

# **SWOT Analysis of Steel Industry in India**

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## **Abstract**

India is among top three steel producing countries in the world but at the same time not among top ten exporters of the steel in the globe. At first sight it seems advantageous that we are the consumption based economy and are not dependent on exports, but the other side is that, our economy needs more sectors which can earn foreign currency for the nation. The question is that, can we expect from this industry to help us improve our net exports.

Instead of few among steel usage and production innovators, our steel industry is currently found trapped because of pricing war and dumping internationally. Globalized economy creates great competition, caps profits throwing all lights on economies of scale, productivity and thus on technology. The current work intends to predict the way forward for the steel industry in India after carrying out its SWOT analysis.

## **Objectives:**

1. To study the overview of the Indian Steel industry
2. To conduct SWOT analysis of Indian steel industry and to project the way forward.

## **Methodology:**

### **Research Design**

The current study is designed to use Purposive sampling. Purposive sampling also known as judgment, selective or subjective sampling is a sampling technique in which researcher relies on his or her own judgment when choosing members of population to participate in the study.

**The current study is based on qualitative primary data as well as on the secondary data.**

Secondary Data for the current research is collected from:

- Publication and websites of Steel Manufacturing Companies, Rating agencies, Relevant Government Departments, websites and publications of Industry associations etc
- Books, Journals, Publications and Reports of various government and private agencies, research institutes and various available reports etc.
- Newspaper articles, media reports, Government Publications and other reliable sources etc

For the current research the primary data is focused on expert survey wherein the

qualitative data is gathered through Interview schedules.

### **Sampling Universe and Sample Size**

Senior executives of steel manufacturing companies make up the universe of the current study. Though the quantitative size of the current universe is very small, qualitatively it is a big universe. To assess the issues in current study, about 300 top executives of 20 top steel producing companies both from private and public sectors form the universe.

So far as the current research paper is considered the opinion of 30 senior executives is registered. The set of qualitative open ended questions is served to them to which they have replied through Google forms. The data thus collected from secondary sources and verified through primary sources is presented in the paper.

### **Overview of Steel Industry and its SWOT Analysis:**

The current research is mix of qualitative and quantitative data. The quantitative data like production, exports, foreign currency earned, contribution on GDP is mostly gathered through the secondary sources. The other side, the qualitative part, which serves the very important purpose of the current research, is gathered through Interview Schedules which allow us to gain information from specialists in a field that we are less qualified or knowledgeable in. As in the current case, experts in the steel industry can only figure out critical issues, while responding to the expert survey.

In past few years it has been observed that the growth of the steel sector is positively correlated with overall growth of the economy. Expert respondents mostly responded that the Growth story of India in steel sector is going to continue. Following points are the crux of the collected data.

The generation of employment is large through Steel plants. This has great potential to boost the economy in coming years. Since last many years, economic growth is directly correlated to the economic progress of the country. An example of this is the developed countries in the current scenarios. China's growth after its independence has shown how the steel industry grew and became the top steel producer in the world. A research report by Oxford economics states that the steel industries and industries related to steel accounts for 10.7 % of the GDP of developed countries. India, in this reference has lot to achieve from its current 2-3 % share in GDP. It is also seen that governments take up lions' shares in structural and development projects whenever a country's economy is going down, which indirectly boosts the steel economy.

All this is not enough to predict growth story of the sector. Following more pointers justify the growth predictions of the sector.

- Expected rise in consumption due to increased infrastructure construction and the thriving automobile and railways sectors.

- Various new edge cutting technologies are coming with advanced solutions of many industrial problems which may help in growth of steel sector.
- Policy support in India which is very helpful for smooth functioning of steel sectors.
- The government has taken objective of increasing rural sector steel consumption.
- Indian steel association has also predicted increase in percentage in FY 21-22.
- Recently the government has launched the GatiShakti scheme to boost the country's infra projects.
- Use of maximum scrap to make steel and low dependency on ores.

**When asked about challenges to the growth of steel sector in India, summary of responses of experts in this reference is as follows:**

- The major challenge the steel sector is facing is China's domination in this sector. China has been dominating this sector for decades and also it is having a wide range of products at cheaper rates. Apart from those Chinese agencies try to infiltrate through different channels to our countries market.
- At present scenario, lack of raw material like domestic iron ore, coal, more

expensive transport and power are also some challenges.

