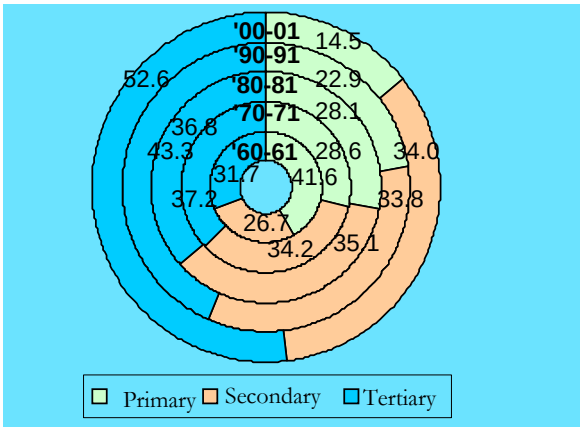
CHAPTER 5

Industrial Growth

Introduction

This chapter presents an analysis of the structural changes of Maharashtra's industrialisation. The sectoral composition of the state domestic product of Maharashtra has been following the national trend of services led growth. With a limited potential in agriculture, the state needs to explore opportunities in the secondary sector. The share of the secondary sector in the State Domestic Product continuously increased up to 1986-87, but since then it has been gradually declining (Figure 5.1).

Figure 5.1: Changing Sectoral Composition of Maharashtra SDP



Maharashtra, the leading industrial state in India occupies a significant position as far as the manufacturing sector in the country is concerned. As per the Annual Survey of Industries (ASI) 1999-2000 results, the value of output in the state originating from manufacturing sector (Industry groups 151-369) was estimated to be Rs. 1,783.8 billion, which was 21.40 per cent of the country's output and in which 8 industries accounted for 51.71 per cent of the total output originating in the state. It is found that 44 industry groups of Maharashtra state had more than 10 per cent share in 1999-2000.

The major manufacturing industries located in Maharashtra include refined petroleum products, other chemical products, basic chemicals, manufacturing n.e.c - jewellery, musical instruments, sports goods, games & toys etc., spinning, weaving and finishing of textiles, other food products, sugar, cocoa, chocolates, noodles etc., basic iron & steel and motor vehicles. The principal industrial zone in Maharashtra is the Mumbai-Thane-Pune belt, accounting for almost 60 per cent of the State's output. Efforts are being made to promote other industrial areas like Nagpur, Nashik, Aurangabad, Solapur, Jalgaon, Raigad, Amravati and Ratnagiri, by building the necessary infrastructure and creating an environment conducive to industrial development.

In this study, we have used ASI data with old classification up to 1997-98 (Box 5.1) and with the new classification in 3 digits for the years 1998-99 and 1999-00. The ASI covers only registered manufacturing activities (broadly factory sector) and hence, this study has been confined to the registered manufacturing sector.

The analysis reveals that during the sixties, the value added by consumer-goods industry contributed 52 per cent of the total, while the remaining 48 per cent came from capital and intermediate industries. But by 1997-98, the consumer-goods industry accounted for a mere 16 per cent of the value added and capital and intermediate industries together contributed about 84 per cent.

In the Table 5.1, we find that Maharashtra, which was in a commanding position during the seventies as far as the share in manufacturing was concerned, faced a decline during the late eighties. But with the introduction of New Economic Policy in the nineties, the State has been able to regain and improve its position. At this juncture, it is felt that it would be useful to critically study the turn-around of the sector with a view to provide guidelines for future growth.

Maharashtra's Industrial Economy

Value of Output

The analysis at three-digit classification level for the state industries, i) based on inputs and ii) based on uses, reveals the following:

An input-based classification analysis (Table 5.2) indicates that Maharashtra's major industries are chemical, engineering and agro/food-based. The

Box 5.1: NIC Classification- 2 Digit Level

Industrial Code	Description of Industry Group	Industrial Code	Description of Industry Group
20	Manufacture of Food Products (Includes Industry Group 21 - Manufacture of Other Food Products)	30	Manufacture of Basic Chemicals and Chemical Products (Except Products of Petroleum and Coal)
21	Manufacture of Other Food Products (Includes Industry Group 20 - Manufacture of Food Products)	31	Manufacture of Rubber, Plastic, Petroleum and Coal Products; Processing of Nuclear Fuels
22	Manufacture of Beverages, Tobacco and Related Products	32	Manufacture of Non-Metallic Mineral Products
23	Manufacture of Cotton Textiles	33	Basic Metal and Alloys Industries
24	Manufacture of Wool, Silk and Man-made Fibre Textiles	34	Manufacture of Metal Products and parts, except machinery and Equipment
25	Manufacture of Jute and Other Vegetable Fibre Textiles (except Cotton)	35	Manufacture of Machinery and Equipment other than Transport Equipment (and Excluding Manufacture of Scientific Equipment, Photographic / Cinematographic Equipment and Watches & Clocks)
26	Manufacture of Textile Products (including wearing apparel)	36	Manufacture of Machinery and Equipment other than Transport Equipment (and excl. Manufacture of Scientific Equipment, Photographic / Cinematographic Equipment and Watches and Clocks)
27	Manufacture of Wood and Wood Products: Furniture and Fixtures	37	Manufacture of Transport Equipment and Parts
28	Manufacture of Paper and Paper Products and Printing, Publishing & Allied Industries	38	Other Manufacturing Industries (incl. Manufacture of Scientific Equipment, Photographic / Cinematographic Equipment and Watches & Clocks)
29	Manufacture of Leather and Leather Products, Fur & Leather Substitutes	39	Repair of Capital Goods

Source: Annual Survey of Industries, CSO

shares of output of chemical and agro/food based industries have declined in 1999-2000 when compared to shares in 1998-99.

Further, an analysis of the use-based classification (Table 5.3) indicates that the major share is from the basic goods sector. This is followed by industries manufacturing consumer non-durable goods, capital goods and consumer durable goods. It is also observed that the share of output from industries manufacturing basic goods has gone down from 38.36 per cent in 1998-99 to 33.23 per cent in 1999-2000.

Table 5.1: Maharashtra's Share in Indian Manufacturing Sector

(Figures in per cent)

Year	Number of Factories	Fixed Capital	Working Capital	Number of Workers	Value of Gross Output	Net Value Added
1979-80	15.57	14.90	19.85	16.71	23.70	24.87
1985-86	14.82	15.63	27.73	15.14	22.54	25.88
1991-92	12.21	15.41	14.81	12.69	17.67	17.22
1997-98	13.74	17.18	18.26	12.70	19.05	19.42
1999-00 (P)	14.45	17.52	18.61	13.60	20.19	22.32

Note: Estimated from various issues of Annual Survey of Industries, CSO

Table 5.2: Growth of Value of Output: Input-Based Classification

(Figures in per cent)

Classification	Value of output	
	1998-99	1999-2000
Agro-based	15.54	14.50
Textile-based	7.45	8.13
Live stock-based	0.20	0.14
Forest-based	0.10	0.12
Metal/Mineral-based	11.41	10.22
Chemical-based	31.48	27.52
Engineering-based	23.25	25.46
Misc.-based	10.57	13.91

Source: Estimated from Various issues of Annual Survey of Industries, CSO

Table 5.3: Growth of Value of Output: Use Based Classification

(Figures in per cent)

Classification	Value of output	
	1998-99	1999-2000
Basic goods	38.36	33.23
Capital goods	21.34	22.27
Intermediate goods	1.33	1.44
Consumer durable goods	12.23	16.25
Consumer non-durable goods	26.71	26.78

Source: Estimated from Various issues of Annual Survey of Industries, CSO

Employment

The estimated annual compound growth rate of employment for the period from 1980-81 to 1997-98 for all industries show that the number employed in the state increased by 0.75 per cent per annum. This occurred mainly in the Non-agriculture Related industries (NAGRIND) while Agriculture Related industries (AGRIND) experienced a fall in employment during this period (Table 5.4). A large number of industries experienced a fall in the employment during this period viz, manufacturing of cotton textile (23), wool, silk and synthetic fibre textiles (24), wood and wood products (27) and transport equipment and parts (37). However, industries such as food and food products (20-21), beverages, tobacco and tobacco products (22), textile products (26), leather and leather products (29), chemical and chemical products (30), rubber, plastic, petroleum and coal products (31), metal products and parts (34) and other manufacturing industries (38) are the major industries, which recorded an increase in the number of employees during this period.

