



Economic problem and remedies with reference to iron & steel industries in India

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ABSTRACT The Indian steel industry is one of the most promising industries in the country and across the world. Consumption of steel is an important indicator of economic progress of any country; it increases with an increase in demand for infrastructure, automobiles, transportation, etc. India is blessed with a rich bed of iron ore and steel in mainly eastern parts of the country like Orissa and West Bengal, which contribute to more than 70% of the total steel production. There are a handful of companies which are known for their phenomenal growth in this field, such as Tata Steel, Jindal Steel and Steel Authority of India Ltd. (SAIL). The total production is set to touch 124 million tonnes by the end of 2012 and further reach 275 million tonnes by 2020, maintaining an impressive CAGR of 8%. This sector, is however, dwarfed by numerous obstructions listed below.

Major challenges

1. Capital
2. Lack of technology
3. Low productivity
4. Inefficiency in public sector units
5. Low potential utilisation
6. Heavy demand
7. Shortage of metallurgical coal
8. Inferior quality of products

Lastly, global economic forces also play a major role in determining the strength of Indian steel industry. An increasing number of international steel giants such as Arcelor-Mittal are entering the Indian shores for expansion. In order to tackle the problem of limited resources, these companies are considering consolidation of forces. One of the biggest steps suggested to the government is banning the export of iron ore, which will ease the problem of shortage of resources.

KEYWORDS :

INTRODUCTION:

Iron and Steel Industry in India is on an upswing because of the strong global and domestic demand. India's rapid economic growth and soaring demand by sectors like infrastructure, real estate and automobiles, at home and abroad, has put Indian steel industry on the global map. According to the latest report by International Iron and Steel Institute (IISI), India is the 4th largest steel producer in the world.

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HISTORY OF IRON AND STEEL INDUSTRY IN INDIA: Iron and Steel industry in the country has experienced a sustainable growth since the independence of the country. A humble beginning of the modern steel industry was reached in India at Kulti in West Bengal in the year 1870. But the outset of bigger production became noticeable with the establishment of a steel plant. It started plant in Jamshedpur in Bihar in 1907 and started production in 1912. The new township was named after Jamshed Ji Tata. It was, however, only after Independence that the steel industry was able to find a strong foothold in the country. Excluding the Jamshedpur plant of the Tata, all are in the public sector and looked after by Steel Authority of India Ltd. (SAIL).

SOME OTHER INDUSTRIES: Bhilai and Bokaro Steel plant were set up with Soviet alliance. Durgapur and Rourkela came up with British and West German technical expertise, respectively.

Some of the major problems faced by Indian iron and steel industry are as follows:

1. Capital:

Iron and steel industry requires large investment which a developing country like India cannot afford.

Many of the public sector integrated steel plants have been established with the help of foreign aid.

2. Lack of Technology:

Throughout the 1960s and up to the oil crisis in mid-1970s, Indian steel industry was characterized by a high degree of technological efficiency. This technology was mainly from abroad. But during the following two decades after the oil crisis, steep hike in energy costs and escalation of costs of other inputs, reduced the margin of profit of the steel plants.

This resulted in lower levels of investment in technological developments. Consequently, the industry lost its technology edge and is now way behind the advanced countries in this regard. Material value productivity in India is still very low.

In Japan and Korea, less than 1.1 tonnes (and in several developed countries 1.05 tonnes) of crude steel is required to produce a tonne of saleable steel. In India, the average is still high at 1.2 tonnes. Improvement in the yield at each stage of production, particularly for value added products will be more important in the coming years.

3. Low Productivity:

The per capita labour productivity in India is at 90-100 tonnes which is one of the lowest in the world. The labour productivity in Japan, Korea and some other major steel producing countries is about 600-700 tonnes per man per year.

At Gallatin Steel a mini mill in the U.S. there are less than 300 employees to produce 1.2 million tonnes of hot rolled coils. A comparable facility in India employs 5,000 workers. Therefore, there is an urgent need to increase the productivity which requires retraining and redevelopment of the labour force.

4. Inefficiency of public sector units:

Most of the public sector units are plagued by inefficiency caused by heavy investment on social overheads, poor labour relations, inefficient management, under utilisation of capacity, etc. This hinders proper functioning of the steel plants and results in heavy losses.

5. Low potential utilisation:

The potential utilisation in iron and steel is very low. Rarely the potential utilisation exceeds 80 per cent. For example, Durgapur steel

plant utilises only 50 per cent of its potential. This is caused by several factors, like strike, lockouts, scarcity of raw materials, energy crisis, inefficient administration, etc.

6. Heavy demand:

Even at low per capita consumption rate, demand for iron and steel is increasing with each passing day and large quantities of iron and steel are to be imported for meeting the demands. Production has to be increased to save precious foreign exchange.

