



## INDIAN IRON ORE INDUSTRY : STRATEGIES TO COMBAT THE SUPPLY CONCERNS AND OTHER CONSTRAINTS OF GROWTH

by

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### SUPPLY CONCERNS MISPLACED

The apprehension about the iron ore availability to Indian steel industry has its genesis when iron ore exports started picking up following the demand from China where steel industry started growing phenomenally from 2000 onwards and Indian steel industry felt that they would also grow as fast. Although Indian steel industry could not even remotely match China but its bogey of supply constraints continues unabated. The following table brings out the fallacy of this apprehension:

**Table – I**

### Crude steel, iron ore production, consumption, surplus and exports

(million tonnes)

Year (1)	Crude steel production (2)	Iron ore consumption by steel industries (3)	Iron ore production (4)	Surplus (4-3)	Exported out of surplus
2009-10	65.83	96.95	218.55	121.60	117.37
2010-11	70.67	107.22	207.15	99.93	97.66
2011-12	74.29	100.57	168.21	67.64	61.74
2012-13	78.41	103.39	136.61	33.22	18.37
2013-14	81.69	108.33	152.18	43.85	14.41
2014-15	88.98	114.68	129.32	14.64	6.12
2015-16	89.79	126.77	155.91	29.14	4.50
2016-17	97.93	150.21	194.58	44.37	30.48
2017-18	103.13	159.57	200.95	41.38	24.20
2018-19	110.92	159.94	206.44	46.50	16.19
2019-20	109.21	180.00	246.08	62.00	36.62

**Source:** For crude steel production: Ministry of Steel and Joint Plant Committee;  
For iron ore production and consumption: Indian Bureau of Mines;  
For exports : Ministry of Commerce and Industry

**Note:** \* This includes illegal exports of pellets: 1.71 million tonnes in 2013-14; 0.65 million tonnes in 2014-15; 0.28 million tonnes in 2015-16; 7.43 million tonnes in 2016-17; 7.85 million tonnes in 2017-18; 7.84 million tonnes in 2018-19; 10.63 million tonnes in 2019-20



2. Following the imposition of ban on exports by Hon'ble Supreme Court of India from Karnataka and now closure of Goan mines since March 2018 and export duty of 30% on iron ore, the exports plummeted, but the supplies to steel industry were never a concern. In fact, for iron ore, the main concern was lack of demand from the steel industry. It has to be emphasised that for the last more than three decades, no new iron ore mine has been opened; in fact the extant mines had latent capacity to feed the domestic steel industry as well as to take advantage of world demand mainly from China.

### **STEEL INDUSTRY FAILED TO DELIVER**

3. It is thus not the iron ore industry which failed; rather it is the steel industry which faulted to deliver and continues to do so. Since there is abundance of iron ore and prices cheaper than world average, the steel industry is very choosy in selection of best grade of iron ore. According to World Steel Association (WSA), the average consumption of iron ore per tonne of 'hot metal' is 1.37 tonnes. On the other hand, Indian steel industry on an average consumes 1.65 tonnes of iron ore per tonne of hot metal (National Steel Policy, 2017) and calculates its requirements on that basis. Average grade of iron ore consumed by Indian steel industry is +62% Fe whereas the world's average grade is 60% Fe. This is despite the fact that Indian steel plants are as modern as any steel plants abroad. This selective buying has resulted in unsold stockpile of iron ore to the tune of 162 million tonnes (including 94 million tonnes in Odisha and 43 million tonnes in Jharkhand) at mine-heads in the country as on 31<sup>st</sup> March, 2019 which the steel industry neither purchases nor allows mining units to export.