Table 5.4: CAGR of Employment in Organised Manufacturing Sector of Maharashtra

(Figures in per cent)

NIC Code	Number of Employees	Production Workers	Non-Production Workers
20-21	1.03	1.18	0.79
22	2.23	2.42	0.12
23	-2.15	-2.23	-1.69
24	-1.7	-1.86	-1.06
25	-	-	-
26	3.32	2.79	5.09
27	-2.51	-2.86	-1.3
28	-0.29	-0.79	1.08
29	4.98	4.31	7.26
30	1.47	1.34	1.67
31	2.84	2.46	3.83
32	-0.05	-0.61	1.96
33	-0.34	-0.67	0.55
34	1.67	1.2	3.02
35-36	0.93	0.45	1.85
37	-0.97	-1.47	0.33
38	5.14	4.82	6.05
39*	4.38	3.82	7.09
Mfg.(2-3)	0.75	0.48	1.46
AGRIND	-0.3	-0.45	0.2
NAGRIND	1.59	1.31	2.21

Note: * Data are available from 1989-90

Source: Various issues of Annual Survey of Industries, CSO

In the case of employment in the manufacturing sector of Maharashtra, non-production workers such as persons holding supervisory or managerial positions or those engaged in administrative office, store-keeping section etc., recorded a higher growth rate than the production workers during the period. The industries such as cotton textiles (23), wool, silk and synthetic fibre textile (24), wood and wood products (27), non-metallic mineral products (32) and transport equipment and parts (37) recorded a substantial fall in the employment of production workers during 1980-81 to 1997-98 in the manufacturing sector of Maharashtra. However, industries such as beverages, tobacco and tobacco products (22), textile products (26), leather and leather products (29), rubber, plastic, petroleum and coal products (31) and other manufacturing industries (38) recorded a substantial rise in the

employment of production workers during the period. In the case of non-production workers only cotton textiles (23), wool, silk and synthetic fibre textile (24), wood and food products (27) experienced a fall in employment during the period in manufacturing sector of Maharashtra. This peculiar pattern of growth of employment means that service-sector oriented employment is increasing, whereas in production, the rising capital intensity especially in large-scale industries is adversely affecting employment of production workers. This trend of employment in the state can be expected to adversely affect the income distribution pattern in Maharashtra.

Those employed in the manufacturing sector of Maharashtra realised an increase of 2.76 per cent per annum in real wages during 1980-81 to 1997-98. This rise was relatively more in the case of NAGRIND than that in AGRIND. In the case of production workers, increase in real wages is higher than that of non-production workers in the manufacturing sector. This trend in rising real wages may be one of the reasons for slow increase in the employment opportunities for production workers.

Capital and Output

The output (in real terms) of the manufacturing sector in Maharashtra increased by 8.07 per cent per annum during 1980-81 to 1997-98. The growth rate of output of NAGRIND is relatively higher than that of AGRIND during the same period (Table 5.5). The industries such as other manufacturing industries (38), leather and leather products (29), textile products (26), chemical and chemical products (30), transport equipment and parts (37) and machinery, machine tools and parts (35-36) recorded relatively high growth rate of output during the period in the state manufacturing sector. However, industries such as cotton textiles (23) recorded very low growth in the output while wood and wood products recorded a fall in the output during this period in the manufacturing sector.

In the case of gross fixed capital the manufacturing sector registered a growth rate of 10.08 per cent per annum during 1980-81 to 1997-98. This growth is relatively higher in the NAGRIND than in the AGRIND. The industries such as non-metallic mineral products (32), basic metal and alloys industries (33), rubber, plastic, petroleum and coal products (31), textile products and leather and leather products (29) recorded relatively higher growth in capital during this period in the state manufacturing sector. These are the capital-intensive industries. The higher growth rate of capital than that of output implies the rising capital intensity in these industries during the period. However, the industries such as cotton textile, wood and wood products registered relatively lower growth in capital.

Table 5.5: CAGR of Output and Fixed Capital in Organised Manufacturing Sector of Maharashtra (Constant Price; 1982=100)

(Figures in per cent)

NIC Code	Value Of Output	Gross Fixed Capital
20-21	7.53	7.17
22	4.76	11.57
23	1.93	5.35
24	4.7	10.17
25	-	-
26	11.61	11.49
27	-0.78	6.68
28	5.5	9.75
29	10.01	11.26
30	9.45	9.9
31	7.84	13.81
32	7.48	17.17
33	6.98	14.16
34	6.01	10.89
35-36	8.15	8.57
37	8.88	7.23
38	19.11	9.82
39*	14.74	12.45
Mfg.(2-3)	8.07	10.08
AGRIND	5.94	7.98
NAGRIND	8.84	10.87

* Data are available from 1989-90

Source: Various issues of Annual Survey of Industries, CSO

Location of Industries

In order to identify the industry-wise location status and their potential for higher growth, we have tried to use the Location Quotient (Florence, 1948) which is used to measure the concentration of any particular industry in any defined geography area. In short, Location Quotient can be defined as the ratio of the percentage share of a given industry in terms of total employees employed in the manufacturing sector of a given state to the percentage share of that industry in the national level to the total

number of employees in the national manufacturing sector. The location quotient can be defined as follows:

$$Location\ Quotient: \frac{(ES_i / ES_m) * 100}{(EN_i / EN_m) * 100}$$

Where,

ES_i = Employment in the i^{th} industry of the State

ES_m = Employment in the manufacturing sector of the State

EN_i = Employment in the i^{th} industry in national Manufacturing Sector

EN_m = Employment in the National Manufacturing Sector

If the location quotient of a given state in respect of a particular industry is more than unity, it means that the state has a larger share in the distribution of that particular industry than warranted by its share in the distribution of employment in the manufacturing sector. On the other hand, if the location quotient of a given state in respect of a particular industry is less than unity, it means that the state has a smaller share in the distribution of that industry than its due share in the country. The variation in the value of the location quotient of a given state in respect of a particular industry over a period of time reflects the changes in the relative importance of the state with regard to that industry. Precisely, location quotient explains the localisation of a particular industry in a given state.

The location quotient has been estimated for the two digit industries of Maharashtra for the years 1980-81, 1991-92 and 1997-98 (Table 5.6). The location quotient in general is declining over the period for AGRIND in the manufacturing sector of Maharashtra. Industries such as cotton textiles, wool, silk and synthetic fibre, textile products, wood and wood products recorded a decline in the location quotient. However, industries such as metal products, machinery, machine tools and parts, and other manufacturing industries recorded an increase in location quotient.

