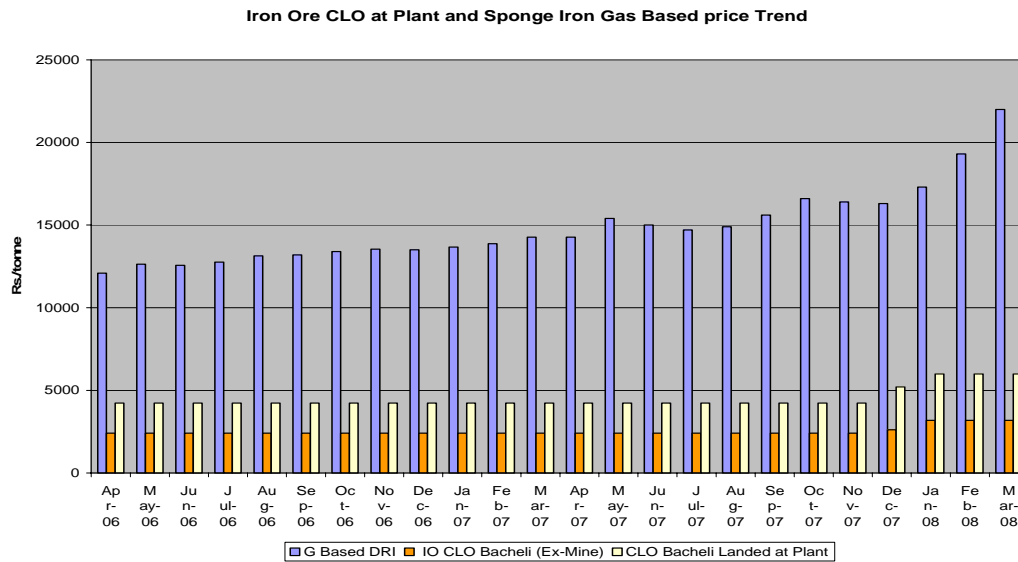


Chart-16



Source: Sponge Iron Industry

Chart-17



Source : Sponge Iron Industry

33. It can be seen from the charts earlier that iron ore prices globally remained stagnant till 2003-04 and started gaining strength only following the steel price increases from that year on. The more recent prices exhibited scarcity value of iron ore in the global market which the steel makers were able to bear as they gained more from steel price increases more than proportionately.

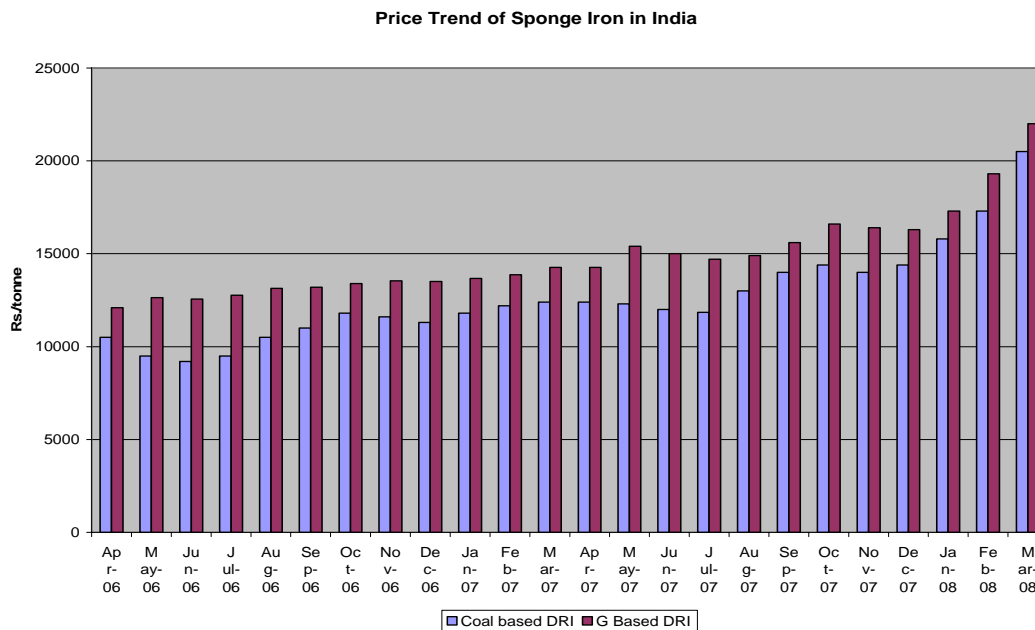
34. *Also, when 98 per cent of the iron ore has to be sold to steel makers, unless the steel makers have the ability to pay, the iron ore industry will not find an alternative buyer. As against this, about 71 per cent of the Indian steel industry's iron requirement is met from iron ore with the rest coming from scrap. Therefore, it is incorrect to believe that iron ore prices can be unilaterally raised beyond the paying capacity of the user industries ( steel/Pig Iron/*

*sponge iron ). This dependency scenario does not support existence of oligopolistic pricing by Indian iron ore mining companies. It is also to be noted that at a time when the government owned NMDC is holding down prices below the market level, it is not possible for the highly scattered small and medium size iron ore mining companies to go beyond the market and resort to oligopolistic pricing. It is more unlikely in the context of the government very openly supporting the cause of the steel makers and taking its best foot forward to ensure supplies of iron ore to steel makers.*

35. There are over 350 small and medium size sponge iron units, most of which are located near the iron ore mines. These units were set up specifically to take advantage of the assured supply of iron ore and proximity to the mines. This boom came up in particular with the development of indigenous low cost coal based sponge iron making technologies. Many of these units are integrated with power generation and steel making and rolling. Some of these units have also been allotted iron ore and coal mines. The iron ore miners have also built their production plan in line with the requirement of the sponge iron industry with substantial investment in machinery.