4. Not only this, while working out the price of steel, the Indian steel industry takes international price as base whereas it gets high grade iron ore at comparatively lower prices, either from domestic sources or captive mines (where it is only transfer price). At present almost all the primary steel producers have

#### **Auction of Iron Ore Fines by Primary Producers**

**The JSW Steel conducted an auction of iron ore fines for 600,000 tonnes on 10<sup>th</sup> March, 2021 and 300,000 tonnes on 12<sup>th</sup> February, 2021. The entire quantity of material put up for the auction remain unsold and cancelled due to dull response from the market.**



captive iron ore mines where iron ore is available to them at transfer prices. Some of the primary producers of steel viz. JSW and JSPL who have been the staunch proponent of banning exports of iron ore on fallacious grounds are now themselves exporting and selling iron ore directly or through middleman in the open market. The consumption of high grade iron ore at lower than the international price, coupled with cheaper labour costs should give more and better quality steel at a competitive price. The domestic steel industry hides these vital information and reaps windfall profits. In the current financial year 2020-21, the major steel companies have declared the Q3 financial results which shows that they earned huge net profits because of effecting continual increase in prices of steel products by them as from the following table:

**Table – II**

**Primary steel companies: Quarter 3 results of financial year 2020-21**

(Rs crores)

JSPL			JSW			Tata Steel			SAIL						
	20-21 Q3	20-21 Q2	19-20 Q3		20-21 Q3	20-21 Q2	19-20 Q3		20-21 Q3	20-21 Q2	19-20 Q3				
<b>Net profit</b>	2,567	1,179	219	<b>Net profit</b>	2,669	1,595	187	<b>Net profit</b>	4,832	1,635	1,194	<b>Net profit</b>	1283	393	430

Source: Steel companies' websites

From the above table it can be observed that in case of JSW net profits have surged whooping more than 1300% during Q3 of 2020-21 over corresponding period of Q3 of 2019-20. Similarly, in case of JSPL also, the hike in profit is to the tune of more than 12 times in Q3 of current year in comparison to Q3 of last financial year. Even in case of SAIL the profit has gone up by almost 4 times. In case of Tata Steel, the consolidated net profit (PAT) for third quarter of 2020-21 is Rs 4,832 crores against net profit of Rs 1,194 during the corresponding period of 2019-20 i.e. increase of more than 4 times.

5. With a view to give relief to MSMEs, the Government in Union Budget 2021-22 has announced reduction of import duties on steel products to a level of 7.5% from the existing rate 12.5% / 10%. However, despite duty reduction major steel producers have stated that they will not reduce the prices of steel products despite reduction in the basic customs duty effected by Government.



### **HIGH COST OF STEEL RESULTED IN SUBDUED DEMAND**

6. Any firming up of steel demand propels the steel companies to raise price of steel unabatedly. Since Covid-19, as per newspaper reports, the steel industry has been raising prices of steel very frequently. During the period of last two months itself (November to December 2020) the prices of steel have increased six times which is unprecedented:

**Table – III**

**India: Steel Prices**

Month	Price (Rs per tonne)	In six months prices increased by Rs 22,700/-
31 <sup>st</sup> December, 2020	Rs 57,950	
9 <sup>th</sup> December, 2020	Rs 51,950	
1 <sup>st</sup> December, 2020	Rs. 49,750	
19 <sup>th</sup> November, 2020	Rs 47,250	
8 <sup>th</sup> November, 2020	Rs 46,750	
1 <sup>st</sup> November, 2020	Rs 46,250	
October, 2020	Rs 43,500	
August, 2020	Rs 38,750	
July, 2020	Rs 35,250	

**Source:** Media Reports

7. The high cost of domestic steel in India has deprived domestic consumers from common usage of steel and kept the steel demand bare minimum leading to low per capita consumption as can be seen from **Table-IV**.

**Table – IV**

**Top 10 Steel Producing Countries in 2020  
(covering 86% of global crude steel production)**

Country	Rank	Crude steel production in 2020 (million tonnes)	% of global production	Per capita finished steel consumption in 2019 (kilograms)
China	1	1,053.0	56.5%	632.9
<b>India</b>	<b>2</b>	<b>99.6</b>	<b>5.3%</b>	<b>74.3</b>
Japan	3	83.2	4.5%	498.1
Russia	4	73.4	3.9%	296.8
USA	5	72.7	3.9%	298.2
S. Korea	6	67.1	3.6%	1039.0
Turkey	7	35.8	1.9%	417.9
Germany	8	35.7	1.9%	313.4
Brazil	9	31.0	1.7%	97.8
Iran	10	29.0	1.5%	223
Others	-	-	13.7%	-
<b>World</b>		<b>1,829.14</b>	<b>100%</b>	<b>229.3</b>

**Source:** World Steel Association, Brussels : World Steel Annual Crude Steel Production Release 2021

The subdued demand because of high prices of domestic steel seem to be reason for IISCO's 2.5 million tonne plant at Burnpur dedicated by the Hon'ble Prime Minister on 10<sup>th</sup> May, 2015 not coming on stream so far. Even the fate



of NMDC's 3 million tonne steel plant which started construction in 2009-10 at Nagarnar (Chhattisgarh) is not much different.

