



**Full Length Research Article**

**REALIZING CHHATTISGARH'S STEEL DREAM- OPPORTUNITIES FOR ECONOMIC DEVELOPMENT  
WITH SOME SUGGESTIONS**

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**ABSTRACT**

Steel sector is in tremendous growth in the state of Chhattisgarh, with the sustainable development and progressive policies of Government this sector is able to retain and handle their employees and workers satisfactorily. The paper focuses on the "Exploring the developmental potential of steel industries in the state of Chhattisgarh". Within the consideration of Chhattisgarh state various reports published in the area of iron and steel industries based on that reports researcher given some suggestion to formulate such policies so that we can feed the world with the cheapest steel which we have, the capacity.

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**INTRODUCTION**

Chhattisgarh is India's youngest and the fastest growing state truly a land of opportunities with a geographical area of 135,000 sq km. Chhattisgarh is the ninth largest state in India and amongst the richest States in terms of mineral resources like steel, coal, aluminum, tin & bauxite and also having forest resources, with a large untapped potential for industrialization. The State ranks third among all the iron-ore producing states in India and contribute almost 16 per cent of national iron ore reserves; 32 per cent of India's sponge iron production comes from Chhattisgarh (Figure 1). This State has economic & political stability and have a conducive industrial relations environment with abundant power and water facility for the industrial needs. In line with the State's Industrial Policy, the Government of Chhattisgarh enhanced its fiscal allocations for Public-Private Partnerships for providing basic and specialized physical infrastructure, especially in its industrial parks. The government of Chhattisgarh has opened its doors to private investors who wish to set up new steel plants in the State by providing industrial land at reasonable rates and also through government's incentives directed towards thrust industries, mega projects and small-scale industries.

With such a significant step, the State government has already covered a considerable journey towards becoming the ultimate steel hub of India. The notable Chhattisgarh Industries that provide major impetus to the growing economy of the state consist of steel, aluminum, cement, thermal power, mining and various specialized industrial areas having mega industries in these sectors including steel, power, mining, aluminum and cement. With a number of Engineering Colleges, Polytechnics and ITIs, trained engineers and technicians are available to the industries.

Steel industry holds a major position in the arena of Indian industries and the Chhattisgarh Steel industry is one of the biggest zone of Chhattisgarh which has a reputation of producing high quality equipment's and products that have a high export value there are more than 100 steel rolling mills, sponge iron plants and Ferro-alloy units in Chhattisgarh all of which are able to provide world-class output. The advances machineries, tools and equipment used in the iron and steel industry of Chhattisgarh also help in encouraging the yearly production. Chhattisgarh industrial areas house a number of multifarious units each of which specializes in a specific commercial resource. Chhattisgarh Industrial Areas boast of a varied array of commercial units most of which deals with thermal power plants, steel plants, mineral mining, cement factories and agriculture engineering companies. Bhilai, Urla, korba, Raigarh, Durg, Siltara and bilaspur are the main regions

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where the industrial areas have emerged. Bhilai in Chhattisgarh is one of the most profitable steel producers of India which specializes in manufacture of bars, beams, structural, wire rods, rails, pig iron, plates, channels, billets, rebars and slabs. Apart from a major economic hub, some of the notable steel units like the Bhilai Steel Plant efficiently produces considerable amount of steel products round the year with a capacity of 3.6 million tons per year, is regarded as a significant growth indicator of the state and it has become a major attraction among the various industrial areas of Chhattisgarh. The growth unit of Silrara in Chhattisgarh symbolizes one of the commercially-viable industrial parks of the state which is located in the nearby region of Raipur district. It is equipped with 48 industrial centers and there are upcoming plans of cooking gas bottling plants, sponge iron units and Ferro-alloy plants. The area comprises of 414 large, medium and small scale industries, all of which contribute significantly towards the growth of the economy of Chhattisgarh. The South Eastern Coal fields are the key components of the Bilaspur industrial area of Chhattisgarh. Supplying a huge amount of coal to different manufacturing zones of the state, this industrial area is counted as one of the vital economic link. Durg district of Chhattisgarh houses called as Borai industrial area which is having 45 industrial zones, this area symbolizes one of the pioneering joint ventures of state government and private bodies in the field of water supply. Undoubtedly, Chhattisgarh Industrial Areas are the biggest catalyst in the economic progress of the state. It can be said that Chhattisgarh steel industry provides momentum to the process of economic progress in the State. Chhattisgarh Industries in a way symbolizes the prosperous stage of its economy.