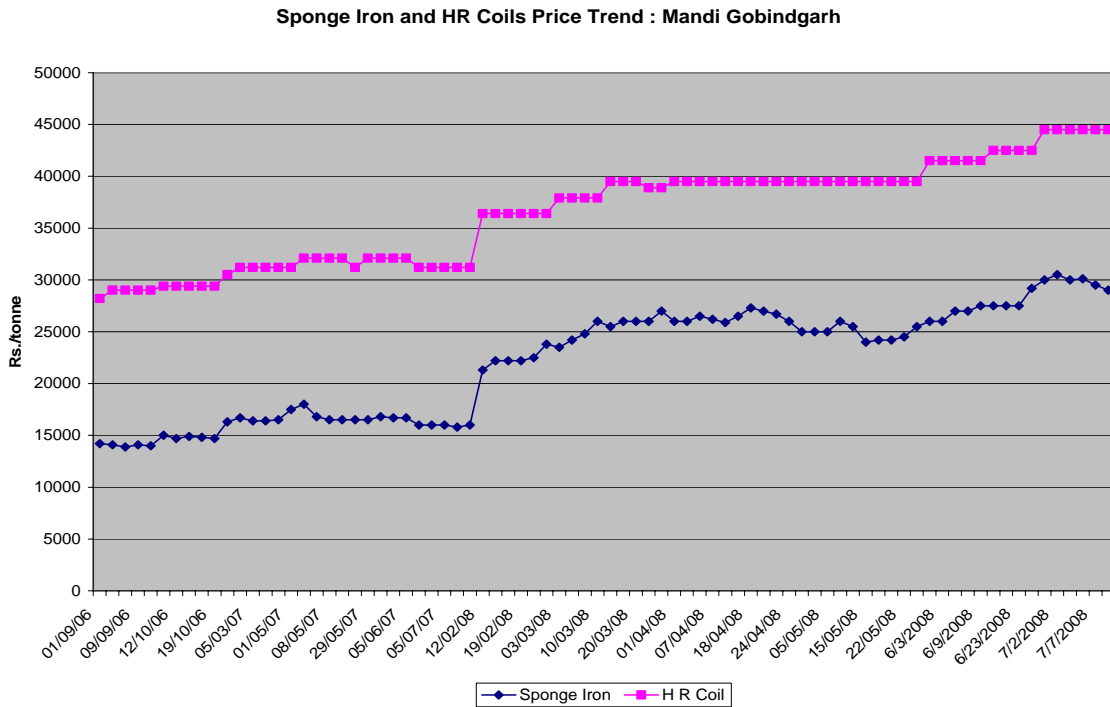
36. The rush to invest in such plants was further shaped by the strong prices of steel and sponge iron prevailing in the market and shortage of steel melting scrap requiring perpetual imports which were rising over the years. The strong export demand for iron ore fines leading to additions in iron ore mining capacities could also release significant quantities of lump ores for the sponge iron industries and to some extent to the merchant pig iron producers. There was no scope for selling these products to other potential customers such the integrated steel mills as most major mills had either captive iron ore or required only fines.

Chart-19



Source : Sponge Iron Industry

Chart-20



Source : Steel Trade Intelligence Data

37. There is no doubt that potential profit seen in sponge iron business brought investment in excess. With similar technologies, all such units had almost identical cost structures. Their individual economic viability in the process came to be heavily dependent on the supply of iron ore and coal in the market and especially for them individually. The strong competition that emerged within the sponge iron industry was partly for survival. They were ready to pay any price for these inputs as for quite some time, the industry rode the steel boom.

38. However, the sponge iron market faces a slowdown on account of the weakness in the construction steel demand which itself is a reflection of a general downturn in the economy. There are various studies which indicate to significant underutilization of capacity in this industry. This has been there always. In the course of time, if the economic activities do not gain ground, the demand for sponge iron will further drop. Also, due to low degree of metalisation, the electric steel making units ( IF or EAFs ) do not prefer sponge iron produced by most of the coal based units lying in the unorganized sector, unless there is adequate price incentives. With added iron making capacity in the blast furnace route, there is a pressure now on these units. This industry stands threatened due to its poor internal economics and adverse externalities. Again, iron ore prices do not seem to be the cause of the dwindling fortune of this industry.

39. On the other hand, with greater competition, especially after the government waived the import duty on steel scrap and sponge iron, the margins of the sponge iron producers have come under pressure with their average realization falling to some extent.

40. **The economic viability of many such units will depend not so much on how and at what cost iron ore is available to them, but, at what cost coal or gas is available.** The coal based units are using low grade coal thus losing out on overall economics and operational problems.

Shortage of coal from Coal India has forced these units to buy from the e-auction at huge prices, most of the time, the purchase prices going as much as 80% above the pre-bid base price set by Coal India.<sup>4</sup> They are also resorting to imports.

41. There is no doubt that sponge iron prices will fall along steel prices in the days ahead.<sup>5</sup> The steel market will be faced with the combined impact of a slowdown in domestic demand and a sharp decrease in the international price of steel. If the inability of the steel makers to pay more for sponge iron forces prices down, the iron ore mining companies will also not be able to retain the current market prices for long. Therefore, the government's concern about the high prices of steel, intermediate metallics and iron ore is over-extended.

**42. The total sponge iron production in the country was reported to be 19.2 million tonnes by the JPC. Out of which approximately a million tonnes were produced from captive or self owned iron ore and another 5 million tonnes had assured iron ore supplies from NMDC. This leaves only about 10.2 million tonnes of sponge iron production that had to depend directly on the open market. This required about 16.32 million tonnes of lump ores and pellets. In addition there was a demand for about 5.2 million tonnes of lump ores/pellets from the merchant pig iron or pig based smaller producers. The total is 21.52 million tonnes.**

**43. On a rough basis, the private iron ore miners excluding Tata Steel produced 44 million tonnes of lumps out of which about 10 million tonnes could have been exported. This leaves the domestic market with 34 million tonnes of lump ores when the demand for the same could be lower than 25 million tonnes at the most ( considering unreported production of sponge iron ). It is difficult to accept that the mining industry would had so much of bargaining strength to dictate terms in the market.**

44. If the excess lump ores have actually been consumed in sponge iron/pig iron production that has not been reported ( over and above what we have assumed ), there are serious reasons to go into it further because there are no justification of supporting units which are being run illegally.

45. Otherwise, when a product is in surplus in aggregate, why should there be any restriction on its trade? Will the government put restrictions on exports of anything and everything to ensure that domestic supplies will increase to such an extent that the prices will fall in the interest of the consumers? The government needs to be responsive and not impulsive or sentimental about any real or perceived adversity in the economy. It has to act responsibly and correctly.

