

Chapter V

INDUSTRIES AND POWER

Karnataka State is endowed with a large number of useful minerals, raw materials, marine resources, besides infrastructural facilities such as Transport and Communication, Banking, Technical Man-power, Industrial Estates, Industrial Areas, International Technological Park, Information Technology, Bio-technology, and Electronics etc. A sound industrial base has been built up over a period of time and good labour relations have helped the state achieve a pre-eminent position on the industrial map of the country.

The Central and State Governments have declared special incentives and concessions for the development of industries in the State. The mineral based industries such as iron and steel, manganese, cement, bricks, tiles etc., have played a vital role in the state. Agro-based industries such as sugar, cotton, textile, oil extraction, processing of cashew-nuts, fruit processing and food products are prominent. Wood-based industries such as saw mills, paper mills, plywood, poly-fibres etc., are flourishing in the State. The need for supporting institutions relevant for development of industries in the State was realised by the Government even before independence and some of the important measures which were introduced include starting of the Department of Industries and Commerce (1913), the Mysuru Bank (1913), and the Chamber of Commerce (1915).

Hydro electric power was first produced at Gokak Falls on a small scale as early as in 1887 and on a large scale, to meet the needs of Kolar gold mines in 1902 at Shivasamudram.

Karnataka has been spearheading the growth of Indian industry, particularly in high-technology industries in the areas of electrical and electronics information and communication technology (ICT), biotechnology and, more recently, nanotechnology. However, the industrial structure of Karnataka presents a blend of modern high-tech capital goods and knowledge-intensive industries on one

hand and traditional consumer goods industries on the other.

TRENDS IN INDUSTRIAL PRODUCTION

The general index of industrial production (IIP) of Karnataka covering mining, manufacturing and electricity sectors for 2010-2011 stood at 202.14. The sector-wise indices for the period from 2008-09 to 2010-11 with base 1999-2000 is presented in table 5.1. The overall organized industrial sector of Karnataka has registered 7.96% growth when compared to 2009-10 (12.22%).

Within the organized industry, manufacturing sector registered the highest growth of 9.73% followed by electricity (1.15%) and mining (1.09%). All the three sectors of organized industry have registered a higher growth in 2010-11, when compared to 2008-09 (4.72%) and 2009-10 (12.22%).

The weights of different sectors and sub-sectors in IIP are assigned based on their contribution to gross value added (GVA) of industry in the base year. The manufacturing sector contributes the highest weight of about 78.6% followed by electricity sector (17.3%), and mining sector (4.1%). Aided by the manufacturing sector's growth of 9.73% the overall industrial growth has moderated to 7.96% in 2010-11.

The average annual growth rates for the overall organized industry mainly for mining, manufacturing and electricity sectors for the decade from 2001-02 to 2010-11 are presented in Table 5.1. The compound average rate of growth (CARG) for the decade the entire organized industry was about 6.56% whereas it was 7.92% for mining, 7.23% for manufacturing and 4.20% for electricity.

The sector wise general index (revised form 2005-06 to 2010-11) for new base year 2004-05 is presented in Table 5.2.

Table 5.1 : Index of Industrial Production of Karnataka 2001-02 to 2010-11

Sector	Weight	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	CARG**
Mining	41.36	131.15	144.92	180.20	187.33	192.45	190.65	224.60	241.22	219.21	221.59	7.92
		(21.40)	(10.50)	(24.35)	(3.69)	(2.73)	(-0.94)	(17.81)	(7.40)	(-9.13)	(1.09)	
Manu- facturing*	785	107.19	114.33	120.19	128.98*	136.58*	147.27*	158.71*	167.45*	189.47*	207.89*	7.23
		(3.30)	(6.66)	(5.13)	(7.31)	(5.89)	(7.83)	(7.76)	(5.51)	(13.15)	(9.73)	
Electricity	172.93	118.96	115.15	119.63	115.83	121.54	137.11	146.22	146.33	169.43	171.38	4.20
		(5.54)	(-3.32)	(3.75)	(-3.28)	(4.70)	(11.36)	(6.23)	(0.08)	(15.78)	(1.15)	
General	1000.00	108.60	114.98	121.31	129.06	136.45	147.30	158.98	166.85	187.24	202.14	6.56
		(3.74)	(5.55)	(5.21)	(6.00)	(5.42)	(7.36)	(7.35)	(4.72)	(12.22)	(7.96)	

* Provisional, **CARG = Compound Average Rate of Growth

Note : Figures in brackets are percentage growth compared to the previous year

Source : Directorate of Economics and Statistics

Table 5.2 : Sector-wise Growth in Index of Industrial Production (IIP): 2005-06 to 2010-11

(Base year: 2004-05=100)

Sector	Weight	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	CARG**
Mining	69.83	102.73	101.77	119.90	128.77	117.02	118.29	3.25
		-	(-0.94)	(17.81)	(7.40)	(-9.12)	(1.09)	
Manu- facturing*	811.36	105.89	114.18	123.05	129.83	146.90	161.18	8.80
		-	(7.83)	(7.77)	(5.51)	(13.15)	(9.72)	
Electricity	118.81	104.93	118.37	126.24	126.33	146.27	147.96	7.30
		-	(12.81)	(6.64)	(0.08)	(15.79)	(1.15)	
General	1000.00	105.73	114.98	121.31	129.06	136.45	147.30	8.21
		-	(7.95)	(7.93)	(4.95)	(12.22)	(7.96)	

* Provisional, **CARG = Compound Average Rate of Growth

Note : Figures in brackets are percentage growth compared to the previous year

Source : Directorate of Economics and Statistics

The quarterly growth in IIP under major sectors for the first two quarters of 2011-12 with base year 2004-05 is given in table 5.3 along with the sector wise weights. The state has experienced industrial deceleration in the first quarter of the current year. Due to the growth of manufacturing and electricity sectors in the second quarter, the state has experienced a marginal increase when compared to the corresponding period of previous year.

Table 5.3: Quarterly Growth in IIP: 2009-10 to 2011-12

(Base year: 2004-05)

Period/Sector	Mining	Manufacturing*	Electricity	General
Weight	(69.83)	(811.36)	(118.81)	(1000.00)
2009-10				
Q 1 April 09 – June 09	110.80 (0.14)	119.83 (27.58)	126.19 (-6.58)	120.33 (18.71)
Q 2 July 09 – Sept. 09	110.59 (10.79)	125.80 (35.77)	131.93 (15.67)	125.90 (30.54)
2010-11				
Q 1 April 10 – June 10	134.96 (21.80)	126.12 (5.25)	138.38 (9.66)	128.61 (6.88)
Q 2 July 10 – Sept. 10	97.64 (-11.71)	128.43 (2.09)	122.37 (-7.24)	125.70 (-0.16)
2011-12				
Q 1 April 11 – June 11	87.52 (-35.15)	123.33 (-2.21)	138.38 (0.00)	122.62 (-4.66)
Q 2 July 11 – Sept. 11	68.77 (-29.57)	133.71 (4.11)	159.94 (30.70)	132.29 (5.24)

Source: Directorate of Economis and Statistics 1. *Estimated

2. Figures in brackets indicate percentage changes over the previous year

INDUSTRIAL GROWTH BY USE-BASED CLASSIFICATION

Industrial growth in items of use-based classification of industries is presented in table 5.4 for four broad groups of organizes manufacturing industries: (i) basic goods, (ii) capital goods, (iii) Intermediate goods, and (iv) Consumer goods. Consumer goods, in turn, comprise durables and non-durables. Among the four broad groups of the manufacturing industry sector, consumer goods industry sector accounts for the highest weight of 40.8% followed by capital goods (14.5%), basic goods (13.6%) and intermediate goods (9.6%). Within the consumer goods industry sector, non-durables account for 37% and durables account for 3.8% of the total weight of 40.8%. These weights indicate relative importance of the different groups in the manufacturing industry of Karnataka.

Comparative growth rates of the four broad groups and the two sub-groups of consumer goods from 2008-09 to 2010-11 are given in table 5.4. for 2010-11, among the four broad groups, intermediate goods registered highest growth of 9.48% followed by consumer goods at 8.29%, basic goods at 5.25% and capital goods at 5.06%. the comparative study of the four groups indicates that, within the consumer goods sector, both durables and non-durables grew more or less evenly by 6.52% and 8.43% respectively during 2010-11. But, consumer durables experienced a double digit growth of 19.58% during 2008-09 and consumer non-durables experienced a growth of 18.46% during 2009-10 since the growth performance of groups and sub-groups are moderate, the overall growth rate of manufacturing sector is restricted to single digit growth of 9.73% during 2010-11.

Table 5.4: Index of Industrial Production for Organized Manufacturing Industry in Karnataka Use-based classification: 2008-09 to 2010-11

(Base Year: 1999-00)

Sl. No.	Industry Group	Weight	2008-09*	2009-10*	2010-11*
1.	Basic goods	136.2317	212.00 (2.39)	214.60 (1.23)	225.87 (5.25)
2.	Capital goods	145.1053	148.63 (-5.85)	171.63 (15.48)	180.31 (5.06)
3.	Intermediate goods	95.9852	152.42 (3.83)	176.46 (15.78)	193.19 (9.48)
4.	Consumer goods	408.3859	167.22 (7.40)	190.97 (14.21)	210.65 (8.29)
	a) Consumer durables	38.0612	174.91 (19.58)	178.31 (1.95)	189.94 (6.52)
	b) Consumer non-durables	370.3247	165.49 (3.36)	196.03 (18.46)	212.56 (8.43)
	Total (Manufacturing Sector)	785.7081	167.45 (5.51)	189.47 (13.15)	207.89 (9.73)

Figures in brackets indicate percentage changes over the previous year * Provisional figures

Source: Directorate of Economics and Statistics

The compound average rate of growth (CARG) for the decade for all the groups was about 7% with CARG of basic goods at 8.35%, capital goods at 6.21%, Intermediate goods at 6.39% and consumer goods at 5.47%.

INDUSTRIAL GROWTH BY TWO DIGIT INDUSTRIES

At the two digit NIC-04 level, manufacturing industry sector has been sub-divided into 22 major industry groups in the IIP for manufacturing sector is given in Table 5.5. among the major industry groups, food products and beverages account for more than 11% weight followed by tobacco products (8.9%), chemical products (7.3%), and machinery equipments (6 %).

Table 5.5: Annual indices of industrial production in Karnataka manufacturing division by groups

(Base Year: 1999-2000=100)

Name of the Industry Group	Weight	2008-09	2009-10	2010-11
Food products	114.2302	206.29	245.10	280.02
Beverages, tobacco and tobacco products	88.8659	121.79	173.77	207.55
Cotton textiles	33.3693	152.29	162.03	174.32
Wool, silk and man-made fiber textiles	56.9767	129.94	166.42	185.85
Textile products	3.4481	168.46	181.31	188.15
Wood and wood products, furniture and fixtures	6.3571	136.53	138.48	144.82
Paper and paper products	18.2818	207.28	219.10	230.80
Leather and leather products	8.1189	286.29	297.40	327.34
Chemicals and chemical products	5.1339	195.79	213.19	227.17
Rubber, plastic, petroleum and coal products	72.7980	143.67	153.76	161.53
Non-metallic mineral products	22.4338	234.32	242.76	265.24
Basic metal and alloy industries	54.1271	195.68	202.09	210.36
Metal products and parts	51.1849	213.63	225.56	242.34
Machinery and equipment, other than transport	29.4362	163.06	171.51	178.29
Transport equipment and machinery and part	59.6110	148.90	157.25	162.86

Other manufacturing industries	1.3149	232.42	245.71	267.35
All groups	55.3691	158.63	169.40	176.37
Television and Communication equipments	23.6595	196.26	221.48	247.18
Medical, Optical Instruments and Watches	16.8933	167.03	172.86	177.01
Motor Vehicles, Trailers and Semi-Trailers	57.5095	137.18	161.68	184.70
Other Transport Equipment	4.3227	79.1	83.37	96.13
Furniture	2.2665	183.60	201.14	205.39
Manufacturing Index	785.7083	167.45 (5.51)	189.47 (13.15)	207.89 (9.72)

**Provisional figures, Note: Figures in brackets indicate percentage change over the previous year,*

Source: Directorate of Economics and Statistics

The indices for different two-digit level industries, from 2008-09 to 2010-11 with growth rates for 2010-11 are given in Table 5.5. Among the two digit level industries, tobacco products (19.44%), other transport equipment (15.30%), motor vehicle, trailers and semi-trailers (14.24%), food products and beverages (14.25%), wearing apparels and televisions and communication equipment (11.68%) and publishing and printing materials (10.07%) have experienced double digit growth. The remaining industry groups registered growth rates ranging from 1 % to 9% in 2010-11. Thus, among the 22 two digit level industry groups, Seven industries have registered growth rate of more than 10%, Seven industries grew by more than 5% but less than 10% and Six industries grew by more than 3% but less than 5%. Only two industry groups show growth of less than 3% in 2010-11.

ANNUAL SURVEY OF INDUSTRIES (ASI)

The annual survey of Industries (ASI) presents detailed statistics on manufacturing and electricity sub-sectors of organized industrial sector and excludes mining and quarrying from its purview. Table 6.5 presents ASI statistics for registered factories in 2008-09 and 2009-10 for Karnataka and All-India. Karnataka accounted for 5.38% of the total registered factories in 2009-10 in the country. The contribution of registered factories of Karnataka stood at 7.12% of total fixed capital, 6.29% of total output and 6.46% of GVA in the Country during 2009-10. The share of Karnataka in total registered factories and total investment (fixed capital and working capital) has risen in 2009-10 as compared to 2008-09. However, the relative contribution of Karnataka's registered factories to industrial performance (of all-India) in terms of total output, gross and net value added and profits has declined marginally during the same period.

Table 5.6: Selected Key Indicators of Registered Factories: Karnataka and all-India

(₹. Crore)

Particulars	2008-09			2009-10		
	Karnataka	India	% Share	Karnataka	India	% Share
Industries (No.)	8451	155321	5.44	8541	158877	5.38
Fixed Capital	86695	1055966	2.36	96244	1351324	7.12
Working Capital	7354	311233	2.36	7979	387761	2.06
Total Output	225813	3272798	6.90	234127	3722777	6.29
Total Input	177044	2661486	6.65	189705	3035605	6.25
Gross Value Added	48769	611311	7.98	44422	687172	6.46
Net Value Added	42532	527766	8.06	37586	582024	6.46
Profit	26536	296991	8.93	20693	322834	6.41

Source: Central Statistical Organization (SCO), GOI

According to ASI-2009-10 and NIC-2008, the major industrial groups in the registered factory sector of Karnataka in terms of value of output are (i) coke and refined petroleum products (14.79%), (ii) basic metals (13.56%), (iii) Food products (13.40%), (iv) other manufacturing materials (8.34%), (v) Machinery and equipment (6.22%) and (vi) Motor vehicle, trailers and semi trailers (6.13%). These six industries groups together accounted for more than 62% of the total value of output of registered factories of Karnataka in 2009-10. The industry-wise composition of registered factories in Karnataka (in terms of two-digit NIC-2008) is given in Table 5.7.

Table: 5.7: Two Digit Level (NIC-2008) Industrial Composition based on ASI 2009-10

Sl. No.	Industrial Group (NIC-2008)	Value of Output (₹. lakh)	Percentage
1	Agriculture and related activities (01)	208530	089
2	Manufacture of Food Products (10)	3137746	1340
3	Manufacture of Beverages (11)	355308	152
4	Manufacture of Tobacco Products (12)	167303	071
5	Manufacture of Textiles (13)	291867	125
6	Manufacture of Wearing Apparels (14)	718113	307
7	Manufacture of Leather and Related Products (15)	44545	019
8	Manufacture of Wood and Wood Products (16)	55670	024
9	Manufacture of paper and Paper Products (17)	233893	100
10	Manufacture of Printing and Reproduction of Recorded Media (18)	228231	097
11	Manufacture of Coke and Refined Petroleum Products (19)	3462981	1479
12	Manufacture of Chemical and Chemical Products (20)	593745	254
13	Manufacture of Pharmaceutical, medicinal chemical and Botanical products (21)	641713	274
14	Manufacture of Rubber products (22)	581481	248
15	Manufacture of other non metallic mineral products (23)	610798	261
16	Manufacture of basic metals (24)	3173677	1356
17	Manufacture of Fabricated metal products (25)	527157	225
18	Manufacture of Computer, electronic and optical products (26)	819730	350
19	Manufacture of electrical equipment (27)	1315954	562
20	Manufacture of machinery and equipment (28)	1457042	622
21	Manufacture of motor vehicle, trailers and semi trailers (29)	1434225	613
22	Manufacture of other transport equipment (30)	265115	113
23	Manufacture of furniture (31)	109430	047
24	Manufacture of other manufacturing materials (32)	1952409	834
25	Manufacture of repair and installation of machinery (33)	7897	003
26	Manufacture of waste collection treatment of disposal activities (38)	6082	003
27	Others	1012068	432
	State Total	23412710	10000

Source: Central Statistical Organisation

The important indicators per registered factory based on ASI results for 2008-09 and 2009-10 are presented in table 5.8. Karnataka compares favourably with all-India in terms of the indicators of per factory investment, employment, and output and grows value added. Though registered factories of Karnataka, on an average, are more capital intensive than that of all-India they are also more employment-intensive and generated more value added as well as output.

Table 5.8: Important Indicators per Factory

Indicator	Unit	2008-09		2009-10	
		Karnataka	India	Karnataka	India
Investment in fixed capital	₹. lakh	1025.8	679.9	1126.8	850.5
Employment	No.	91	73	104	74
Value of Output	₹. lakh	2672.0	2107.1	2741.2	2343.2
Gross Value Added	₹. lakh	577.1	393.6	520.1	432.5

Source: Central Statistical Organization (SCO), GOI

The selected economic indicators per worker for Karnataka and All-India are given in table 5.9. Net value added, total input per worker, total output per worker and annual wages per worker reveal that Karnataka lagged behind the all-India average in terms of the first three variables but was better-off than all-India in terms of annual wages per worker in 2009-10.

Table 5.9: Selected Economic Indicators of Industries

Year	Labour productivity (Net value added per ₹ in wages)		Total input per worker (₹. Lakh)		Total output per worker (₹. Lakh)		Annual wages per worker (₹.)	
	Karnataka	India	Karnataka	India	Karnataka	India	Karnataka	India
2007-08	9.0	9.4	25.5	27.2	32.5	33.9	67478	62297
2008-09	9.9	8.8	29.6	30.3	37.8	37.3	71120	68103
2009-10	7.7	8.4	32.5	33.1	40.1	40.6	83218	75277

Source: Central Statistical Organization (SCO), GOI

UNREGISTERED MANUFACTURING SECTOR

The unregistered of unorganized manufacturing sector is another important component of Karnataka's manufacturing industry. The national sample survey organization (NSSO), ministry of statistics and programme Implementation, government of India conducts periodic surveys covering unorganized sector at the national level and collect data. The previous survey (62nd round) covering unorganized manufacturing enterprises was conducted by NSSO during 2005-06.

The highlight of State wise results of 62nd round of NSSO survey covering unorganized manufacturing enterprises are given in table 5.10. Karnataka accounted for 5.64% of total number of unorganized manufacturing enterprises and 5.42% of the total unorganized manufacturing employment in the country in 2005-06. In terms of GVA per enterprise as well as per worker, Karnataka performed better than the all-India average. Both in terms of GVA per enterprise and GVA per worker, Karnataka stood fourth among Indian States.

Table 5.10: Unorganised Manufacturing Enterprises (2005-06)

State	Number (lakhs)		Annual Gross Value Added (₹.)	
	Enterprises	Workers	Per Enterprise	Per Worker
Andhra Pradesh	15.33	29.39	30062	15683
Bihar	7.72	14.53	26291	13976
Chattisgarh	2.07	4.58	40519	18341
Gujarat	6.54	18.52	96612	34133
Karnataka	9.62	19.74	58030	28268
Madhya Pradesh	8.55	17.41	29625	14544
Maharashtra	11.26	29.01	121913	47332
Orissa	9.57	20.24	20374	9638
Rajasthan	6.36	12.95	59605	29287
Tamilnadu	14.82	33.70	55590	24449
Uttar Pradesh	23.59	52.88	52041	23220
All India	170.71	364.43	51308	24304

Source: National Sample survey Organisation, GOI

In addition to the manufacturing sector, service enterprises play a crucial role in Karnataka's economy. The highlights of results of NSSO survey covering service sector enterprises (excluding trade) under the 63rd round (2006-07) are presented in table 5.11. The table indicates the number of enterprises and number of workers as well as GVA per enterprise and GVA per worker. Karnataka accounted for 4.9% of the total service sector enterprise and 4.8% of the total service sector enterprise workers in the Country. In terms of both GVA per enterprise and GVA per worker, Karnataka stood first in the country and accounted for more than twice as that of all-India average in terms of GVA per enterprise as well as GVA per worker.