8. It is ironical that despite Indian steel industry being 100 years old and ranking distant 2<sup>nd</sup> in the world crude steel production, not much efforts have been made to upgrade the technology for value addition. Consequently, the country is still dependent on import of several high performance and value added steel products like electrical steel, automotive grade steel and steels for specialized use in defence, space and nuclear applications **(National Steel Policy 2017)**. Further more than 90% of our steel being exported is accounted by non-alloy steel comprising mainly basic products like flat and long products, while more than 70% of its imports are also non-alloy steel. There is therefore a need to discourage such exports by the steel industry so that the same is available to the domestic industry at a competitive price.

### **REPERCUSSION**

9. One tonne of steel consumption leads to the usage of three tonnes of cement and other metals. Low per capita steel consumption in India results in lesser per capita consumption of cement and other metals. If the steel usage is promoted in the country by removing import duty on steel, the domestic consumer will get cheaper and better grade of steel. This will lead to massive construction activities (housing), infrastructure development (roads, bridges and ports) and boost automotive industry, railway and shipping sectors. Removal of the import duty will also push the complacent domestic steel industry to innovate and become more efficient to produce steel at a competitive price.

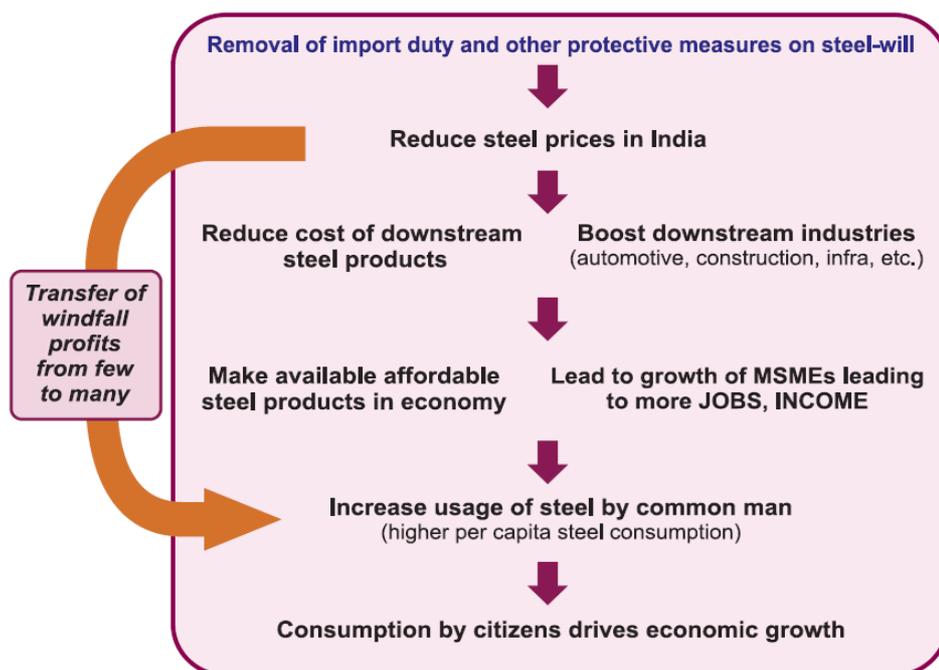
10. It may be emphasised that just as iron ore is a raw material for steel, steel is raw material for downstream engineering and various other products, many of which are exported. High price of steel in India has deprived many downstream products their competitive edge in the international market. If the import duty is removed, it will lead to competitive production of domestic steel by elimination of windfall profits by handful of steel producers and thus benefit



downstream industries and domestic consumers at large. This will lead to all round growth of all other materials that go alongwith the usage of steel.