46. There has been an overwhelming sentiment against the profitable iron ore industry and the most commonly observes traits in the government has been to act to use divert the acquired or potential profits of the iron ore mining industry to support the user industries which for completely different reasons may not have been as much profitable. **If the private iron ore industry does not prosper and grow, the future growth potential of the sponge iron industry can be simply written off.** It will adversely hit the economic prosperity in the country. The sponge iron industry strategically has to appreciate that if the current views of the government

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<sup>4</sup> Source: Coal Junction Reports

<sup>5</sup> There are hopes that the recessionary conditions witnessed currently will see their end soon. But, there has not been any consensus among experts on that. There are also no immediate signs on ground that can make one very positive on the outlook of the global economy and steel prices in the short term.

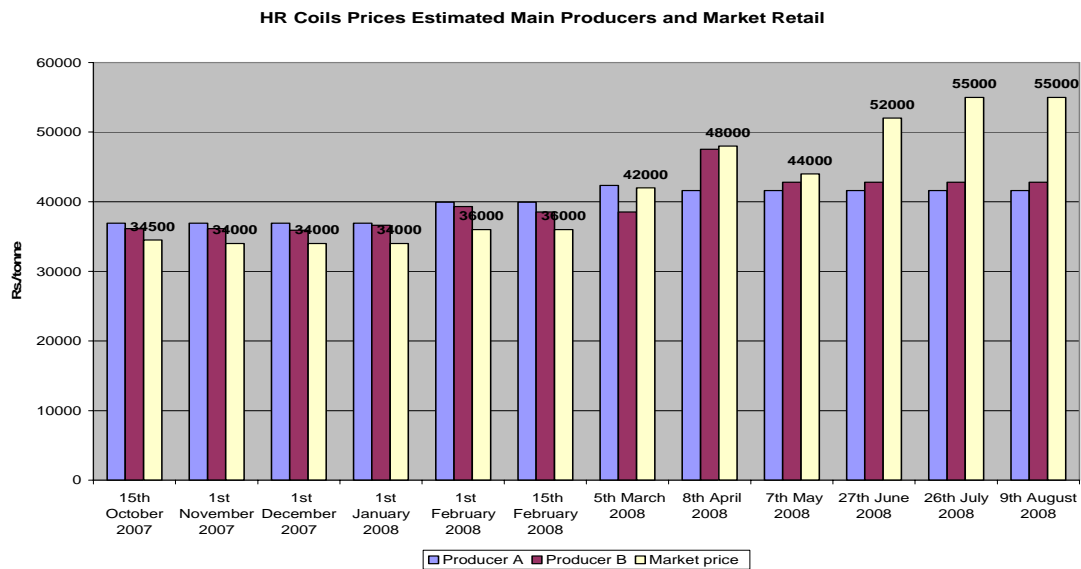
and their active policy to accord priority to allot iron ore mining leases to steel producers with large projects continue, in the absence of a merchant mining industry, its iron ore supply conditions will be severely affected. The merchant producers will also be affected if the iron ore miners start moving to value addition themselves, making sponge iron or steel themselves. This trend has already emerged. The end result of this can be weakening of the supply of lump ores or pellets in the domestic market hitting them hard at the end of the day. The sponge iron industry seems to be looking at only the immediate problems they are faced and not eh long term issues in a larger strategic framework.

## IRON ORE AND STEEL PRICES, EXPORT ISSUES AND THEIR IMPACT

47. The Government of India has been actively intervening in the steel and iron ore market in the country with the announced objective of containing inflation. Apart from the series of measures taken to contain steel price rise, such as waiver of import duty, introduction of export duty, reduction in excise duty on steel from 16 to 14 per cent, etc. , the government directly intervened into the pricing matters of the industry. The intervention led to apparent acceptance of the steel producers to hold down prices till August. What is important to note is that the steel prices maintained their upward trend in the retail market despite these ‘efforts’ from the few major steel makers.

48. The government initiatives may have helped a small number of large consumers but certainly not the small players who depended on the retail market. Given the differential between the producer and retail prices, it is clear that the margins could have been pocketed by the traders/intermediaries or that price reduction was selectively carried out with the bulk of the products lying outside it. It is difficult to assess this as the detailed product by product price information is not published by the steel makers.

Chart-21



49. The government was seen to be instrumental in forcing the steel makers to announce price cuts and bring in stability in the market at a time when the prices of steel globally were up. Such measures may not have had any real impact on the retail market and might not have been

useful in containing inflation which was the main objective of the actions. This is evident from the trend in prices of steel in the past few months as shown above.

50. The price cuts were not carried out in a transparent manner as can be observed from the complaints of the steel buyers ( ref. representation of the Cold Rolled Steel Manufacturers Association ) . Also, even if the producers had cut prices, there was no reflection of that on the steel market, as can be seen from the market data published by Steel Trade Intelligence ( used here ) and Steelguru.com ( can be referred to their websites). Even when the government’s own information ( from Joint Plant Committee ) appeared not to have reflected the absolute price levels correctly, the trend showed that the prices of steel increased despite the repeated claims of the government of a reduction in the market prices as a result of the actions taken. <sup>6</sup>

Chart-22



Chart-23



Source: Steel Trade Intelligence for both above

<sup>6</sup> For JPC’s price information go to [www.jpcindiansteel.nic.in](http://www.jpcindiansteel.nic.in)

51. The issue here is not what happened with the government efforts to reduce steel prices. The real point lies in the government projecting the steel industry as the champion of a national cause to contain inflation. How much sacrifice the steel industry has made in terms of foregone revenue is a different matter and is difficult to estimate due to complications stated so far, but, their acceptance of the government's wishes paved way for them to demand concessions in terms of iron ore and other raw materials to reduce their costs. The government accorded waiver of import duty on raw materials which partially compensated for the loss of potential revenue.

52. The Government has over-estimated the role steel or iron ore prices have played in causing inflation rate to rise. The major problems start from the statistical system and the methodology adopted for computing WPI. Iron ore gets an excessive weight due to inclusion of the captive portion of the iron at market prices. Further, a first look at the weights provided to iron and steel will establish the serious errors on account of multiple inclusion of iron and steel products. While the government is rightfully concerned about the rising inflation in the country, their undue focus on steel and iron ore has not only drawn them into a wrong area for policy actions but also taken them away as a result from those where they would have tasted more success.

53. But, the steel industry's main objective seemed to have been in getting a leverage in the iron ore market. Considering the overall objective of containing inflation and also taking a liberal view of the steel industry's concerns and interests, the government raised the export duty on iron ore to 15 per cent ad valorem.

