Data Collection Survey for Investment Promotion Program in India

Final Report

January 2020

Japan International Corporation Agency (JICA)

Nomura Reserch Institute, Co. Ltd.

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Introduction

Under President Narendra Modi, India adopted the “Make in India” policy in September 2014, aiming to create employment in manufacturing for 100 million people, and the “Skill India” policy in July 2015, to provide occupational training and boost the job uptake rate. Through these policies, the government has been encouraging private sector investment by both Indian and foreign companies, in order to promote economic growth and job creation.

To achieve the aims of these policies, the Indian government’s Department of Commerce undertook to improve 98 existing items in the government’s business improvement action plan, set out in December 2014, to create a new business improvement action plan covering 340 items. It encouraged each state and regional governments in each area under direct government authority to adopt the plan and has published rankings of progress made by each state every year since October 2015. As a result of this undertaking, protection of the rights of small investors, etc. has been favorably assessed, and in the World Bank’s “Ease of Doing Business” rankings, India moved up from 142nd place among 189 countries in 2015 to 130th place in 2016 and to 100th place in 2017.

However, being in 100th place is still far from the government’s goal of getting India into the top 50 in the “Ease of Doing Business” rankings. Complicated procedures for everything from investing to obtaining construction permits and paying taxes remain in place, and further progress needs to be made by the Department of Commerce and regional governments to implement regulatory reform to improve the investment climate. Further, in addition to the system-related issues just mentioned, firms are hesitating to invest in India because of the poor industrial infrastructure (poor roads, water shortages, power outages) and the lack of human resources with the skills and technologies required by industry.

To support the government’s program for improving the investment climate, JICA implemented the Tamil-Nadu Investment Promotion Program (TNIPP) and the Tamil-Nadu Investment Promotion Program Phase 2 (TNIPP2) for the Chennai-Bengaluru Industrial Corridor (CBIC) in the state of Tamil Nadu, and the Gujarat Investment Promotion Program (GIPP) for the Delhi-Mumbai Industrial Corridor (DMIC) in the state of Gujarat.

This study collected information on the investment climate necessary for considering policies for yen loans and support for institutional reform in the four states of Haryana, Rajasthan, Maharashtra and Andhra Pradesh, in order to further improve the investment climate for DMIC and CBIC in the future. The information collected was organized into a policy matrix and policy

actions outlining the policy-, system- and procedure-related issues, infrastructure issues and industrial workforce issues in each state, along with a list of sub-projects, in order to study the type of support that JICA should offer to further promote investment in these states and ensure the sustainable growth of industry (particularly manufacturing) in each state. Study findings were discussed with the finance, planning, and industry promotion departments in each state, development corporations, and personnel in charge of infrastructure development, in order to identify the more realistic options for which there are strong needs.

Outline of Study Findings

1. Main Issues in Each State and Policy Matrix

1) Policy Matrix Proposed to Haryana

With regard to investment procedures, Haryana already has a single-window system, but in reality it is necessary to have individual consultations about documents. To improve this part of the process, it was suggested that the format of various forms be standardized and that specialized staff be made available for investors to consult with. With regard to training human resources, it was suggested that job opportunities and an educational environment be provided for youths coming to urban areas, and at the same time to train trainers, etc., since there is a need for programs to bring manufacturing skills up to the standards required by foreign firms. Where readying infrastructure is concerned, in addition to projects around the MED development where Japanese firms are clustered, it was suggested that the state government adopt a flexible scheme to provide funding for small-scale PPP, etc. projects.

Policy Issues	Policy Actions
1. Improve the investment application process	・ Expand the departments concerned at HEPC (Haryana Enterprise Promotion Corporation) ・ Eliminate handwritten application procedures and integrate with the online system ・ Introduce a standardized format for construction applications and introduce common software ・ Introduce a standardized format for forms and introduce digital lockers

2. Smooth introduction of investors	・ Create a relationship manager position in charge of attracting investment ・ Set up a Japan desk ・ Introduce a compliance inspection system for principal sectors
3. Improve industrial workforce training (entrepreneurial spirit)	・ Introduce E-Karma to teach and give job opportunities to the unemployed and to students
4. Improve industrial workforce training (manufacturing skills)	・ Establish a training program for human resource development and set up relevant organizations ・ Introduce an ITI virtual education program ・ Introduce an industrial education program concurrently with the above ・ Set up organizations for youth vocational training ・ Introduce a basic training program for manufacturing technology at ITI
5. Improve the business enviromentment to attract further investment	・ Introduce a system to identify small priority infrastructure projects and monitor their implementation

2) Policy Matrix Proposed to Rajasthan

With regard to investment procedures, Rajasthan already has a single-window system, but given the need for the state to attract still more manufacturers, it was suggested that specialized staff be made available whom investors can freely consult regarding permit procedures. Although foreign firms already operate at Neemrana and other industrial estates, there are few industrial clusters in Rajasthan. Since the bulk of the manufacturing industry is along DMIC, measures to nurture supporting industries and training programs for acquiring manufacturing skills that meet industry needs are needed, and a number of related actions were suggested. In terms of infrastructure, the most important issue is a reliable supply of water to industrial estates, and a number of water supply projects around industrial estates were proposed.