**Chart – I**

**Removal of import duty and other protective measures on steel :  
Cascading effect in the economy**



**NATIONAL STEEL POLICY (NSP), 2017**

11. The Government of India has ambitious plan to achieve 300 million tonnes of crude steel production capacity by 2030–31. In other words, the country would have to add roughly 200 million tonnes to its present steel production capacity. This would require creation of additional infrastructure facility to move 800 million tonnes of cargo (3 tonnes of raw materials and one tonne of finished product per tonne of crude steel or 200 million tonne × 4 = 800 million tonnes). Looking to the present high cost of steel, it is worthwhile to ponder whether the country would be able to generate the additional demand to achieve the production capacity of 300 million tonnes of crude steel by 2030–31.



## CONSTRAINTS TO GROWTH

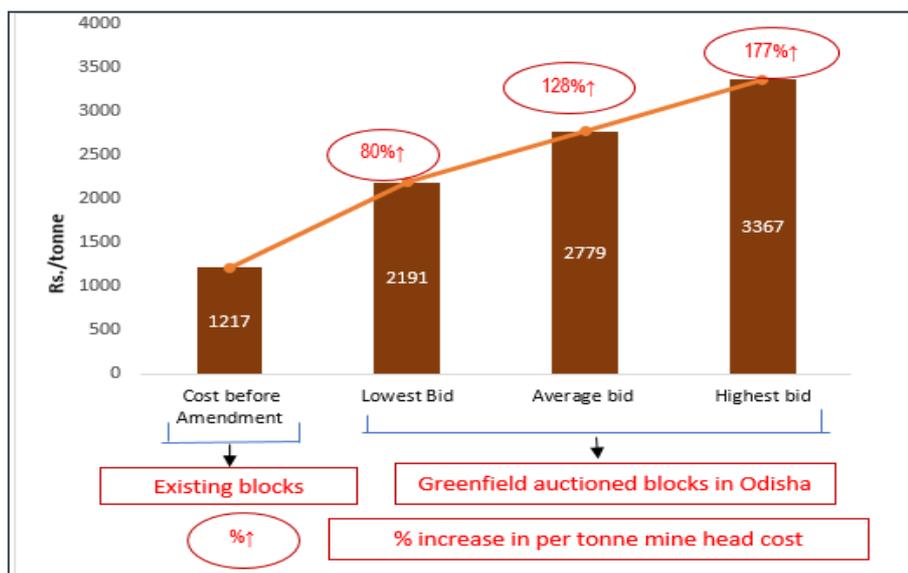
12. Ensuring low cost of production is crucial for any business or sector, including mining, as it helps to remain profitable as well as competitive. This competitiveness also assists in country's growth through cheaper raw material supply to its domestic industries and export of the surplus at competitive rates to enhance the balance of trade.

13. Owing to high taxation, logistics and fuel costs etc., the Indian mineral sector has been facing high production cost. After the advent of auction, the production cost in the country has risen steeply from the auctioned mines. As more and more mines are granted through auction, the entire mineral sector is being subjected to high production costs. It may reach a point, where mines are no longer economic to operate and may have no other option but to shut down, leaving India's mineral wealth untapped. Thus, auction affects all downstream industries and employment opportunities in the economy, while fueling the already high domestic production cost through additional burden on mineral production cost.

14. An idea of the increase in the cost of production of the pre-vs. post-auctioned mines in Odisha and Karnataka can be had from the following charts:

Chart – II

ODISHA: Greenfield blocks – Cost of production at mine-head :  
Pre vs Post auction (iron ore)