54. What is more frightening from a policy point of view is the fact that the government is further considering to increase the export duty on iron ore from 15 to 20-25 % and also to ban export of medium and high grade lumps in recognition of the steel industry's so called compliance to government wishes. While the industry actions from April to July could still be considered in a positive perspective, today, when the steel prices have nosedived across the globe, including in India, there is no sacrifices to be made by the industry by holding down or even reducing the prices from the current levels as the domestic demand has slowed down sharply and global prices have fallen.

55. The government has been complaining constantly that the iron ore exports have been rising despite the export tax and that the miners instead of raising supplies in the domestic market and creating a supply pressure voluntarily ( ?) and reduce prices have instead jacked up iron ore prices in the local market. The government needs to correct certain basic perceptions regarding market behaviour in this respect. There is a basic mistake most make by ignoring the specific market conditions in the first place and then assuming that strategic options are limited to the players in the market and that such actions will automatically lead to diversion of potential export volumes to the domestic market.

56. To take an example, the Chinese government has been involved in a host of measures including export tax to curb export of met coke, coking coal, pig iron and steel. None of the measures, in fact, have so far had any impact in the desired way. This can be seen from the trend in Chinese met coke exports and the timings of various actions taken.<sup>7</sup> While one could see an immediate impact in the desired line for a month or so, mainly caused by the uncertainty created by such an action and the renegotiations which are to be brought in as a consequence, the exports volumes rebound to the normal level soon. The story is similar in the

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<sup>7</sup> Various reports such as China Insight published by Steel Business Briefings,UK.

case of steel too when steel exports in July 2008 rose to the record level despite having all the restrictive actions purely on account of the domestic and global market conditions.

57. Today, there is no effort the government is required to make to bring down steel prices to contain inflation. The iron ore prices have fallen in line and to such an extent that any increase in the export duty on it will lead to losses within the mining industry.

58. The misconception that the government action in the manner they were taken could actually effect a price reduction has the potential to cause incredible errors in policy decisions. This logic is being extended also to iron ore. In the first place, the government imposed an export duty on iron ore thinking that it will lead to a conservation of iron ore for domestic use and possibly larger supply of that in the domestic market. This understanding itself was flawed as the actual structural character of the market was grossly overseen. **Non acceptance of the fact that the iron ore prices in the domestic market will be driven by domestic demand and supply conditions have already led the government to inappropriate trade actions that has only worked to reduce profitability in the iron ore mining business, hold down investment there and create uncertainty among the global business communities. There are serious concerns among global investors about policy stability in the country in the mining industry. The industry will be forced to pay heavily on this account in the long run.**

59. Government policy actions being often sticky and difficult to reverse, the iron ore mining industry faces the prospects of strong regulatory actions at a time when the business is on the downhill. What is being seen today is not merely a temporary affair as most analysts, in the face of global recessionary conditions in the commodity market and in the economies at large, believe that the a downward correction in steel and iron ore is going to stay long. Any action, based on the experiences a few months ago, will, therefore, have the potential of being hugely incorrect.

60. The government seems to be having a completely incorrect perception on the profitability in iron ore mining industry. The government while looking at the cost of mining ignores the long drawn efforts that had gone into bringing the mines to operation today. Secondly, it undermines the costs of transportation and especially the additional costs one incurs due to poor infrastructure in the mining areas and the increasing risk it undergoes in the face of extremist violence. There are popular misconceptions on the mining costs too which are unrealistically assumed low. ( see Annexures 5 and 6 on costs of mining )

61. On the question of export prices, the government goes again by some notional reference value for some standard product type, assuming that the industry is homogeneous and there is no product differentiation. The actual price variation in exports can be seen from a given period sample data taken from the customs publications and released by Steel Trade Intelligence.



Chart- 24

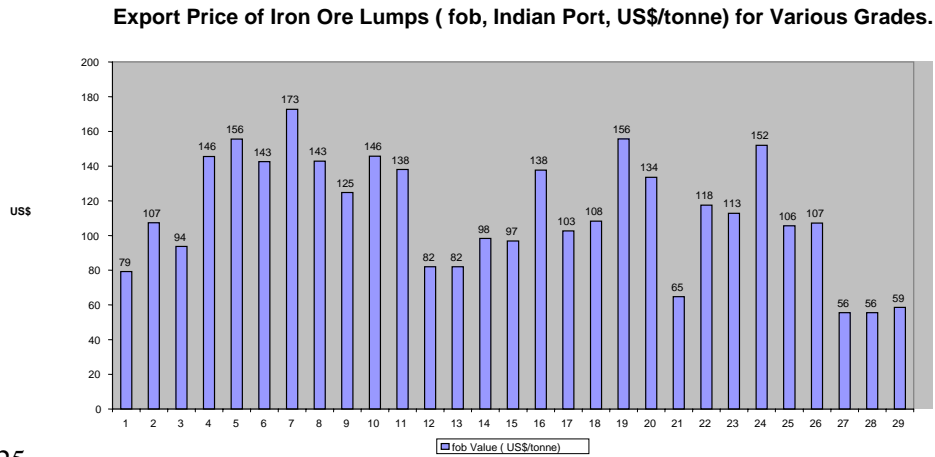
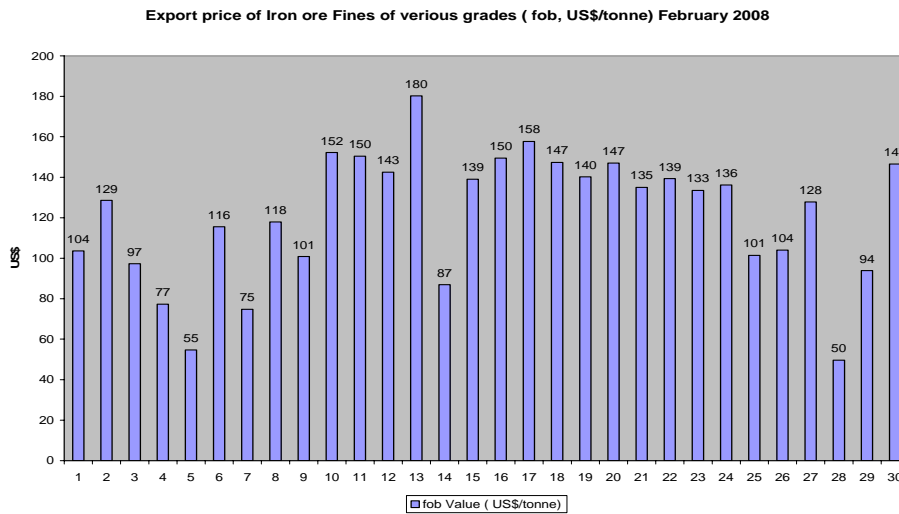
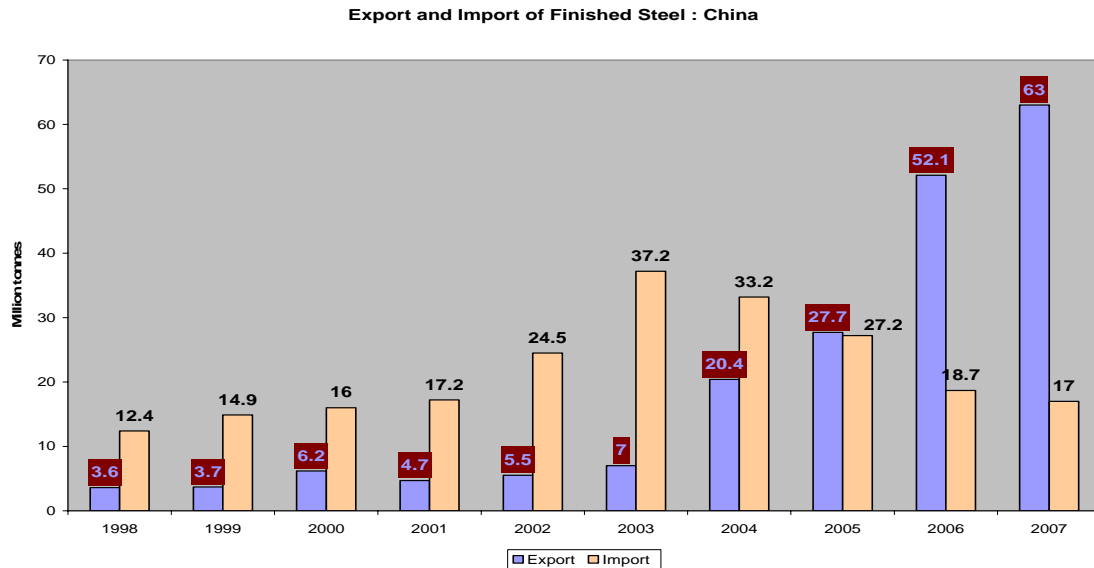