Table 5.11: Service Sector Enterprises (2006-07)

State	Number (lakhs)		Annual Gross Value Added (₹.)	
	Enterprises	Workers	Per Enterprise	Per Worker
Andhra Pradesh	17.23	36.35	58255	27605
Bihar	8.72	13.09	33079	22031
Chattisgarh	1.77	4.50	52476	20664
Gujarat	6.44	12.23	189061	99506
Karnataka	8.05	15.92	221559	112097
Madhya Pradesh	4.68	10.17	64742	29822
Maharashtra	14.89	31.60	189679	89400
Orissa	6.22	19.24	36123	11678
Rajasthan	6.00	11.88	93738	47350
Tamilnadu	11.93	29.22	98969	40413
Uttar Pradesh	22.46	40.64	47380	26188
All India	165.12	328.80	92633	46519

Source: National Sample survey Organisation, GOI

MICRO, SMALL and MEDIUM ENTERPRISES

Micro, small and medium enterprises (MSMEs) form an important and growing segment of Karnataka's industrial sector. As per the MSME Act 2006, MSME units have been categorized broadly into those engaged in manufacturing and providing / rendering services. Based on their investment on plant and Machinery, MSMEs are defined as enterprises.

During 2010-2011, 18434 MSME Units have been registered in the State with an investment of ₹. 1,20,623 lakh by providing employment to 111226 persons. When compared to the same period of the previous year (2009-10), there is a 7.2% increase in No. of units registered, 1.8% decrease in investment and 0.5% increase in number of persons employed. During the first nine months of the current year (April to Dec. 2011), 14578 units have been registered with an investment of ₹. 1,10,732 lakh by providing employment to 90203 persons. Under this, 13601 micro units, 952 small and 25 medium industries have been registered with an investment of ₹. 30,388.21 lakh, ₹ 63,867.79 lakh, and ₹. 16,476 lakh respectively by providing employment to 60455, 24382 and 5366 persons respectively,

Details of year wise registration of MSME s in the State and persons employed in the registered MSME enterprises during 2000- 01 to 2011-12 are given in Table 5.12. The table also nine represents the number of persons employed per unit in the newly registered MSMEs from 2000-01 onwards.

Table 5.12: Micro, small and Medium Enterprises (2000-01 to 2013-14)

Year	MSME Units	Employment	Employment per Unit
2000-01	16554	85792	5.18
2001-02	16964	73195	4.31
2002-03	12029	57371	4.77
2003-04	12220	56790	4.65
2004-05	11238	49998	4.45
2005-06	12780	58133	4.55
2006-07	12580	57517	4.57
2007-08	14984	123399	8.24
2008-09	15705	105034	6.69
2009-10	17195	111164	6.46
2010-11	18434	111226	6.03
2013-14	25966	167347	-

Source: Directorate of Industries and Commerce

Traditional Industries

Many crafts and industries have flourished in the state from ancient times. Of the ancient industries of Karnataka, production of textile is an important industry. It had centres all over Karnataka and they included places like Binnamangala, Aigandapura (Bengaluru Dt.), Balligavi (Shivamogga Dt.), Arasikere (Hassan Dt.) and Chinmali (Raichur Dt.) to speak of the most prominent centres mentioned in inscriptions. During the medieval times Hubballi, Gadag, Badami, Ilkal, Kodyala, Guledgud, Bengaluru and Doddaballapur became notable centres. The Adilshahi rulers of Vijayapura started paper and agarbathi (joss stick) industries in their territory in North Karnataka. A British factory founded at Kadwad on the banks of the Kali in 1638 exported cloth from the hinterland at Hubballi. Under Chikkadevaraya of Mysuru, Bengaluru had 12,000 families of Weavers and Dodballapur also grew to be a major centre of textile production. Under Tipu, many weavers from Baramahal in Tamilnadu settled down in Bengaluru and surrounding places. Buchanan, while speaking of the Mysuru State during his visit, says that there were a class of weavers called Togataru who wove coarse, thick, white cotton cloth with red borders and Holiars who wove coarse, white strong cloth called parakali. Karnataka women spun yarn using a charka in their spare time and Buchanan says that a full-time spinner earned as much a farm worker. But the Industrial Revolution ruined spinning as a profession, and also throttled weaving on a major scale.

Weaving coarse blankets (kambali) also flourished and inscriptions speak of Davangere and Dodballapur as the two centres of this industry. Dr. A. Appadorai speaks of Budihal (Chitradurga dt.) as a centre of producing cloth from hemp fibre. Inscriptions speak of Pattedgars or silk weavers from Lakshmeshwar (Gadag dt.) and Varagiri (Haveri dt.). Though the raw silk was imported in ancient times, Tipu introduced sericulture in Mysuru on a large scale. Buchanan speaks of the Khatries (Kshatriyas, people from the Southern part of Gujarat) in Bengaluru who prepared very strong and rich clothes. They dyed much of their silk and were more wealthy than other weavers, he adds. These people had also settled in Hubballi in good numbers. They were well-versed in brocade work too. Production of oil was another

flourishing industry in the state, sesamum and linseed, soyabean, nigerseed, rape and mustard, sunflower, honge seed, castor, coconut, kusube (safflower) etc., were used to extract oil.

The Panchalas included blacksmiths, goldsmiths, coppersmiths, braziers and carpenters and they are also called Vishvakaramas. An inscription of 11th Century from Mysuru district speaks of a blacksmith who was an expert in producing swords. Under Mysuru Rulers, Chikkadevaraya had Kabbinadachavadi (ಕಬ್ಬಿಣದ ಚಾವಡಿ), perhaps to supervise production and sale of iron tools and implements. Tipu continued this monopoly and he also founded a state foundry at Kanakapura where even canons were forged. Buchanan speaks of manufacture of iron from sand accumulating in the rainy seasons at places like Madhugiri, Chennarayanadurga. Hagalavadi and Devarayanadurga. He gives the technical details of iron smelting too at these places. He speaks of iron ore from Ghattipura in Magadi taluk. He also informs us of manufacture of steel which was used to produce sword blades and stone cutter chistles at Magadi near Bengaluru and other places. He tells us that Channapatna was a centre of production of steel wires which had a demand all over was used in musical instruments too. Tegur near Dharwad, Halgur near Malavalli, Benkipura(modern Bhadravati) etc., were notable centres of iron production and charcoal to smelt iron was available in abundance in the forests of Western Ghats, which had also abundant iron mining centres.

Production of jewellery was also a flourishing industry and Manasollasa gives a long list of jewellery worn by both men and women. Among the Panchalas, the goldsmiths make the jewels, earlier, they minted coins by paying a fee called tankato the State. There were state mints at Lakkundi, Sudi, Kudutini, Balligavi, Mangaluru, Barkur and other important cities. The Kasars or Kanchugars (braziers) produced bronzeware which included vessels, musical instruments like bells and trumpets, lamps of various kinds, mirrors and images of various deities. They are mentioned in many records and the one at Laksmeshwar of the 8th century is notable among them. Carpentry was another profession of the Panchalas and in addition to the production of agricultural implements and household furniture; they also produced chariots, carts, boats and palanquins. They also built

palaces with decorated pillars, panels and ceilings. All old palaces were mostly wooden as can be seen even today by those surviving ones at Shivamogga, Bengaluru and Srirangapattana.

Production of foot-wear, waterbags, shields, beds and cushions, drums, etc. was undertaken by leather workers called Samagars (tanners) and Mochis. Footweares produced by them were of a variety of designs and colours as testified to by Manasollasa. A Badami record speaks of their guild. The Kumbaras or potters were producing earthen vessels and tiles. The vessels were both handmade and wheel turned. Production of salt and lime were two other notable industries. Salt was produced from sea water on the coast and the salt stones mined. There were uppina moles or salt pans mentioned in records. Places like UppinaKuduru, Uppinamogaru, Uppinapatna, Uppuru, Uppalli, Uppinangadi etc., are reminders of the fact that these places were centres of salt manufacture. The Uppars were the caste engaged in producing salt. This traditional industry which supported thousands came to be ruined after the British made salt production a state monopoly. Buchanan speaks of the industry as flourishing at Tekal (Kolar dt) and gives details of the techniques of production adopted at the place. Lime was produced both from sea shells on the coast and from lime Stones mined. Buchanan also described the kilns at Kadugodi near Whitefield (Bengaluru dt). There was a community called Sunagars engaged in this industry.

Production of glass bangles was also a flourishing industry. A record of 1161 from Belagavi district speaks of Senahalli, Kallakundarge (Kallakundri) and Nittur as centres of this industry. The Balegars formed a separate caste and Kannada poet Ranna was of this caste. Some of them had the surname Setti as seen from inscriptions. Buchanan speaks of Muttodu in Chitradurga district as a centre of bangle manufacture and he mentions that these bangles were of five colours viz., black, green, red, blue and yellow. He also states that glass produced there was opaque and coarse and materials needed for glass making were available in the neighbourhood of the place. He also describes manufacturing glass bangles and bottles at Channapatna and here this industry was started under the initiative of Tipu.

Production of jaggery, sugar candy was other notable industries. Inscriptions speak

of alemane found in many parts of Karnataka where sugar cane juice was boiled and jaggery was manufactured. Buchanan speaks of this manufacture as seen by him at Maddur (Mandya dt.) and surrounding villages. Palm juice was also used to produce jaggery. Tipu had made special efforts to foster sugar and sugar candy industry and has even secured the assistance of Chinese technicians. Buchanan speaks of sugar produced at Chikkaballapur which he describes as very white and fine and the sugar candy of the place was “equal to the Chinese”. The Astagrama sugar works started at Palahalli (Mandya dt.) in 1847 was famous for its crystal sugar. It had the privilege of participating in international exhibitions of 1850, 1861 and 1867 held at London and had even won a prize. But it stopped working later due to various reasons.

Manufacture of perfumes was another industry. Manasollasa in the section ‘Snanabhoga’ (on enjoying bath) refer to perfumed oil and ointments and also speaks of the processes of their production, using mostly the raw materials derived from vegetable sources. A good number of craftsmen especially in villages were partly agricultural and also pursuing their craft which was hereditary and the training was mostly imparted by father to son. The craftsmen had their flourishing guilds, and even the Shatavahana records make a mention of these nigamas, (nikayas or shrenis in Sanskrit). In Kannada, the guilds were called kottali, shreni, samaya, samuha or hittu.

A record of the Badami Chalukya times from the capital city speaks of the guilds of garland makers (malekaras), cobblers etc, A record of the days of the same dynasty from Lakshmeshwara mentions the guild of the braziers and another of Pattegars (silk weavers). The State did protect the guilds and maintained their privileges. Inscriptions speak of saligasamaya or jedagottalli, the guilds of weavers, oddagottali (the stone-cutters guild) or telliganakhara or oilmen’s guild.

Some of the guilds are mentioned with certain numerical suffixes attached to their professional name such as telligaayvattu (fifty) or uguramunnuru (300), the ugurus being pluckers of betal leaves or gale munnuru (300), pluckers of fruits in orchards. Uguru literally means nail and they plucked leaves by attaching a small chistle to their nails. Gale or bamboo was used to pluck fruits.

Beginning of Modern Industries

Tipu made special efforts to introduce new industries and modern techniques in producing sugar, glass, etc. Buchanan informs that under arrangements made by Tipu, broad cloth, paper, watches and cutlery were manufactured by new techniques. He got new techniques from China to improve sugar production and men from Bengal to introduce sericulture and European experts, especially the French to produce watches and cutlery. Dewan Rangacharlu had stated as early as in 1881, his clear conviction that no country can prosper unless its agricultural and manufacturing industries were equally fostered. The later dewans like Sheshadri Iyer, Sir M. Visveswaraya and Sir Mirza Ismail also had such a conviction and they formulated their policies based on it.

In the erstwhile Mysuru State, the Kolar Gold Fields had been started by an English Mining Company (John Taylor and Sons) in 1880. When the State was under direct British rule. Laying of railways was an added advantage. By 1900, two large scale textile mills came up i.e., the Bengaluru Woollen, Cotton and Silk Mills Ltd. (1884) and the Mysuru Spinning and Manufacturing Company Ltd. (1894), both at Bengaluru. A Central Industrial Workshop was established by the State Government in 1897 at Bengaluru. The State Government enterprises of Hydro-electric power generation at Shivasamudra (Mandya Dt) in 1902 may be said to have initiated the modern industrial development in the State.

Industrial development did take place in the Old Hyderabad and Bombay Karnataka area also. But they were incidental and not on any planned basis. At Kalaburagi, a textile mill, the Mahaboob Shahi Kalburga Mills, was established in 1884 with the active support of the Government of Nizam of Hyderabad. The MSK Mills Co, Ltd. was re-registered under the Indian Companies Act in 1888. The Mill ran into difficulties in the early sixties of this century and the State Government of Karnataka acquired the controlling interest and took over the management in 1963 and later in 1973 the Mill was taken over by the National Textile Corporation.

Except for the English-owned textile mills established in 1885 at Gokak Falls and in 1889 at Hubballi, there were hardly any major industrial enterprises in Bombay Karnataka area. There

were however some crafts such as the Bidriware in Bidar taluk and handlooms in Vijayapura, Bagalkot, Dharwad, Gadag and Haveri districts. In the thirties and forties of the 20th century, a few industries came up, the notable among them being the Cement factories at Shahabad and Wadi (Kalaburagi dt), Sugar factories at Kittur and Ugarkhurd (both in Athani tq, Belagavi dt). The Swadeshi spirit did help the establishment of a few minor units like ceramic works at coastal Karnataka and many industrial units and beedi manufacture grew here as a home industry. Beedies with regular labels came to be manufactured from 1914 when Mahalakshmi Beedi Works started at Panemagalur in 1914 followed by PVS Beedies (1918), Bharat Beedies and Ganesh Beedies (both in 1930). Tile manufacture initiated by German missionaries (Basel Mission Tile works 1865) in Mangaluru was a notable avenue. Cashew processing was another enterprise.

Economic Conference

The starting point of planned economic development as a concept and State policy began with the appointment of Sir M. Visveswaraya as Chief Engineer in 1909 and he dominated the industrial scene for over five decades. It was at his instance that the First Mysuru Economic Conference was held in 1911 and its report dealt in great detail the natural resources of the State and identified a number of industrial possibilities. The Government accepted the recommendation of the Economic Conference and set up a separate Department of Industries and Commerce in 1913. The Department was reorganized in 1922 and strengthened periodically to meet the growing needs of industrial enterprise, in both public and private sectors.

The Government Sandal Oil Factories were located in Mysuru City (1915) and Shivamogga (1944) to augment the production and distillation of sandal wood oil. The manufactured items included sandal wood oil B.P. Quality, special 'A' Quality oil, sandal wood oil residue and sandalwood balloon dust.

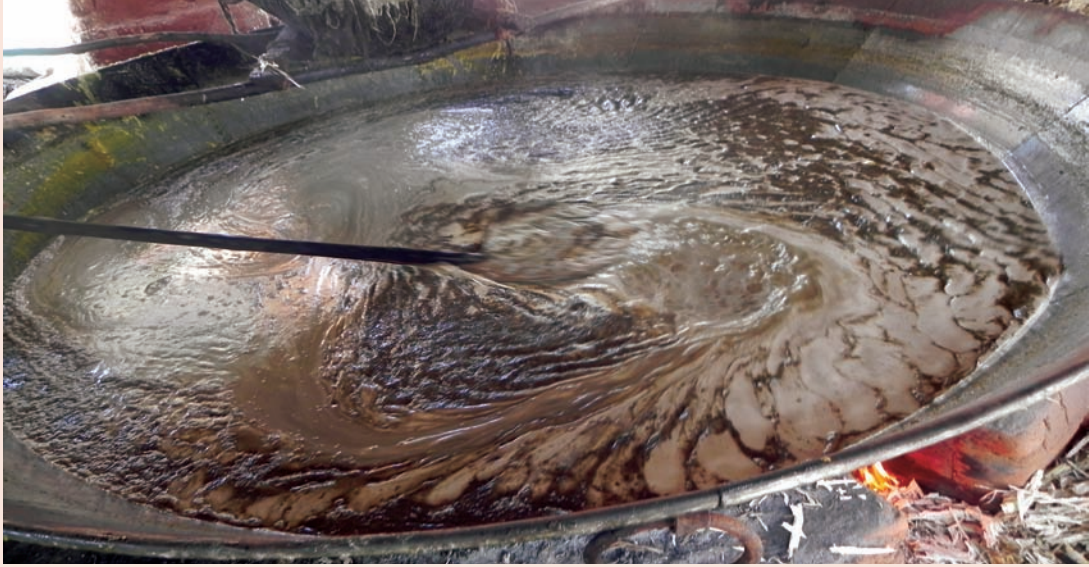
The Government Soap Factory was established in 1918 in Bengaluru with an objective of manufacturing laundry soaps and toilet soap in sandal, jasmine and lavender perfumes, Mysuru Sandal Soap, shaving soap, Indo-cure quickfix,

glycerine etc. The Karnataka Soaps and Detergents Ltd., a State Government undertaking has taken over the management of the Government Soap Factory at Bengaluru and the Sandalwood oil factories at Mysuru and Shivamogga in 1980. The Company is having the following units (1) Detergent Unit commissioned in 1976, (2) Fatty Acid Unit commissioned in July 1981 (3) Soap expansion project to boost the manufacture of soap from 6,000 tonnes to 26,000 tonnes. (4) Sandal oil divisions at Mysuru and Shivamogga, and (5) the agarbathi units at the Sandalwood oil divisions.

The Minerva Mills, a private enterprise was established in 1919 in Bengaluru. The products manufactured were 10 to 40m. single folded cloths - shirting, long cloth, dhoties, chaddars and towels. The first major public sector undertaking was the Mysuru Iron and Steel works at Bhadravati, which was established in 1923 with the objective of converting the vast iron deposits of Kemmannugundi in the ranges of the Bababudan Hills into pig iron and manufacture of allied products. The nomenclature was changed to the Mysuru Iron and Steel Works' with the commissioning of cast iron pipe plant, open hearth furnace, rolling mills and a cement plant. In the year 1962, it was changed into a company called 'Mysuru Iron and Steel Ltd.,' with Central Government share of 40 percent of its equity. This departmental undertaking became a Government company jointly owned by the Central Government and the State Government of Karnataka in the ratio of 40:60 respectively. In 1975, in order to pay tribute to its founder the name was changed as 'Visveswaraya Iron and Steel Ltd.' Now it is under the administrative control of the Steel Authority of India.

The Pierce Leslie and Company, Mangaluru (1924), and Siddeshwara and Company, Hubballi, also came up during early twenties. The former was processing cashew nuts and the latter manufacturing cash chests and steel furniture.

By the late twenties of this century, the old Mysuru State had 26 major industrial concerns excluding the Kolar Gold Fields, the textiles and hydro- electric works. Prior to the States Reorganisation in 1956, the decade 1931-1941 was the most active period in the economic development of Mysuru. The Mysuru Industrial and Testing Laboratory to produce Pharmaceuticals,



Jaggery Making Unit



Bricks Industry

chemicals, malt extracts and medicinal specialties were started in 1931 as a Government concern. It was converted into a joint stock company with the Government hold of 40 percent of its shares in 1945. The Mysuru Match Company Shivamogga, was another enterprise of this time. The Government Silk Weaving Factory was also established in 1932 at Mysuru for manufacture of high grade silk fabrics, sarees, cholies etc.

The Government Electric Factory was started in 1934 at Bengaluru to produce electric transformers, motors, pumps, transmission towers, etc., The Mysuru Sugar Company Ltd., at Mandya was started in 1933 with Government holding about 55 percent of the shares to produce sugar, and alcohol such as potable liquors, industrial spirits and power alcohol were the other important products.

The Mysuru Paper Mills Ltd., at Bhadravathi was established in 1936 with the Government holding a portion of its shares. The products manufactured were cream laid, writing and printing bonds, azure laid, ledger papers and other varieties of paper. The Mysuru Spun Silk Mills at Channapatna was started in 1936 as a public limited company for manufacturing fabrics out of silk waste. The products manufactured include spun silk yarn, raw silk fabrics, sarees, waste silk druggets, pile carpets, coatings and shirtings, etc. It was under liquidation in 1960 when the Government took it and is being run as a Government concern.

The Davanagere Cotton Mills was established in 1936 in the private sector with a view to manufacture cotton yarn, grey and bleached mull, long cloth, dhoti, etc. The Mysuru Lamp Works Ltd., Bengaluru was established in 1936 with government holding 17.6 percent of the shares to manufacture all types of incandescent electric lamps, neon signs and other components. The Mysuru Stone ware and Potteries Ltd., Chikkabanavara was established in 1937. The products manufactured were stone ware pipes, and other products and it was managed by the Mysuru Industrial Development Company. The Mysuru Tobacco Co. Ltd., a tobacco curing unit was established in 1937. It has curing centres at Mandya, Mysuru, Kolar and a grading station at White Field.

The Mysuru Chemicals and Fertilisers Ltd., was established in 1937 at Belagola (Mandya

District) and it manufactured ammonium sulphate, sulphuric acid, super phosphate, nitric acid, oleum, anhydrous ammonia and ammonium salt. It is the pioneer in the establishment of the first synthetic ammonia plant or fertilizer unit in India.

In 1932, the Mysuru Government pioneered the manufacture of insulators for the Electric Department by starting the Government Porcelain Factory. During 1957, the Government obtained technical collaboration of NGK Insulators Ltd., Nagoya, Japan for the first phase of expansion from 50 tonnes of ceramics per month to 200 tonnes. The second phase of expansion to 600 tonnes per month was completed in 1967. It was converted into a Government Company, viz. Mysuru Porcelains Ltd. In 1976, this company became a subsidiary of Bharat Heavy Electrical Ltd. The insulators manufactured by this company are unique and are of international standard.