- Availability of Raw material may be a major challenge if alternative are not identified in time.
- Scrap price fluctuation.
- Demand of raw materials is not met from Indian market and since most of the industries are dependent on China or other foreign markets. It is one of most the serious challenges.
- Lack of new inventions or technology.
- Lack of proper logistics network are also the one of major challenges

**Availability of cheap labour is currently favoring Steel industry in India. Given the changes in Indian Demographic Profile, an expert in the industry expects that cheap labour will not be the USP for Indian Steel Sector for a very long time.**

The steel industry requires huge manpower. Currently we have good availability of unskilled labour in India. But, manpower cost will increase in near future. In next 5-6 years the unskilled manpower will be hard to get. The competitiveness of the Indian steel industry cannot be sustained in the long run purely based on low labor costs and cheaper raw materials. Technological excellence, innovation, and the adoption of environment-friendly techniques at all stages of production, from the extraction of minerals to the treatment of wastes, are key pointers to sustained growth in this sector

**Pointing out major threats for the Steel Sector in India, experts summarily listed following points:**

- In India government duty and taxes are quite high as compared to other countries. Lack of raw materials like iron ore and coal are among major threats.
- High Conversion Cost
- Government Policy with reference to Land acquisition
- Chinese intrusion and their bullish strategy
- Increased research in the field of other materials like High Entropy Alloys, Ceramics
- Less availability of non-coking coal
- Dumping of steel in India by China
- Low cost steel manufactured by China with mixing low grade iron ore which makes monopoly in global steel market.

**Experts listed out following technological changes that they expect in Indian Steel Sector to get the competitive advantage in Steel production.**

- More digitization and advanced equipment are required
- The other change required is high automation. Many companies are operating with manual interventions. High-level automation and the digital way can help to increase the production sections.

- Use of low grade ores with better quality of the product is required
- Reduction in cost of power generation by using nuclear power.
- India must be a member of Nuclear Suppliers Group (NSG) for generating cheap power.
- Use of recycled plastics to replace a portion of metallurgical coke
- Reduction of refractory wear in BF
- Development of ultra-high powered EAF
- Improved post combustion in conventional oxygen steel making.
- Gas based technology is required
- Competitive Cost of production is expected

**Private sector units are major contributors in steel production in India. Experts do not expect turnaround in this picture in next 10 to 15 years.**

In past few years Government started eyeing Privatization. Government is looking forward to maximum governance but with fewer government officials. They are looking forward to bringing the private sector to play the role. Thus we expect private sectors to dominate the steel production in India.

**China has dominated the sector since long and the story seems to go on.**

If India needs to overtake China, we need cheaper and good quality raw material, high end

technology, cheaper energy and more favorable government policies. All this together, seems a distant dream. Ray of hope is created by Kalinganagar plant at Odisha. To bring India to the forefront on the global market Indian democrats have joined hands with Japan to increase the production of the world. It is expected that India will increase production by 1.5 times according to the ratings of the CARE.

**A cheaper steel import from China is one of the major challenges for the steel industry.** The restriction is difficult in today's globalized world. But by levying higher import duties it can be tackled. That will heavily affect the cost segment of the imported steel products and help Indian brands to thrive. The Indian government has helped in this section by including anti-dumping duties for the Chinese material entering through ASIEN countries.

**In a globalized world we cannot restrict import of steel. But we can surely consider following measures as suggested by experts in Steel Industry.**

- Import duty can be increased.
- Cheaper power cost is required.
- By having subsidized rates for Indian steel or having low import duty on raw materials
- By heavy import duty and making an act or law that dumping of steel cannot be more than 5% of steel manufactured in India.

- By establishing Steel Imports Monitoring System (SIMS)
- By making steel scrap recycling policy
- By facilitating R&D sector under steel research & technology mission in order to increase domestic demand.
- We have to reach our product quality and productivity to international level so that we can improve our export of steel .
- Indian logistics is also one such constraint. Improvement in Indian logistics as well as cheap and high quality end product and improve the demand of Indian steel in the foreign markets.
- Better quality of product and competitive cost of steel is required.
- By increasing MSME contribution which can manage value addition works like hot rolling, cold rolling, color coating etc.
- With China focusing on reducing carbon emissions, their capacity for making crude steel will be down. Instead of making, they will buy 20% semi-finished products; thereby increasing the customer base of Indian companies.
- By value stream mapping of end to end activities for better supply chain management.
- Better Marketing strategies

**Experts have suggested following support from the Government to get the competitive advantage in Steel production in India:**

- Government should support steel mills to compete in international markets by giving relaxation on duties and taxes .
- Lower Power cost is required
- Reduced customs duty on Imported Raw material
- Land availability at right area, financial benefits.
- Government should support industries by implementing more schemes like National Steel Policy(NSP) to export to other developed markets where a quality product by our country's name can create space.
- Ban on steel dumping from china and other countries.
- high import duty on steel should be imposed
- Low cost transport required

**Conclusive Remarks:**

Instead of few among steel usage and production innovators, our steel industry is currently found trapped because of pricing war and dumping internationally. Globalized economy creates great competition, caps profits throwing all lights on economies of scale, productivity and thus on technology.