Chart- 25



62. The global steel market stability today has to be seen in terms of ability of the Chinese mills to produce surplus of steel so that the same can reach the world market. It is only in China that one sees sufficient excess steel making capacity and that it only in this country that a lot of capacities are lying in the pipeline. Today, the liberal trade policies of major iron ore bearing nations such as Brazil and Australia are ready to meet the iron ore requirement of the country's steel makers. India's iron ore is still crucial for China's steel makers although one expects them to play a relatively marginal role in the years to come due to the policy uncertainty created by the Indian government. The point to be noted is that if India remains a net importer of steel and steel production is reduced in China due to non-availability of Indian ore, the country's industry is likely to be hit much more than what one expects the conserved ores will deliver. The government will also lose revenue from the overall negative impact of higher import price of steel ( which will also raise the domestic prices in consequence) in terms of industrial slowdown. If Indian iron ore exports to China drops by 50 per cent, this will lead to a 24 million tonne drop in finished steel production. It is highly unlikely that immediately China will be able to procure additional 40 million tonnes of iron ore globally. Even if they do so the global iron ore prices will shoot up without according any benefit to the domestic mining industry. This will only create conditions for increased exports of steel at the cost of the domestic sales, which the government is concerned about at the moment.

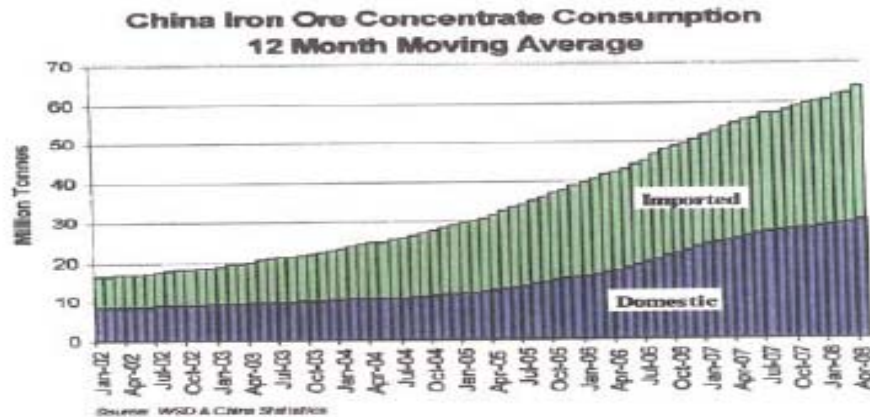
Chart - 26



## CONCLUSIONS

- The government needs to examine in depth the changing context of the steel and iron ore business in the world as also in India. The markets for both steel and iron ore have weakened in the face of the ongoing global recession. The iron ore spot prices are continuously falling with no bottom visible at this moment. The private merchant iron ore industry in India may, in fact, slip into a crisis if the global and domestic prices of iron ore fall further especially at a time when the transport costs are rising.
- The government should also be relieved to see the inflation rate dropping slowly in the past two weeks. Therefore, it should be concerned more about growth, balance of payment problems and should not take measures which have potential to kill growth or exports.
- The industry has been hit hard by the 15 per cent ad valorem export tax at the current prices of iron ore. Any increase from this, guided by any popular misconception about the ability of the mining industry and that any tax burden can be absorbed without pain or that consignments diverted from the exports will automatically find ways to the potential domestic consumers, will lead to a slow death of the industry. It is sufficiently evident from the huge increases in stock of iron ore as a result of the weakening of the export demand for the same.
- There is sufficient evidence that higher iron ore prices in the past have been completely absorbed by the rising steel or sponge iron prices. The profitability of the steel companies has been phenomenal. There was no significant role the iron ore prices played to alter their profitability conditions.
- The government should consider waiver of the export duty on iron ore. Further, selective use of iron ore export duty, with the proposed exemption to NMDC, will be against the competition law in the country.