The Mysuru Vegetable Oil Products Ltd., was established in 1938 at Bengaluru. The products manufactured were hydrogenated oil (Vanaspati) and refined oil. The Mysuru Coffee Curing Works Ltd., was established in 1938 at Chikkamagaluru. The manufactured products include curing coffee, steamed bone meal and other requisites. The Mysuru Implements Factory at Hassan was established in 1939 to produce agricultural, estate and garden implements and tools, domestic articles, cutlery, sheet-metal work, light structures, ornamental gates and grills, etc. During 1975 the Karnataka Implements and Manufacturing Company Ltd., was established, under the provision of the Company Act of 1956. It was formed by the merger of two erstwhile departmental undertakings of the Government viz, Central Industrial Workshop at Bengaluru and the Mysuru Implements Factory, Hassan. The Bengaluru Factory is currently engaged in the fabrication of 20 T and 100 T trailers. The other products are road rollers, concrete mixers, tar boilers, white washing machines, etc. The Hassan unit is manufacturing agricultural implements like munties, axes etc. The Second World War not only gave a greater impetus to all the industries but also made them self-reliant as foreign materials, machineries and spare parts could not be imported. The needs of the war front were also considerable as little could be imported. The industrial activity expanded substantially.

Public Sector Units

After India became independent, Bengaluru was selected as the venue for many Central enterprises. Among the public sector undertakings of the Central Government, the following are important.

The Bharat Earth Movers Ltd., (BEML) commenced operations on January 1st 1965 in Bengaluru. It is engaged in the manufacture of high technology transportation equipment. Bharat Electronics Ltd. (BEL) is engaged in the manufacture of Electronic and Communication equipments for use by Defence Sector, AIR, Meteorology Dept, and Post and Telegraph Dept. The Bengaluru Complex has 19 Ancillary Units. Bharat Heavy Electrical Ltd., 1976 (BHEL) has produced for the first time truly distributed control system in the country.

Hindustan Machine Tools Ltd. 1953 (HMT) has bagged two contracts for supply of machine tools worth ₹. 24.15 crore to Bulgaria and Soviet Union during the year 1987-88. It has also entered into an agreement to render technical assistance to telephone manufacturing unit in Algeria. It has a wrist watch unit also. Indian Telephone Industries Ltd., (ITI) is the first public sector undertaking set up in India in 1948 in Bengaluru with five divisions, one each for manufacture of strowger, crossbar transmission, telephones and defence equipments respectively. It had also set up three more electronic switching units during the Seventh Plan Period.

Hindustan Aeronautic Ltd., (HAL) was established at Bengaluru during 1940 by the noted industrialist, the late Walchand Hirachand with Central and State Governments as partners. It was originally intended to be an automobile factory. The pressure of the British manufacturers of cars forced the enterprise to switch over to aircraft servicing and assembling. At the time of the Second World War, repairing of aeroplane, over-hauling etc., was undertaken. The first fighter jet plane was manufactured within a period of six months from the date of inception of the unit. During the war time, the number of workers was around 16,000. After the war, the number of workers was reduced to 3,000. The Rail Coach Division of the HAL commenced functioning from 1947. During 1951, the administration was taken over by the Ministry of Industries and Commerce and latter by the Defence Ministry.

HAL made a major contribution for a standardization of road transport vehicles by producing pre-fabricated bus body which can be easily assembled by operators in their workshops. It was during 1964 that all the Aero Engine Units were amalgamated and called the Hindustan Aeronautics Ltd. The rail coach division was retransferred to BEML. HAL has a very reliable and extensive maintenance division for the repair and over-haul of aircraft, aero engines, accessories and systems. The wide product mix of HAL ranges from rotary and fixed wing aircraft of indigenous design to the manufacture of jet and piston engines to power them, matched avionics and accessories to obtain operations capabilities. It manufactures supersonic aircraft designed for specific strike, combat, interception, observation and surveillance roles equipped with advanced technology power plants, avionics, accessories and armament. The civilian needs like agricultural passenger, training and cargo uplift requirements are also met.

The Wheel and Axle Plant, Bengaluru was commissioned on 15th Sept 1984 at a cost of ₹.146 crores. The plant has unique features incorporating the latest designs and technology in the manufacture of wheels. At the time of installation the estimated capacity was 56,700 wheels and 23,000 axles. With the introduction of productivity linked incentives scheme in 1990 the plant capacity has been fixed at 67,500 wheels and 35,250 axles. In 1991-92 there were 69,887 wheels and 43,470 axles manufactured in this plant. In addition to these industries, Southern Railway workshops at Mysuru and Hubballi and others are also noted Central Government public sector undertakings.

The Karnataka Government has been running many industrial enterprises.

They are broadly divided into seven groups viz.

Public Utilities:

1. Karnataka Power Transmission Corporation Ltd.,
2. Karnataka State Road Transport Corporation and
3. Karnataka Power Corporation.

Financial institutions:

1. Karnataka State Financial Corporation Limited and

2. Karnataka State Industrial Investment and Development Corporation Limited.

Development Enterprises (non-commercial)

1. Karnataka S/C and S/T. Development Corporation Ltd.,
2. Karnataka Backward Classes Development Corporation Ltd.,
3. Karnataka State Police Housing Corporation Ltd.,
4. Karnataka Minorities, Development Corporation Ltd., and
5. Karnataka State Women's Development Corporation.

Development Enterprises (Commercial)

1. Karnataka State Handicraft Development Corporation Limited,
2. Karnataka Agro Industries Corporation Ltd.,
3. Karnataka Film Industries Development Corporation Ltd.,
4. Karnataka Fisheries Development Corporation Ltd.,
5. Karnataka Forest Development Corporation Ltd.,
6. Karnataka Compost Development Corporation Ltd.,
7. Karnataka Handloom Development Corporation Ltd.
8. Karnataka Leather Industries Development Corporation Ltd.,
9. Karnataka State Electronics Development Corporation Ltd.
10. Karnataka Cashew Development Corporation Ltd.,
11. Karnataka Inland Fisheries Development Corporation Ltd.,
12. Karnataka State Coir Development Corporation Ltd.
13. Karnataka industrial area development board.
14. Karnataka state industrial investment and Development Corporation.

Service Enterprises:

1. Karnataka Housing Board,
2. Karnataka State Warehousing Corporation,
3. Karnataka State Small Industries Development Corporation Limited,
4. Shree Kanteerava Studios Ltd.,
5. Karnataka State Construction Corporation Ltd.,
6. Karnataka Urban Development Corporation Ltd.,
7. Karnataka State Tourism Development Corporation Ltd.,
8. Karnataka Food and Civil Supplies Corporation Ltd.,
9. Karnataka Land Army Corporation Ltd.,
10. Jungle Lodges and Resorts Limited,
11. D. Devaraj Urs Truck Terminals Ltd.,
12. Krishna Basin Lift Irrigation Corporation Ltd. and
13. Cauvery Basin Lift Irrigation Corporation Ltd.

Manufacturing Enterprises:

1. Mysuru Sugar Company Ltd.,
2. Mysuru Paper Mills Ltd.,
3. Mysuru Lamp works Ltd.,
4. Mysuru Tobacco Company Ltd.,
5. Mysuru Paints and Varnishes Ltd.,
6. Mysuru Match Company Ltd.,
7. Mysuru Chrome Tanning Company Ltd.,
8. Mysuru Electrical Industries Ltd.,
9. Hatti Gold Mines Company Ltd.,
10. New Government Electrical Factory Ltd.,
11. Mysuru Acetate and Chemical Company Ltd.,
12. Mysuru Minerals Ltd.,
13. Mysuru Cosmetics Ltd.,
14. Karnataka State Agro Corn Products Ltd.,
15. Karnataka State Forest Industries Ltd.,
16. Karnataka State Veneers Ltd.,
17. Chamundi Machine Tools Ltd.,
18. Karnataka Implements and Machines Company Ltd.,

19. Karnataka Agro Proteins Ltd.,
20. Karnataka Vidyuth Karkhane Ltd.,
21. Karnataka Silk Industries Corporation Ltd.,
22. Karnataka Soaps and Detergents Ltd.,
23. Karnataka Milk Products Ltd.,
24. Karnataka Co-operative Milk Producers Federation Ltd.,
25. Karnataka State Textiles Ltd.,
26. Karnataka Telecom Ltd.,
27. Karnataka Plywood Ltd.,
28. Karnataka Tungsten Moly Ltd., and
29. New Government Electric Factory (Hubballi) Ltd.

Marketing and Advertising Enterprises:

1. Mysuru Sales International Ltd.,
2. Marketing Consultants and Agencies Ltd.,
3. Karnataka State Seeds Corporation Ltd.,
4. Karnataka Meat and Poultry Marketing Corporation Ltd.,
5. Karnataka Silk Marketing Board Ltd., and
6. Karnataka small Industries Marketing Corporation Ltd.

State Government Industries

Of the Industries of Post-War years, REMCO is notable. The Mysuru Government established a company called, the Radio and Electrical Manufacturing Company Ltd., at Bengaluru, in the year 1946 to manufacture radios and the components, electricity and water meters, PVC wires and cables. It has three divisions at present viz : Radio Division, Plastic Division and Metal Division. The capital invested for Radio Division was ₹. 25 lakhs, the then Government of Mysuru holding 60 percent of the shares. The other two divisions are wholly owned by the State Government. Domestic and community radio receivers and their component parts are manufactured in the radio division, extended plastic insulated wires and cables. It has been taken over a subsidiary unit of Bharat Heavy Electrical Ltd.,

The Karnataka State Forest Industries Corporation was established during 1973 with

a proposed equity share capital of ₹. 200 lakhs provided by the State Government. The following projects have been taken up by the Corporation viz, extraction of essential oils, cultivation of pine apple, cultivation of nutritional grasses, dehydration and pelletisation of the nutritional grasses and running of saw mills. The decorative veneer factory has been established in 1974 at Kavachur in Uttara Kannada District in collaboration with the Italian Plywood Manufacturing Co., Ltd. (Dandeli).

It produces attractive wood veneers of various types and colours. The Mysuru Match Factory near Shivamogga has been revived by an agreement entered into with West India Match Company. The saw milling activities have been further expanded by creating two units in Uttara Kannada.

Dr. Babu Jagjeevan Ram Leather Industries Development Corporation (LIDKAR)

Karnataka Leather Industries Development Corporation Ltd, (LIDKAR) was established by Government of Karnataka in the year 1976, keeping in view objectives of overall developmental leather Industry in Karnataka and upliftment of Socio – Economic conditions of SC Leather Artisans in the State. The said Corporation has been renamed as Dr. Babu Jagjivan Ram Leather Industries Development Corporation Ltd. The Corporation has been implementing various programmes under developmental and commercial activities.

The Corporation has so far assisted 25,000 Leather artisans by providing living cum work sheds, common facility centres, wayside cabins, training programmes and Study Tours, Celebration of Leather Craft Week and Presentation of Awards, etc.,

The Corporation under Commercial activities has been extending Marketing Assistance for the products made by Artisans and SSI Units under the following programmes:-

- (1) Sales through 24 Retail outlets throughout the State under LIDKAR's brand name.
- (2) Organising Exhibition-cum-sales in important places within and outside the state.
- (3) Supplies to Government Departments and Private and Public Sector Companies.
- (4) Apart from this Corporation has participated in National and International Trade Fares.

So far, the Corporation has assisted 25,000 Artisans towards construction of living cum work sheds to 225 artisans, construction of Common Facility Centres to 38 artisans, training programmes to 9,846 artisans, Distribution of Wayside cabins 13,200 artisans, Celebration of Leather Crafts Week and Presentation of Awards to 168 artisans, Study Tour to 561 artisans. Apart from this, the Corporation has started procurement activities from Artisans throughout the State. The Corporation has so far assisted 1,200 leather artisans and more than 125 SSI units by providing them with marketing facilities. During 2011-12 the Corporation has conducted exhibition-cum-sales through its retail outlets all over the states and conducted exhibition-cum-sales programmes at Mysuru Dasara and Peenya Bengaluru. The corporation is able to achieve a total sales turnover of ₹.7.00 crore against the Target of ₹.9.25 crore.

The Karnataka Vidyut Karkhane Ltd., was registered in 1976 with an authorised share capital of ₹. 200 lakhs. Its important objectives are to manufacture all kinds of electrical operators, electrical machines and equipments required for being used in connection with generation, transmission, distribution and utilisation of electricity, and all kinds of transformers, rectifiers, generators etc. It has secured orders for its transformers and motors from all over India and abroad.

The Thungabhadra Steel Produce Ltd., was established near Hosapete in 1952 which was originally started as a machinery division of the Thungabhadra Reservoir Project. It was converted into a Shutter manufacturing factory for the manufacture of gates, hoists, and penstocks. This is the only industrial unit which is a joint undertaking with the Government of Andhra Pradesh. The New Government Electric Factory (NGEF) was established in Bengaluru in 1961 in technical collaboration with AEG Telefunken of West Germany. It was converted into a joint stock company during 1965. It has the most up-to-date manufacturing facilities with separate factories for transformers, switchgears, motors, silicon power diodes and power rectifiers. The new addition to the NGEF product is the line of silicon power diodes

and power rectifiers. It was making a significant contribution to the industrial development of the country and at present the production in the factory has been stopped.

Information Technology

The Information Technology industry is poised for accelerated growth in the near future. The state of Karnataka has been in the forefront as far as the location and growth of Information Technology industry is concerned. It proposes to have an increased focus on this sector and aims to provide the necessary infrastructure and environment that would facilitate and give impetus to the significant growth expected in the IT sector. It also proposes to go in for changes in the manner of functioning of the government machinery by introducing the system of E-Governance. For the first time in the country the state has formulated an industrial promotion policy for the Information Technology industry in June 1997 offering attractive incentives and concessional and other support for its growth.

The Department of Information Technology is a newly created department in which four organisation viz. Karnataka Government Computer Centre, Karnataka State Remote Sensing Application Centre, Indian Institute of Information Technology, Bengaluru and KEONICS has been brought under the administrative control of the Information Technology. Presently the Karnataka Government has established information technology parks at Mysuru, Mangaluru, Kalaburagi and Shivamogga cities under private-public partnership scheme and these projects are under different stages of development. The different dimensions of achievements made in the IT sector are presented in Table 5.13.

International Technology Park Ltd.

The International Technology Park is a high tech park built to provide a one stop solution to multinationals and other conglomeration for conducting high tech business in India. It is a futuristic park built to exacting standards with the latest state of the art infrastructure and managed by professionals. The park houses corporate majors operating in a wide range of business such as information technology, biotechnology, telecom(R and D), financial services and other IT related services. Located in Whitefield, 18 km. from Bengaluru, the ITPL is spread over 27

hectares (68 acres) on perfectly landscaped habitat. It has taken some of the world's finest brain and corporate giant from Singapore and India to conjure upon this business paradise. The ITPL has been jointly promoted by:

Table 5.13: Achievements in Information Technology Sector (2009-10 to 2011-12)

Sl. No.	Particulars	Units	2009-10	2010-11	2011-12 (upto Nov'11)
1.	Software Exports	₹. crore	76000	70589	44052
2.	No. of STP units approved	Nos.	77	2197	2216
3.	Investments from approved STP units	₹. crore	818.08	825.80	418.63
4.	No. of Foreign Equity Companies	Nos.	34	16	14
5.	Investments from FE's	₹. crore	449.87	744.24	328.41
6.	No. of Electronic Hardware Companies	Nos.	-	1	1
7.	Investment from Hardware Units	₹. crore	2261.57	12.47	8.0
8.	No. of major Indian Companies	Nos.	4	-	-
9.	Investment from major Indian Companies	₹. crore	213.83	-	-
10.	No. of SME Companies	Nos.	39	25	5
11.	Investment from SME Companies	₹. crore	154.38	81.53	14.89
12.	No. of BPO Companies	Nos.	-	-	-
13.	BPO Exports	₹. crore	-	-	-
14.	Investment from BPO units approved	₹. crore	-	-	-
15.	New IT projects approved by the SLSWCC/SHLCC/BT for the current year upto November 11	Nos.	83	85 IT + 4 BT	34 IT

Source: Karnataka Biotechnology and Information Technology Services

1. Tata industries Ltd, (47%)
2. Information Technology Park investment (P) Ltd., a consortium of Singapore Companies (47%)
3. Karnataka Industrial Area Development Board, a statutory body of the Government of Karnataka (6%).

A special Task Force has been created in December 1999 to prepare an action plan for the development of Information and Technology Industry. Infosys and Wipro are the other corporate giants in the software field who have grown in a big way.

KEONICS (Karnataka State Electronics Development Corporation Limited)

Karnataka, specially, Bengaluru is a preferred destination for companies looking to offshore their information technology (IT) and back-office functions, due to the metropolis' natural and strategic advantages coupled with the support extended by the Government of Karnataka to the IT industry in the form of allotment of land at concessional rates, IT in infrastructure and other tax incentives to the IT Entrepreneurs. Further, the industry has its low-cost advantage and is a financially attractive location when viewed in combination with the business environment which the State offers, and the availability of skilled people. Further, a number of India's top technology firms have their strong base in the Silicon Valley of India, i.e. in Electronics City, Bengaluru. These IT Exports are instrumental in regularly achieving and sustaining a growth rate of over 20% indicating a robust growth ahead. Reports suggest that the industry in the State has offered direct employment to almost 8 lakh people, which is expected to grow by at least 15% in the year ahead.

In order to ensure that the fruits of the IT revolution are obtained in all regions of the State and to encourage the local entrepreneurs to set up their business units, the Government of Karnataka has taken a series of measures to establish IT Infrastructure/IT Parks in the Tier-II cities. To supplement the measures taken in this direction, the Government entrusted the Karnataka State Electronics Development Corporation Limited (KEONICS) with the responsibility of setting up IT Parks in Tier-II cities in the State and don the role of a nodal agency to provide necessary IT Infrastructure and support to the IT Industry and the entrepreneurs in the State.

The activities that are presently being undertaken by KEONICS can be broadly categorized as, i. IT Infrastructure Facility Services, ii. Commercial and Marketing Services, iii. Training Services, iv. Information Technology Enabled Services (ITES) and Allied Services, v. Consultancy Services, and vi. Human Resources and Manpower Consultancy Services.

KEONICS is actively involved in establishing IT Parks in Tier two Cities in the State such as Hubballi, Kalaburagi, Shivamogga, Mysuru and

Mangaluru. The progress made in this direction is as under:-

IT Park, Hubballi: The Government of Karnataka has initiated several measures to establish IT Park in Hubballi with State-of-the art infrastructure. The first step in this direction was taken way back in the year 1999-2000 by setting up an IT Park with 2,75,000 sq.ft. built-up area in a sprawling IT complex at Hubballi with a total investment of ₹.42.36 crore. The Government has offered additional incentives including providing workspace at concessional lease rentals to prospective entrepreneurs to utilize the space available for establishing IT and IT-enabled businesses in the complex. KEONICS has been entrusted with the responsibility of maintaining the IT Park Complex at Hubballi.

IT Park, Shivamogga: The Government of Karnataka has announced the establishment of IT SEZ and IT Park in Non-SEZ areas in Shivamogga. KEONICS has been mandated to establish and develop IT-SEZ and IT Park in KIADB Industrial Estate, off Shivamogga-Bhadravathi Highway. Developmental works have been undertaken to create One Million sq.ft. built-up area in 25 acres of land allotted for developing IT SEZ with an estimated investment of ₹.250 crore on PPP model. Co-developers have been identified and the work is in progress in the first phase in an area of six acres. All necessary approvals have been obtained from the Government of India and other Agencies.

IT Park (Non-SEZ) Shivamogga: The first phase of construction for setting up of IT Park in the Non-SEZ area of Shivamogga for a built-up area of 67,599 sq.ft. out of a total area of 1,00,000 sq. ft. is in progress. The project cost is ₹.1546 lakh (approx.). The Phase-I work is expected to be completed by December 2011.

IT Park, Kalaburagi: KEONICS has taken up IT Park project in Kalaburagi in an area of 2 acres land with a built-up area of 150000 sq.ft. in 3 phases with an estimated cost of ₹.23.90 crore. The construction of the IT Park complex is in its final phase. Several incentives are offered to the

local entrepreneurs including allotting workspace at very nominal rates.

IT Park at Mangaluru and Mysuru: The Government of Karnataka has approved the proposal for establishing IT parks at Mysuru and Mangaluru under the Public Private Partnership (PPP) mode. The tendering process for identifying the private partner has been initiated and the implementation of the project is expected to take off during 2012.

Along with the implementation of activities related to establishment of IT Parks, KEONICS is also involved in other activities as indicated above. The financial performance of KEONICS is given in Table 5.14.

Table 5.14: Financial Performance of KEONICS (2009-10 to 2011-12)

(₹.crore)

Item	2009-10	2010-11	2011-12
(Upt September 2011)			
Sales and Service Turnover	113.80	11.64	40.18
Other Income	5.36	4.06	0.94
Total Turnover	119.16	117.70	41.12
Profit before Tax	5.92	7.01	0.89
Profit after Tax	4.53	4.57	0.58

Source: KEONICS

KEONICS is poised to play a vital role in the upcoming Information Technology Investment Region (ITIR) project conceived and being developed by the Government of India and the Government of Karnataka near the international airport, Bengaluru with an initial investment of ₹.1600 crore in an area spread over 2100 acres in the first phase. The project is aimed at housing IT SEZ, Electronic Hardware Park among other ancillary industries with an integrated township.