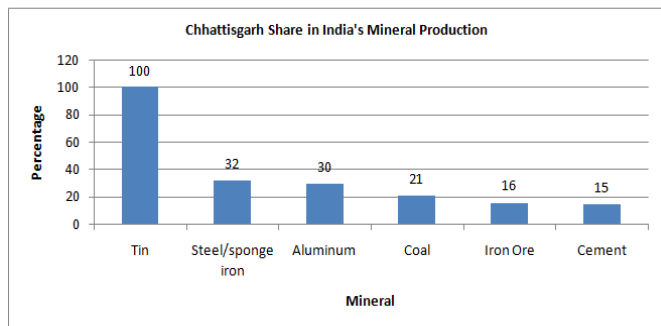


Figure 1.

Source: Commerce and Industries Department, Government of Chhattisgarh, Economic Survey of Chhattisgarh, 2012-13

**Investment climate of Chhattisgarh**

The state has been acclaimed as “one of the best fiscally managed states” by the Reserve Bank of India (RBI) and it has emerged as one of the most preferred investment destinations in the country due to following reason.

**Rich Natural Resources**

Chhattisgarh is one of the youngest and fastest growing states in India. Natural resources are the biggest strength of the State with rich deposits of Limestone, Iron ore Copper-ore, Rock Phosphate, Manganese ore, bauxite, Coal, Asbestos and Mica

In fact Chhattisgarh, along with Orissa and Jharkhand constitutes over 80% of the nation's Coal reserves. Chhattisgarh also has proven reserves of Diamond which can, in the future, be a large source of income for the State.

**Table 1. Shows reserves of important minerals in Chhattisgarh**

S.No.	Mineral	Unit	India	Chhattisgarh	% of Reserves in India
1	Iron ore	Million Tonnes	10,052	2,336	23.23
2	Coal	Million tonnes	204,652	35,375	17.28
3	Bauxite	Million Tonnes	24,622	96	3.89
4	Limestone	Million Tonnes	75,658	3,580	4.73
5	Dolomite	Million Tonnes	4,386	606	13.81
6	Tin Ore	Tonnes	28,907	28,894	99.96
7	Gold	Tonnes	68	3	4.41
8	Corundum	Tonnes	-	25	-
9	Quartzite	Million Tonnes	2,707	44	1.62

Source: Directorate of Geology and Mining, Government of Chhattisgarh, Chhattisgarh State Industrial Development Corporation

**Surplus Power**

Chhattisgarh is currently one of the few states that have surplus power. This could be an important advantage for industrialists making project and investment decisions. Presence of low grade coal makes Chhattisgarh an ideal location for setting up of low cost pit head based Thermal Power Plants, capable of generating power to meet the requirements of other states.

**Favorable Labour Climate**

Though the Skill base is relatively low, the presence of a large number of willing and able-bodied people contributes to a substantial workforce. The State has a high worker participation rate (male and female) and a high labour force in the 15-39 age groups. It also has one of the lowest losses in person-days attributed to labour problems, in the country.

**Relatively Low Land Cost**

With a lower population density and urbanization rate, the State is able to offer land at extremely competitive prices

**Fiscal Position**

The fiscal deficit situation of the State is currently under control. It also has reliable sources of public finance and possesses no deficit on account of either the State Electricity Board or Road Transport Corporation.

**Political Environment**

Lesser number of bureaucrats and government employees compared to the other States in the country also resulted as one of the lowest expenditures in the country on government functioning and presence of a strong, committed and focused leadership is an asset in the state.

**Industrial Infrastructure**

There are several industrial growth centers/parks in Chhattisgarh (Table 2), acting as hubs of development and

Table 2.