Policy Issues	Policy Actions
1. Speed up and smooth investment procedures	・ Appoint a relationship manager
2. Modernize industry	・ Promote attracting supporting industries

promotion policies	・ Introduce an investment incentive system aimed at SMEs with advanced technologies ・ Promote technological support to local firms by foreign firms
3. Train an industrial workforce	・ Draw up a medium to long-term plan for developing human resources in promising industries ・ Draw up revised training programs meeting industry needs ・ Conduct leader training with the cooperation of industry ・ Rebuild decrepit training facilities (ITIs, engineering schools, etc.) ・ Draw up a plan to promote employment of women workers
4. Improve the industrial infrastructure	・ Set up a Japan desk Improve the electricity supply facilities near industrial estates (Neemrana, Ghiloth, etc.) ・ Draw up a plan for a reliable supply of industrial water using reservoirs and recycled water
5. Build basic infrastructure to promote investment	・ Introduce a system to identify small priority infrastructure projects and monitor their implementation

3) Policy Matrix Proposed to Maharashtra

With regard to investment procedures, Maharashtra already has a single-window system, but application procedures for investors are not necessarily user-friendly. It was therefore suggested to make specialized staff available and to make it possible to complete all procedures with related departments through a portal site. It was also suggested to set up a portal site on the food logistics industry for farmers and producers. Regarding promotion of industry, since overseas manufacturers are already clustered in the state, it was suggested that efforts should be made to nurture supporting industries, introduce and support occupational training meeting industry needs and training facilities, and build roads leading to Mumbai.

Given that this state is already highly industrialized, it is time now to promote industries other than manufacturing. Actions to modernize the food logistics industry, including agriculture, were proposed, including provision of cutting-edge seeds/seedlings, mechanization, making it possible for farmers to process their crops for distribution, traceability from producers to consumers, and setting up cold chains, to bring structural change to intermediate distribution and build import/export-related facilities.

Policy Issues	Policy Actions
1. Speed up and smooth	• Make it possible to complete permit procedures with all departments via

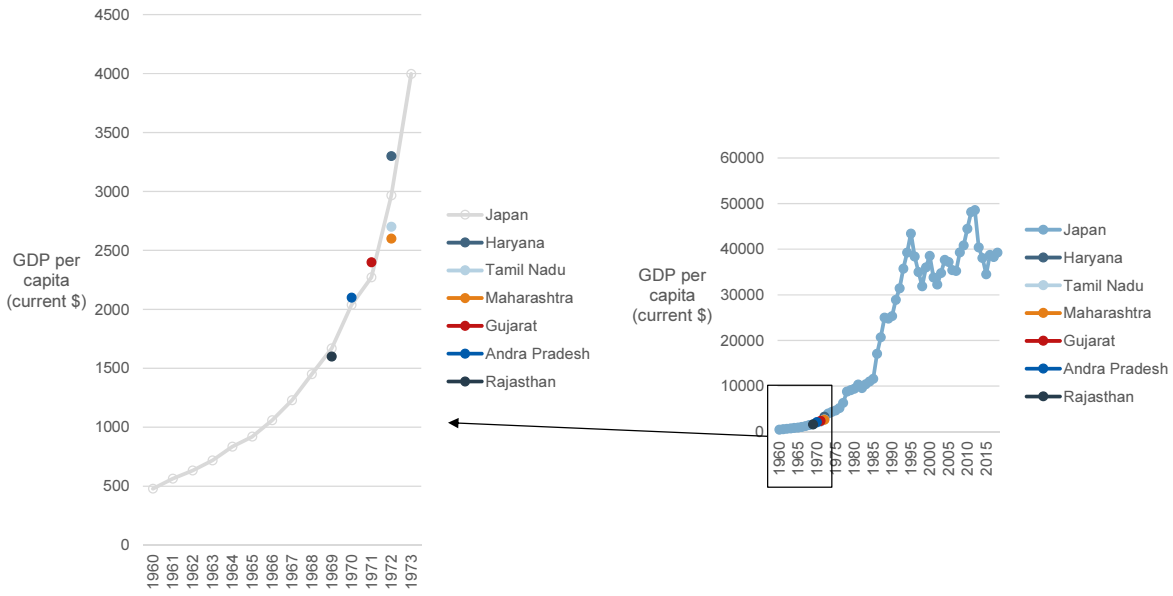
investment procedures	an integrated portal system • Appoint a relationship manager • Set up a portal site for farmers and producers
2. Revise industry promotion policies and incentives for nurturing supporting industries	• Attract overseas supporting industries and promote matching with local firms • Promote development of industrial and logistics estates in areas closer to Mumbai
3. Train an industrial workforce	• Draw up occupational training programs meeting industry needs • Provide additional funding for equipment and operational capital for TECT established by TAGMA • Rebuild decrepit training facilities (ITIs, engineering schools, etc.) • Draw up a plan to promote employment of women workers
4. Improve infrastructure connectivity	• Draw up a plan to improve connectivity of industrial roads, such as the Chakan–Talegaon road, etc.
5. Promote a direct transaction distribution model for foods	• Introduce cutting-edge seeds/seedlings, growing technologies, production forecasts and an information-sharing system for market price information for farmers and FPOs • Introduce advanced seedling beds, develop a low-interest loan support scheme for investing in automation and mechanization • Develop a capital support scheme to allow farmers and FPOs to buy primary food processing machinery and cold chain-equipped storage facilities allowing them to regulate shipments • Teach farmers and FPOs about traceability and set up a quality inspection system • Set up traceability from farmers to overseas consumers for soybeans • Build a cold chain warehouse for joint use with food importers at ports • Develop a low-interest loan scheme to provide capital for introducing reefer containers