KEONICS has established a cyber lab at Mangaluru with the support of the Department

of Information Technology, Government of Karnataka, to develop capacity building unit for law enforcement agencies, legal fraternity, Government departments, banking, corporates, students and netizens on the fast growing cyber security risks, cyber crime investigating skills, cyber laws of India and other countries, cyber crime mitigation measures, cyber security policies and framework etc. The KEONICS cyber lab was launched on 23.07.2011.

The mission of KEONICS cyber lab is to provide training and investigation support to agencies and entities involved in prevention, investigation and prosecution of economic and high-tech crime. The vision of the KEONICS cyber lab is:

- 1) Training of law enforcement, prosecution, judiciary in cyber crime investigation (Tools and Techniques), Cyber Forensics Processes and procedures and Cyber laws for their respective roles in dealing with Cyber Crimes/ Cyber threat incidents
- 2) Training Banking and Financial Institutions and Education Segment on Cyber Security to prevent security breaches
- 3) Conducting Cyber Safety sensitization programmes for all Government Departments
- 4) To act as a resource center for guiding law enforcement authorities in the investigation of Cyber crime cases and
- 5) Knowledge enhancement for the core departments handling cyber crime issues.

Indian Space Research Organisation (ISRO)

Government of India established the Department of Space in 1972 to promote development and application of space science and technology for socio-Economics benefits. Indian Space Research organization (ISRO) is the primary agency under the Department of Space for executing Space programmes. During the seventies India under took demonstration, broadcasting and Remote Sensing; designed and built experimental satellites Aryabhata, Bhaskara, Apple and Rohini and experimental satellite Launch Vehicles-SLV-3 and ASLV. Today India has established space systems that form an important element of the National

Infrastructure. India successfully sent the Chandrayana -I space craft to moon in November 2008 and became the fourth individual Country to send a probe to the lunar surface.

Indian National Satellite (INSAT) System

Commissioned in 1983, INSAT is a multipurpose satellite for telecommunications, television broadcasting, meteorology, disaster warning and search and rescue. Besides telecommunications and regular broadcasting services, INSAT is widely used for interactive education, developmental communication and telemedicine. Meteorological imaging and direct-to-community broadcast capabilities of INSAT help in issuing warnings on impending cyclones. INSAT also carries transponders dedicated to search and rescue operations as part international COSPAS/SARSAT programme.

Infrastructure for Space Development

India has established a strong infrastructure for executing its space programme. They include facilities for the development of satellites and launch vehicles and their testing; launch infrastructure for sounding rockets and satellite launch vehicles; telemetry and command network; data reception and processing systems for remote sensing. A number of academic and research institutions as well as industries participate in the Indian Space Programme. Several Indian industries have the expertise to under take sophisticated jobs required for space systems.

Space Sciences (CHANDRAYANA-I)

Earlier India has flown Gamma-Ray and Retarding Potential Analyser payloads on two of its Stretched Rohini Satellites launched in 1992 and 1994. IRS-P3, launched in 1996, carried an X-ray astronomy payload. Chandrayana-1, India's first spacecraft mission to moon, was successfully launched by PSIV-C11 on October 22, 2008 into an Earth orbit, Carrying 11 payloads built in India and abroad, the spacecraft later reached the moon and went into an orbit around it with the help of its Liquid Apogee Motor. After reaching its final operational path of 100 km height from the surface, the spacecraft's Moon impact separated and successfully reached the lunar surface 25

minutes later, carrying Indian tricolour with it on November 14, 2008.

International Co-operation: International co-operation has been the hallmark of Indian space programme. India participates in major space forums including the UN, IAF, COSPAR and CEOS. India has set up the Centre for Space Science and Technology Education in Asia and the Pacific (CSSTE- AP) which is sponsored by the United Nations.

India offer in space applications to personnel from developing under the programme Sharing Experience in Space (SHARES). Chandrayana-1 a 1400 kg unmanned spacecraft built by ISRO for exploring the moon, carried 11 scientific instruments from India, the United States, the European Space Agency and Bulgaria. ISRO and the French Space Agency CNES have undertaken a joint atmospheric satellite mission Megha-Tropiques to be launched in 2009-10.



Chandrayana-1

Bio-technology

Karnataka has the training knowledge base necessary to drive the next revolution in biotechnology. The critical mass of the Bio-tech Companies and best research institutions have to be used to nurture that innovation, promote entrepreneurship and facilitate effective technology transfer to the end users. To work out the future

strategies- a vision group on Bio-technology was setup. Millennium Biotech policy has been formulated. The objectives of the Millennium Biotech Policy are:

- To spread awareness about the investment opportunities in biotechnology, genomics, bioinformatics, bio-fuels, contract research, etc., to the entrepreneurial community.
- To sustain and maintain the present pre-eminent position of Karnataka and Bengaluru in the field of biotechnology.
- To outline a set of incentives and concessions for the biotechnology industry to attract investments to the State.
- To provide specific infrastructure as well as enhance human resources for the development of biotechnology.
- To encourage the growth of bioinformatics in Karnataka.
- To provide an appropriate institutional framework to achieve all these objectives.

Industrial Status

As in other States, the power sector has been going through a major change in perception regarding the public-private sector mix in respect of both generation and transmission and the right approach to pricing to ensure efficiency in the use and costing of power to different categories of consumers. At present, the public sector in Karnataka has a monopoly of both generation and transmission in the area of conventional energy sources like hydel and thermal power with limited captive power generation permitted for individual entrepreneurs along with sales to the grid. This approach has now been questioned and private power companies welcomed into the area of generation through carefully worked out legal and financial arrangements. A related issue that has gained prominence is the need to set up an independent regulatory framework to arbitrate on pricing issues between producers, consumers and government. Serious discussions have also commenced on this issue so that a formal mechanism is ready by the time independent

power producers are likely to commence the supply of power in accordance with power purchase agreements executed with the government.

Karnataka State has evolved from a basically agricultural economy into an industrial one. Its ranking in the industry scenario in 1994 was as low as VIII in the country. The growth of industrial production in the State during the VII Plan was 6.6 percent compared to only 3.6 percent during VI Plan. This 6.6 percent growth is still less than the national industrial growth of 7.6 percent.

As at the end of March 2011 there were 4,13,354 small scale industries in the State and these units with a capital of Rs.12.40 crore had provided employment to 23.95 lakh persons. For more details see table 5.15

Food Processing Industries (Food Parks)

Under the 10th five year plan, the Ministry of Food Processing Industries, Government of India had approved the establishment of food parks in Malur, Hiriyur, Bagalkot and Jewargi. Most of the civil infrastructure work in these parks has been established. The status of implementation of these food parks are as detailed below:

1. Innova Agri Biopark Limited, Malur: The company has started processing vegetables, fruits and dal for the local as well as export market. An expenditure of ₹.1827.64 lakh has been incurred (as on 30th September 2011) under the project. The Government of Karnataka has provided a grant of ₹.400 lakh for the project while the implementing agency has mobilized ₹.549.30 lakh. The project has also mobilized a grant of ₹.278.34 lakh from Government of India.

2. Green Food Park Limited, Bagalkot: The civil works for most of the buildings have been completed. The company has acquired the cold storage equipments and the same are being installed. An expenditure of ₹.1275.93 lakh has been incurred (as on October 2011) under the project. The Government of Karnataka has provided a grant of ₹.200 lakh for the project. While the implementing agency has mobilized ₹.421 lakh the project has also mobilized a grant of ₹.178.34 lakh from Government of India. The company has indicated that it would put the food park into operation by March 2012.

Table 5.15: Registration of small scale Industries in Karnataka

Sl No.	District	Cumulative figures upto 2009-10		
		Units (No.)	₹. (lakh)	Employment (No.)
1.	Bagalkote	7738	17649.81	36404
2.	Bengaluru	67553	321679.27	622327
3.	Bengaluru (Rural)	16966	55465.54	91758
4.	Belagavi	33737	68748.58	143036
5.	Ballari	15924	56779.16	36571
6.	Bidar	7661	15316.31	42180
7.	Vijayapura	8692	15450.44	43811
8.	Chamarajanagar	8127	9810.52	35370
9.	Chikkaballapur	682	2507.09	3765
10.	Chikkamagaluru	8251	13933.93	34205
11.	Chitradurga	9886	17433.43	40071
12.	Dahshina Kannada	20031	47470.65	102072
13.	Davanagere	8700	19597.32	39511
14.	Dharwad	16626	49598.40	140289
15.	Gadag	7550	10481.23	28725
16.	Kalaburagi	16352	33124.87	69487
17.	Hassan	11427	20882.13	48911
18.	Haveri	9181	13393.02	34374
19.	Kodagu	3573	7189.41	24217
20.	Kolar	14125	51642.26	90044
21.	Koppal	5297	25176.12	34152
22.	Mandya	9361	20020.50	43298
23.	Mysuru	22788	52129.24	119751
24.	Raichur	9172	22893.82	43365
25.	Ramanagara	928	6666.45	7795
26.	Shivamogga	15094	25824.44	66063
27.	Tumakuru	21864	54627.02	115093
28.	Udupi	8210	42142.97	57402
29.	Uttara Kannada	9424	21614.57	50178
30.	Yadagiri	0	0	0
	Total	394920	1119249.5	2284225

Cumulative figures upto 2010-11			Cumulative figures upto 2011-12		
Units (No.)	(₹.lakh)	Employment (No.)	Units (No.)	(₹.lakh)	Employment (No.)
7738	17649.81	36404	8135	18781.41	38153
67553	321679.27	622327	71249	364749.03	661032
16966	55465.54	91758	17148	60559.76	94151
33737	68748.58	143036	35438	74082.01	150188
15924	56779.16	36571	16752	62247.93	41292
7661	15316.31	42180	7772	16268.86	42929
8692	15450.44	43811	9124	16293.24	44832
8127	9810.52	35370	8400	10089.38	36190
682	2507.09	3765	932	3284.79	5134
8251	13933.93	34205	8846	14856.16	35869
9886	17433.43	40071	10141	17875.33	41167
20031	47470.65	102072	21180	52407.22	107590
8700	19597.32	39511	9198	22806.83	41459
16626	49598.40	140289	17550	55452.41	145239
7550	10481.23	28725	7826	10655.50	29749
16352	33124.87	69487	16810	34784.32	71049
11427	20882.13	48911	12069	21749.88	50783
9181	13393.02	34374	9622	14204.90	35855
3573	7189.41	24217	3639	7361.16	24633
14125	51642.26	90044	14383	54961.25	91799
5297	25176.12	34152	5736	28711.32	36526
9361	20020.50	43298	9782	20995.52	45033
22788	52129.24	119751	23635	61536.51	125432
9172	22893.82	43365	9499	25351.05	44646
928	6666.45	7795	1338	12663.79	10761
15094	25824.44	66063	15829	27897.86	69807
21864	54627.02	115093	22729	61574.83	119943
8210	42142.97	57402	8661	45813.61	61805
9424	21614.57	50178	9849	22479.42	52069
0	0	0	82	379.43	336
394920	1119249.5	2284225	413354	1239872.5	2395451

Table 5.16 Details of MSMEs Registration in Karnataka for the year 2013-14

Sl No.	District	MICRO			SMALL		
		UNIT	INV	EMP	UNIT	INV	EMP
1.	Bagalkote	694	1826	3118	38	2371	522
2.	Bengaluru(U)	5797	40543	38957	1692	65619	26764
3.	Bengaluru (Rural)	323	1343	1575	56	4484	1471
4.	Belagavi	1815	4281	7033	59	4338	1139
5.	Ballari	972	5921	7013	175	15624	1395
6.	Bidar	108	429	749	20	1140	388
7.	Vijayapura	432	385	1305	10	962	228
8.	Chamarajanagar	68	238	547	09	349	95
9.	Chikkaballapur	234	789	1064	10	1143	145
10.	Chikkamagaluru	331	512	1169	07	420	123
11.	Chitradurga	476	648	989	04	410	49
12.	Dahshina Kannada	1509	1040	3253	42	2354	1308
13.	Davanagere	564	879	2080	21	2185	394
14.	Dharwad	1117	2674	3936	111	5769	1462
15.	Gadag	311	896	1548	08	530	192
16.	Kalaburagi	589	1767	2723	26	1932	278
17.	Hassan	711	793	1928	20	1591	511
18.	Haveri	597	530	1013	08	881	92
19.	Kodagu	93	297	435	07	276	137
20.	Kolar	475	1601	2457	40	4774	1325
21.	Koppal	460	631	1649	26	2966	375
22.	Mandya	471	890	1522	14	737	167
23.	Mysuru	962	2047	3263	48	3237	1187
24.	Raichur	107	377	481	39	5202	709
25.	Ramanagara	503	1294	2361	43	4171	1432
26.	Shivamogga	1063	1584	6400	20	2152	436
27.	Tumakuru	1088	2394	4358	61	5238	3553
28.	Udupi	569	1153	3617	27	1883	396
29.	Uttara Kannada	530	1460	1915	14	808	378
30.	Yadagiri	260	195	703	06	251	90
	Total	23229	79416	110070	2661	144095	46741

MEDIUM			TOTAL		
UNIT	INV	EMP	UNIT	INV	EMP
01	514	376	733	4712	4016
37	16672	6546	7526	122834	72267
04	2635	220	383	8462	3266
05	18951	162	1879	27570	9234
05	4083	31	1152	25628	8439
00	00	00	128	1569	1137
00	00	00	442	1348	1533
00	00	00	77	587	642
01	732	59	245	2664	1268
01	952	44	339	1884	1336
03	2455	103	483	3513	2050
01	495	47	1552	3889	4608
00	00	00	585	3064	2474
02	1880	146	1230	10322	5544
00	00	00	319	1426	1740
00	00	00	615	3699	3001
01	876	75	732	3260	2514
00	00	00	605	1410	1105
01	656	92	101	1229	664
03	1981	205	518	8355	3987
01	700	14	487	4297	2038
00	00	00	485	1626	1689
02	1466	393	1012	6751	4843
02	1451	75	148	7337	1265
04	3643	1015	550	9108	4808
01	747	20	1084	4483	6856
00	00	00	1149	7632	7911
01	650	13	597	3686	4026
00	00	00	544	2268	2293
00	00	00	266	446	793
76	61545	10536	25966	285056	167347

3. Akshay Food Park Limited, Hiriyyur:

Cold storage equipments, four lines of grading and separating machines for fruits and vegetable processing, two lines of grading machines for food grains, oilseeds and spices with a total capacity of 16 MTs per hour and two lines of packaging machines have been acquired and installed. The company has entered into MOU with six companies for allotting 17 acres of land for establishing gherkin processing plant, food packaging unit and HRD institute in the park.

The company has already started operations by availing working capital from banks. An expenditure of ₹.2435.45 lakh has been incurred (as on October 2011) under the project. The Government of Karnataka has provided a grant of Rs.399 lakh for the project .while the implementing agency has mobilized ₹.305 lakh. The project has also mobilized a grant of ₹.400 lakh from Government of India.

4. Jewargi Agro Food Park Limited, Jewargi:

The Company has acquired cleaning, grading and packing lines for all types of grains with a capacity of 10 tonnes per hour. An expenditure of ₹.986.99 lakh has been incurred (as on October 2011) under the project. The Government of Karnataka has provided a grant of ₹.200 lakh for the project .while the implementing agency has mobilized ₹.200 lakh. The project has also mobilized a grant of ₹.196.25 lakh from Government of India.

5. Food parks at Bengaluru (Rural), Tumakuru, Shivamogga, Davanagere, Vijayapura and Belagavi districts: The Government of Karnataka had approved the establishment of food parks in Bengaluru Rural, Tumakuru, Shivamogga, Davanagere, Vijayapura and Belagavi districts in the 2008-09 budget. These parks are in various stages of development.

Textiles Industries

The textile policy 'Suvarna Vastra Neethi: 2008-2013' of the Government of Karnataka covers all units which are engaged in various value chain activities of the industry such as spinning, weaving (powerloom and handloom) including pre-loom activities, knitting, processing, garmenting, units

engaged in manufacturing technical textiles and all other supporting ancillary activities including textile machinery manufacturing.

The policy has the objective of establishing the textile and garment industry of Karnataka as a producer of internationally competitive value-added products thereby maintaining dominant presence in the growing domestic and international markets and contributing to the sustainable employment and economic growth of the State.

Details of handloom weavers and looms in the State are given in Table 5.17 while details of powerloom weavers and looms are given in Table 5.18.

Table 5.17: Handloom Weavers and Looms in Karnataka

Sl. No.	Particulars	Rural	Urban	Total
1.	Total Weaver households	33854	3826	37680
2.	Weaver population			
	(a) Male	61632	6447	68079
	(b) Female	60056	6203	66259
	(c) Children (below 14 yrs.)	43452	4275	47727
	Total	165140	16925	182065
3.	Weaving workforce			
	(a) No. of adult weavers	35894	4038	39932
	(b) No. of adult allied workers	337962	3125	36917
	Total	69686	7163	76849
4.	Looms			
	(a) Working	30394	4212	34606
	(b) Idle	5268	614	5882
	Total	35662	4826	40486
	Per capita income of weaver households	24840	25405	24897

Table 5.18: Powerloom Weavers and Looms in Karnataka

Sl. No.	Particulars	Nos.
1	Weaver households	30988
2	Weavers	127535
3	Looms	88566

Source: Powerloom census conducted by Govt. of India, 1995-96

During the 11th five year plan, 3000 handloom weavers have been provided with housing facilities. 12,500 handloom weavers have been provided with loans at subsidized rate of 4% or 3% to the tune of ₹.350.42 lakh. ₹.4290 lakh has been utilized during the plan period for waiver of loan and interest of weavers. 120 handloom cooperative societies are being provided with 20% rebate on sale of handloom goods as a marketing incentive. Power is subsidized and provided at the rate of ₹.1.25 per unit for 25,000 powerloom units having power connection upto 20 HP benefitting 90,000 weavers. 1,500 powerloom weavers are being provided with Two powerlooms each at subsidized rate of 50% subject to a ceiling of ₹.1.00 lakh per beneficiary. Employment of 85,000 persons is being generated by imparting skill development training in various segments of textile sector through training and setting up of training centres with an expenditure of ₹.7,000 lakh. Details of production and employment in the cooperative powerloom and handloom sectors are given in Table 5.19.

Table 5.19: Production and Employment in Handloom and Powerloom Industries

(Co-operative sector only)

Sl. No.	Item	Unit	Annual Plan 2009-10		Annual Plan 2010-11		Annual Plan 2011-12	
			Target	Achmt.	Target	Achmt.	Target	Achmt.
1	Handlooms							
	a) Production	Million mtrs.	50.00	48.92	50.00	44.08	50.00	37.24
	b) Employment	lakh	0.90	0.74	0.90	0.91	0.95	0.89
2	Powerlooms							
	b) Production	Million mtrs.	275.00	253.21	275.00	292.65	300.00	246.43
	b) Employment	lakh	2.00	2.19	2.20	2.29	2.35	2.30

*Achmt- Achievement

During the 12th five year plan, it is planned that 10,000 weavers would be provided with housing facilities. 30,000 weavers will be provided with 3% interest loans and 10,000 employment opportunities will be created for SC/ST beneficiaries by providing training, looms and accessories, working capital and housing facilities. 200 handloom weavers' cooperative societies will be provided with 30% rebate on sale of handloom goods as a marketing incentive since the Government of India has discontinued provision of 10% rebate on sale of handloom goods. 5000 silk weavers will be

covered under the catalytic development program of the Government of India for the development of silk sector in the State. 50 clusters and groups of weavers will be identified and developed under the integrated handloom development scheme with coverage of about 10,000 weavers. All handloom weavers will be provided with yarn subsidy at the rate of ₹.15 per kg of yarn purchased through National Handloom Development Corporation which is subject to change according to market fluctuations.

Sericulture

Sericulture is one of the major employment generating sectors and its growth has immense employment generation potential particularly in rural Karnataka. The area under mulberry cultivation in the State was about 50.71 thousand hectares at the end of November 2011, which is lower than the area under mulberry cultivation in 2010-11 (See Table 5.20). Even the production of cocoons, quantity of cocoons marketed, raw silk production and total employment in industry was less in 2011 compared to 2010. Details of the State's production and imports of silk yarn are given in Table 5.21.