Competition Among the States

During the 1980s many states realised their industrial backwardness and have been attempting to correct their industrial policies. These states started providing fiscal incentives, better infrastructural facilities, less bureaucratic administration, to name a few. States like Gujarat, Tamil Nadu, Karnataka, Andhra Pradesh etc. are competing with Maharashtra and are trying to provide a better climate for the industrial relations.

Table 5.6: Location Quotient: Maharashtra

(Figures in per cent)

NIC Code	1980-81	1991-92	1997-98
20-21	0.63	0.81	0.73
22	0.87	0.8	0.9
23	1.25	1.25	1.19
24	1.68	1.15	1.03
25	0	0	0
26	1.31	0.9	0.51
27	0.48	0.35	0.36
28	1.01	0.98	1.08
29	0.17	0.21	0.27
30	1.48	1.4	1.31
31	1.35	1.24	1.27
32	0.6	0.56	0.52
33	0.69	0.66	0.67
34	1.62	1.3	1.71
35-36	1.31	1.25	1.43
37	1.17	1.13	1.16
38	1.61	1.74	1.91
39*	*	1.63	1.11
AGRIND	0.88	0.88	0.82
NAGRIND	1.14	1.11	1.17

* Data are available from 1989-90

Source: Various issues of Annual Survey of Industries, CSO.

Competitiveness of a state can be broadly considered as the overall health of the economy in terms of various observable economic and social indicators, which adequately demonstrate the level of development attained by the states. In a market economy, the relative competitiveness of the states becomes the guiding factor for the private corporate sector while evolving their future investment strategies. Therefore, it is necessary to analyse the relative competitiveness of Maharashtra on various performance indicators.

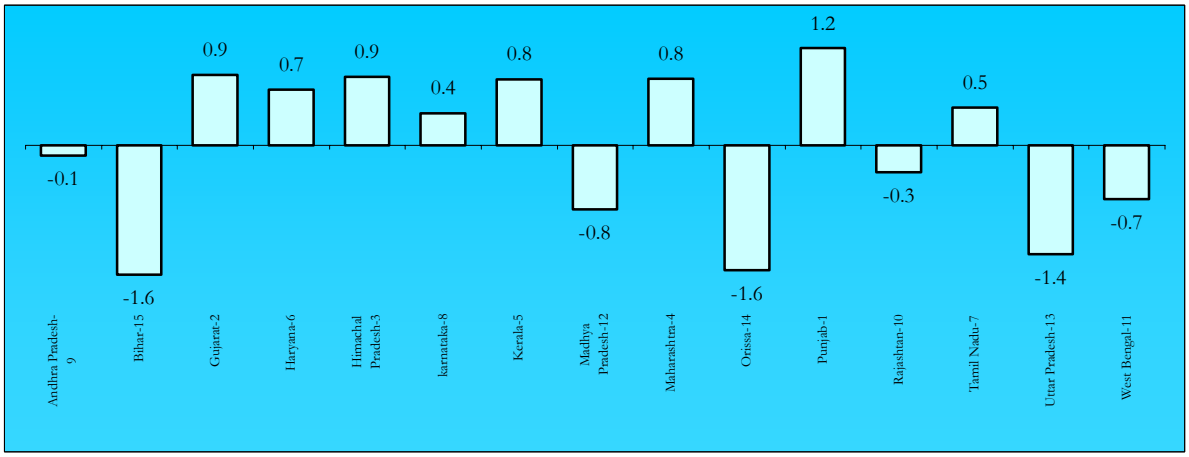
Availability of Physical Infrastructure

In this section, we discuss the availability of power, road and rail transport across the states. These constitute, inter alia, the physical infrastructure and are crucial for the growth and productivity performance of the states.

Availability of Power

Although the availability of power has improved in all states, there is hardly any drastic change (during the period 1991-92 to 2000-01) in the ranking of the states in terms of per capita availability of power or

Figure 5.2 (a): Physical-Financial Infrastructure Index



Note: The number against the name indicates the rank of each state.

reduction in disparities in the distribution of power across states. Both in 1991-92 and 2001-02, the states with higher per capita availability of power (in descending order) as compared to the all India level were Punjab, Haryana, Gujarat, Maharashtra, Tamil Nadu, Karnataka and Andhra Pradesh.

Availability of Road

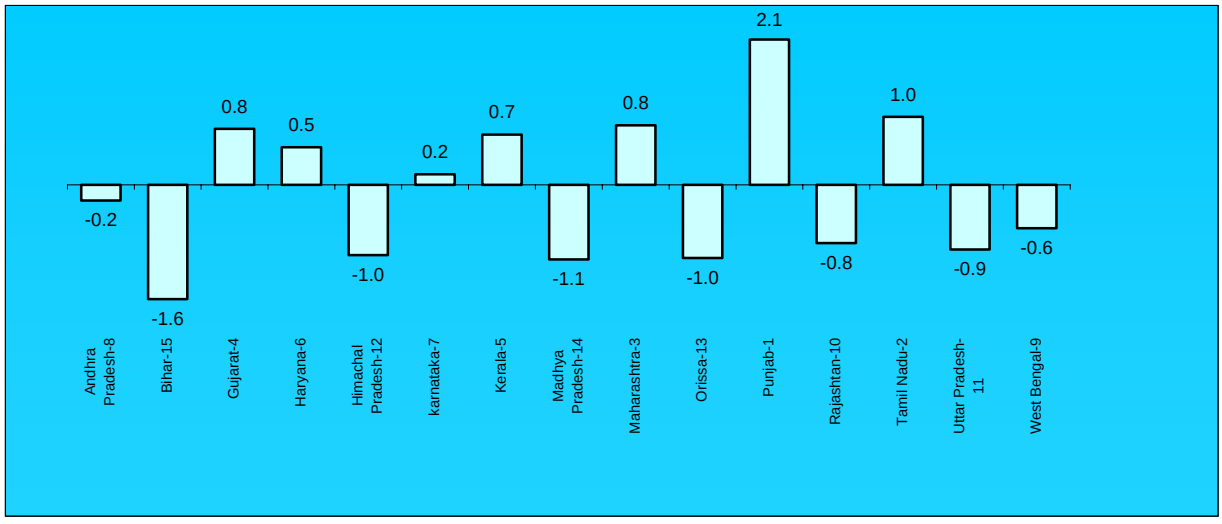
It is seen that in states like Bihar, Uttar Pradesh and West Bengal, the road network is much poorer as compared to the proportion of population of these states. As against this, Maharashtra and Tamil Nadu are relatively better placed. Maharashtra seems to have improved the availability of road transport over the years as compared to other states. For other selected states, the disproportion between the road transport and population shares is not very striking.

Infrastructure Index

To arrive at an infrastructure index, we have considered all possible variables representing various sectors of infrastructure (transportation, power, etc.) and have categorised them into physical, financial and social infrastructure. Figure 5.2 (a) and 5.2 (b) suggests that Punjab is the top ranking state in terms of overall infrastructure development, followed by Gujarat and Maharashtra in the second and third positions respectively. These are followed by Kerala and Tamil Nadu, respectively.

In general, the trend observed is that the states

Figure 5.2 (b): Social Infrastructure Index



Note: The number against the name indicates the rank of each state.

of the southern and western region are relatively better off in comparison to other regions in terms of infrastructure availability.

Policy Incentives

Besides the availability of physical infrastructure, policy incentives can also activate productivity and growth process. Bajpai and Sachs (1999) have used various criteria such as incentives for investment, power sector reforms, industrial policy reform, infrastructure reforms and tax reforms implemented at the state-level to classify the states into three categories. These categories are: (i) reform-oriented states (Andhra Pradesh, Gujarat, Karnataka, Maharashtra and Tamil Nadu); (ii) intermediate reformers (Haryana, Orissa and West Bengal); and, where the economic performance is measured in terms of growth rate, higher investment (both domestic and foreign), increase in software exports and improvement in primary health and education.