In the case of Andra Pradesh, issues have been identified but policy actions have not been studied or proposed.

2. Next-Generation IPP (Investment Promotion Program)

The investment promotion programs drawn up so far for Tamil Nadu and Gujarat were for the purpose of increasing foreign direct investment mainly in manufacturing, to achieve manufacturing-led economic growth, as had been the case with Japan and ASEAN. Because of this, policy actions focused on training a manufacturing workforce and on building industrial infrastructure such as roads, etc. and this aspect will continue to be considered.

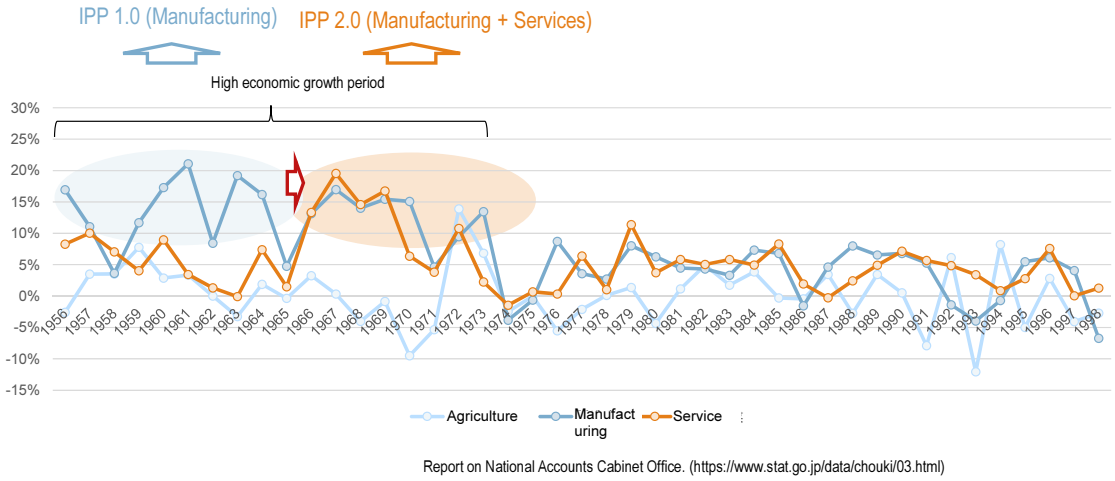
Comparison of Per Capita GSDP in the Main Indian States and Per Capita GDP in Japan



Source: Prepared based on World Bank and International Monetary Fund materials.