Table 5.20: Sericulture Industry in Karnataka (2009-10 to 2011-12)

Sl. No.	Category	Unit	2009-10	2010-11	April to November		% variation (2011 over 2010)
					2010	2011	
1.	Area under mulberry	'000 hectares	82.09	62.70	62.70	50.71	-23.72
2.	Production of cocoons	'000 MTs	54.28	52.71	25.86	25.11	-2.89
3.	Quantum of cocoons marketed	'000 MTs	51.70	50.04	24.63	23.86	-3.12
4.	Raw silk production	'000 MTs	7.36	7.34	3.55	3.53	-0.40
5.	Employment in sericulture	Lakh	10.67	8.15	4.32	3.30	-23.61

Source: Department of Sericulture

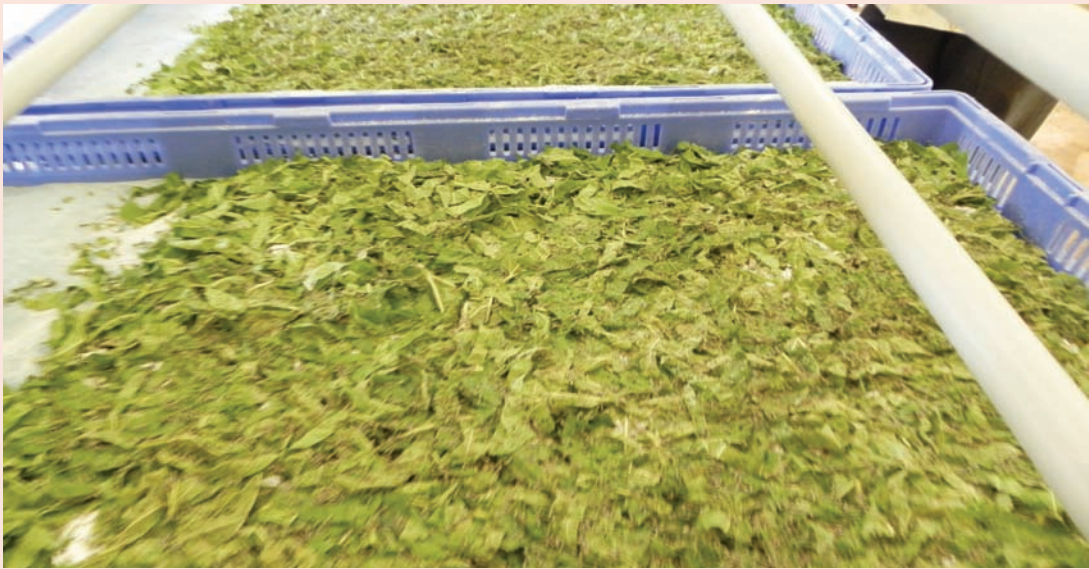
Notes: MTs-Metric Tonnes

Table 5.21: Production of Silk Yarn and import of Silk Yarn in Karnataka (2000-01 to 2011-12)

Year	Karnataka Silk Production (in M.Tonnes)	Import of raw Silk by India (in M. Tonnes)
2000-2001	8121	4713
2001-2002	82728	6808
2002-2003	8760	9054
2003-2004	5949	9258
2004-2005	7302	7948
2005-2006	7471	8383
2006-2007	7883	5565
2007-2008	8240	7922
2008-2009	7238	8392
2009-2010	7360	7338
2010-2011	7338	5820
2011-2012	7796	5673(p)

Source: Central Silk Board, Bengaluru

The Karnataka Silk Marketing Board Ltd (KSMB), established in 1979, aims at stabilizing the prices of silk yarn. During the year 2010-11, the turnover of the company was ₹.3443.90 lakh as against ₹.2653.89 lakh in the previous year. In the year 2011-12 (upto Dec-11), the turnover was ₹.3037 lakh. Details are given in Table 5.22. The value of exports of silk goods from Karnataka and India is given in Table 5.23:



Sericulture Industry

Table 5.22: Financial Performance of Karnataka Silk Marketing Board

(₹. Lakh)

Particulars	2008-09	2009-10	2010-11	2011-12 (upto 31.12.2011 provisional)
1. Turnover	1898.47	2653.89	3443.90	3037.00
2. Profit after tax	(-) 361.88	(-)258.79	(-)399.64	(-287.80)

Source: Karnataka Silk Marketing Board

**Table 5.23: Value of exports of silk goods from Karnataka and India
(2009-10, 2010-11 and 2011-12)**

(₹. Crore)

Particulars	2008-09	2009-10	2010-11 (April to Sept) (provisional)
Karnataka	700.32	712.62	1113.52
India	2892.44	2863.76	3443.90
Share of Karnataka (Percentage)	24.21	24.88	28.81

Source: Central Silk Board, Bengaluru

Note: Value of export of silk goods figures from Karnataka reflects the export consignments dispatched from ports viz., Bengaluru air and Bengaluru ICD only.

Handicrafts

Karnataka with a rich heritage of tradition in arts and crafts is one of the leading States in handicrafts industry. The handicrafts of the State include lacquer ware, sandalwood carving, rosewood inlay work, pith work, toys and dolls, Bidiriware, decorative pottery, bronze work, cane and bamboo crafts, leather work, sculpture, gold and silver jewellery, brocade weaving, horn carving etc., There are about 1,000 identified master artisans and the coverage of Handicraft Development Corporation is included to sixty percent, at present. The assistance given by the department to the craftsmen includes supply of raw materials at subsidized rates, training of craftsmen and intensive development projects in various crafts. The Corporation has set up complexes for sandalwood, bidriware, inlay-works and lacquer ware. It has set up six raw material depots and nine show rooms besides a bronze production and design centre at Bengaluru and procurement centre for Kinnhal toys.

To ensure that the State's rich tradition of exquisite craftsmanship is preserved, developed and promoted, the Government of Karnataka established the Karnataka State Handicrafts Development Corporation (KSHDC) in 1964.

KSHDC has taken up the following initiatives:

- Identify places where craftsmen are concentrated and set up craft complexes with facilities like living-cum-work sheds equipped with tools and machinery.
- Provide raw materials like sandalwood, zinc and silver at subsidized rates to the craftsmen.

- Train craftsmen in creating new designs in mediums like sandalwood, rosewood, lacquer and bronze.
- Keep craftsmen updated on the changing market trends, by exposing them to the latest technology.
- Look after requirements of the handicraft industry, for instance, wood-seasoning plants set up at the Multi Craft Complex in Mysuru and at the Lacquer ware Craft Complex in Channapatna.

Indian arts and crafts are in demand all over the world for their beauty, intricacy and artistic work, adding elegance to any decor. KSHDC markets the beautiful handicrafts of Karnataka under the brand name Cauvery through outlets across the country. The high standard of craftsmanship maintained by KSHDC has made the Cauvery name synonymous with quality handicrafts. The following handicrafts collection centers have been established in Karnataka: multicrafts Complex, Balavatta, Mysuru; Sandalwood Crafts Complex, Sagar (Shivamogga); Also Sirsi and Kumta (North Kanara); Sorab (Shivamogga); bidriware Craft Complex (Bidar); Lacquer ware Craft Complex, Channapatna (Ramanagar); Bronze Craft Complex, Peenya (Bengaluru); Pottery Craft Complex, Ramanagar; Rural Marketing and Service Center, Navalgund (Dharwad); Kinnala Procurement Center, Kinnala, (Koppal Dist.) etc.

Coir Industries

Karnataka ranks second in the production of coconut and have great potential for the development of Coir industries. The State Government has set up a Coir Development Corporation for promoting coir based industries and to provide employment in rural areas besides procurement-cum-distribution and training centres. Integrated Coir Development Project: ₹. 200 lakhs have been provided of which ₹. 100 lakhs is grant and ₹. 100 lakhs is investment to assist Four Primary Coir Co-operative Societies and take up 18 programmes in the area of Manpower development through the Karnataka State Coir Co-operative Federation Limited, Primary Coir Co-operatives Societies and Karnataka State Coir Development Corporation. ₹. 4 crores have been provided as State's share to set up new mini tool rooms at Bagalkot, Bidar and Shivamogga.

Khadi and Village Industries

Karnataka State Khadi and Village Industries Board came into existence under the Karnataka Khadi and Village Industries Act 1956 (Karnataka Act of 1957). The board was established by the Government of Karnataka with the objective to organise, develop and regulate Khadi and Village Industries activities in Karnataka.

The main objective of the KVIB is to give priority for Khadi and Village Industries in rural areas and to develop provide assistance, generate employment opportunities in rural areas and improve the economic status of the rural artisans.

About three lakh artisans are employed In the Khadi and Village Industries, of whom, the Karnataka State Khadi and village Industries Board has been assisting 1.4 lakh artisans. The Board has taken steps to organise new institutions in the uncovered areas of the State. It also extends assistance for village industries like oil industry, carpentry, black smithy, leather industry, soap industry, mat weaving etc.; it has also initiated a concerted drive to install biogas plants in the State. Karnataka is famous for producing national flags and printed khadi silk sarees in this sector.

Of the agro-based industries, bee-keeping is also notable and the Western Ghats districts like Kodagu, Hassan, Chikkamagaluru and Shivamogga produce honey in large quantities. Dakshine Kannada Udupi.

Rural Employment Generation Programme (Margin Money Scheme)

The Government of India has launched Rural Employment Generation Programme to provide more employment opportunities of rural artisans. The Margin Money will be provided to the units of these entrepreneurs identified by Khadi and Village Industries Commission/ Khadi and Village Industries Board. This Margin Money will be adjusted to the loan account of the entrepreneur only after two years of successful establishment of the unit. This Scheme is applicable to the rural areas.

- This is applicable only to rural village industries which are not in the Negative list of industries.
- Margin Money Scheme benefits will not be provided to Khadi, Polyvastra, Wool and Silk Industries.
- The loans for the projects are extended by the selected Nationalized Banks, Private Scheduled Banks, Grameena Banks and Co-operative Bank which are approved by Khadi and Village Industries Board.
- 69 Banks have been recognised by KVIB to take up the scheme.

Vishwa Programme: Vishwa programme was launched in order to rejuvenate the traditional crafts and village industries and to provide self-employment to the youth while encouraging them to make use of the raw materials available locally. This programme was named after Sir M. Visveshwaraya. This was launched on 2nd October 1991. The programme is intended to overcome the scarcity of raw materials and proper marketing faced by craftsmen in rural Karnataka. This will enable them to prosper with their own traditional know how. Under this programme, it is envisaged to give institutional status to rural industries and crafts, to train the youth so as to enable them to take up proper industrial activity and to provide financial assistance to take up self employment.

Large and Medium Scale Industries

The Industrial policy of 1993 replaced the division of the State into zones by the three fold classification under which Bengaluru and its surrounding became ineligible for subsidy; growth centres got a higher subsidy of 30% and other areas a subsidy of 25%. This was modified in 1996 and subsidy restricted to small scale industries, with medium scale industries being extended only sales tax incentives. Hi-tech and renewable energy projects, non-polluting and exporting units were given special attention apart from exemption from power cuts and stamp duties. The 2001-2006 new industrial policy, in order to achieve the objectives as set

out in this policy and to ensure that the strategy/ approach detailed in this policy is implemented successfully, the government offers the following incentives and concessions for new investment made in industrial sector on or after 1st April 2001. For the purpose of various incentives and concessions, the state has been classified into four zones namely; Zone - A Developed areas, Zone-B developing areas, Zone-C backward areas and Zone - D growth centres and mini growth centres specialised industrial parks.

In the 8th Plan 77 mega projects with investment of ₹. 54,700 crores and employment potential of 90,490 have been approved, Vijayanagar Steel Plant was started. Mangaluru Refinery was commissioned, the Singapore Information Technology Park at Whitefield commissioned, a textile policy is announced, the National Institute of fashion Technology project is initiated, a software services support and education centre with ECC and Government of India and an Electronics Trade and Technology centre set up. Major projects approved include the TVS Suzuki two wheeler projects with an investment of ₹. 150 crores, a heavy duty truck manufacturing facility by Volvo with an investment of ₹. 300 crores and a special purpose vehicle manufacturing unit of Telco with an investment of ₹. 300 crores.

The high level committee has cleared seven major projects, important among them being construction of Equipment manufacturing plant of Eicon, two cement grounding units at Toranagallu and Kolar, a fertilizer plant of Jindal fertilizers Ltd. At Torangallu, expansion projects of Mahadeshwara sugar along with a co-generation plant, a multidisciplinary high technology Rand D centre of GE India Technology Centre at Whitefield, Bengaluru.

By 2011 March end there were 801 large and Medium scale industries in the State with an investment of ₹.1,12,600.35 crore, and they had provided employment to 4,47,837 persons. In addition, the high level committee cleared 429 projects involving investment of ₹.6,879.64 crore and had provided employment to 1,10,505 persons. See more details in table 5.24

Table 5.24: District-wise large and medium scale industries as at the end of March 2011

(₹. in Crores)

Sl. No.	Districts	Units (No.)	Investment	Employment (No.)
1.	Bagalkote	18	1996.02	7447
2.	Bengaluru	407	11559.10	213635
3.	Bengaluru (Rural)	53	2467.73	23133
4.	Belagavi	29	3233.28	23430
5.	Ballari	45	36173.55	24899
6.	Bidar	03	195.97	1020
7.	Vijayapura	03	195.74	765
8.	Chamarajanagar	03	205.78	235
9.	Chikkaballapur	02	496.20	632
10.	Chikkamagaluru	01	15.86	235
11.	Chitradurga	04	132.31	452
12.	Dahshina Kannada	20	12268.37	6734
13.	Davanagere	06	272.24	1831
14.	Dharwad	12	620.63	3500
15.	Gadag	05	2278.40	2486
16.	Hassan	08	677.64	3745
17.	Haveri	11	17777.55	12803
18.	Kalaburagi	12	2977.08	8289
19.	Kodagu	00	0.00	0
20.	Kolar	04	724.63	12663
21.	Koppal	19	1517.25	3759
22.	Mandya	13	1061.19	45533
23.	Mysuru	56	3474.29	20108
24.	Raichur	08	3771.84	7288
25.	Ramanagara	24	4493.19	5344
26.	Shivamogga	08	1039.18	6262
27.	Tumakuru	16	710.77	4041
28.	Udupi	08	1110.56	3532
29.	Uttara Kannada	03	1121.00	4036
30.	Yadagiri	00	0.00	0
	Total	801	112500.35	447837

The state was able to attract severe competition from other states, regarding the prestigious project of the Toyota Motor Corporation covering an investment of ₹. 4,200 crores to establish an automobile unit for the manufacture of passenger cars.

Mining and Mineral Industries

The State has a rich deposit of ores and minerals and as such, the State's mining industry has earned a recognizable position in the National map. The department of Mines and Geology has collected ₹.671.35 crore royalties during 2011-12 (upto November 2011) as compared to ₹.1184 crore during 2010-11 (Details in Table 5.25).

In 2011-12 (upto November 2011), a total of six quarry leases for ornamental stone and 330 leases for building stone has been granted, and Seven mining leases have been sanctioned. During 2010-11, 24 quarry leases for ornamental stone and 774 leases for building stone has been granted, and 29 mining leases have been granted.

Table 5.25: Royalty collected by Dept. of Mines and geology, Karnataka

Year	Target	Achievement (₹. Crore)
2007-08	450	475.52
2008-09	519	556
2009-10	815	863.3
2010-11	1125	1184.16

The Karnataka Mineral Policy, 2008 has been launched on par with the National Mineral Policy, 2008. Also, in order to curb illegal mining and transportation, the State has framed the rules entitled Karnataka (Prevention of Illegal Mining, Transportation and Storage of Minerals) Rules, 2011 under the provisions of Section 23 (C) of MMRD Act, 1957. The Government of Karnataka has issued a ban order on the issue of mineral dispatch permits for exporting iron ore. Further, the stock yard permission given to traders is also cancelled. The stock yard permissions are given to only for mine owners and to those who have true mineral beneficiation plant.

The State Government is currently implementing the new sand policy 2011 to prevent illegal sand mining. The State Government has also formulated "The Karnataka Regulation of Stone Crushers Ordinance 2011" for regulating the stone crushing business. The details of Production of Mineral Resources in Karnataka during 2009-10 are given in Table 5.26.

Table 5.26: Production of Mineral Resources in Karnataka during 2009-10

Sl. No.	Minerals	Production (MTs)	Sales (MTs)	Royalty (₹. Lakh)
1	Iron ore	52921735	34937028	1251043708
2	Red Oxide	35130	16240	1097040
3	White Quartz	50910	44766	1312806
4	Manganese	47242	63883	5888866
5	Lime Stone	12721899	12475651	765909064
6	Moulding Sand	52126	28820	699817
7	Quartz	11524	10347	240807
8	China Clay	54879	41983	1122984

Table 5.26: Continued

9	Silver (in grams)	220219	220219	327785
10	Chromite	41336	2974	2843998
11	Kayolene	13219	6373	956211
12	Dolomite	434486	294041	16660654
13	Bauxite	123316	111642	11407500
14	Aluminium Laterate	183378	179631	11321560
15	Silica	139320	142866	2913601
16	Soap Stone	282	0	0
17	Gold (in grams)	2166301	2166301	62514173
18	Corundum	0	20	12100
19	Feldspar	3100	3100	0
20	Rubi corundum	1520	1520	0
21	Pelsite	1873	1878	246771
22	Graphite	0	2422	246564
23	Magnasite	0	53771	239048
24	Vermiculite	0	250	4000

Industrial Policy Initiatives and Industrial Investment

Karnataka has been pursuing a proactive industrial policy to facilitate and promote a favourable investment climate both for existing and prospective investors. The State's current industrial policy (2009-2014) has been introduced for a period of five years with effect from 1st April 2009. The policy has the major objective of (i) Building a prosperous Karnataka by developing human and natural resources in a systematic, scientific and sustainable manner (ii) Creating an additional employment of one million with an investment of ₹.30,000 crores in the industrial sector by 2014 (iii) Creating enabling investment for robust industrial growth and achieving inclusive industrial development in the State and (iv) Enhancing the contribution of manufacturing sector to the State GDP from the present 17% to 20% by the end of March 2014.

Industrial investments proposed through filing of Industrial Entrepreneurs' Memorandum (IEM) and issuing Industrial Licenses (IL) are presented in Table 5.27. The number of investment proposals, amount of proposed investment and proposed employment has increased in 2011 as compared to 2010.

Table 5.27: Industrial Approvals in Karnataka

Particulars	2009	2010	2010	2011
			January to October	
Industrial Entrepreneurs' Memorandum (IEM) filed (Nos.)	179	261	227	173
Proposed Investment (₹. crore)	92054	139218	130986	87762
Proposed Employment (Nos.)	82339	112761	89200	89488

Source: Department of Industrial Policy and Promotion, GOI

Foreign Direct Investment (FDI)

The figures for State-wise FDI inflows from 2008-09 upto 2011-12 (upto Nov' 11) as well as cumulative FDI inflows from April 2000 till November 2011 are given in Table 5.28. Though FDI inflows to Karnataka have fluctuated in the last three years, the total FDI inflows to the State in the last decade accounted for 6% of the total FDI inflows to India and, Karnataka stands third among Indian States in terms of quantum of FDI inflows.

Table 5.28: FDI inflows to Karnataka

Sl. No.	Reserve Bank of India Regional office	State covered	2008-09	2009-10	2010-11	2011-12 (upto Nov' 11)	Cum. Inflows (Apr 2000-Nov'11)	% to total inflows
1	Bengaluru	Karnataka	2026	1029	1332	1182	9410	6
	Grand Total	India	27331	25834	19427	22835	152673	-

Source: Department of Industrial Policy and Promotion, GOI

Karnataka Udyog Mitra (KUM)

Karnataka Udyog Mitra (KUM) is a single contact point for all investors who intend to set up enterprises/businesses in Karnataka. As the nodal agency, its role is to facilitate investments and execute initiatives to enable a smooth transition from the stage of receiving an investment proposal to the eventual implementation of the project. It acts as a secretariat for State high level clearance committee (SHLCC) for projects above ₹.50 crore and State level single window clearance committee (SLSWCC) for projects between ₹.3 to 50 crore.

Special Economic Zones (SEZs)

The Government of Karnataka has formulated a State policy for SEZs as per Central SEZ Act 2005 and Rules 2006, with a view to provide a hassle-free environment for export production and to attract FDI. Salient features of the State Policy for SEZs are:

1. Single point clearance to SEZ developers and units.
2. No compulsory acquisition of land. Land to be acquired on consent.
3. SEZs have to be set up on waste, dry and single crop land.
4. Delegation of labour commissioner's power to development commissioner SEZ.

5. Monitoring and review committee constituted to monitor and review implementation of SEZs under the chairmanship of State's Chief Secretary.

The fiscal package of incentives extended to SEZ developers unit include: Exemption from State taxes for all purchases from domestic tariff area excluding petroleum products, exemption from stamp duty and electricity duty and, capital subsidy for common effluent treatment plant.

Karnataka Industrial Area Development Board :

Since its inception KIADB has acquired an extent of 58,865 acres and developed 81 industrial areas in an extent of 21,220 acres in all districts of the state. It has taken up programme of implementation of

- i) Export promotion, Industrial park at Whitefield Bengaluru,
- ii) Mini Growth Centre in five location,
- iii) Major water scheme for seven Industrial Areas,
- iv) Acquisition of land for airport during the year 1998-99. The statistics on the performance of KIADB for the last three years are given in Table 5.29

Table 5.29: Performance of Karnataka Industrial Development Board

Sl. No.	Particulars	Units	2009-10	2010-11	2011-12 (upto Nov'11)
1.	Area acquired	Acres	3778	25058	2796
2.	Area allotted				
	(a) SSI, L and M	Acres	1985	2128	458
	(b) Single unit complex	Acres	262	160	5067
3.	Total	Acres	2247	2288	5524
4.	Expenditure incurred for acquisition	₹. lakh	137500	174900	66060
5.	Expenditure incurred for development	₹. lakh	15670	28625	11150
6.	Total expenditure incurred	₹. Lakh	153170	203525	77215
7.	No. of entrepreneurs				
	(a) SSI units, L and M	Nos.	1072	997	414
	(b) Single unit complex	Nos.	8	12	17
8.	Total		1080	1009	431

Source: Karnataka Industrial Area Development Board, Bengaluru.

Karnataka State Small Industries Development Corporation

Karnataka State Small Industries Development Corporation (KSSIDC) promotes the development of small scale industry (SSI) sector by providing industrial sheds, channels for procurement and distribution of raw materials and management guidance to SSI entrepreneurs. The corporation has a network of 24 depots for raw materials distribution in the State. It has also acquired land in and around Bengaluru and in other districts for the construction of sheds and plots for development as per SSI units' demand. The details of raw materials sold, sheds constructed and plots developed by the corporation are given in Table 5.30.