7. Shortage of metallurgical coal:

Although India has huge deposits of high grade iron ore, her coal reserves, especially high grade cooking coal for smelting iron are limited. Many steel plants are forced to import metallurgical coal. For example, steel plant at Vishakhapatnam has to import coal from Australia. Serious thought is now being given to replace imported coal by natural from Krishna-Godavari basin.

8. Inferior quality of products:

Lack of modern technological and capital inputs and weak infrastructural facilities leads to a process of steel making which is more time consuming, expensive and yields inferior variety of goods. Such a situation forces us to import better quality steel from abroad. Thus, there is urgent need to improve the situation and take the country out of desperate position.

- 1. Human Resources:** Availability of efficient manpower has been listed as the biggest hurdle in the development of Indian steel industry. Attracting and retaining the best engineers is a challenge task as employees find service sector a more lucrative opportunity for professional growth. Employees do not wish to take up the challenges offered by manufacturing sector, opting for glamorous desk jobs instead.
- 2. Manufacturing & Mining:** Depleting resources and reserves of iron ore, steel etc. is one of the biggest challenges the industry is likely to face. Competition is increasing, resources are limited. It is an intense tug of war between the biggest steel giants for mining. Amidst all this chaos, small sized firms find it difficult to survive for a long period.
- 3. Technological Innovation:** There is a need for introducing eco-friendly technologies in the mining and production process. Only with the help of technologies like recycling of steel, production efficiency, etc. can they sustain for a longer period.
- 4. Government policies:** Government initiatives such as better infrastructure, stricter norms to bring demand at par with supply, etc. are needed for management of the industry (Tata, 2008).

PROSPECTS AND REMEDIES TO IMPROVE IRON AND STEEL INDUSTRIES IN INDIA

The steel industry and its associated mining and metallurgy has seen a number of major investments and developments in the recent past. Some of them are as follows:

- Japanese steel maker Daido Steel Company will pick up 10 per cent stake in Maharashtra-based Sunflag Iron and Steel for around Rs 56 crore (US\$ 9.09 million).
- Tata Steel has initiated talks with the Klesch Group, a Swiss Investment bank with interests in commodities, to undertake "detailed due diligence and negotiations" for the possible sale of its long steel business and associated distribution activities in Europe.
- Posco India, the subsidiary of the South Korea headquartered company, will invest US\$ 20 million to set up a steel plant in Sanand in Ahmedabad. The plant will produce steel sheets to meet demand from automobile companies that have made a hub in Sanand.
- Essar Steel has announced the commissioning of an integrated 6 MT iron ore pellet plant near Paradip in Odisha. The factory is linked by a 253 km slurry pipeline with a facility which is located at Odisha's iron ore belt and can beneficiate low-grade ore.

Government Initiatives

The centre is aiming at rejuvenating the steel sector and removing the hurdles in steel production by scaling up production to 300 MT by 2025 from the 81 MT in 2013-14, according to Mr Narendra Singh Tomar, Minister for Steel and Mines, who also said that India is poised to move to second position in steel production in the next 10 years.

In another boost to the steel sector, the Union Government has decided

to set up a research centre for the steel industry. The centre will spearhead research under the proposed 'Steel Research & Technology Mission of India' (SRTMI) to promote collaborative programmes in the sector. It is envisioned that the research will be done in priority areas covering best usage of available raw materials, conservation of natural resources, optimum energy conservation, minimum emissions leading to innovations, development of design, engineering and manufacturing facilities of key steel plant equipment.

The Government of India plans to set up a steel plant under SAIL at Bayyaram in Khamman District of Telangana, according to Mr Narendra Singh Tomar, Union Minister of Steel and Mines. A feasibility study is already underway and soon after its completion, a site would be selected for plant and funds allocation.

Some of the other recent government initiatives in this sector are as follows:

- After the approval of the new mining law by the Parliament of India, the SAIL-led Afghan Iron and Steel Consortium (AFISCO) will soon recommence negotiations with the Afghanistan government to set up a plant with a capacity of 1.5 MTPA.
- The Ministry of Steel has proposed to set up special purpose vehicles (SPVs) with State governments to revive investment in the steel sector. The role of the SPVs will be to acquire land and obtain all necessary environment and forest clearances, while NMDC Ltd will be the company creating these SPVs.
- The Ministry of Steel has also proposed Special Mining Zones, where regions with mineral resources will be identified as strategic resources and one nodal authority will arrange necessary green clearances for mining projects in such areas.

Road Ahead

The demand for steel in India is expected to rise by 4-5 per cent this year and will touch a compounded annual growth rate (CAGR) of 15 per cent after FY17. Given the government's high focus on jump starting stalled projects, followed by pushing large flagship projects, including the freight and industrial corridors, it is expected that India will begin moving back on the path of materials intensive growth by the end of this year.