Annexure -1



Source : Steel Business Briefings,UK

Annexure-2

Chinese Iron Ore and Steel price Trend (2008)

	Iron Ore at Port	Pig Iron BF Grade	Scrap	Billets	Rebar	HR Coils
4-Jan	1665	3860	3140	4150	4330	4630
11-Jan	1704	3910	3140	4220	4340	4600
18-Jan	1618	3910	3170	4220	4310	4600
25-Jan	1618	3910	3190	4190	4280	4580
1-Feb	1592	3910	3190	4150	4340	4620
15-Feb	1629	3870	3190	4200	4400	4650
22-Feb	1629	3940	3310	4500	4760	5050
29-Feb	1692	4070	3510	4800	4900	5130
7-Mar	1732	4270	3680	4900	4930	5250
14-Mar	1698	4500	3680	4900	4950	5250
21-Mar	1689	4360	3680	4850	4960	5300
28-Mar	1633	4450	3700	4850	4980	5480
7-Apr	1596	4360	3680	5000	5050	5530
11-Apr	1596	4300	3630	5000	5080	5480
18-Apr	1557	4250	3630	5100	5250	5550
25-Apr	1557	4350	3650	5200	5430	5650
5-May	1557	4600	3800	5500	5600	5850
9-May	1596	4600	3950	5600	5800	5900
16-May	1596	4600	3900	5550	5700	5900
23-May	1596	4700	3950	5450	5480	5850
30-May	1536	4700	4000	5450	5590	5900
6-Jun	1559	4750	4000	5450	5580	5950
13-Jun	1591	4850	4100	5350	5480	5930
20-Jun	1591	4880	4150	5300	5320	5800
27-Jun	1559	4820	4150	5300	5400	5870
11-Jul	1559	4700	4150	5380	5500	5980
25-Jul	1559	4750	4130	5500	5650	6030
1-Aug	1559	4650	4120	5260	5650	6030

Source: Mitsui and Company

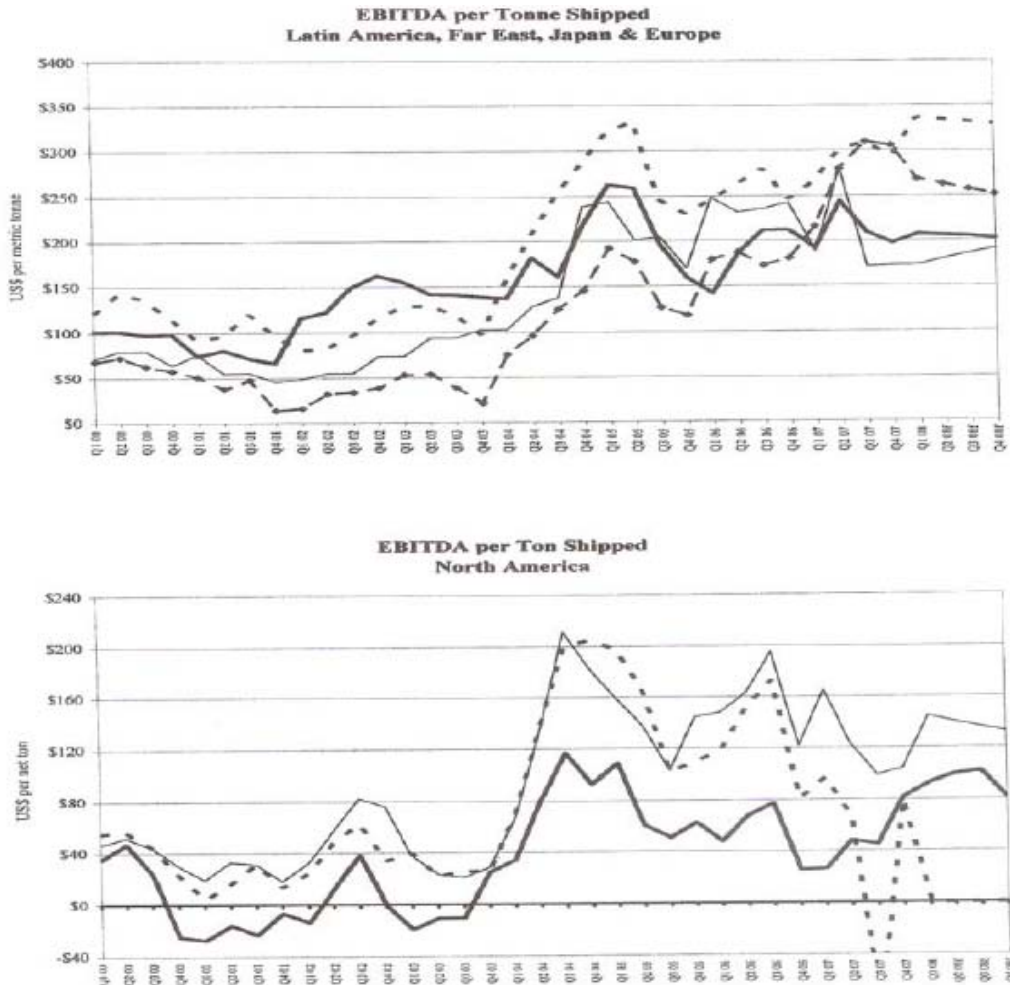
Annexure-3

HRC Prices (Tier -I Mills for Export )

	Prices in \$/tonne
January 2008	693
February 2008	720
March 2008	900
April 2008	995
May 2008	1024
June 2008	1051
July 2008	1113
August Early 2008	1077
Late August 2008	900
September 2008	900

Source: World Steel Dynamics : Various Issues and SBB  
 These are for Class -I mill Products