Table 5.30: Performance of Karnataka State Small Industries Development Corporation

Particulars	Unit	2008-09	2009-10	2010-11	2011-12 (Apr-Dec 11)
Depots for distribution of raw materials	Nos.	24	24	24	24
Raw materials sold (Iron and steel)	₹.crore	63.15	67.23	89.24	66.42
Industrial sheds constructed (incl. sheds/godowns/flats / shops)	Nos.	5756	6214	6214	6214
Industrial plots developed	Nos.	5943	6301	7036	7036

Source: Karnataka State Small Industries Development Corporation

Karnataka State Financial Corporation (KSFC)

KSFC is a State-level financial institution established by the State Government in the year 1959 under the provisions of SFCs Act 1951 to cater to the long term financial needs of MSMEs in Karnataka. The corporation has extended sizeable assistance to manufacturing, textiles and other services sector like hospitals, hotels, transport, mining etc. Over the last 52 years KSFC has been playing a pivotal role in the promotion of MSMEs, development of backward areas and first generation entrepreneurs etc. The financial performance of KSFC during the past few years is given in Table 5.31.

Table 5.31: Performance of KSFC: 2008-09 to 2010-11

	2008-09		2009-10		2010-11		Apr 11 to Dec 11	
	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.
Sanctions	1420	56524	1461	63149	1537	73163	1037	58909
Disbursement	-	38392	-	43439	-	58041	-	41403
Recovery	-	50122	-	55494	-	58671	-	45707

Source: Karnataka State Financial Corporation

Karnataka State Industrial Investment and Development Corporation (KSIIDC)

KSIIDC, established in 1964, has been greatly instrumental in industrialization of the State, especially in the large and medium sectors. KSIIDC has stopped financial lending activities since October 2002. At present, recovery of the past lending/advances and loans disbursements of equity is the main activities. However, certain investments as per the directions of Government of Karnataka are being made from time to time. KSIIDC continued its proactive role in the promotion of infrastructure projects in PPP model and as the nodal agency for the Kempe Gowda International Airport project. Duly noting the initiatives taken up by KSIIDC in the infrastructure sector, the organisation's name was changed to "Karnataka State Industrial and Infrastructure Development Corporation Limited" with effect from November 2010.

KSIIDC has initiated the development of various projects as the nodal agency of the Government, which will be pursued for completion during the 12th five year plan. Such projects include:

1. Expansion of the Kempe Gowda International Airport.
2. Bengaluru International Convention Center adjacent to the Kempegowda International Airport
3. Development of Devanahalli Business park
4. Tadadi port
5. Dabhol-Bengaluru (Bidadi) gas Pipeline
6. City Gas Distribution Project, and
7. Food parks at Malur, Hiriyur, Bagalkot, Jewargi, Shivamogga, Tumakuru and Belagavi.

Department of Public Enterprises

The Government of Karnataka established the Karnataka State Bureau of Public Enterprises in 1981. This Bureau was converted in 2002 as the Department of Disinvestment and Public Enterprises Reforms. The main aim of this Department was to take decisions in matters relating to disinvestment, restructuring, amalgamation etc. The Government in 2005 accorded independent status of a department in the secretariat and re-named it as Department of Public Enterprises, and vested it with monitoring, regulatory, evaluator, and advisory functions for improving performance of the enterprises. 72 State-level public enterprises operate in Karnataka with 30 of them earning profits. Among the predominant profit-making units include the Karnataka Soaps and Detergents Ltd. (KSandDL), Karnataka State Road Transport Corporation (KSRTC), Bengaluru Metro transport Corporation (BMTC), Mysuru paints and Varnish Ltd. (MVPL), Karnataka Vidyut Karkhane Ltd. (KAVIKA), Karnataka Silk Industries Corporation (KSIC), Hutti Gold Mines Ltd. (HGML) and Mysuru Minerals Ltd. (MML) etc. Out of the 72 operating units, details of the profit-making top 8 State-level public enterprises in Karnataka are given in Table 5.32.

Table 5.32: Performance of top 8 State-level public enterprises in Karnataka

Sl. No.	Name of Enterprise	Enterprises' Status as on 31.03.2009			Enterprises' Status as on 31.03.2010		
		Investment (₹. Lakh)	Employment (Nos.)	Profit after tax	Investment (₹. Lakh)	Employment (Nos.)	Profit after tax
1	KSandDL	3182.20	875	1168.40	3182.20	859	931.10
2	KSRTC	133106.00	32100	5770.50	148297.00	33299	4884.68
3	BMTC	3075.89	27644	5517.78	1420.10	30996	6512.62
4	MVPL	103.65	63	364.73	103.65	62	176.58
5	KSIC	1657.95	775	477.63	1906.50	771	798.54
6	KAVIKA	561.00	213	538.62	561.00	212	59.59
7	HGML	19291.00	3933	9319.00	18903.00	3895	9080.00
8	MML	80736.00	1250	12530.00	93356.00	1247	13669.00

Export from Karnataka

International Trade is one of the important means for developing the country's economy. The present era of Liberalisation, Privatisation and Globalisation poses up several challenges as well as opportunities. After the formation of World Trade Organisation (WTO), the world has shrunk into a Global Village. World is now one Market place. Exports from Karnataka have shown tremendous growth in recent past. From the value of ₹ 29,898 crores in 2002-2003, exports have increased nearly five times and have crossed ₹.1,32,703 crores from the year 2007-08. It has to be noted that during 2007-08 the share of Karnataka in the country's exports was 16.23% and as on now Karnataka stands fourth in the country in merchandise exports. Karnataka has made rapid and spectacular strides in exports of Electronic and Computer software. Petroleum and Petroleum Products, Ready made garments, Gem and Jewellery, Engineering goods, Iron ore and Minerals apart from the traditional sectors like silks, cashews, spices, coffee and handicrafts etc.

A major attraction of the State is the excellent living conditions, which brings talented professionals from all over the country and overseas to live and work here. A number of residential and international schools offer quality education in a stimulating environment.

Export Promotion Drive of Karnataka Government

Visvesvarayya Industrial Trade Centre (VITC), is the Nodal Agency of the State Government

of promotion of exports from Karnataka. VITC regularly conducts export related programmes/workshops and participates in trade fairs/exhibitions at both national and international level. It also offers regular counselling to exporters and also resolves their grievances through various committees like State Level Export Promotion Council, State Level Export Promotion Committee, Export Facilitation Co-ordination Committee and also through Committees of other Central and State Government Organisations. VITC is working closely with District Industrial Centres, District level Chambers Associations for undertaking export promotion programmes for improving of the export scenario of the state and also assisting the exporters to participate in international events by offering financial support under the MDA scheme of the state.

Ministry of Commerce, Government of India releases funds Under Assistance to States for Developing Export Infrastructure and Allied Activities (ASIDE) to the State based on the export performance. VITC is the Nodal Agency for the above scheme.

VITC (Government of Karnataka Centre for Export Promotion), Export Agencies and Exporting Community should work hand in hand to accelerate the export growth from the state and to achieve envisaged target. The export performance of Karnataka from 2007-08 to 2011-12 is given in Table 5.33 below:

Table 5.33: EXPORT PERFORMANCE OF KARNATAKA STATE from 2007-08 to 2011-12

Sl. No	Commodity	2007-08	2008-09	2009-10	2010-11	2011-12
1	Electronics and Computer Software	69517.50	82153.00	90734.57	105350.77	135660.40
2	Readymade Garments	4125.00	5395.00	5125.00	6865.70	8142.56
3	Petroleum and Petroleum products	11232.00	11642.00	11041.41	14602.47	23418.32
4	Engineering	8301.00	6185.99	4386.57	7324.29	8262.93
5	Iron Ore and Minerals (incl granites)	10197.00	7274.77	4692.97	967.97	1134.08
6	Silk Products	912.12	896.87	701.56	677.81	673.31
7	Coffee Products	1307.60	1579.05	1423.10	2184.04	3173.31
8	Basic Chemicals, Pharmaceuticals and Cosmetics	2069.76	2530.64	2760.91	2892.78	5076.68
9	Agriculture and Processed Food Products	415.51	712.34	662.57	670.30	762.94
10	Gem and Jewellery	9749.00	10892.66	17409.31	19896.82	23728.06
11	Cashew and Cashew Kernels	527.05	638.48	644.18	586.76	882.21
12	Handicrafts	428.36	428.93	257.27	292.75	267.33
13	Leather Products	201.28	213.90	193.97	202.18	319.65
14	Chemicals and Allied Products	399.28	456.87	311.25	338.80	479.88
15	Marine Products	153.46	236.21	412.27	527.72	604.50
16	Plastic Goods	215.25	265.77	327.09	562.78	603.69
17	Spices	245.15	479.25	381.73	449.75	700.11
18	Wool andWoolen Products	147.59	153.25	144.39	90.96	128.75
19	Miscellaneous and Others	2559.52	2120.39	1261.29	1038.39	4818.68
	Total	122703.43	134255.37	142871.41	165523.04	218837.39

Karnataka Industrial Policy 2009-14

Karnataka is one amongst the industrially developed States in the Country. The State has all potential to stand out on the fore front and has been focusing on development of industries, trade and service sectors.

The State Government understands that the challenges poised due to global economic recession have to be addressed to promote economic growth of the State. A stimulus to boost economic activities needs to be given to sustain the current pace of over all development. Further, the State is endowed with rich natural resources across the

State and such resources need to be optimally utilized for the benefit of local people.

Value addition to resources is one of the ways of optimizing the wealth available locally. This will also help ensure uniform spread of industries and economic activities throughout the State and will accelerate the pace of development especially in the districts of North Karnataka. Through these measures, the Government would be able to readdress the serious issue of regional imbalances in development.

The State Government realizes the limitation of agriculture sector to generate large scale

employment to the local youths. About 56% of the State's workforce is estimated to contribute 19.13% of the GSDP. It is the agreed fact that, the manufacturing sector has high potential to create maximum employment that too, to all sections and levels of job aspirants.

In order to provide enabling environment for investors, the State government has already enacted Karnataka Industries (Facilitation) Act, 2002. Due to the progressive measures and pro-active mind set of the Government, today, Karnataka has been recognized as one of the preferred investment destinations both for domestic and overseas investors.

The State Government has introduced Industrial Policy 2006-11 with an aim to increase the growth of GDP, strengthen manufacturing industries, increase share of exports from Karnataka, to generate additional employment of at least 10 lakh persons in the manufacturing and service sectors, reduce regional imbalance and ultimately aim at overall socio-economic development of the State.

In the meantime, the Government of India enacted Micro, Small and Medium Enterprises Development Act, 2006 and requested all the States to provide required support and encouragement to make MSMEs more competitive. In order to make the State more attractive and investor friendly, there was a need to focus more on inclusive industrial development, comprehensive HRD programmes, special attention towards development of sector specific zones, classification of taluks according to Dr. D.M.Nanjundappa Committee Report, attractive package of incentives and concessions, encouragement for existing industries to take up expansion, modernization and diversification etc. The State also understands the need to provide stimulus measures for industries to combat the prevailing financial crisis. Keeping these points in view, the State intends to formulate a new Industrial Policy with a determination to provide level playing field to all investors. This policy is framed with the broad guiding principles of creation of employment, development of backward regions and value addition to local resources.

The salient features of the Karnataka Industrial Policy 2009-14 are as follows:

- (i) Envisions making Karnataka prosperous through development of human and natural resources in a systematic, scientific and sustainable manner.
- (ii) Target to provide additional employment for about 10 lakh persons in the next five years.
- (iii) Efforts to increase the Share of industry to the State GDP to 20% by the year 2014.
- (iv) To double the State's export from the current level of ₹.1,30,000 crores.
- (v) Focus on providing quality infrastructure across the State
- (vi) Thrust on Skill Development and Entrepreneurship Promotion
- (vii) Added focus on development of MSME sector
- (viii) Performance and Employment linked Incentives and Concessions

The above industrial policy and package of incentives and concessions shall come into effect from 01.04.2009 and will have a span of five years there from i.e upto 31.03.2014.

Vision

To build prosperous Karnataka through development of human and natural resources in a systematic, scientific and sustainable manner.

Mission

1. To create enabling environment for robust industrial growth.
2. To ensure inclusive industrial development in the State.
3. To provide additional employment for about 10 lakh persons by 2014.
4. To enhance the contribution of manufacturing sector to the State's GDP from the current level of 17% to 20% by the end of policy period.

Strategies

1. Classification of the taluks of the State into four zones depending on backwardness of the taluks and also based on broad guidelines of Dr. D M Nanjundappa Committee Report.
2. Thrust on provision of world-class infrastructural facilities for industries with active participation of private sector/ industry.

3. Implementation of Suvarna Karnataka Development Corridor Programme (SKDCP) through length and breadth of the State and develop industries at the potential locations along with corridor.
4. Development of four eight lane industrial corridors under SKDCP.
5. Development of sector-wise industrial zones for optimal utilization of local natural and human resources so as to minimize migration of people to urban centers.
6. Simplification of land acquisition procedures with emphasis on inclusive development.
7. Safeguarding the socio-economic interests of both farmers and investors while acquisition of land.
8. Preferential treatment for MSME sector enabling to meet the global challenges.
9. Attractive employment and performance linked package of incentives and concessions to attract investments to backward regions and also to provide a leverage to MSME sector.
10. Thrust on development of MSME Sector through attractive package of Incentives and Concessions.
11. Tailor made package of incentives to larger projects having wider positive implications on the State's economy to leverage a better edge over other competing states.
12. Additional incentives for entrepreneurs belonging to under-privileged sections of the society to bring them to the main stream in order to achieve much needed inclusive growth.
13. Focus on skill development in order to enhance the employability of youth especially women and also to make ready-to-employ human resource to the industry.
14. Inculcate entrepreneurial qualities amongst local youth in general and women in particular and motivate them to take up self employment by extending handholding support.
15. Create level playing environment for all investors / private sector players by enhancing the facilitation mechanism enabling to do their business with ease and less transaction cost.
16. Appropriate provisions for the protection of environment and to encourage energy and water conservation measures in industry/ projects through go-green strategy.

Development of Special Economic Zones

1. The State Govt. realises the potential of SEZs in driving industrial / economic growth and committed to facilitate exports and expedite establishment of Special Economic Zones (SEZs) in the State.
2. Single point clearance will be given for SEZ proposals before recommending to the Govt. of India for approval. Attractive fiscal benefits will be offered to developer and unit operating in the SEZ in accordance with the SEZ Act 2005, enacted by Govt. of India.
3. State Govt. will pronounce an exclusive SEZ Policy to support and encourage healthy proliferation of SEZs in the State.

Skill Development

1. Emphasis will be given for development of skilled manpower for the use of industry and trade. Focus will be given on skill upgradation in the emerging skill sets while phasing out redundant skills.
2. The State Govt. will promote private sector investments for skill development through a market driven approach.
3. Thrust will be given for skill development amongst women to enhance their employability.
4. Regular industry-institution interface is encouraged to identify skill sets required for the industry and to develop such skill sets in the training institutions.
5. The Directorate of Employment and Training will spearhead all the activities related to skill development. Initiatives taken by the Skill Development Commission constituted by the Govt. and activities of the newly established Karnataka Skill Development Corporation would be integrated suitably to achieve best results.

Entrepreneurship Development

1. Thrust will be given for promotion of self employment by local youth through proper backup support and facilitation. All efforts will be made to inculcate entrepreneurial qualities amongst youth, with a special focus on women entrepreneurs. More thrust will be given to motivate youth belonging to under privileged sections of the society. CEDOK will take a leading role in these activities.
2. Counseling and handholding mechanism will be strengthened by dovetailing Rajiv Gandhi Udyami Mitra Yojana introduced by the Central Government.
3. To motivate the prospective entrepreneurs, Guidance Cell in the DICs will be strengthened. This cell will help entrepreneurs both at entry and implementation level.
4. Necessary support will be provided to micro level Enterprises to graduate to higher level in due course of time. Escort services will be provided by the Guidance Cell in this growth process. 'Karnataka Kaigarika Darshana' will be arranged every year benefiting the entrepreneurs to have wider exposure on successful ventures across the State/ other States.
5. Industries are also encouraged to participate in trade fairs / exhibitions both national and international not only to promote their products and services but also as learning process.

Focus on MSME Sector

1. The former President of India, Dr. A P J Abdul Kalam, in his address to the members of the Karnataka Legislature on the occasion of Suvarna Karnataka Celebrations, had advocated 11 Missions for Karnataka's prosperity.
2. Of these, Missions on Textiles, Bio-fuel, Agro processing and Entrepreneurship are related to industries sector. As envisaged by the Government, exclusive task forces will be set up to take the Mission of Dr. Kalam forward and achieve tangible results during the policy period.
3. Price preference of 15% will be allowed for the

goods manufactured by MSM manufacturing industrial Enterprises located in the State in case of purchases by the Govt. departments and State owned PSUs.

4. Attractive package of incentives will be offered especially in backward areas to provide competitive edge to the sector. Emphasis will be given for industrialization of border taluks. Efforts will be made to develop industrial infrastructure in these taluks in addition to offering added incentives to attract investments especially from the neighboring States to these taluks.
5. Market development and promotion will be supported through setting up virtual and physical exhibition centres at State and district levels. Common branding and promotion of MSME products are also encouraged.
6. Cluster development approach will be encouraged for development of enterprises in order to harness natural resources and skills concentrated in the respective cluster. A thorough analysis of the industries that have competitive advantage and resource availability in the surrounding regions will be made. This will lead to identification of clusters and their pillar industries at the taluk / district / region level. An action plan for each cluster / region will be made once they are identified and pro-active measures through policies, concessions and promotions will be made to selectively promote them. KCTU will be made a Nodal Agency to promote clusters in the State.
7. Realising the need for encouraging Khadi and village industries, the State will come out with a special programme for promotion of this sector.
8. Thrust will be given to increase the labour productivity as that is the key to improved returns and greater output especially in MSMEs. Simplification of laws and procedures will also be attempted to reduce the transaction cost.
9. While developing new industrial areas by KIADB, atleast 20% of the developed land will be reserved for MSME sector. Further, preference will be given to the local entrepreneurs/underprivileged sections of the society while allotting the land earmarked

for MSME sector. Relocation of industries from city centres to out skirts will also be supported suitably.

10. Relevant schemes like ASIDE, Credit Guarantee Fund Trust Scheme, Cluster Development Programme for MSMEs, Credit Linked Capital Subsidy Scheme, Technology Upgradation Scheme being operated by Government of India and various Promotional Schemes of different Ministries of Govt. of India will be suitably dovetailed for the benefit of MSM Enterprises. The State will also suitably complement these schemes enabling the entrepreneurs to avail maximum advantage of these schemes. A separate cell to co-ordinate and monitor implementation of these schemes will be set up in the Department of Iand C.
11. The role and responsibilities of support organizations which are engaged in providing services either to entrepreneurs or artisans will be revisited and redefined in the context of changed scenario.
12. The slow down in global economy has seriously impacted several industries especially those in MSME sector. Some of these have been able to re-structure and have turned around. Many continue to languish while some have become totally unviable. The State proposes to help in the revival of the viable Enterprises through a relief package and facilitate smooth exit of unviable one. Accordingly, a separate Scheme will be formulated in consultation with all stakeholders.

Boost to the Manufacturing Sector

1. Manufacturing is recognized as the main engine for economic growth and creation of wealth. Robust growth of manufacturing sector is necessary for creating overall growth and employment opportunities. Competitiveness and innovation are the key to robust growth of the manufacturing sector.
2. Focus will be given on reducing transaction cost by addressing vital areas like taxation, availability of land and other infrastructure requirements, implementation of regulatory laws dealing with labour, environment etc. as enunciated in the National Strategy for Manufacturing.
3. Necessary investment climate will be provided for the growth of manufacturing in broad guidelines of the recommendations of National Manufacturing Competitiveness Programme.

Promotion of Exports

1. The State has initiated several measures to promote exports of both primary and manufactured products as also services. The State has all strengths to increase its exports manifold and it is targeted to double the exports of State from the current level by the end of policy period.
2. VITC, the Export Promotion Centre for Karnataka will provide initial services in market intelligence, export documentation, finance and other critical areas to the Enterprises. Incentives will also be provided for technology upgradation / sourcing of technology to meet the specifications of international buyers.
3. Special incentives will be offered for Export Oriented Enterprises for obtaining compulsory certifications like Conformity Europeenne (CE), China Compulsory Certificate (CCC), etc., for enhanced export competitiveness.
4. Industries will be encouraged to participate in International exhibitions and trade fairs. Visits of trade delegations will also be supported financially by dovetailing the schemes of Govt. of India.

Other Policy initiatives of the State for encouraging potential sectors

1. Textile and Garment sectors are providing large employment especially to women. The State is committed to achieve balanced, higher and sustainable growth in the entire value chain from fiber to finished products with emphasis on balanced regional development. An exclusive promotional policy- Suvarna Vastra Neethi – 2008-2013 has already been announced by the state to give an added support to this sector.
2. Realizing the fact that minerals are the treasures of the State, the Government focuses on systematic and sustainable harnessing of mineral wealth. There is a need to optimize the geological potential by way of

scientific and detailed prospecting. To guide the orderly development of mining sector, the Government has announced Karnataka Mineral Policy – 2008. The provisions of this policy will be made use of for the rapid development of mining related industries in the State.