Also, the recently released Union Budget 2014-15 has paved the way for the development of the Indian steel sector with proposals for the construction of 100 smart cities and changes in the MMRD Act. India's ranking in the global list for production of crude steel is all set to improve with increasing demand for domestic consumption in the years to follow. As per Tata Steel, India's steel sector is anticipated to witness investment of about Rs 2 trillion (US\$ 32.46 billion) in the coming years.

Exchange Rate: INR 1 = US\$ 0.0162 as on January 21, 2015

Global Scenario

- In 2014, the world crude steel production reached 1661.5 million tonnes (mt) and showed a growth of 1.2% over 2013. (Source: World Steel Association or WSA, prov.)
- China remained the world's largest crude steel producer in 2014 (823 mt) followed by Japan (110.7 mt), the USA (88.3 mt) and India (83.2 mt) at the 4th position.
- WSA has projected that global apparent steel use will increase by 2% to 1,562 mt in 2014 following growth of 3.8% in 2013 while in 2015, world steel demand will grow by another 2% and will reach 1,594 mt. As per their forecast, India's outlook is improving and in 2014, India's steel demand is expected to grow by 3.4% to 76.2 mt, following growth of 1.8% in 2013. In 2015 structural reforms and improving confidence will support a further 6% growth in Indian steel demand but elevated inflation and fiscal consolidation remain key downside risks to the outlook.
- Per capita finished steel consumption in 2013 is estimated at 219 kg for world and 545 kg for China by WSA. (note: 2014 data has not yet been released by WSA).

Note: 2014 world data are provisional

Domestic Scenario

- The Indian steel industry has entered into a new development stage from 2007-08, riding high on the resurgent economy and rising demand for steel.
- Rapid rise in production has resulted in India becoming the 4th

largest producer of crude steel and the largest producer of sponge iron or DRI in the world.

- As per the report of the Working Group on Steel for the 12th Five Year Plan, there exist many factors which carry the potential of raising the per capita steel consumption in the country. These include among others, an estimated infrastructure investment of nearly a trillion dollars, a projected growth of manufacturing from current 8% to 11-12%, increase in urban population to 600 million by 2030 from the current level of 400 million, emergence of the rural market for steel currently consuming around 10 kg per annum buoyed by projects like Bharat Nirman, Pradhan Mantri Gram Sadak Yojana, Rajiv Gandhi Awaas Yojana among others.
- At the time of its release, the National Steel Policy 2005 had envisaged steel production to reach 110 million tonnes (mt) by 2019-20. However, based on the assessment of the current ongoing projects, both in greenfield and brownfield, the Working Group on Steel for the 12th Five Year Plan has projected that domestic crude steel capacity in the country is likely to be 140 mt by 2016-17 and has the potential to reach 149 mt if all requirements are adequately met.
- The National Steel Policy 2005 is currently being reviewed keeping in mind the rapid developments in the domestic steel industry (both on the supply and demand sides) as well as the stable growth of the Indian economy since the release of the Policy in 2005.

Production

- Steel industry was delicensed and decontrolled in 1991 & 1992 respectively.
- Today, India is the 4th largest crude steel producer of steel in the world.
- In 2013-14, production for sale of total finished steel (alloy + non alloy) was 87.67 mt and 65.197 mt during April-December 2014-15 (provisional).
- Production for sale of Pig Iron in 2013-14 was 7.95 mt and 6.08 mt during April-December 2014-15 (provisional).
- India is the largest producer of sponge iron in the world with the coal based route accounting for 89% of total sponge iron production in the country.
- Data on production for sale of pig iron, sponge iron and total finished steel (alloy + non-alloy) are given below for last five years and April-December 2014-15:

Indian steel industry : Production for Sale (in million tonnes)						
Category	2009-10	2010-11	2011-12	2012-13	2013-14	April-December 2014-15*
Pig Iron	5.88	5.68	5.371	6.870	7.950	6.081 (5.868)
Sponge Iron	24.33	25.08	19.63	14.33	18.20	13.276 (13.413)
Total Finished Steel (alloy + non alloy)	60.62	68.62	75.70	81.68	87.67	65.197 (64.190)

Source: Joint Plant Committee; *provisional; figure in () is value in same period of last year

Demand - Availability Projection

- Demand – Availability of iron and steel in the country is projected by Ministry of Steel in its Five Yearly Plan documents.
- Gaps in availability are met mostly through imports.
- Interface with consumers by way of a Steel Consumers' Council exists, which is conducted on regular basis.
- Interface helps in redressing availability problems, complaints related to quality.