Competitive Classification of Industries

The relevance of labelling a state/national economy as competitive in the context of the changed global economic environment and the pursuit for competitiveness as an excuse for picking winners is a matter of continuous debate. Yet, this has become a pre-occupation of policy planners the world over. A country's industries can be classified into dynamic and non-dynamic product categories. There are several ways of measuring dynamism. For the purpose of this analysis, a three-digit industry belongs to the dynamic product category if its share is seen as rising in the basket of output of the entire manufacturing industry. If the share is stagnant or declining over a period of time, then the three-digit industry is in the non-dynamic category. Two key indicators were used to assess the competitive strength and weaknesses of manufacturing sector state-wise.

Relative Production Competitiveness Index (RPC)

This is defined as the production share of a particular industry or cluster (at the three-digit) in total manufacturing of a state divided by the average share of the state in total national manufacturing of all products. A value greater than 1 indicates that a given state cluster or industry has a greater share of the country's production than average.

Relative Production Competitiveness Growth Index (RPCGI)

RPCGI is calculated by dividing the RPC for the current period 1999-2000 by the RPC for the previous period (1998-99). A figure greater than 1 shows the competitiveness in production during the period under analysis. With regard to the economic status of a state, three-digit industries can be classified into the following four categories using relationships between the above two ratios.

Rising stars (RPC>1 and RPCGI>1)

Lost Opportunity (RPC>1 and RPCGI<1):

Falling star/Possible Future star (RPC<1 and RPCGI>1)

Retreat (RPC<1 and RPCGI<1)

On the basis of ASI 1998-99 and 1999-2000 results, RPC and RPCGI have been calculated for Maharashtra State. The industries (at the 3 digit level) of Maharashtra State have been classified into these four groups (Table 5.7, 5.8, 5.9 and 5.10).

Rising stars (RPC>1 and RPCGI>1): Dynamic industries in which the state's share in national industry product is increasing.

Table 5.7: The Rising Stars

NIC code	Industry
154	Manufacture of other food products
155	Manufacture of beverages
201	Saw milling and planking of wood
210	Manufacture of paper and paper products
222	Printing and service activities related to printing
223	Reproduction of recorded media
243	Manufacture of man-made fibres
261	Manufacture of glass and glass products
289	Manufacture of other fabricated metal products; metal working service activities
293	Manufacture of domestic appliances, n.e.c.
300	Manufacture of office, accounting and computing machinery
323	Manufacture of Television and radio receivers, sound or video recording or reproducing apparatus, and associated goods
331	Manufacture of medical appliances and instruments and appliances for measuring, checking, testing, navigating and other purposes except optical instruments
353	Manufacture of aircraft and spacecraft
359	Manufacture of transport equipment n.e.c.
369	Manufacture n.e.c.

Lost Opportunity (RPC>1 and RPCGI<1): Dynamic industries in which the state's share in national industry product is declining.

Table 5.8: Lost Opportunity

NIC code	Industry
232	Manufacture of refined petroleum products
242	Manufacture of other chemical products
291	Manufacture of general purpose machinery
292	Manufacture of special purpose machinery
341	Manufacture of motor vehicles
342	Manufacture of bodies for motor vehicles; manufacture of trailers and semi-trailers
361	Manufacture of furniture

Falling stars/Possible Future stars (RPC<1 and RPCGI>1): Non-dynamic industries in which the state's share in national industry product is increasing; non-dynamic industries that have the potential to be dynamic.

Table 5.9: The Falling Stars/Possible Future Stars

NIC code	Industry
171	Spinning, weaving and finishing of textiles
172	Manufacture of other textiles
173	Manufacture of knitted and crocheted fabrics and articles
181	Manufacture of wearing apparel, except fur apparel
192	Manufacture of footwear
221	Publishing
251	Manufacture of rubber products
252	Manufacture of plastic products
313	Manufacture of insulated wire and cable
314	Manufacture of accumulators, primary cells and primary batteries
322	Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy
332	Manufacture of optical instruments and photographic equipment
343	Manufacture of parts and accessories for motor vehicles and their engines
351	Building and repair of ships & boats
352	Manufacture of railway and tramway locomotives and rolling stock

Retreat (RPC<1 and RPCGI<1): Non-dynamic industries in which state's share in national industry is decreasing.

Tables 5.7 to 5.10 indicate that though there is significant number of rising stars in Maharashtra's industries, the picture is marred by lost opportunities in some industries. Significant among these are refined petroleum products, other chemical products (pharmaceutical, medicinal chemicals and botanical products, soap & detergents, paints/varnishes, pesticides), special purpose machinery (agricultural and forestry machinery, machinery for food, beverages & tobacco processing), and motor vehicles industries.

Table 5.10: Retreat

NIC code	Industry
151	Production, processing and preservation of meat, fish, fruits, vegetables, oils and fats
152	Manufacture of dairy products
153	Manufacture of grain mill products, starches and starch products, and prepared animal feeds
160	Manufacture of tobacco products
191	Tanning and dressing of leather, manufacture of luggage hand-bags, saddlers and harness
202	Manufacture of products of wood, cork, straw, and plating materials
231	Manufacturing of coke oven products
241	Manufacture of basic chemicals
269	Manufacture of non-metallic mineral products n.e.c.
271	Manufacture of basic iron & steel
272	Manufacture of basic precious and non-ferrous metals
273	Casting of metals
281	Manufacture of structural metal products, tanks, reservoirs and steam generators
311	Manufacture of electric motors, generators and transformers
312	Manufacture of electricity distribution and control apparatus
315	Manufacture of electric lamps and lighting equipment
319	Manufacture of other electrical equipment n.e.c.
321	Manufacture of electronic valves and tubes and other electronic components
333	Manufacture of watches and clocks

Total Factor Productivity Growth Analysis

This section aims at assessing the efficiency of the industrial sector in Maharashtra at two-digit level by

Total Factor Productivity (TFP) analysis. The time-span covered in the study is 1979-80 to 1997-98. The summary of the results adopting the Translog index number approach to calculate TFP growth is provided in Table 5.11.

This attempts to bring out the relative performance of various two-digit level-manufacturing segments over the study period. This constitutes an analysis of the performance of the manufacturing sector in the light of 1991-92 liberalisation policy initiatives, mentioned as winners and losers in the Table 5.12. Changes that have come about in the comparative shares of the different inputs, their growth rates, and the resulting changes in the output and productivity have been looked into for this purpose. The study includes the analysis of data on 19 two-digit level industries within the manufacturing sector of which, the data for 2 industries is not complete.