3. The State is an ideal location for promotion of agro food processing industries due to its agro climatic conditions. Efforts will be made for further promotion of this sector through establishing food parks at potential locations with active participation of private sector. Mega food parks will also be established in the state dovetailing the schemes of Government of India. A separate Policy for promotion of Agro Food Processing sector is envisaged by the State.
4. The State has a strong presence of sugar industries especially in the districts of North Karnataka. The sugar sector will be further encouraged to compete with the neighboring states. Factories going for cogeneration and ethanol production will be suitably supported. The State will come out separate Policy for the benefit of sugar sector.

Facilitation

1. Karnataka Udyog Mitra will be strengthened to provide better single point contact services for investors. KUM will continue to provide post-approval support to investors in order to ensure high conversion rates.
2. Information kiosks will be set up in major district centres for easy access of information from entrepreneurs and investors. Karnataka Diaspora Cell will be made more effective to attract foreign investors to the State.
3. Single Window Clearance mechanism will be made more effective so that most of clearances / approvals are accorded at the time of approval by SHLCC / SLSWCC / DLSWCC. Relevant provisions of Karnataka Industries (Facilitation) Act 2002 will be used more effectively to reduce the transaction cost and to do the business with ease. Efforts will be made to accord all the required approvals within a specified time of 45 days.
4. Proposals of all micro, small and medium

enterprises will be cleared by the District Level Single Window Clearance Committee (DLSWCC). Necessary amendments will be brought to the Karnataka Industries (Facilitation) Act in this regard.

5. Investors guide / Information booklets will be made available for information of investors. All relevant information will also made available to the investors in website / online.
6. (1) Investors' meets and road shows will be organized regularly at State / National / International level to attract large scale investment to the State.
(2) Industrial Adalats will be organized regularly at District / Regional/ State level with a view to understand the problem of industries and to settle pending cases.
7. Inter departmental co-ordination will be strengthened to achieve better results. Benefits of supportive policies will be taken to the maximum extent. Comprehensive labour reforms will be brought in consultation with industry by the Labour department.
8. Efforts will be made to expedite implementation of a host of envisaged mega projects, enabling the local Enterprises to avail spin off benefits of such larger projects.
9. Industry Vision Group constituted by the Govt. will guide the orderly development of industries and trade in the State. Regular interaction will also be held with financial institution / banks and such agencies to sort out various issues coming on the way of implementation and successful operation of projects.
10. State level Industrial Development Council will be constituted involving representative from industry and trade to regularly review the progress of implementation.

Incentives and Concessions

1. As a commitment to provide a level playing environment to the entrepreneurs in the globalised economy, attractive package of incentives and concessions is evolved. The concept of performance and employment linked incentives is adopted to achieve the expected results.

2. Special package of incentives over and above the standard package will be offered for Mega projects based on the recommendations of SHLCC depending on the merits and advantages of such projects to the State.
3. For the purpose of administering package of incentives and concessions, taluks of the State have been categorized into four zones

Milestones and review of Implementation

1. In order to achieve the targets spelt out in the policy within the stipulated time frame, following milestones are set for ensuring periodical progress :

By the end of the year	Creation of additional employment (₹.crores)	Generation of additional investment (lakh Nos.)
2009-10	1.00	30,000
2010-11	3.00	90,000
2011-12	5.00	1,65,000
2012-13	7.50	2,40,000
2013-14	10.00	3,00,000

2. A high level Inter Departmental Review Committee will be constituted to regularly monitor implementation of all provisions of the policy. This committee will also ensure issue of necessary Govt. orders by various departments in relation to the policy without loss of any for mid-course corrections, if required for smooth implementation of the Policy. The committee will also bring out annual reports indicating the progress in implementation of the Policy.

Classification of Taluks in Karnataka into Zones for the purpose of administering Incentives and Concessions

Sl. No.	Districts	Total No.of Taluks	Zone -1 Most Backward Taluks	Zone -2 More Backward Taluks	Zone - 3 Backward Taluk	Zone -4 Industrially Developed Taluks
South Karnataka Region						
1	Bengaluru (U)	4				Anekal B'luru (North) B'luru(South) B'lluru(East)
2	Bengaluru (R)	4				Devanahalli D B Pur Hoskote Nelamangala
3	Ramanagara	4	Kanakapura Magadi			Ramanagaram Channapatna
4	Chitradurga	6	Hosadurga	Hiriyur Molakalmur Hololkere Challakere	Chitradurga	

5	Davanagere	6	Channagiri Harapana halli	Honnali Jagalur	Davangere Harihar	
6	Chikkaballapura	6	Bagepalli	Gudibande Gowribidanur	Chikka- ballapura Siddlaghatta Chintamani	
7	Kolar	5		Mulbagal	Kolar Bangarpet Srinivasapura Malur	
8	Shivamogga	7		Soraba	Shivamogga Bhadravathi Sagar Shikaripura Hosanagara Thirthahalli	
9	Tumakuru	10	Kunigal Madugiri Gubbi Sira Pavagada	Turuvekere Koratagere Chikkanaya- kaanahalli	Tumakuru Tiptur	
10	Chamarajanagar	4	Chamaraja- nagar	Gundlupet Kollegal	Yelandur	
11	Chikkamagaluru	7		Kadur	Chikka - magaluru Tarikere Shringeri Mudigere Koppa N R Pura	
12	D Kannada	5			Bantwal Mangaluru (excl. Corpn. limits) Puttur Sulya Belthangadi	Mangaluru (only Corporation limits)
13	Hassan	8		Arakalgud	Hassan Arasikere C R Patna H N Pura Belur Alur Sakleshpura	
14	Kodagu	3			Madikeri Somwarpet Virajpet	
15	Mandya	7		Malavalli Nagamangala K R Pet	Mandya Maddur Srirangapatna Pandavapura	
16	Mysuru	7	H D Kote	Hunsur T N Pura Nanjangud	Periapatna Mysuru (excl. Corpn. limits) K R Nagara	Mysuru (only Corporation limits)
17	Udupi	3			Udupi, Kundapura, Karkala	

North Karnataka Region						
18	Ballari	7	Sandur Kudligi	Siraguppa H B Halli Hadagalli	Ballari Hosapete	
19	Bidar	5	Bhalki Humnabad B Kalyana Aurad		Bidar	
20	Kalaburagi	10	Sedam Shourapur Yadgir Chitapur Afzalpur Shahapur Aland Chincholi Jewargi		Kalaburagi	
21	Koppal	4	Kushtagi Yelburga	Koppal	Gangavathi	
22	Raichur	5	Sindanur Manvi Lingasugur Devadurga	Raichur		
23	Bagalkote	6	Bilagi	Hunagund Badami	Bagalkote Mudhol Jamkhandi	
24	Belagavi	10		Athani Gokak Soundatti	Belagavi Khnanapur Hukkeri Ramdurga Bailhongal Chikkodi Raibag	
25	Vijayapura	5	Muddebihal B Bagewadi Indi Sindgi		Vijayapura	
26	Dharwad	5		Kalghatagi	Dharawad Hubballi Kundaggol Navalgund	
27	Gadag	5		Mundargi	Gadag Nargund Ron Shirahatti	
28	Haveri	7		Savanur Shiggaon Hirekerur	Haveri Ranebennur Byadagi Hanagal	
29	U Kannada	11		Supa Bhatkal	Karwar Haliyal Sirsi Mundagod Yellapura Honnavar Ankola Siddapura Kumta	
TOTAL		176	39	40	85	12

Package of Incentives and Concessions offered for Investments

1. Investment Promotion Subsidy

a) Micro Mfg. Enterprises

- Zone – 1 : 25% VFA (max. ₹.10 lakhs)
- Zone – 2 : 20% VFA (max. ₹.7.5 lakhs)
- Zone – 3 : 15% VFA (max. ₹.5.00 lakhs)
- Zone – 4 : Nil

b) Small Mfg. Enterprises

- Zone – 1 : 20% VFA (max. ₹.20 lakhs)
- Zone – 2 : 15% VFA (max. ₹.15 lakhs)
- Zone - 3 : 10% VFA (max. ₹.10 lakhs)
- Zone – 4 : Nil

c) Med. Mfg. Enterprises (Those who employ minimum 25 workers)

- Zone – 1 : ₹.30 lakhs
- Zone – 2 : ₹.20 lakhs
- Zone – 3 : Nil
- Zone – 4 : Nil

Notes :

(i) 25% of the subsidy sanctioned amount will be released every year on refund basis towards the payments made by the unit in respect of gross VAT, ESI and PF and power tariff.

In cases of enterprises which do not use power and not covered under VAT, EPF, ESI the investment subsidy will be released against the loan dues.

(ii) This incentive is available to enterprises availing term loan to an extent of minimum 50% cost of fixed assets only.

(iii) The unit shall avail the sanctioned subsidy within the period of five years.

Additional subsidy to SC/ST, Women, Physical challenged, Ex-Servicemen Entrepreneurs and enterprises coming up in most Backward taluks of Hyderabad Karnataka region. Additional 5% subsidy subject to a maximum of ₹.1.00 lakh, ₹.3.00 lakhs and ₹.5.00 lakhs for Micro, Small and Medium Manufacturing Enterprises respectively.

Exemption from Stamp Duty

(MSME, Large and Mega Projects)

Stamp duty to be paid in respect of

(i) loan agreements, credit deeds, mortgage and hypothecation deeds executed for availing term loans from State Govt. and / or State Financial Corporation, Industrial Investment Development Corporation, National Level Financial Institutions, Commercial Banks, RRBs, Co-operative Banks, KVIB / KVIC, Karnataka State SC/ST Development Corporation, Karnataka State Minority Development Corporation and other institutions which may be notified by the Government from time to time for the initial period of five years only and (ii) for lease deeds, lease-cum-sale and absolute sale deeds executed by industrial Enterprises in respect of industrial plots, sheds, industrial tenements, by KIADB, KSSIDC, KEONICS, KSIIDC, Industrial Co-operatives and approved private industrial estates shall be exempted as below :

- Zone – 1 : 100%
- Zone – 2 : 100%
- Zone – 3 : 75%
- Zone – 4 : Nil

Concessional Registration Charges

(MSME, Large and Mega Projects)

For all loan documents and sale deeds as specified in two above, the registration charges shall be at a concessional rate of ₹.1 per ₹.1000.

Waiver of Conversion Fine

(MSME, Large and Mega Projects)

The payment of conversion fee for converting the land from agriculture use to industrial use including for development of industrial areas by private investors will be waived as detailed below:

- Zone – 1 : 100%
- Zone - 2 : 100%
- Zone – 3 : 75%
- Zone - 4 : Ni.

Exemption from Entry Tax

(MSME, Large and Mega Projects)

In Zone – 1, 2 and 3 :

100% exemption from payment of ET on 'Plant and Machinery and Capital Goods' for

an initial period of Three years from the date of commencement of project implementation. For this purpose, the term 'Plant and Machinery and Capital Goods' also includes Plant and Machinery, equipment etc. including machineries for captive generation of Electricity.

On raw materials, inputs, component parts and consumables (excluding petroleum products) [wherever applicable] for a period of Five years from the date of commencement of commercial production.

Zone – 4 : Nil

Incentives for Exported Oriented Enterprises

(MSME, Large and Mega Projects)

(i) Exemption from payment of ET

For 100% EOUs, 100% exemption from payment of ET on 'Plant and Machinery and Capital Goods' for an initial period of three years from the date of commencement of project implementation irrespective of zones.

For other EOUs, (Minimum Export obligation of 25% of their total turnover) 100% exemption from payment of ET on raw materials, inputs, component parts and consumables (excluding petroleum products) for an initial period of Three years from the date of commencement of commercial production in Zone 1, 2, and 3 and 50% in Zone 4.

(ii) Refund of Certification Charges :

Refund of expenses incurred for compulsory marking like Conformity Europeenne (CE), China Compulsory Certificate (CCC), etc., to the extent of 50% of expenses subject to a maximum of ₹. 2.00 lakhs per unit for both 100% and other EOUs in all zones.

Exemption of APMC Cess / fees

(MSME, Large and Mega Projects)

APMC Cess/ fees in respect of procurement of agriculture produce as specified in the Schedule (inserted by Act No.17 of 1980 and effective from 30.06.1979) Sl.No. II, III, IV, VI, VII, IX and X to the Karnataka APM (Regulation and Development) Act, 1966, directly from farmers for processing by new and existing industries in Zone – 1, 2 and 3 shall be exempted for a period of five years, four

years and three years respectively.

Zone – 4 : Nil

Subsidy for setting up ETPs

(MSME, Large and Mega Projects)

One time capital subsidy upto 50% of the cost of Effluent Treatment Plants (ETPs), subject to a ceiling of ₹.100 lakhs per manufacturing enterprise in Zone – 1, 2 and 3 and a ceiling of ₹.50 lakhs in Zone – 4.

Interest Subsidy Micro manufacturing enterprises:

Interest subsidy@5% on term loans. The interest subsidy is payable only on the interest actually paid to financial institutions and not defaulted in payment of principle or interest installments. The amount of interest subsidy will be effective rate of interest (after deducting interest subsidy) receivable by any institutions / under any Govt. of India scheme or 5% per annum whichever is less). The period of interest subsidy is five years, four years and three years in Zone -1, Zone -2 and Zone-3 respectively.

Exemption from Electricity Duty

(Micro and Small Mfg. Enterprises)

100% exemption of electricity duty / tax for the initial period of five years, four years and three years in Zone – 1, Zone-2 and Zone-3 respectively.

Technology Upgradation, Quality Certification and Patent Registration

(Micro and Small Mfg. Enterprises)

(i) Interest Subsidy on TU Loan :

Zone 1, 2 and 3 : 5 % on loans availed from KSFC, KSIIDC and Scheduled commercial banks, which are not covered under CLCSS of GOI.

(ii) ISO series certification :

Zone 1, 2, 3 and 4: 75% of cost (max. ₹.75,000).

(iii) BIS Certification:

50% of fees payable to BIS. (max. ₹.20,000) and 25% of cost (max. ₹.50,000) for purchase

of testing equipments as approved by BIS.
(iv) Patent registration :

75% of cost of fees payable to Patent Office (max. ₹.1.25 lakhs) and 50% of cost (max. ₹.75,000) towards attorney fees, patent search etc.

(v) Technology Adoption :

25% of cost (max. ₹.50,000) for adopting technology from recognized national laboratories.

(vi) Technology Business Incubation Centre :

25% of the project cost (Max : ₹.50 lakhs).

Water harvesting / Conservation Measures

(Small and Medium Mfg. enterprises in all Zones.)

- (i) Rain water harvesting: 50% of cost (max. ₹.1 lakh)
- (ii) Waste water recycling: 50% of cost (max. ₹.5 lakh)
- (iii) Zero discharge process: 50% of cost (max. ₹.5 lakh).

Energy Conservation

(Small and Medium mfg. enterprises in all zones.)

Practicing Energy Conservation measures resulting in reduction of Energy Consumption of atleast 10% of earlier consumption: 10% of capital cost (max ₹.5 lakh).

Use of non-conventional energy sources: 10% of capital cost (max. ₹.5 lakh).

Support to Sugar Sector

New sugar factories and existing sugar factories who have not availed purchase tax deferment having co-generation facilities and ethanol production would be considered for conversion of purchase tax on sugar cane as interest free loan on case to case basis depending on the financial position of the factory

In the case of existing Sugar factories which establish co-generation plants, ethanol plant, and

such investment will be treated as expansion for availing incentives and concessions as per this Policy, but limited to the investment made on such additional projects.

POWER SECTOR

The State of Karnataka has been experiencing condition of power shortage because of the ever-growing demand for power influenced by the rapid economic progress. The State government has been taking various initiatives to implement projects in the public as well as private sectors for adding new installed capacities for power generation. Recognizing the crucial role of power in achieving economic progress, Karnataka was one of the first Indian States to implement power sector reforms. The institutional setup for undertaking the reform was strengthened with the enactment of the Karnataka Electricity Reforms Act in 1999. The Karnataka Electricity Regulatory Commission (KERC) was established as a regulatory authority of the state's power sector. Among other functions of the KEREC, it regulates the supply of power to different categories of consumers. Four Electricity Supply Companies (ESCOMs), Bengaluru Electricity supply Company Ltd. (BESCOM), Mangaluru Electricity Supply Company Ltd. (MESCOM), Hubballi Electricity Supply Company Ltd.(HESCOM), and Kalaburagi Electricity Supply Company Ltd. (GESCOM) were established during 2002 and other ESCOM, Chamundeshwari Electricity Supply Corporation (CESC) was established in 2005. These five distribution companies are engaged in retail supply of electricity to the end consumers.

Power generation in public sector is managed by the Karnataka Power Corporation limited (KPCL) whereas the Karnataka power Transmission Corporation Limited (KPTCL) deals with transmission of power and, load dispatch functions. As part of the restructuring of power sector in the state, the erstwhile Karnataka Electricity Board (KEB) was restructured as KPTCL in 1999 by giving it a corporate status. As per the Electricity Act 2003, KPTCL, being the State's transmission utility is not empowered to engage in trading in electricity. Therefore, the distribution companies directly procure power from power generators, both public and private, and use KPTCL's transmission network to distribute electricity.

Demand and Supply Status

A part from augmenting its generation, the State has been importing power-generating stations, from neighboring States, and also through energy exchanges for minimizing power shortages. In addition, the State Government is taking steps for conservation of energy through demand side management. In cases wherein it is highly difficult to bridge the supply-demand gap, load shedding is imposed.

It has been observed that both the peak demand and peak energy supply are showing increasing trends since 2007-08. The peak demand recorded during 2010-11 was 7815 MW, which is an increase of about 13% from 6987 MW in 2009-10. The peak demand observed in 2011-12 (April-December 2011) was 7711 MW. The anticipated peak demand during 2011-12 is likely to be above 8300 MW. The highest day's consumption recorded in 2010-11 was 172 MU and the same during the period of April-December 2011 was 173 MUs. It is anticipated that the likely highest day's consumption during 2011-12 will be about 190 MUs.

The trends in estimated gaps in demand and supply for both power and energy show that the shortages in power supply are more critical compared to that in energy supply. The Power Supply shortage was highest at 1296 MW in 2007-08 and has since, reduced to 523 MW in 2010-11. This suggests a substantial improvement in power supply situation in the state since 2007-08. The estimated energy shortages have remained at about 10% since the last three years.

Power Generation

The sources of power generation in Karnataka are:

- Generation Station of KPCL
- Independent Power Producers (IPP's) (Conventional and Non-Conventional)
- State's share from Central Generating Stations
- Procurement from other States through bilateral trade, purchase and energy exchanges
- Barter arrangement (power banking)

Installed capacity and capacity addition

KPCL has been pioneering the capacity addition for power generation in the public sector in the State. Benefiting from the reform processes, various private generators have also established power plants in Karnataka. Further, the State Government has established the Karnataka Renewable Energy Development Ltd (KREDL) to harness non-conventional sources of energy. The total installed generation capacity both in the public sector and private sector including the State's share in the Central generation stations (CGS) as on 31.03.2011 was 11366MW. The installed capacity in this public sector was 7,587 MW (including CGS allocation) and the private sector's share was 3,779 MW. The private sectors capacity includes the renewable energy sources of power generation. The status of power generation. The status of power sector in terms of both installed capacity and electricity generation for Karnataka is provided in Table 5.34.

Table 5.34: Progress in Power Sector (2008-09 to 2011-12)

Source	Units	2008-09	2009-10	2010-11	2011-12 (Dec' 11)
Installed capacity (cumulative)					
Public Sector (KPCL)					
Hydel	MW	3637	3637	3652	3652
Wind Energy	MW	05	05	05	05
Thermal	MW	1970	1970	2220	2220
Disel Plants	MW	128	128	108	108
Solar PV Plant	MW	-	06	06	06
Total		5740	5726	5991	5991
Private Sector					
IPP Thermal	MW	109	109	709	709
Hydel	MW	422	572	656	635
Wind	MW	1367	1513	1670	2035
Co-generation and Biomass and Solar	MW	616	766	744	842
Total (1)		2514	2960	3779	4221

Central Generating system	MW			1596	1699
Total Installed Capacity	MW	8254	8686	11366	11911
2. Electricity Generation					
a. Hydel (KPCL)	MU		12249	10543	7870
b. Thermal (KPCL)	MU	12897	13263	10434	5535
c. Diesel (KPCL)	MU	11718	494	490	203
d. Private Sector	MU	451	5546	8984	6651
e. Wind (KPCL)	MU	5108	13	16	10
f. Solar PV Plant	MU	14	3	7	4
Total (2)		30188	31566	30474	20274
3. Electricity Imports					
a. Central Projects	MU	11600	10974	44041	6307
b. Other States	MU	Nil	35	5757	2796
Total (3)		11600	11009	16798	9102
4. Total Electricity Supply	MU	41788	42575	47270	29376

Source: KPCL, KPTCL and KREDL

The status of the installed capacity of power generation as on 31-12-2011 suggests the domination of hydro power in the state. The contribution from wind power generation is the third highest at 2,035 MW after hydro and coal thermal. Out of the total installed capacity of 11911MW in the private sector, renewable energy's share is 3,512MW accounting for 29% share, and upon including major hydro power, the share of installed capacity based on renewable energy source increases to 60%, which is one of the highest in the country. The Hydro: Thermal mix in the state generation in public sector is in the ratio of about 60:40.