Industrial Infrastructure	Type & Location	District	Size (Hectares)	Investment Requirement (US \$ million)
Growth Centers (established)	Siltara	Raipur	1,185	157.1
	Urla	Raipur	375	93.2
	Borai	Drug	451	29.8
	Sirgitti	Bilaspur	338	98.0
Large Industrial area (New projects)	Bhanpuri-Rawabhata	Raipur	200	NA
		Bilaspur	795	12.9
		Raipur	1,730	38.8
		Raigarh	1,466	20.0
Industrial Park (ongoing project)	Metal park	Raipur	101.7	19.1
	Apparel park	Bhanpuri	4	5.8
	Herbal & Medicinal Park	Dhamtari	250	5.4 to 7.6*
	Food processing park	Rajnandgaon	303	17.4*
Integrated infrastructure development Centers (IIDCs)	Engineering park	Bhilai	120	2.0
	Harinchhapara	Kabirdham	All Between	
	Birkoni	Mahasamund	20-90	
	Girwarganj	Surguja		

Source: Economics Survey of Chhattisgarh 2012-13, CSIDC website, \*PPP (Public-Private Partnership) mode

Table 3.

Promoters	Particulars	US \$ (million)	INR (million)	
Jindal Steel and Power - Mega Steel Project with a total investment of US\$ 576.36 million (INR 25,950 million). It includes:	1 MTPA Plate Mill	99.95	4,500	
	1.25 million Blast Furnace	88.84	4,000	
	0.7 MTPA Power Plant Rolling Mill for Re-Bar, TMT and Wire	72.18	3,250	
	99 MW Power Plant	71.07	3,200	
	1.25 MTPA Steel Melting Shop	66.63	3,000	
	2.5 MTPA Sinter Plant	55.53	2,500	
	0.8 MTPA Coke over Plant	38.87	1,750	
	2X380 TPD Oxygen Plant	28.87	1,300	
	3X330 TPD Lime & Dolomite Kiln	16.66	750	
	Railway Line from Captive Mines to Plant Site	37.76	1,700	
	Prakash Industries Mega Iron and Steel Project with an investment of US\$ 225.87 million (INR 10,170 million). It includes.	Coal based Sponge Iron Plant (DRI Plant) of capacity 4 LTPA	15.55	700
		25 MW Captive Power Plant		
		190 MW Coal based (fluidized bed boiler & thermal boilers)	8.44	380
		Steel Billets/Blooms/Ingots making facility of capacity 9 LTPA	126.60	5,700
Development of captive coalmine of mining capacity 1 million tonne		22.21	1,000	
Development of captive coal block mine for Captive Power Plant, together with Coal Washery Project of capacity 1 million TPA		5.55	250	
Development of iron ore mine with capacity 1 million TPA		5.55	250	
Installation of a Mini Blast Furnace for Pig Iron of capacity 2.50 LTPA		3.33	150	
Installation of a Sub-Merge Arc Furnace (SAF) for producing Silicon Manganese & Ferro Chrome of capacity 1.15 LTPA		11.11	500	
Structural Rolling Mill (2 units each of 1.5 LTPA) of 3 LTPA		9.77	440	
Wire Rod Mill (2 units of 1.5 LTPA each) of capacity 3 LTPA		8.88	400	
		8.88	400	
Vasundhara Steel & Power		400,000 TPA Integrated Steel Plant	36.65	1,650
		82 MW Coal Based Captive Power Plant	66.63	3,000
Top worth Steels	120,000 TPA Sponge Iron Plant	9.77	440	
	100,000 TPA Steel Melting Shop & Concast Rolling Mill	9.99	450	
Shree Shyam Global	165,000 TPA Sponge Iron Plant	13.26	597	
	8 MW Power Plant	7.55	340	
	72,000 TPA Induction Furnace	4.48	201.5	
	60,000 TPA Re-Rolling Mill(Structural)	2.25	101.5	
Salasar Sponge & Power	120,000 TPA Sponge Iron Plant	21.24	956	
	576,000 TPA Coal Washery	1.93	87	
	30 MW Power Plant	22.03	992	
	100,000 TPA Steel Plant	5.55	250	
Rexon Strips	20,000 TPA Ferro Alloys Plant	13.10	590	
	400,000 TPA Integrated Steel Plant	36.65	1,650	
	82 MW Coal Based Captive Power Plant With waste heat recovery boiler(WHRB) & advanced fluidized bed combustion (AFBC)	66.63	3,000	
Shree Radhe Industries	260,000 TPA Sponge Iron Plant	24.43	1,100	
	32 MW Captive Power Plant	23.32	1,050	
	50,000 TPA Steel Melting Shop	3.89	175	
Crest Steel & Power	700 TPD Sponge Iron Plant	11.16	502.3	
	16 MW Thermal Power Plant	9.47	426.2	
	18MVA Ferro Alloy Plant	5.25	236.5	
Chhatisgarh Electricity Company	120,000 Sponge Iron Plant	55.53	2,500	
	250 MW Power Plant	177.69	8000	
	1,000,000 TPA Steel Plant	99.95	4,500	
	40,000 Coke Oven Battery	35.54	1,600	
	1,800,000 TPA Pelletizing & Sintering Plant	44.42	2,000	
	Coal Mining & Coal Washery	33.32	1,500	