A British inventor, Henry Bessemer, is generally credited with the invention of the first

technique to mass produce steel in the mid-1850s. Steel is still produced using technology based on the Bessemer Process of blowing air through molten pig iron to oxidise the material and separate impurities. Since ages the steel production capacity has been co related with nation's development. "Higher the steel production, develop the country is" this was the basic rule established since hundreds of years.

Though usage of steel in India dates to ancient times, modern steel making began only during the 19th century with the establishment of the Bengal Iron and Steel Company in 1875. The company employed modern methods in the manufacturing of pig iron which was a first in India. Tata Iron & Steel Company (TISCO) in Bihar was founded in 1907. Public sector, SAIL was established in 1973.

The share of public and private sector in the production of crude steel during 1990-91 was 46% and 54% respectively, while during 2017-18 the same was 20% and 83% respectively, according to Ministry of Steel. This change was brought about by de-regulation and de-control of the Indian iron and steel sector in 1991.

India surpassed US to become the third largest steel producer in 2015 and in 2018, it surpassed Japan to become the second largest steel producer in the world. Though India is the second largest steel producer, it is far behind China as China's steel production is nearly eight to nine times higher than that of India.

So far Steel sector is concerned China has been largest competitor for India. Their investment in high end technology marked them as one of the most competitive Steel produces in the world. India being large consumption economy is a favorite dumping destination for China. We also share a large geographical border with them making the transportation easy for Chinese Steel. Per capita finished steel consumption in 2020 was 224 kg for world and 600 kg for China. The same for India was about 75 kg for the same period.

Total crude steel production of world is 1877.5 million metric tonnes, wherein India contributes 100.3 million metric tonnes out of that, which is about 5.34 %. We have better prospects to develop our steel industry.

To our credit we have easily available skilled and unskilled manpower, favorable government policies, support of large consumption based economy. We also lot of infrastructure development plans in our hand with budgeted government spending and under PPP projects. Private sector is growing at never before pace and shall require steel for project construction. Demand for crude steel as raw material is also growing day by day.

We are still underrated for production technology, infrastructure, import restrictions, transportation networks etc. We are facing lot of challenges from China with reference to its price war and dumping practices. India as country can

on our long list of strengths and sufficiently prepared to deal with few identified challenges.

### **References:**

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- A Review of developments in The Global & Indian Steel Industry (Monthly edition July 2021) Compiled on behalf of Indian Steel Association, By Mr. Anup Kashyap.

#### **Website Referred:**

- <https://indsteel.org/>
- <https://www.worldsteel.org/>
- <https://www.iso.org/organization/9565.html>
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*Demographic Profile, how long do you expect this preposition to work for the sector?*

### **Books Referred:**

- Economics of the Indian Steel Industry authored by Economics of the Indian Steel Industry
- Development of Steel Industry in India authored by Jayanta Bagchi on 2005
- "Transformation Of The Steel Sector" Make in Steel, Make in India By Chinmay Nimgoankar · on 2017

### **Appendix:**

Questions asked to Experts through Interview Schedule.

The current study is presented from the outcome of the data collected from secondary sources and correlating that with the data collected from Interview Schedule. Questions asked to experts through Interview Schedule are listed below:

- 1. In past few years it has been observed that the growth of the steel sector is positively correlated with overall growth of the economy. Do you think that the steel sector will keep on growing at the pace, the Indian Economy is growing? Please explain.*
- 2. What are the strengths based on which you expect growth story of steel industry to continue?*
- 3. What are challenges to the growth of steel sector in India?*
- 4. Availability of cheap labour is favoring Steel industry in India. Given the changes in Indian*

*5. Looking towards the growth story of India, what are major opportunities for the growth of Steel Sector in India?*

*6. What are major threats for the Steel Sector in India?*

*7. What technological changes are expected in Indian Steel Sector to get the competitive advantage in Steel production?*

*8. Do you think that India can become competitive steel producer as compared to China? Please Comment.*

*9. Do you think cheaper steel import specifically from China is a major challenge for Indian steel industry? How to deal with this?*

*10. What steps are required to improve the export of steel from India?*