Source: FIMI analysis



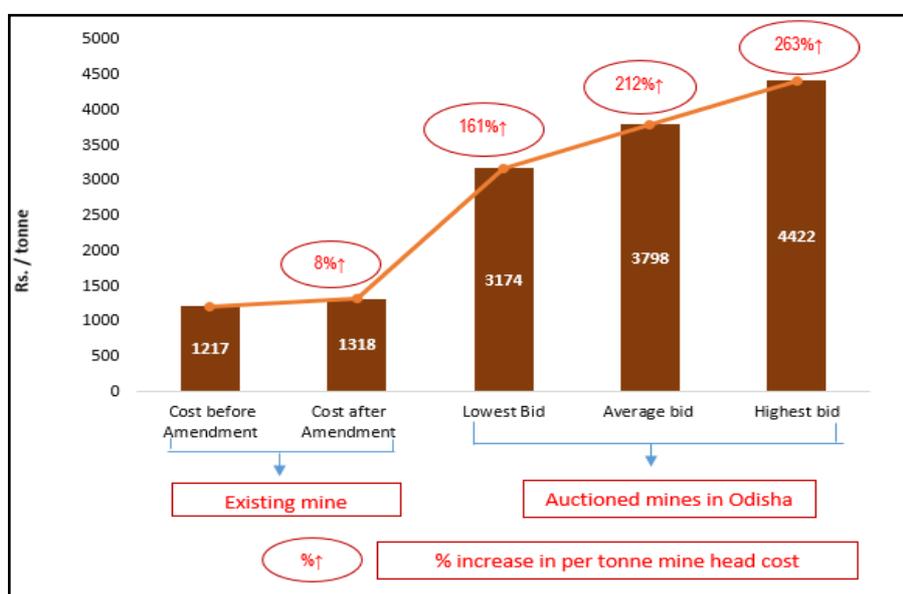
15. From the above chart, it can be observed that, prior to introduction of auction in 2015, in Odisha for greenfield mines, the mine head cost per tonne was Rs. 1217. This is a tentative cost, which does not include other major cost components like land acquisition, stamp duty, corporate income tax, CSR, performance security, GST, NPV and compensatory afforestation charges, other levies, etc. However, after the introduction of auction, in case of greenfield auctioned blocks in Odisha:

- ❖ **Lowest bid:** the per tonne mine head cost becomes Rs. 2191 which is 80 % higher than the cost before amendment.
- ❖ **Average bid:** the per tonne mine head cost becomes Rs. 2779 which is 128% higher than the cost before amendment.
- ❖ **Highest bid:** the per tonne mine head cost becomes Rs. 3367 which is 177 % higher than the cost before amendment

Chart – III

**ODISHA: Non-captive iron ore and iron and manganese ore  
MLs expired on 31<sup>st</sup> March, 2020**

**Cost of production at mine-head: Pre vs Post auction**



Source: FIMI analysis

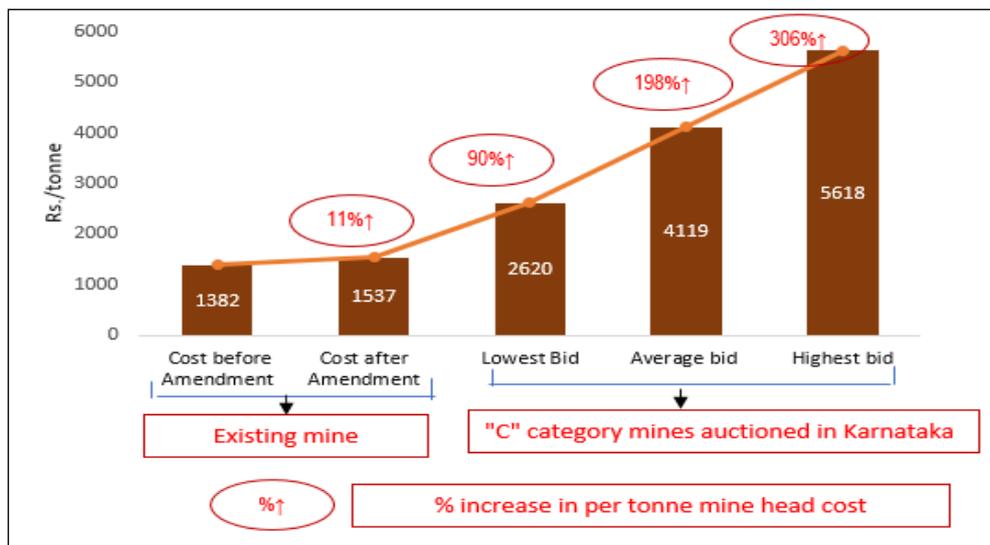
16. In Odisha prior to introduction of auction in 2015, for expired mines, the mine head cost per tonne was Rs. 1217. This is a tentative cost, which does not include other major cost components like land acquisition, stamp duty, corporate income tax, CSR, performance security, GST, NPV and compensatory afforestation charges, other levies, etc. However, after the introduction of auction, in case of expired auctioned mines in Odisha:



- ❖ **Lowest bid:** the per tonne mine head cost becomes Rs. 3174 which is 161% higher than the cost before amendment.
- ❖ **Average bid:** the per tonne mine head cost becomes Rs. 3798 which is 212% higher than the cost before amendment.
- ❖ **Highest bid:** the per tonne mine head cost becomes Rs. 4422 which is 263% higher than the cost before amendment.