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Chhattisgarh Steel & Power	3 x 350 TPD Sponge Iron	19.43	874.9
	3 x 30 MW Coal + 3 x 7.5 MW Waste Heat Recovery based power generation plant	83.82	3773.9
API Ispat & Powertech	3 x 350 TDP Sponge Iron Plant	22.21	1,000
	16 MW Captive Power Plant	9.99	450
	86,400 TPA Steel Ingots Manufacturing	2.89	130
Pushp Steel & Mining	Sponge Iron Plant	17.77	800
	3 x 8 MW Power Plant	16.66	750
Satyarth Steel & Power	219,999 TPA Coal based Sponge Iron Plant	38.87	1750
	13 MW Captive Power Plant		
	182,500 TPA Steel Plant (Induction Furnace)		
	31,400 TPA Re-Rolled Products		
Baljee Vidyut & Sponge	60,000 TPA Sponge Iron Plant	23.32	1,050
	15 MW Captive Power Plant		
BigBoss Steel & Alloys	6 MVA Ferro Alloys		
	Integrated Steel Plant Captive Power Plant	155.48	7,000

(Source– *New Project in India -indscan.weblogs.us*)

promotion of industrial activity. Some of the well-established industrial growth centers are located at Urla and Siltara in Raipur district; Sirgitti and Anjani in Bilaspur district; and at Borai in Durg district. Moreover, to meet the increasing demand of land for new industrial units, the government has decided to set up four Star Industrial Areas across 6,836 hectares of land in the districts of Bilaspur, Raigarh, Rajnandgaon and Raipur. Sponge iron and mini-steel plants, Ferro alloy units, power plants/captive power plants and other core industries are planned to be established in these proposed Star Industrial Areas.

### Steel projects coming up in Chhattisgarh (Since January 2005)

Chhattisgarh State Industrial Development Corporation has signed Memorandum of Understanding (MoU) with various iron and steel project promoters in the State for them to set up Greenfield projects, which are, discuss in Table 3:

#### Key player of the state

##### Bhilai Steel Plant (BSP)

Bhilai Steel Plant (BSP) specializes in heavy rail plates, merchant products and structural those are used by various other industries of India. Acknowledged by the government of India as one of the best steel plants, BSP produces more than 4 million tonnes of iron and steel per annum. It is India's sole producer of rails, heavy steel plates and stands tall on the industrial contours of Chhattisgarh.

##### Jindal Steel & Power Ltd (JSPL)

Jindal Steel and Power Ltd, part of the Jindal group, is among the largest coal-based sponge iron manufacturers in India. It has a 24 per cent market share in this product segment. JSPL also sells electricity to the Chhattisgarh State Electricity Board. JSPL has the world's largest coal-based sponge iron plant at Raigarh in Chhattisgarh with an installed capacity of 6,50,000 MPTA. JSPL's growth plans include expanding the finished steel making capacity to 2.9 million tonne per annum by March 2006. A US\$ 270 million project envisages setting up of a coke oven battery and a sinter plant as supporting

facilities. The company also plans to set up a 1000 MW power plant.