Table 5.11: Comparison of the pre- and post-liberalisation scenario in the manufacturing sector

Industry Code	Capital Share in Output	Labour Share in Output	Intermediate Input Share in Output	Output Growth Rate	Capital Growth rate	Labour Input Growth rate	Growth rate of Intermediate Inputs	TFPG
20	0.027	0.052	0.767	0.026	0.015	0.023	0.031	0.000
20	0.021	0.042	0.891	0.037	0.049	0.009	0.042	-0.003
22	0.022	0.109	0.561	0.013	0.005	0.005	0.020	0.001
22	0.035	0.073	0.696	0.059	0.102	0.028	0.062	0.011
23	0.036	0.193	0.602	-0.005	-0.006	-0.021	0.000	-0.002
23	0.046	0.138	0.783	0.018	0.020	-0.006	0.027	-0.003
24	0.034	0.103	0.623	0.009	0.003	-0.004	0.013	0.001
24	0.064	0.066	0.708	0.052	0.153	0.005	0.059	0.001
25	0.008	0.044	1.042	0.164	0.689	0.123	0.261	0.152
25	0.042	0.044	0.666					
26	0.017	0.071	0.616	0.023	0.015	0.002	0.023	0.008
26	0.024	0.046	0.623	0.027	0.069	0.017	0.032	0.008
27	0.020	0.093	0.614	-0.012	-0.064	-0.018	-0.008	-0.002
27	0.026	0.067	0.691	0.067	0.109	0.004	0.084	0.002
28	0.051	0.128	0.589	0.022	0.025	0.002	0.026	0.005
28	0.056	0.078	0.675	0.036	0.081	0.030	0.043	0.001
29	0.020	0.105	0.596	0.013	0.037	0.000	0.012	0.006
29	0.022	0.081	0.660	0.068	-0.002	-0.005	0.032	0.065
30	0.039	0.083	0.634	0.015	0.036	0.005	0.021	0.000
30	0.051	0.054	0.668	0.052	0.025	0.012	0.047	0.018
31	0.022	0.028	0.793	0.033	0.042	0.014	0.035	0.004
31	0.046	0.023	0.895	0.042	0.070	0.026	0.051	-0.005
32	0.065	0.111	0.557	0.040	0.112	0.010	0.042	0.011
32	0.055	0.073	0.637	0.016	0.065	0.010	0.018	-0.001
33	0.035	0.066	0.733	0.027	0.041	-0.002	0.033	0.002
33	0.068	0.033	0.819	0.030	0.044	0.014	0.030	0.003
34	0.027	0.126	0.593	0.010	0.017	-0.011	0.016	0.002
34	0.052	0.084	0.705	0.069	0.091	0.044	0.076	0.007
35	0.033	0.125	0.547	0.030	0.016	0.015	0.039	0.006
35	NA	NA	NA	NA	NA	NA	NA	NA
36	0.032	0.115	0.585	0.035	0.032	0.016	0.043	0.006
36	NA	NA	NA	NA	NA	NA	NA	NA
37	0.046	0.126	0.611	0.028	0.010	0.011	0.031	0.008
37	0.029	0.075	0.719	0.052	0.080	0.019	0.068	0.000
38	0.024	0.110	0.571	0.032	-0.001	0.011	0.041	0.007
38	0.017	0.047	0.779	0.093	0.178	0.055	0.090	0.019
39	0.024	0.231	0.735	-0.006	-0.022	0.005	-0.026	0.007
39	0.026	0.312	0.460	0.093	-0.005	0.027	0.039	0.068

Note: Post liberalisation figures in lighter shade

In line with the objectives of the New Economic Policy, manufacturing sector is expected to become more productive and efficient. Hence, we would expect higher growth rates in output and productivity. This, as expected, has been the general trend barring the non metallic products manufacturing sector (32), where the output registered an annual average growth rate of 1.6 per cent after liberalisation as against 4 per cent prior to liberalisation. Growth rates of Output of a number of industries have shown notable increases, many of which (namely manufacture of wood and wood products, furniture and fixtures (27) and repair of capital goods (39) have turned from negative to significantly high positive figures.

In accordance with most common beliefs, liberalisation is known to displace labour from the production process due to the functioning of the free market mechanism. This has proved to be a misconception as the study reveals. Even though in 18 of the industries, labour share in total output declined after the reforms (only in industry 39 - repair of capital goods, the labour share has increased from 23.1 per cent to 31.2 per cent during the same period), it is evident from the rate of growth of labour, that there has been a distinct tendency for it to increase. The fall in the share of labour in spite of a higher growth rate can be attributed to a relatively higher growth rate of inputs other than the labour. The only two industries showing a decline in the rate of labour growth are (20) - manufacture of food products and (29) - manufacture of leather and leather products, fur and leather substitutes. These fears of labour displacement thus seem to have been unfounded to a certain extent, at least in the case of the manufacturing sector in Maharashtra.

With respect to the share of capital in the total output, in majority of the industries, there has been a tendency for it to increase following the reforms. However, there have been cases where it either declined or remained unchanged. Corresponding to this, as expected, the rate of growth of capital has shown the same trend (barring the case of a few industries).

In most of the industries, the intermediate inputs have had the dominant share in the output and this share has increased in the post-liberalisation

Table 5.12: Winners and Losers of Liberalisation (on the basis of TFPG averages)

Winners	Losers
1. Manufacture of Beverages, Tobacco and Related Products (22)	1. Manufacture of Food Products (20) (Includes Industry Group 21 - Manufacture of Other Food Products),
2. Manufacture of Wood and Wood Products: Furniture and Fixtures (27)	2. Manufacture of Cotton Textiles (23)
3. Manufacture of Leather and Leather Products, Fur & Leather Substitutes (29)	3. Manufacture of Paper and Paper Products and Printing, Publishing & Allied Industries (28)
4. Manufacture of Basic Chemicals and Chemical Products (Except Products of Petroleum and Coal) (30)	4. Manufacture of Rubber, Plastic, Petroleum and Coal Products; Processing of Nuclear Fuels (31)
5. Basic Metal and Alloys Industries (33)	5. Manufacture of Non-Metallic Mineral Products (32)
6. Manufacture of Metal Products and parts, except machinery and Equipment (34)	6. Manufacture of Transport Equipment and Parts (37)
7. Other Manufacturing Industries (incl. Manufacture of Scientific Equipment, Photographic / Cinematographic Equipment and Watches & Clocks) (38)	
8. Repair of Capital Goods (39)	

period. Corresponding to this, there has been a distinct rise in the rates of growth of intermediate inputs after the reforms in most of the industries except (34)- the manufacture of metal products and parts, except machinery and equipment. The study reveals that that there are inter-industry variations in the growth performance within the manufacturing sector following the reforms. Certain sectors have fared better in the post-reform period as reflected in the total factor productivity growth rate while certain sectors have lost out in the process. Total factor productivity rate in 9 industries were no less (in 7 industries higher & in 2 unchanged) than the pre-reform average, in the remaining 5 industries on which data was available this rate came down from the pre-liberalisation level.

Small Scale Industries in Maharashtra

The small scale industry in Maharashtra contributes significantly to the SDP in terms of production, employment and exports, and therefore, this section tries to explore the potential of the same.

Of the 1,55,621 cumulative number of SSI units set up in Maharashtra till March end 2003, 268 are export-oriented. SSI happens to be a major source of employment as approximately 17 lakh workers are employed with an average of 7 workers employed per unit.

Though the SSI sector is an important component of industrial development, it is plagued with sick industrial units. Maharashtra has done commendable progress in reducing the number of sick units from 8056 in 2001 to 4762 in 2003, but still lots need to be done. In this direction, the recommendations are as below:

Policy

Create a sound policy environment to help the sector cope up with the emerging challenges of globalisation. For this, state-level advisory boards need to be constituted and separate policy for Tiny and Micro enterprises is required. The investment limit for ancillary units should be upwardly revised while special thrust on modernisation and technology upgradation of existing units needs to be provided.

Industrial Legislation

Simplify the measures to include formation of high-powered committee for recommending single comprehensive legislation for SSI units and simplification of inspection procedures based on self-declaration and post-audit.

Credit

Strengthen credit delivery system through earmarking flow of bank credit to micro, tiny and small enterprises and introducing scheme for credit rating of small-scale units.