17. The following chart illustrates the per tonne mine-head cost for “C” category iron ore mines in Karnataka

**Chart – IV**  
**KARNATAKA: “C” category iron ore mine-head cost per tonne:**  
**Pre vs. Post auction**  
**(for iron ore mines in Karnataka, average 62% Fe, fines)**



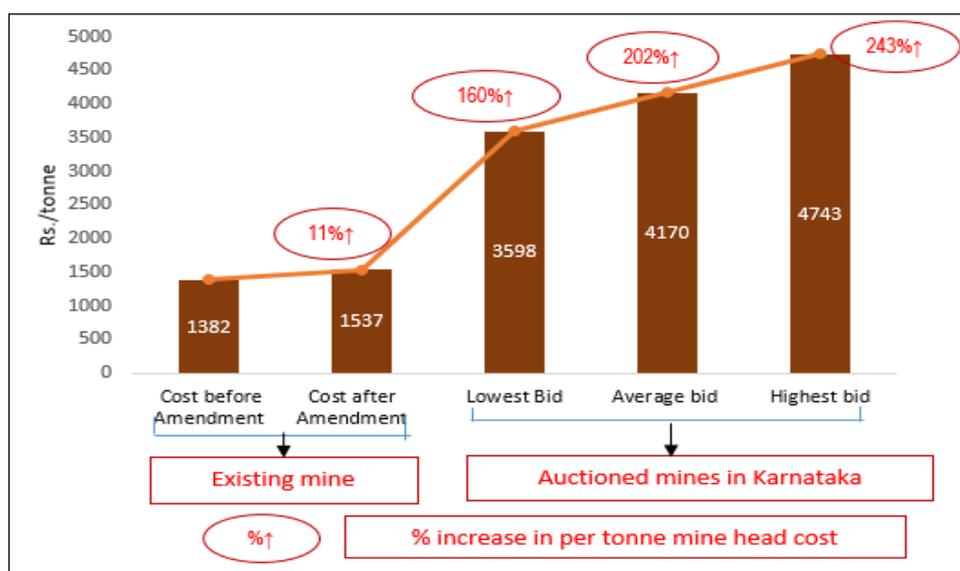
18. In Karnataka prior to introduction of auction in 2015, for “C” category mines, the mine head cost per tonne was Rs. 1382. This is a tentative cost, which does not include other major cost components like land acquisition, stamp duty, corporate income tax, CSR, performance security, GST, NPV and compensatory afforestation charges, other levies, etc. However, after the introduction of auction, in case of “C” category auctioned mines in Karnataka:

- ❖ **Lowest bid:** the per tonne mine head cost becomes Rs. 2620 which is 90 % higher than the cost before amendment.



- ❖ **Average bid:** the per tonne mine head cost becomes Rs. 4119 which is 198% higher than the cost before amendment.
- ❖ **Highest bid:** the per tonne mine head cost becomes Rs. 5618 which is 306 % higher than the cost before amendment

**Chart – V**  
**KARNATAKA: Non-captive iron ore MLs expired on 31<sup>st</sup> March, 2020**  
**Cost of production at mine-head : Pre vs. Post auction**



19. In case of Karnataka for non-captive iron ore MLs expired mines, per tonne cost before auction was Rs. 1382, which has increased in case of

- ❖ **Lowest bid:** to Rs. 3598 which is 160% higher than the cost before amendment.
- ❖ **Average bid:** to Rs. 4170 which is 202% higher than the cost before amendment.
- ❖ **Highest bid:** to Rs. 4743 which is 243% higher than the cost before amendment.

20. The moot question is whether the steel industry will be competitive at such a high cost of raw materials despite the fact most of the reserves offered in recent auctions of iron ore mines were grabbed for captive purposes. If there is any future constraint of growth of steel industry and supply concerns of iron ore, the blame will be at the door of steel industry.