##### Jayaswal Neco

Jayaswal Neco Limited is an integrated Steel plant at Siltara industrial Growth Centre with all auxiliary facilities along with captive power plant, raw-material handling plants, Gas cleaning plant, etc. The project completed and commissioned on 15th November 1996 on a green field from grass-root level and now is in operation. Over the years the company has already established its brand in construction castings & is the leading supplier of pipes, Fittings & Manhole covers in Maharashtra, Gujarat, Andhra Pradesh & Madhya Pradesh.

##### Monnet Ispat and Energy Limited

The company is a prominent player in the coal-based sponge iron space. It has production facilities in both Raipur and Raigarh, with an annual combined capacity of 860,000 tonnes of sponge iron, 300,000 tonnes of steel and 60,000 tonnes of ferroalloys. A green field steel plant is being set up in Raigarh for the production of flat and long steel products. The plant will have an annual production capacity of 1.5 million tonnes at an investment of US\$ 870 million. In 2008-09, the company recorded revenues of US\$ 360.9 million.

##### Sarda Energy and Mineral Ltd.

Sarda Energy & Minerals Limited (SEML) is one of the lowest cost producers of steel (sponge iron, billets, ingots, TMT bars) and one of the largest manufacturers and exporters of Ferro alloys in India. Headquartered in Raipur, Chhattisgarh, the company merged with Chhattisgarh Electricity Company Limited (CECL) in 2007 with a vision to becoming a leading energy and minerals company. Over the last three decades the company has continuously diversified its product portfolio to include many customized value added products. The company firmly believes in benchmark product quality, customer centric approach, people focus, ethical business practices and good corporate citizenship. Building on these values, SEML has become the supplier of choice for many domestic and international customers across more than 60 countries.

(Source:-[www.csidc.in](http://www.csidc.in))

### Suggestions

Some of the following points may be reckoned, as given below

- There should be single ministry comprising steel, power & commerce & industries, also comprising of secretaries from finance, logistics, & infrastructure.
- The suitable institution should be equipped with full facilities for R&D and should be opened by the government and then autonomous status should be provided to such institution with strict law & term & conditions.
- A single window channel should be set up for necessary clearance for logistics & infrastructure planning inclusive of necessary clearance from environment, land acquisition & forest etc.
- The administration both at the state & central level, should be strict against anti-social activities in the name of local syndicate for logistics.
- Empowered co-ordination process on clearance for high impact infrastructure project.
- Multi pronged strategy to boost manufacturers
- Very low rate of interest should be imposed for purchase of land, plant & machineries and installation charges for manufacturing units. No industry can be established or run competitively on the higher rate of interest.
- To create an atmosphere where workers & staff are promoted to produce at par with the worker & staff across nation. Though it is stated that cheap labour is available in state but no government tries to verify the productivity of worker & staff in state, in comparison with global productivity.
- Administration should be free of any political interference. The ruling party/ministries should only be permitted to formulate firm & stable policies and strict action may be taken against the authority of whatever position it is, if found guilty
- Apex bodies, the local chambers & associations should come forward to bring the facts before the ministers in place of praising every policy wrong or right.

### Conclusion

The backbone of every developed state stands on the development of its small industries. But the steel ministry appears to perish these sectors which produce about 50% of the total steel in state. This will result to cartelization of a few

big ones and the projects will have to bear the exorbitant prices of steel unnecessary. Being a core sector, the steel industry reflects the overall growth of the economy in the long term. Consumption of steel has taken to an indicator of economic development. The demand of steel is also derived from various sectors such as infrastructure, automobiles, consumer durable, engineering industries, housing and real estate's etc. each sector of producers should be given equal preference. With the steel consumption is very low in state but sky is scope for development of steel industry in state. We should formulate such policies so that we can feed the world with the cheapest steel which we have, the capacity.

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