The anticipated capacity addition during 2011-12 is 1,936 MW (2036 MW if CGS of 100 MW is included) of which 443MW under renewable energy sources has already been synchronized. There are few major private power producers (IPPs) whose total installed capacity is about 709 MW. It expected to add 1,436 MW (600 MW UPCL and 836 MW of renewable energy) during 2011-12 in the private sector and 600 MW (500 MW BTPS-II and 100 MW CGS) in the public sector. The total installed capacity is expected to be 13,305 MW by March 2012. The total electricity supply made available in the state during 2010-11 procured from various sources was 47,270 MU. Recent data suggested that electricity supply up to the end of December 2011 was 29,376 MU. The deficits in supply are being met through short

term purchases from other states and also through energy exchange. The short term import of energy during 2010-11 was 5,757.47 MU and an import till December 2011 was 2,796.41 MU.

PLANT LOAD FACTOR (CAPACITY UTILISATION)

The trends suggest that the PLFs of both the thermal and hydel plants fluctuate resulting in variation in generation. As can be observed from table 5.35, the average cost of power generation is higher in thermal plants as compared to hydel plants and the state's reliance on thermal plants for power generation has increased over the years. As a result, the average cost of power generated (paise/kWh) has been increasing.



Raichur Thermal Power Station

**Table 5.35: Plant Load factor and Unit Cost of Power for Select Power Stations
(2009-10 to 2011-12)**

Sl. No.	Power Station	Type	Plant Load factor			Unit Cost* 2011-12 paise/kWh
			2009-10	200-11	2011-12	
1.	Sharavathy	Hydel	49.89	49.66	60.81	23.86
2.	Nagihari	Hydel	27.27	28.06	39.94	49.21
3.	Supa	Hydel	33.27	41.50	49.44	
4.	Varahi	Hydel	28.68	24.45	28.90	66.23
5.	RTPS Unit-1	Thermal	50.86	56.25	65.48	287.30
6.	RTPS Unit-2	Thermal	76.45	46.22	66.17	
7.	RTPS Unit-3	Thermal	93.73	75.66	69.49	
8.	RTPS Unit-4	Thermal	87.28	57.95	75.53	
9.	RTPS Unit-5	Thermal	76.30	82.00	70.98	
10.	RTPS Unit-6	Thermal	89.56	74.99	76.29	
11.	RTPS Unit-7	Thermal	66.65	64.07	65.38	
12.	RTPS Unit-8	Thermal	-	-	39.56	
13.	BTPS Unit-1	Thermal	57.78	60.18	63.60	303.48

Source: KPCL/KREDL. * Before accounting for TandD losses

GENERATION OF POWER BY KPCL

KPCL has been establishing power plants to maximize power generation by identifying and utilizing the hydro resources available in the state as well as by procuring coal from outside. The thermal generation was lower by 2,828 MU during April 2010 to December 2010 (as compared to 2009-10) due to problems in coal handling system in RTPS, lower generation from RTPS Unit-8 which is a new unit and, lower generation from BTPS unit-1 as the unit was shut down for annual OH works during September November 2010 (69 days). Karnataka's share of power generation capacity from CGS is highlighted in table 5.36. Table 5.37 shows that total generation from hydel stations during 2010-11 was lower by 3287 MU as compared to 2011-12 due to lower total inflows to the major three hydel reservoirs and, restriction in generation to conserve water for meeting the peak demand during summer months and up to onset of next monsoon.

Table 5.36 KPCL POWER PROJECTS IN KARNATAKA as on 31.3.2014

Sl.No	Power Station	Units X MW	Installed Capacity in MW
HYDRO POWER PROJECTS			
I Cauvery River Basin			
1	Sir Sheshadri Iyer Hydro Electric Station(Shivasamudram)	4x6 6x3	42.00
2	Shimsha Hydro Electric Station	2x8.6	17.20
Total			59.20
II Sharavathy Valley Project			
3	Linganamakki Dam Power House	2x27.5	55.00
4	Mahathma Gandhi Hydro Electric Station	4x21.6+13.2	139.20
5	Sharavathy Generating Station	10x103.5	1035.00
Total			1229.20

III	Gerusoppa Hydro Electric Project		
6	Gerusoppa Dam Power house	4x60	240.00
		Total	240.00
IV	Kali Hydro Electric Porject		
7	Supa Dam Powerhouse	2x50	100.00
8	Nagihari Powerhouse	5x150+1x135	885.00
9	Kadra Dam Powerhouse	3x50	150.00
10	Kodasalli Dam Powerhouse	3x40	120.00
		Total	1255.00
V	Varahi Hydro Electric Project		
11	Mani Dam Powerhouse	2x4.5	9.00
12	Varahi UGPH	4x115	460.00
		Total	469.00
VI	Krishna Basin Project		
13	Almatti Dam Powerhouse	1x15+5x55	290.00
		Total	290.00
VII	Mini Hydro Electric Project		
	Bhadra Project		
14	Bhadra Right Bank canal Powerhouse	1x7.2+1x6	13.20
15	Bhadra Left Bank Canal Powerhouse	2x12+1x2	26.00
16	Munirabad Powerhouse(Thunga Bhadra Basin)	2x9+1x10	28.00
17	Ghataprabha Dam Powerhouse	2x16	32.00
18	Mallapur Mini Hydel Scheme	2x4.5	9.00
19	Sirwar Mini Hydel Scheme	1x1	1.00
20.	Kalmala Mini Hydel Scheme	1x0.40	0.40
21	Ganekal Mini Hydel Scheme	1x0.35	0.35
		Total	109.95
	Total Hydro		3652.35
VIII	Thermal Stations		
22	Raichur Thermal Power Station 1 to 7 Unit	7x210	1470.00
23	Raichur Thermal Power Station Unit-8	1x250	250.00
24	Ballari Thermal Power Station Unit-I	1x500	500.00
25	Ballari Thermal Power Station Unit-II	1x500	500.00
	Total Thermal		2720.00
IX	Diesel Generating Station		
26	Yelahanka Diesel Generating Station	6x18	108.00
X	Wind Power Station		
27	Kappadagudda Wind Farm	9x0.225+11x0.230	4.555
	SOLAR ENERGY		
28	Yelesandra Solar PV Plant, Kolar Dist		3.00
29	Itnal Solar PV Plant, Belagavi Dist.		3.00

30	Yapaldinni Solar PV Plant, Raichur Dist		3.00
31	Shimsha Solar PV Plant, Shimshapur, Mandya Dist.		5.00
	Total Solar		14.00
	Grand Total		6498.905

KPCL Ongoing Projects			
1	Ballari Thermal Power Station Unit-III	1x700	700
2	Yermarus Thermal Power Station	2x800	1600
3	Munirabad		10
4	R M & U of NPH unit-6	1x15	15
	Total		2325

KPCL New Projects(Capacity in MW)			
1	Bidadi Gas Based combined Cycle Power Plant	1x700	700
2	Godhna Thermal Power Station Chhattishgarh Thermal Plant(Pit head)	2x800	1600
3	Edlapur Thermal Power Station	1x800	800
4	Ghataprabha		20
	Total		3120

KPCL Proposed New Projects			
A	Hydro Projects		
1	Shivasamudram Seasonal Scheme	3x100+1x45	345
2	Gundia Hydrel Project	2x200	400
B	Gas Based Projects		
1	Bidadi 2 nd Stage		700
2	Yelahanka		350
3	Tadadi Gas Based Project		2100
	Total		3895

GENERATION OF POWER BY INDEPENDENT POWER PRODUCERS (CONVENTIONAL)

As per Karnataka's Independent power producers (IPP) policy enacted in January 2001, three IPPs have been established in the state. These IPPs are contributing power to the state Grid (See below).

Power generation Capacity and Electricity Generation from IPPs

Name of firm	Installed capacity	Generation/day (MU)
TATA	81.30	1.95
Royalseema	27.80	0.67
UPCL Unit-1	600.00	14.40

GENERATION OF POWER BY INDEPENDENT POWER PRODUCERS (NON- CONVENTIONAL)

Karnataka has successfully encouraged private sector investments in power generation from non-conventional or renewable energy sources of generation. Details of power generation by IPPs using non-conventional sources are given in table 5.37

Table 5.37: Power generation Capacity from non-conventional energy source-based IPP Producers

Sl. No.	Source of renewable energy	2010-11		2011-12	
		Capacity added during the year (MW)	Cumulative capacity (MW)	Capacity added during (upto Dec' 11) (MW)	Cumulative capacity (MW)
1	Wind	254.05	1687.00	125.00	1812.00
2	Mini Hydel	43.50	611.00	36.00	647.00
3	Solar	0.00	6.00	5.00	11.00
4	Bio-mass	0.00	86.00	0.00	86.00
5	Co-gen	60.56	680.00	138.00	817.84
	Total in MW	358.11	3070.00	304.00	3373.84

Source: KPCL

PURCHASE OF POWER FROM OTHER STATES AND ENERGY EXCHANGES

Towards meeting shortage in electricity supply, Karnataka buys power from neighbouring States and other states, and from energy exchanges. The details of such purchase during 2007-08 to 2011-12 are given in table 5.38

Table 5.38: Procurement from other States through bilateral trade and purchase through energy exchanges

Year	Energy (MU)	Amount (₹. Crore)	Average rate (₹./Kwh)
2007-08	40.50	28.51	7.04
2008-09	1963.49	1327.43	6.76
2009-10	1798.64	1041.06	5.79
2010-11	7815.36	3898.30	4.99
2011-12 (Dec-11)	3862.41	1902.35	5.25

Source: Power Company of Karnataka Limited

Transmission and Distribution KPTCL-State Transmission Utility

KPTCL is the state transmission utility engaged in the business of transmission of electricity in the state. It is the Responsibility of KPTCL to construction power stations and lines and, strengthen the system for easing network congestion, power evacuation etc. The status of transmission infrastructure as in 2011 is given in Table 5.39.

Table 5.39: Power stations and transmission Lines (as on 31.12.2011)

Voltage Level	No. of stations	Transmission Lines in CKMs
400 kV	4	1978
220 kV	85	9368
110 kV	325	8954
66 kV	539	9610
33 kV	372	8495
Total	1325	38405

Source: KPTCL



Supa Dam, Kali Project



Itnal Solar Power Project



Ballari Thermal Power Station

The transmission lines of different voltage class new sub-stations and capacity augmentation in the existing sub-stations added during the period 2008-09 to 2011-12 and proposal for 12th plan period are shown in Table 5.40.

Table 5.40: Transmission lines of different voltage class added during last 3 years and proposal for 12th plan period

Voltage class in kV	2008-09	2009-10	2010-11	2011-12	12th plan 2012-17
400	0.33	-	-	664	580
220	291.35	69.25	329.5	283.12	780
110	412.4	262.33	131.98	258.2	1905
66	535.34	179.46	227.69	131.91	1800
Total	1239.42	511.04	689.17	1337.23	5065

Source: KPTCL

Transmission and Distribution losses (TandD Losses)

Karnataka's power sector has reduced its TandD losses from 38% (in 1999-2000) to 21.27% in 2010-11. It is expected to bring down TandD losses to about 19% by March 2012. The utilities in the sector are making planned investments for strengthening and augmenting the network for reduction of technical losses. The vigilance efforts have under taken by the utilities have contributed to the reduction in AT & C losses.

Re-structured Accelerated Power Development Reforms Programme

Re-structured Accelerated Power Development Reforms Programme (R-APDRP) is a major programme of the Government of India under the XI plan. The aim of the programme is to strengthen the distribution network and reduce overall ATandC losses. The scheme is implemented in two stages- part-A and part-B. Part-A includes it applications/ energy auditing and IT-based consumer service centers while, part-B Consists of regular distribution network strengthening projects such as strengthening 11kv distribution system, re-conducting of 11kv lines and bellow, and strengthening, renovation and modernization of 11kv substations, transformers/ transformer centers. In Karnataka ,under Part-A, 100 towns have been covered with a total project cost of ₹.469 Crore of which Government of India has sanctioned ₹. 391.2 Crore as a loan. The remaining amount is being provided by ESCOMs. Subject to the implementation of Part-A programme within the stipulated time, the total sanctioned loan amount of ₹.391.2 crore can be converted into a grant. The implementation of part-A is expected to be completed by Feb-2012. Part-B covers 88 towns with a total project cost of ₹.948.99 crore of which Government of India has sanctioned ₹.237.25 crore as a loan. Upon reduction of ATandC losses in the selected towns to 15% over a period of 5 years, the sanctioned loan would be converted to a grant. Of the sanctioned amounts, by December 2011, ₹.117.07 crore has been released under part-A and an expenditure of ₹.67.14 crore has been incurred. Further, ₹.142.34 crore has been released under part-B.

In part-A, consumer indexing and network surveys are under progress. The latest data suggests that 85.90% consumer indexing and 52.90% network survey has been completed in pilot towns as of December 2011. In addition, 36.70% consumer indexing and 69.50% network survey has been completed in other towns as of December 2011.

Power Consumption Pattern in the State

As shown in table 5.41, for the year 2010-11, agricultural sector accounts for the highest share of electricity consumed in the state's power being sold to irrigation pumpsets (IP sets). The commercial consumers have paid highest tariff during 2010-11 as is evident from the table. The IP set consumers are the lowest tariff category.

The ESCOMs supply electricity to various categories of customers at different price slabs. It is seen that about 57% of the ESCOMs revenue arise from LT category customers while electricity supplied for lift irrigation fetches the lowest average revenue of ₹.1.26/ kWh. Other than temporary installations, commercial LT customers and HT industrial and commercial customers pay higher prices for electricity consumed.

Table 5.41: Electricity Consumption Pattern (2010-11)

Category of consumers	Total			
	Consumption (MU)	% of sales	Demand (₹.crore)	ARR Ps./kWh
Industries	7047	18.93	3768.3	534.74
IP Sets	12940	34.77	3763.2	290.82
Domestic	8061	21.66	2860.3	354.83
LT Industries and Water Works	2463	6.62	1230.9	499.74
Water Works and Sewage pumping	1171	3.15	482.3	411.86
Commercial lighting	4595	12.35	3138.0	682.85
Public lighting	743	2.00	346.2	466.03
Others	197	0.53	328.9	1669.71
Total	37217*	100.00	15918.11	427.71

Sourec: Energy Department **After TandD losses*

There are 26,85,845 Bhagya jyothi/ kutira jyothi (BJ/KJ) Connections and 18,33,455 irrigation pumpsets in the state as of December 2011. The power supply to IP sets and BJ/KJ consumers has been made free with effect from 01.08.2008. The entire cost of supply of free power to agricultural sector has been made good by the State Government through subsidy. The subsidy provided by the State Government during the last three years and in 2011-12 is provided in Table 5.42.

Table 5.42: Subsidy Released by the Government

Year	Subsidy Released (₹.crore)
2007-08	1650.0
2008-09	1742.7
2009-10	2091.1
2010-11	3776.3
2011-12 Up to Jan-2012	3380.0

Demand Side management (DSM)

The Government of Karnataka has implemented and proposes to implement new programmes

to conserve energy as part of its Demand Side management (DSM) initiatives. Some of the important programmes are:

- i. Making the currently-optional "Time of Day Tariff" compulsory for industrial consumers.
- ii. Energy efficient street lighting systems and installing "Electronic Time Switches" for street installations for switching "ON and "OFF".
- iii. Segregating agricultural loads from the existing 11kV feeders through Niranthara Jyothi Scheme to provide 24x7 uninterrupted power supply to non-agricultural loads in rural areas.
- iv. Adoption of High Voltage Distribution System (HVDS) for agricultural loads.
- v. Encouraging consumers to use solar water heaters.
- vi. Mandatory use of CFL in Government buildings / Aided institutions / Boards / Corporations.
- vii. Promotion of energy efficient building designs.
- viii. Mandatory use of electronic ballasts (choke) instead of conventional copper choke in fluorescent tube lights.

BESCOM is currently implementing the smart grid pilot project and a project for implementation of smart meter technologies for online recording of energy consumption and provision of post-paid/ pre-paid options to consumers of electricity.

Rural electrification

Towards meeting targets stipulated by the National Electricity Policy (NEP), the State Government has planned initiatives for energisation of villages, hamlets, harijan bastis and thandas. In Karnataka, almost all the villages have been electrified except a few for which extending the grid is extremely difficult. Only four villages in the State are pending electrification.

The ESCOMs have planned to energize hamlets and thandas in a phased manner.

State Government flagship programme: Niranthara Jyothi Yojane (NJY)

Niranthara Jyothi Yojane (NJY) is a major project that aims to segregate the rural area loads into agricultural and non-agricultural loads so as to provide 24 hours of quality power supply to rural households, drinking water supply, rural industries and fixed hours of supply to the irrigation pumpsets. The Niranthara Jyothi Yojane is implemented in two phases covering 126 taluks (Table 5.43) with 70 taluks and 56 taluks being covered in the first and second phases respectively. The cost of implementation of Phase-I is ₹.1203 crore and Phase-2 implementation will cost ₹.920 crore. The Government of Karnataka has approved the implementation of the Niranthara Jyothi Yojane at a total cost of ₹.2123 crore with 40% equity. The ESCOMs are expected to borrow the remaining 60% of the project cost as loan. The implementation of the Niranthara Jyothi Yojane phase-I is under progress. As per the latest status, 171 Niranthara Jyothi feeder works are completed of which 90 feeders have been commissioned as of November 2011. The State Government has released ₹.464.32 crore as equity and an expenditure of ₹.343.81 crore has been incurred.

Table 5.43: Details of Niranthara Jyothi Implementation

Name of the company	Phase I				Phase II		
	No. of taluks	No. of villages covered	No. of proposed 11kV NJ feeders	Project cost (₹. crore)	No. of taluks	No. of feeders	Estimated cost (₹. crore)
BESCOM	20	4750	269	382	20	248	353.08
CESC	10	3358	161	246	14	161	249.92
HESCOM	20	1891	248	288	8	76	101.18
GESCOM	20	2765	227	287	14	183	215.76
TOTAL	70	12764	905	1203	56	668	919.94

Source: energy department

Central Government flagship programme: Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY)

RGGVY, a programme for developing rural electricity infrastructure and expanding household electrification, was launched in 2005 with the objective of providing access to electricity to all rural households. At the time of inception, the scheme aimed at electrification of over 1,00,000 un-electrified villages and free electricity connections to 23.4 million rural below poverty line (BPL) households in India. Under this scheme, Government of India provides 90% grant and 10% is provided as a loan by Rural Electrification Corporation Limited.

In Karnataka, the scheme is being implemented in two phases, X plan phase covering 17 districts

and XI plan covering seven districts. Works under X plan phase are completed and the works of XI plan phase are under progress. Under X plan phase, electricity connections were provided to 6,31,321 BPL households and 46 villages were electrified. Under XI plan, connections were provided to 1,73,465 BPL households and 15 villages were newly electrified as of December 2011. Under XI plan, ₹.313.11 crore has been released and an expenditure of ₹.233.11 crore has been incurred as of December 2011.

Karnataka Renewable Energy Development Limited (KREDL)

KREDL is one of the nodal agencies for the development of renewable energy sources in Karnataka. To harness green and clean renewable energy sources in the State for environmental

benefits and energy security, and to initiate energy conservation and efficiency measures in all sectors for sustainable development, Government of Karnataka issued a policy on renewable energy (for the period 2009-14) on 19.01.2010. The State Government has also published its Solar Policy for 2011-16.

KREDL envisages private investment for renewable energy development in the State. During 2011-12, as of December 2011, a total capacity of 441.00 MW has been added from renewable energy sources (Table 5.44).

Table 5.44: Capacity Addition under Renewable Energy

Sources	Capacity Addition during 2011-12 (MW)
Wind Power	262.00
Small/Mini Hydro	38.00
Co-generation	138.00
Solar	3.00
Total	441

Source: KREDL

It has been targeted to generate about 678.42 MW from renewable energy sources during 2011-12. The State's achievement in renewable energy sector as on 31.10.2011 is shown in Table 8.23. Further, the progress in renewable energy capacity addition during the last three years is given in Table 5.45. The data suggests a marginal decline in capacity additions over the last three years.

Table 5.45: Progress in installed capacity additions through renewable energy sources

Source	2009-10		2010-11		2011-12	
	Capacity added (MW)	Cumulative capacity (MW)	Capacity added (MW)	Cumulative capacity (MW)	Capacity added (MW)	Cumulative capacity (MW)
Wind Power	145.40	1511.53	254.05	1765.58	125.05	1890.663
Mini Hydro	150.00	567.30	43.50	610.80	36.05	646.8
Solar	6.00	6.00	0.00	6.00	3.00	9.00
Bio-mass	0.00	88.50	0.00	86.50	0.00	86.50
Co-gen	109.50	619.30	60.56	679.86	138.00	817.85
Waste to energy	0.00	0.00	0.00	0.00	0.00	0.00
Total	410.90	2790.63	358.11	3148.74	302.10	3450.84

Source: KREDL

National Project on Bio-gas Development

National Project on Biogas Development is a centrally sponsored scheme being implemented in the State since 1982-83. During 2011-12, the Government of Karnataka had provided the State's share of ₹.412.05 lakh and central share of ₹.1192.15 lakh as part of budgetary provisions. A total subsidy of ₹.1008.24 lakh has been released by the State and Central Governments upto December 2011.

Based on the cattle population in the State, it is estimated that about 6.80 lakh biogas plants could be constructed, of which, upto march 2011, about 3.97 lakh biogas plants have already been constructed. Government of India has already allocated 15,000 biogas plants as a physical target to the State for 2011-12. By November 2011, 5271 plants have been completed under the programme.