Annexure-4



Source : World Steel Dyanmics

**Annexure- 5**

**Net Realisation of Iron Ore Fines From Hospet Sector, Karnataka (26.06.2008)**

		KARIGANURU TO		NMPT (Via Arsikeri)	GOA (Via SVM)	GOA (Via TGT)	Krishnapat nam	Vizag
		Chennai	Kakinada					
1	Medium Grade Iron Ore Fines (Price in USD)	\$ 125	\$ 115	\$ 115	\$ 115	\$ 115	\$ 115	\$ 125
2	Exchange Rate	42.50	42.50	42.50	42.50	42.50	42.50	42.50
3	Medium Grade Iron Ore Fines (Price in INR)	5,313	4,888	4,888	4,888	4,888	4,888	5,313
4	Mining & Processing Cost	550	550	550	550	550	550	550
5	CSR	17.49	17.49	17.49	17.49	17.49	17.49	17.49
6	Internal Transport From Mines to Processing Plant, processing plant to railway station & loading at station	245	245	245	245	245	245	245
7	Transport charges (from railway station to port)	1,725	2,341	2,074	1,258	1,315	1,679	2,781
8	Handling Charges to port	115	200	202	265	265	315	275
9	Demurrage	52	52	52	52	52	52	52
10	Less Handling loss @ 7%	371.88	342.13	342.13	342.13	342.13	342.13	371.88
11	Export Duty and Cess	797.88	734.13	734.13	734.13	734.13	734.13	797.88
12	Royalty	19	19	19	19	19	19	19
13	Admn. +Selling expenses	269	269	269	269	269	269	269
14	<b>Total cost PWMT</b>	4,162	4,770	4,505	3,752	3,809	4,223	5,379
15	Moisture (7%)	372	342	342	342	342	342	372
16	<b>Total cost PDMT</b>	4,534	5,113	4,849	4,094	4,151	4,565	5,751
17	Ex-Mine Realisation	779	(225)	41	793	736	322	(438)
18	Income tax @ 33.99% on 17	264.64	-	13.88	269.68	250.30	109.54	-
19	<b>Net Margin</b>	514	(225)	27	524	486	213	(438)
20	<b>Net Margin percentage</b>	10%	-5%	1%	11%	10%	4%	-8%

Source: Own research and FIMI

Annexure-6

Net Realisation of Iron Ore Fines From Chitradurga (26.06.2008 and 16.08.2008)

Sl. No.	From Chitradurga	Amratapur	
		NMPT	16-Aug
1	Medium Grade Iron Ore Fines (Price in USD)	\$105	100
2	Exchange Rate	42.50	43
3	Medium Grade Iron Ore Fines (Price in INR)	4463	4300
4	Mining & Processing Cost	450	450
5	CSR	20	20
6	Internal Transport From Mines to Processing Plant, processing plant to railway station & loading at station	145	145
7	Transport charges (from railway station to port)	1487	1487
8	Handling Charges to port	202	202
9	Demurrage	52	52
10	Less Handling loss @ 7%	312.38	448.14
11	Export Duty and Cess	670.38	645
12	Royalty	11	11
13	Admn. +Selling expenses	175	175
14	<b>Total cost PWMT</b>	<b>3525</b>	3635.14
15	Moisture (7%)	312	
16	<b>Total cost PDT</b>	<b>3837</b>	
17	Ex-Mine Realisation	625	664.86
18	Income tax @ 33.99% on 17	212.48	
19	<b>Net Margin</b>	<b>413</b>	
20	<b>Net Margin percentage</b>	<b>9%</b>	

Source: Own research and FIMI

Annexure- 7

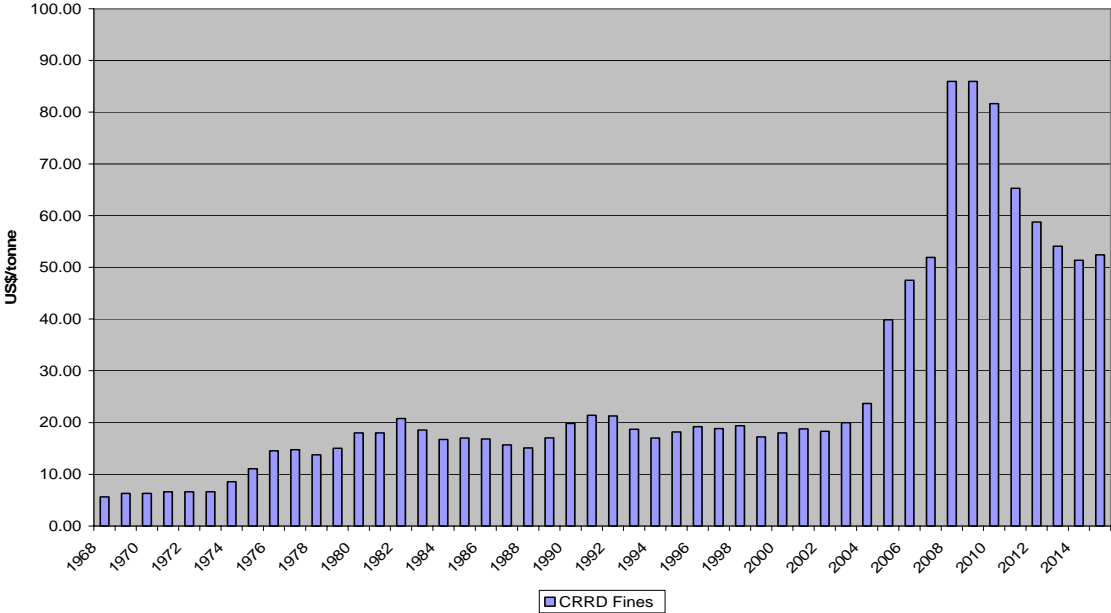
World Hot Rolled Coils Costs, Export Prices and Estimated EBIDTA ( July 2008)

(\$ per metric tonne)

Quarter (mid-point)	HRB World Export Price	Operating Cost	Raw Material Cost	Other Operating Cost	Variable Cost	Fixed Cost (1)	EBITDA Margin
1 <sup>st</sup> (Low Cost)	1113	530	360	170	386	144	583
2 <sup>nd</sup>	1113	635	450	185	474	161	478
Mean	1113	668	473	195	498	170	446
3 <sup>rd</sup>	1113	700	495	205	522	178	413
4 <sup>th</sup> (High Cost)	1113	820	620	200	637	183	293