Rehabilitation of Sick Units

Put in place an appropriate policy framework for addressing the problem of industrial sickness through strengthening of State Level Inter-Institutional Committee (SLIC) for timely identification and rehabilitation of sick units and exploring the possibility of introducing statutory provision for the revival of viable sick units.

Technology Development

Modernise small-scale enterprises through a multi-pronged approach, inter alia, including formation of high powered committee to recommend linkages between R&D institutions, training institutions, technology banks and user groups and introduction of standards for testing.

Marketing

Extend comprehensive marketing support through Project Sub-contracting Promotion policy and Vendor Development Programme for linkages between small, medium and large industries.

Fiscal Regime

Create an appropriate fiscal environment through rationalisation of taxes, tariffs and subsidies for small-scale industries.

Development of Small Enterprises: Cluster Approach

Clusters, from an international perspective, is a major strategic approach towards developing small and medium enterprises, because of its excellent linkages that are possible through key factors: service institutions, presence of units along various points in the value chain in fostering competitiveness, building relationships with big firms, developing niche markets, etc.

Clusters of enterprises making the same, similar or complimentary products are fast becoming the norm world over. They have many advantages:

- Recognition of heterogeneity: Product characteristics, technology, type of markets served, production scale, etc.
- Collective external efficiency: A critical mass of firms producing a similar range of products attracts service providers. There is a free flow of useful information and market linkages are easily established. The cluster from which all the member firms derive benefits earns an image of collective efficiency.
- Ease of customisation of support services: Policy makers and development agencies in the cluster can ensure customisation of their policies and support systems. That helps the cluster to go on to a higher growth trajectory in comparison to generic support instruments applicable to all types of small enterprises.

Industrial clustering has become popular in India too. There are more than 350 modern SME clusters and over 2,000 artisan-based, rural clusters. Roughly 60 per cent of manufactured exports emanating from the Small Scale Industries (SSI) sector originate in clusters. They are concentrated mainly in the northern and western regions of India as is evident from the Table 5.13:

Clusters in Maharashtra

Maharashtra has the highest number of clusters (66 including 55 modern ones). The important ones in Maharashtra are:

- Auto components in Pune and Aurangabad.
- Basic Drugs in Mumbai, Thane-Belapur, Pune-Tarapur.
- Cashew Processing in Sindhudurg, Vaugurla Ratnagiri.
- Chappals in Kolhapur.
- Cotton seed oil in Akola Amravati.
- Electronics in Pune and Mumbai.
- Raisins in Nashik and Solapur.
- Pharmaceuticals in Aurangabad.
- Powerloom in Bewandi Malegaon, Bhivandi and Nagpur.
- Readymade garments in Pune, Nagpur, Mumbai.
- Rice Milling in Bhandara, Chandrapur and Gadchiroli.
- Steel Furniture in Nagpur and Nashik.

Table 5.14 provides a comparative statement of the clusters of Maharashtra vis-à-vis other states. It reflects the export orientation of the clusters of Maharashtra, which is comparatively much higher than the competing states. The number of market-based clusters too is high in Maharashtra.

Recommendations regarding clusters

Our policy recommendations regarding the implementation of the cluster approach are drawn from UNIDO's work on clusters as well as lessons learnt from successful clusters. These are listed below:

- The private sector should be providers of common services rather than state-level public sector agencies.
- FDI into clusters that have inherent export capabilities should be encouraged.
- The state should involve clusters in dialogues to evolve policies and plans on the industry.
- Flexible and unconventional support instruments

Table 5.13: State-wise Concentration of Clusters

Types of Clusters	U.P	Rajasthan	Punjab	Karnataka	Haryana	Maharashtra	Gujarat
Clusters	42	16	23	26	22	66	46
Natural	37	16	23	25	21	63	39
Induced	5	0	0	1	1	3	7
Modern SSI cluster	18	14	20	13	18	53	37
Large Unit centered	0	0	4	1	0	1	1
Horizontal	28	12	15	24	14	50	34
Vertical	6	1	1	0	1	8	4
Both	5	3	3	1	7	7	6

Source: UNIDO

Table 5.14: Comparative Statement on Clusters

Export Orientation	U.P	Rajasthan	Punjab	Karnataka	Haryana	Maharashtra	Gujarat
High	28	8	15	17	7	26	1
Medium	6	0	5	5	8	23	12
Low	6	8	3	4	7	17	21
Infrastructure oriented	0	0	0	0	1	1	5
Market based	29	9	18	11	14	42	25
Resource based	11	7	5	14	6	23	16
Competition with large units	28	7	15	11	9	29	30

Source: UNIDO

should be introduced. A number of consortia could be formed for export promotion, mutual credit guarantee and purchases. The institutional capacities of local associations can be upgraded. These are some of the support instruments that can be exploited to the advantage of clusters and their local economies.

- Positive competition should be induced. Encouraging competition, both external and internal, for clusters based on quality rather than price would ensure motivation for upgradation, which is necessary for units in Maharashtra to retain their competitiveness.
- Co-operation mechanisms should be induced. Clusters could be encouraged to develop task forces so as to make them self-sufficient to the maximum extent possible.
- Stimulate induction of new firms: A continuous process of introducing new firms into the clusters and phasing out of ineffective ones could be performed. The process can be hastened by identifying the gaps in the value chain, which would necessitate the entry of a particular kind of firm. This is done not by the conventional system of providing financial incentives but through a positive approach of providing services and linkages with the local associations and research bodies.
- A database on clusters should be built. Clusters should be typecast into them according to their production and marketing at three levels: local, national and international.
- Policy support and developing assistance to protect the artisan clusters and promote the potential modern SSI clusters should be provided.

Spread of Industrialisation in Maharashtra

After taking a stock of industrialisation in Maharashtra, this section attempts to analyse the distributions of this progress, i.e., the geographical spread of industrialisation.

For this, the nature and extent of facility and incentives provided by the state government is used to measure the level of industrialisation. The assumption used is that a district with more number of blocks categorised as A grade is comparatively more industrialised than a district with blocks in D or D+ grade. The grading used in this analysis is the grading provided by SICOM.

Figure 5.3 shows the six divisions of Maharashtra and the districts in each of them.

Figure 5.3: The Divisions of Maharashtra

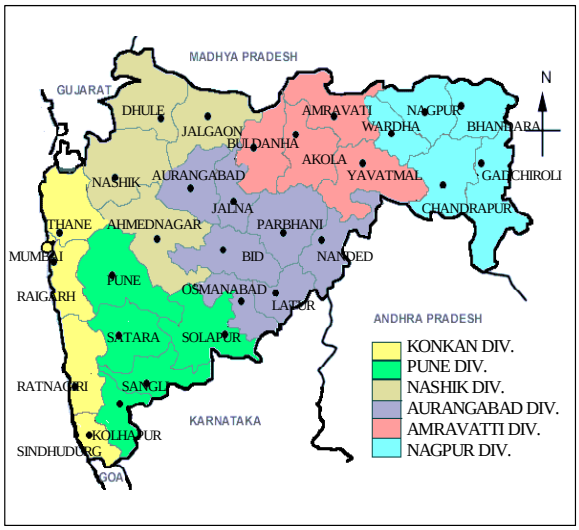
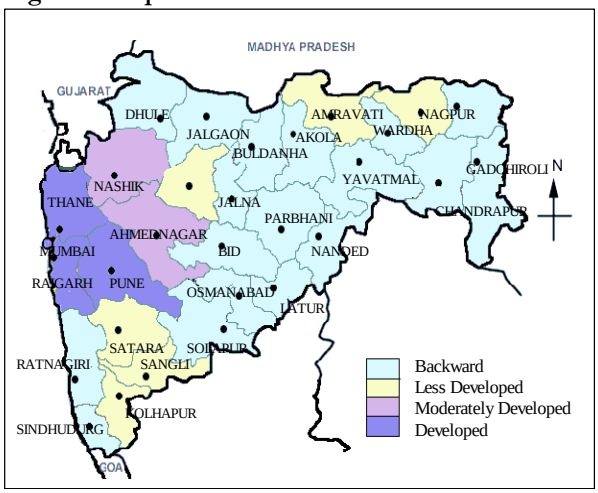