Steel Prices

- Price regulation of iron & steel was abolished on 16.1.1992. Since then steel prices are determined by the interplay of market forces.
- Domestic steel prices are influenced by trends in raw material prices, demand – supply conditions in the market, international price trends among others.
- An Inter-Ministerial Group (IMG) is functioning in the Ministry of Steel, under the Chairmanship of Secretary (Steel) to monitor and coordinate major steel investments in the country.

- The Government earlier took various fiscal and other measures for stabilizing steel prices like significant reduction in import duties on steel, major raw materials, including mineral products and ores and concentrates in last few years. Also, excise duty for steel is currently at 12% and there is no export duty on steel items. The government has also imposed export duty of 30% on all forms of iron ore and 5% on iron ore pellets in order to control ad-hoc exports of the mineral and conserve it for long term requirement of the domestic steel industry.
- For ensuring quality of steel several items have been brought under a quality control order issued by the Government.
- Further, a Steel Price Monitoring Committee has been constituted by the Government with the aim to monitor price rationalization, analyze price fluctuations and advice all concerned regarding any irrational price behavior of steel commodity.

Imports

- Iron & steel are freely importable as per the extant policy.
- Data on import of total finished steel (alloy + non alloy) is given below for last five years and April-December 2014-15 (provisional):

Indian steel industry : Imports (in million tonnes)						
Category	2009-10	2010-11	2011-12	2012-13	2013-14	April-December 2014-15*
Total Finished Steel (alloy + non alloy)	7.38	6.66	6.86	7.93	5.45	6.492 (4.122)

Source: Joint Plant Committee; *provisional; figure in () is value in same period of last year

Exports

- Iron & steel are freely exportable.
- Data on export of total finished steel (alloy + non alloy) is given below for last five years and April-December 2014-15 (provisional):

Indian steel industry : Exports (in million tonnes)						
Category	2009-10	2010-11	2011-12	2012-13	2013-14	April-December 2014-15*
Total Finished Steel (alloy + non alloy)	3.25	3.64	4.59	5.37	5.98	4.066 (4.355)

Source: Joint Plant Committee; *provisional; figure in () is value in same period of last year

Levies on Iron & Steel

SDF levy

- This was a levy started for funding modernisation, expansion and development of steel sector. The Fund, inter-alia, supports :

- Capital expenditure for modernisation, rehabilitation, diversification, renewal & replacement of Integrated Steel Plants.
- Research & Development
- Rebates to SSI Corporations
- Expenditure on ERU of JPC

- The SDF levy was abolished on 21.4.94
- Cabinet decided that corpus could be recycled for loans to Main Producers
- Interest on loans to Main Producers is set aside for promotion of R&D on steel etc.
- An Empowered Committee has been set up to guide the R&D effort in this sector.
- EGEAF* – Was a levy started for reimbursing the price differential cost of inputs used for engineering exporters. Fund was discontinued on 19.2.96.

Opportunities for growth of Iron and Steel in Private Sector The New Industrial Policy Regime

The New Industrial policy opened up the Indian iron and steel industry for private investment by (a) removing it from the list of industries reserved for public sector and (b) exempting it from compulsory

licensing. Imports of foreign technology as well as foreign direct investment are now freely permitted up to certain limits under an automatic route. Ministry of Steel plays the role of a facilitator, providing broad directions and assistance to new and existing steel plants, in the liberalized scenario.

The Growth Profile

(I) Steel : The liberalization of industrial policy and other initiatives taken by the Government have given a definite impetus for entry, participation and growth of the private sector in the steel industry. While the existing units are being modernized/expanded, a large number of new steel plants have also come up in different parts of the country based on modern, cost effective, state-of-the-art technologies. In the last few years, the rapid and stable growth of the demand side has also prompted domestic entrepreneurs to set up fresh greenfield projects in different states of the country.

Crude steel capacity was 101 mt in 2013-14 and India, the 4th largest producer of crude steel in the world, has to its credit, the capability to produce a variety of grades and that too, of international quality standards. The country is expected to become the 2nd largest producer of crude steel in the world soon, provided all requirements for creation of fresh capacity are adequately met.

(ii) Pig Iron: India is also an important producer of pig iron. Post-liberalization, with setting up several units in the private sector, not only imports have drastically reduced but also India has turned out to be a net exporter of pig iron. The private sector accounted for 93% of total production for sale of pig iron in the country in 2013-14. The production for sale of pig iron has increased from 1.6 mt in 1991-92 to 7.95 mt in 2013-14.

(iii) Sponge Iron: India is the world's largest producer of sponge iron with a host of coal based units, located in the mineral-rich states of the country. Over the years, the coal based route has emerged as a key contributor and accounted for 89% of total sponge iron production in the country. Capacity in sponge iron making too has increased over the years and stood at 45 mt in 2013-14.

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