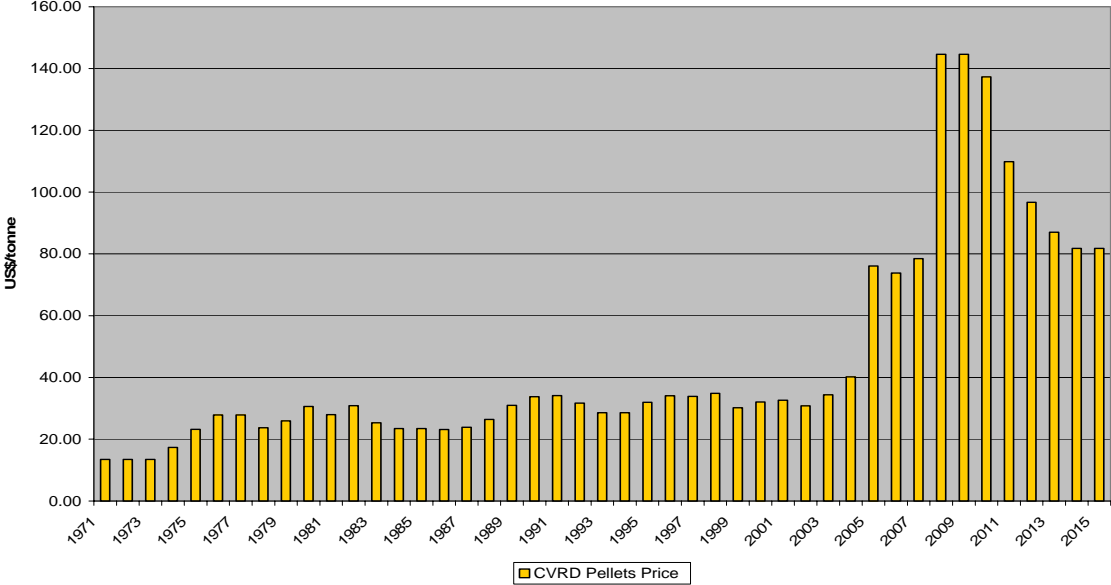
Source: World Steel Dynamics

CVRD Fines Price : past Trend and Forecasts



Source : World Steel Dynamics

CVRD Pellets Price :Past Trend and Forecasts



Source : World Steel Dynamics

**Annexure-9**

**PORT STOCKS AS OF END AUGUST 2008**  
(for previous year only data of Chennai and Krishnapatnam available)

Figures in thousand tonnes

SL No.	NAME OF PORT	IRON ORE STOCK '000 MT				PREVIOUS YEAR
		MANUAL	MECH	OUTSIDE	TOTAL	
1	HALDIA	1,374	99		1,473	300 300
2	PARADEEP	1,384	760		2,144	
3	KAKINADA	426			426	
4	VIZAG	453	559		1,012	
5	KRISHNAPATTANAM				1,000	
6	CHENNAI				434	
7	ENNORE	145			145	
8	NAGAPATTANAM					
9	TUTICORIN					
10	COCHIN					
11	NEW MANGALORE	877			877	
12	KARWAR					
13	BELEKERI	60			60	
14	MORMUGAO		40	250	290	
15	PANJIM					
16	PORT REDDY	15			15	
17	HAZIRA					
18	MAGDALLA					
19	DAHEJ					
20	NAVLAKHI					
21	KANDLA					
22	BHAVNAGAR					
23	OKHA					
24	MUNDRA					
25	PIPAVAV					
26	PORBANDAR					
		<b>4,734</b>	<b>1,458</b>	<b>250</b>	<b>7,876</b>	

Source: FIMI



**CCCMC Reference Prices for Indian Iron Ore Imports**

Issuance Date	FOB Indian Port	
	High Price (US\$/t)	Low Price (US\$/t)
2008.09.01	125	116
2008.08.25	135	125
2008.08.18	138	130
2008.08.11	145	138
2008.08.04	142	138
2008.07.28	140	136
2008.07.21	143	135
2008.07.14	155	135
2008.07.07	145	140
2008.06.30	145	140
2008.06.23	145	140
2008.06.16	140	135
2008.06.10	140	133
2008.06.02	140	135
2008.05.26	140	135
2008.05.19	143	140
2008.05.12	143	140
2008.05.06	143	140
2008.04.28	143	140
2008.04.21	145	135

Source: Mysteel

## Annexure-11

**Iron ore mine-head stocks**

Qty.: Million tonnes

AS ON	LUMPS	FINES	TOTAL
31.3.2002	4.113	26.670	30.783
31.3.2003	5.243	26.391	31.634
31.3.2004	5.843	26.631	32.474
31.3.2005	8.793	25.918	34.711
31.3.2006	11.85	31.200	43.065
31.3.2007	13.440	30.490	43.930

Source: Indian Bureau of Mines, Nagpur

## Annexure-12

NEW DELHI: In a major policy shift, the government may reimburse public sector major NMDC the duty paid on exports to Japan and Korea. This, along with the proposed reimbursement of the special freight surcharge, will help NMDC to offer ore to customers in these countries at a preferential price.

The move is aimed at striking strategic bilateral ties with Japan and Korea, important partners in India's civil nuclear plans.

“The commerce ministry has moved a Cabinet note suggesting special fiscal incentives for NMDC over its iron ore trade with Korean and Japanese steel mills. The proposal is to either reimburse additional levies to the PSU or withdraw the duties applicable on its long-term trade with the two countries. It is expected that the government would soon take a decision on the matter after considering the views of all the stakeholders,” an official source said.

Out of its total production of over 30 million tonne (mt) of iron ore, NMDC exports about 3.5 mt of high-grade ore lumps and fines to Japan and Korea under long-term agreements. The price under this arrangements work out around \$50-67 per tonne (Rs 2,000-3,000 per tonne) while the market price of ore of the same grade varies between Rs 5,500-7000 per tonne. The 15% export duty (about Rs 800 per tonne) and additional railway surcharge of Rs 1,000 per tonne leave very little for NMDC on its overseas deals.

Due to this wide disparity in pricing, NMDC wants to re-negotiate higher prices with Japanese and Korean mills for its 2008-09 contracts. The government fears this could seriously jack up the prices for the two bilateral partners. Moreover, as NMDC's domestic long-term contracts are also based on long-term benchmark prices accepted by Japanese mills, it could substantially increase domestic ore prices having an adverse impact on inflation.

Though the draft Cabinet note has proposed a reduction in export duty from the present 15% per cent ad-valorem to the previous level of Rs 300 a tonne for long-term agreement, it is expected that the proposal may be changed in favour of complete waiver of duty in the final note, the source said. In its reply to the note, NMDC has also made it clear that partial reimbursement or waiver of the duties would not be adequate to restore financial viability of ore exports.

The whole exercise is based on the anticipation that NMDC may seek over 95% hike in iron ore prices for foreign steel makers when negotiations in this regard begin later this year. This is based on international benchmarks arrived after the recent price settlement by mining majors Rio Tinto and BHP Billiton with Chinese buyers. Rio Tinto and Bao Steel had agreed for price increase of about 80% on iron ore fines and 96% on lumps.

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Source: Internet

Steel and Natural Resources Strategy Research  
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