Figure 5.4 shows the level of industrialisation categorised into four types viz: Backward, Less-Developed, Moderately developed and Developed. It is noticed that industrialisation has happened in and around Mumbai. The districts of Pune, Thane and Raigarh are the developed districts with a few

less developed pockets. Nashik and Ahmednagar are moderately developed while Satara, Sangli, Kolhapur, Aurangabad, Amravati and Nagpur are less developed. The rest of Maharashtra is backward.

Figure 5.4: Spread of Industrialisation



Attracting Foreign Direct Investment

This section focuses on the role of FDI and the measures taken by the state governments to boost the investment.

Factors Affecting Foreign Investments

In the studies related to foreign investment in India a number of factors influencing FDI inflow were identified. Market size is one such factor. Foreign investment is also attracted towards those host countries wherein probabilities or confidence of earning relatively higher profits happens to be more. Risk factors also play an important role in determining the FDI flows in a country. It is found that macro-economic policies are as important a factor in determining the inflow of foreign investment, as specific policies are themselves determinants in attracting foreign investment.

Since 1991, states in India have enjoyed more freedom in forming their respective industrial policy and are using this new opportunity most vigorously to attract private investment. States are now busy wooing private investors to invest and in this regard, provide investor companies with vast range of incentives. For each state, these incentives vary across industries, depending upon the scale of production, location of unit, export orientation and a host of other factors. These incentives may be classified as:

Financial Incentives

Defined as those where the government is directly involved in the financing of the projects and comprise:

- Provision of funds for financing investment operations.
- Government involvement in fixed capital investment for new industrial units.
- Financing and other assistance in setting up technologically pioneering and prestigious units.
- Expansion and diversification of external industrial units.

Fiscal Incentives

Fiscal incentives, which mainly aim at reducing the tax burden of (and/or providing subsidies to) investors include:

- Provisions for various sales tax exemptions.
- Deferment of tax schemes.
- Octroi exemptions.
- Reduction and exemptions of other taxes such as property taxes.
- Other incentives such as export-based incentives.

Other Incentives

- Help in formulating project analysis.
- Allowances for subsidised services like generating sets.
- Feasibility reports.

Incentives for modernisation schemes, special incentives and all other incentives that cannot be classified under a common head but basically which increase the economic viability of a foreign unit by no-financial means.

Do incentives matter to investors?

It has been observed that the top-ranking factors influencing the decision to invest are related to infrastructure (namely transport, energy, telecommunication and water). Neither financial nor fiscal incentives are important, but rather good quality infrastructure that investors rank as the most important factor in investment decisions. It has been noticed that there is no strong relationship between investor friendliness and incentive provisions. However, it provides helpful hints about the attitude of the state governments.

Evidence suggests that the following factors influence FDI decisions more than incentives:

- Market characteristics.
- Production costs in the case of export oriented offshore production.
- Availability of resources.
- Tariffs and other trade barriers.
- Transport costs.
- Exchange costs.
- Political conditions and regulating environment.
- Administrative and institutional arrangements and, their effect on transaction costs, which help reduce uncertainty for potential investors.

However, it is found that there is a relatively weak but somewhat positive relationship between incentives and investment, and FDI shows a slightly higher correlation with the incentive index than internal investment decisions. It is therefore wrong to assume that incentives offered by states are irrelevant as a source for attracting FDI. When fundamental determinants across states are similar, incentives help the foreign investors towards making a particular locational decision.

Thus, we find that there are essentially two major strategies to attract FDI:

1) Through creation of Export Processing Zones (EPZs) (providing exclusivity to FDI) and
2) Through provision of "tax holiday (allowing FDI to move directly into the domestic zone and operate alongside local firms).

Industrial Sickness

Maharashtra Government has a policy of promoting industrial growth and dispersal of industries to the underdeveloped areas in the State through creation of necessary infrastructure. But along with the process of industrialisation, old industries have started becoming sick and a large number of industrial workers are being affected in the process. Table 5.15 provides an idea of the extent of the impact.

Board for Industrial and Financial Reconstruction (BIFR) was set up in May 1987 to tackle this problem of industrial sickness. So far the board has received 620 references under the sick industrial companies (Special provision) Act, 1985 of which 119 cases were sanctioned for rehabilitation while 68 were recommended to be wound up. The State Government created organisations like Maharashtra State Financial Corporation (MSFC), Maharashtra Industrial Development Corporation (MIDC), Maharashtra Small Scale Industries Development Corporation (MSSIDC) etc. In addition to the above organisations, central financing agencies such as Industrial Development Bank of India, Industrial Credit and Investment Corporation of India etc., also extended the financial assistance to the State.

Table 5.15: Number of Small, Medium & Large Scale Industries Closed Down and Workers Affected in Maharashtra during the period (1998-99 to 2002-03)

Year	Small Scale Industries		Medium & Large Scale Industries	
	Closed Down	Workers Affected	Closed Down	Workers Affected
1998-99	9274	47166	245	13602
1999-00	941	2891	95	1526
2000-01	4952	25209	333	52907
2001-02	5726	30769	203	27807
2002-03 (Up to end of Dec.)	6249	28996	339	45509

Source: Directorate of Economics & Statistics, Planning Department and GoM, 2003

Industrial Pollution

Industries are essential for the economic development of the state, but the industrial pollution by the way of waste disposal and emissions is causing health hazards and environmental degradation. According to ASI 1997-98 results, 60 per cent of total workforce of factory sector in India was engaged in such polluting industries. These industries contribute 68 per cent of industrial output, 69 per cent of net value added and 37 per cent of gross capital formation. In Maharashtra as per ASI 1997-98 results nearly 50 per cent of the factories in the state belonged to the polluting category. These industries contributed 58 per cent of the output, 50 per cent of value added in the manufacturing sector in the state. Around 50 per cent of factory workers are employed in such polluting industries. Table 5.16 classifies the industries of Maharashtra district-wise into varied levels of environment friendliness. It shows the alarming proportion of industries of Medium and Large scale are polluting in nature. Due to this,

Table 5.16: District-wise Classification of Industry by Red, Orange and Green in Maharashtra (As on 31.3.2001)

District	Industry Type												
	Large Scale				Medium Scale				Small Scale				Total
	Red	Orange	Green	Total	Red	Orange	Green	Total	Red	Orange	Green	Total	
Mumbai	99	22	1	122	75	44	34	153	875	539	3208	4622	4897
Navi Mumbai	92	12	8	112	39	24	22	85	820	260	1891	2971	3168
Raigad	32	4	-	36	35	4	4	43	271	261	411	943	1022
Kalyan	24	2	4	30	54	12	-	66	656	415	1337	2408	2504
Thane	32	2	3	37	101	43	73	217	1116	695	3577	5388	5642
Nashik	199	11	22	232	56	24	29	111	734	878	4759	6371	6714
Amravati	24	-	-	24	8	7	-	15	101	322	1364	1787	1826
Aurangabad	70	3	1	74	71	26	16	113	370	813	3416	4599	4786
Nagpur	112	2	2	116	83	19	3	105	494	1032	1872	3398	3691
Pune	135	20	26	181	121	57	29	207	801	812	3146	4759	5147
Kolhapur	60	31	-	91	92	66	-	158	536	729	5667	6932	7181
Total	**879**	**109**	**67**	**1055**	**737**	**326**	**210**	**11273**	**6774**	**6756**	**30648**	**44178**	**46506**

Source: MPCB

environmentalists are threatening with complaints and PIL to shut down the polluting industries to protect the environment. From the said facts the economy cannot afford to shut down these industries on environmental reasons. Neither the present level of environment can tolerate further pollution due to these industries. The only choice, therefore left, is to rigorously pursue the pollution abatement measures in such polluting industries.

Information Technology in Maharashtra

When one thinks of IT in Maharashtra, the focus is narrowed down to Mumbai and Pune, the only two cities that can be considered as significant contributors to the IT revolution in the state. Of these, Mumbai attracts a majority of the investment flowing into Maharashtra for almost every industry and IT is no exception.

However, of late, there has been a growing perception that Maharashtra is fast losing out to other states, especially in the field of IT. This is no good news for a state that prides itself on an excellent track record. Consider the following figures put forward by Maharashtra Industrial Development Corporation.

- Maharashtra has the highest number of software export units (1,251).
- It contributes around 30 per cent of the country's software exports.
- The largest number of ISPs in India are based in Mumbai.
- Over 35 per cent of total PC penetration is in Maharashtra.

Moreover, specialised institutions like C-DAC, IIT, VJTI and NCST are churning out skilled technical manpower to spearhead the IT revolution. Mumbai was also the first choice of the early movers in the software space like TCS, Mastic, Datamatics and Patni. But, despite the impressive track record, recent reports indicate that Mumbai could be losing out to cities in more progressive southern states like Andhra Pradesh and Karnataka. Nasscom, which recently released a report titled, 'Super Nine Indian ITES destinations,' to assess the competitiveness of nine Indian cities for IT-enabled service (ITES) companies revealed some startling facts. According to Nasscom, the ITES industry in India is experiencing the third wave of growth in terms of geographical areas of operation and services offered.

In the first phase, the industry was dominated by captive centres of large multinationals such as GE, American Express and Swiss Air, who set up operations in metros such as Mumbai and Delhi. In its second phase, the growth of the industry attracted entrepreneurs who set up operations in and around Delhi (NCR) and Mumbai. The third phase of growth has been more geographically dispersed with new locations emerging such as Hyderabad, Pune, Bangalore, Chennai and more recently Kochi.

It is this shift that is hurting old-favourites like Mumbai, as every ITES company is looking to cut down operating costs. As factors like employee costs, transportation costs and cost of real estate in Mumbai is higher than those in emerging cities,

ITES companies have naturally been attracted to cities like Kochi and Hyderabad, which offer lower operating costs. Hence, while other states are now going all out to attract IT or ITES companies, Maharashtra, which could earlier boast of its infrastructure facilities, is now grappling to build infrastructure in line with the new demands.

Maharashtra was the leading state in terms of infrastructure and in attracting IT companies, but this position has gradually been taken away by the southern states. Maharashtra lags behind because it did not aggressively take initiatives to stay in the number one slot. Compare this with southern states, where state governments are more proactive in interacting with foreign delegations. Also, one cannot be smug in the fact that our infrastructure was one of the best. In progressive sectors like IT, even in a short span of six months one can see infrastructure reach saturation levels. Hence, provisions need to be made on a continuous basis and infrastructure needs to be upgraded with the time. The southern states built infrastructure first and then invited IT companies to set up shop. Maharashtra is different from other states as it already has big companies operating and hence infrastructure needs to keep pace with the rising demand.

Despite these shortcomings, Mumbai still ranks among the very best in factors like telecom infrastructure and international connectivity. In fact, a recent study conducted by the research group Gartner ranked Maharashtra as the most preferred state in the country for the ITES industry. In terms of overall suitability, no other state can be compared to Maharashtra. When one looks at availability of trained and trainable manpower the state is way ahead of other states.

But, while Maharashtra touts impressive statistics, it has to realise that past laurels do not count in this competitive age and a state has to constantly adapt to changing times to attract businesses. For instance, the government has to take a serious look at the state of roads and try to reduce travel time.

There are certainly some areas that need immediate attention: Road conditions, local transportation and hygiene. The problem of slums around these techno parks does not send positive signals. Solutions to problems like these are not easy but the state has to focus on these aspects. Broadening and quality improvement of roads must be taken up on a priority basis. Secondly, the government should undertake a serious view of slum management and provide basic amenities like toilets in sufficient numbers.

Another bottleneck that software companies in Mumbai face is with respect to getting imported equipment cleared through customs. This is despite the fact that Mumbai has more connecting flights than any other city in the country. Materials imported by air reach the city in a matter of hours, but on an average it takes 10-12 days between landing and permission for installation of the goods at the STP unit.

Another problem is with respect to the power supply outside of Mumbai. While Mumbai boasts of uninterrupted power supply, the same is not the case with cities like Navi Mumbai, where a large number of IT players have centres. Big companies can afford to install generators, but smaller players lose out in terms of revenues, as clients don't want to face the likelihood of data loss due to power failure.

While Maharashtra still has a considerably good infrastructure when it comes to factors like power, telecom infrastructure and international connectivity, it has to realise that being good in this competitive age is not sufficient—one has to be the best.

Conclusions

Maharashtra has made considerable progress in the field of industrial development over the past five decades. It was a front-runner among the developed states of the country in terms of overall economic progress till the mid eighties. However, this situation has changed as seen from the analysis above.

It is time to have a fresh look at the policies, programmes and industrial setup for industrial promotion in the state. Past experience indicates that fiscal and financial incentives do help new ventures initially, but for their long term viability, the state has to take aggressive measures to provide efficient and cost-effective infrastructure, skilled human resource, stable environment and good governance, which are the pre-requisites for creating a proper investment climate for sustainable growth

of industrial and commercial ventures. While it is important to attract new investments, it is equally important to address the problems and concerns of the existing industries, which are passing through a difficult time.

In the context of second generation economic reforms, Maharashtra Government came up with a Statement of Industrial Policy 2001, to accelerate the flow of investments in industry and infrastructure. To improve upon these efforts, the following can be recommended for the industrial development of the state:

- A growth rate of 8 to 10 per cent should be aimed at.
- The infrastructural facilities, especially, power, good port facilities and better road network should be improved.
- Better institutional support for developing industries in the backward regions of the state should be provided.
- Streamlining of the octroi assessment and collection procedures must be performed.
- Single Window Clearance should be propagated in all the departments.
- Development of Special Economic Zones with world-class infrastructure to accelerate exports in the pattern of Schenzen in China could be planned and implemented.
- Development of social infrastructure should be enhanced.
- Export Oriented Units (EOU's) should be recognised as one of the thrust areas.
- Department of Industries should evolve suitable schemes and activate its district centres to adopt new management techniques for quality improvements, cost reduction, improved productivity and operational efficiency
- Sick Small Scale units and Non-BIFR Units should be revived.
- The conditions of the State-level financial institutions should be improved.
- Film industry should be supported and promoted.
- Efforts should be made to emphasise the comparative advantage of host base.