Meanwhile, in the four states in this study, and in particular Maharashtra, where Mumbai is located, clustering of manufacturing has been achieved to a certain extent and per capita GSDP roughly equivalent to that of Japan in the later stage of its rapid economic growth period has been reached. In Japan at that stage of its economic developing, in addition to manufacturing, the service industry was also driving economic growth. This came about because the logistics and retail sectors grew and the service industry developed to support urban living as the population became increasingly concentrated in large cities. In order to modernize logistics and retail in Maharashtra, it will be necessary to modernize the entire supply chain, including the agriculture, fisheries and intermediate distribution sectors. In other words, the IPP should cover not only manufacturing but also restructuring of the entire food distribution industry, from upstream to downstream.

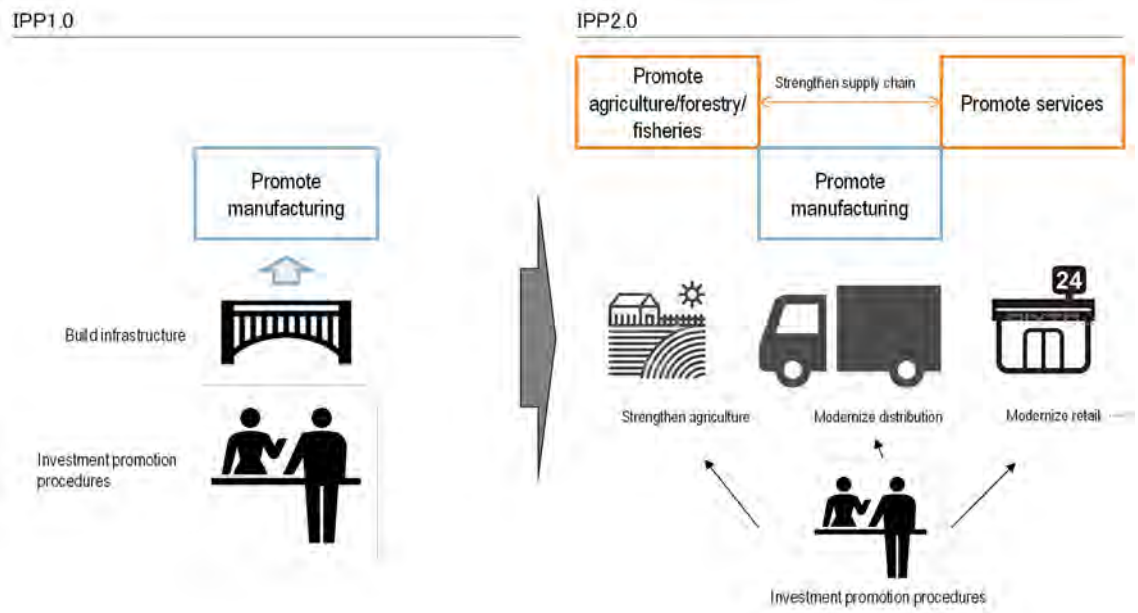
Real GDP Growth Rate for Agriculture/Forestry/Fisheries, Manufacturing and Service Industries (Base Year: 1990)



Source: Report on National Accounts, Cabinet Office. (https://www.stat.go.jp/data/chouki/03.html)

Based on the foregoing, upgrading the investment promotion program from IPP 1.0 focusing on manufacturing to IPP 2.0 which would also include the service industry was tried in Maharashtra. IPPs for the logistics industry in Haryana and for the tourism industry in Rajasthan were also proposed, to focus more on tertiary industry which the states are trying to attract.

IPP Up to Now (IPP 1.0) and Future IPP (IPP 2.0)



Source: NRI.

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1. Haryana

1.1. An Overview

Haryana is the 20th state of India and it came into existence on 1st November 1966. Previously, it was a part of Punjab state. Haryana is a land-locked state and it is situated in the north-western region of India and is surrounded by the state of Himachal Pradesh from the north, Uttarakhand from north-east, Rajasthan from the south, Uttar Pradesh and Delhi from the east, and Punjab from north-west (Figure 1.1). Chandigarh is the capital of Haryana is shared by its neighbouring state Punjab. It was designed by the Swiss born, French architect, Le Corbusier. Haryana's geographical area is 44,212 sq. km, which covers 1.34% of India's total geographical area and is home to 25.3 million people, that is, 2.9% of India's total population. The population density of the state is 573 persons per sq. km with a sex ratio of 879 females per 1,000 males.
As per the Census of 2011, 65% of the state's population (16.5 million persons) still lives in the rural areas which is 6 percentage points less than the 71.1% recorded in the Census of 2001, indicating urbanisation in the state. Haryana is divided into six administrative divisions and has 22 districts (Figure 1.1) constituted by 140 blocks, 154 towns and 6,841 villages.

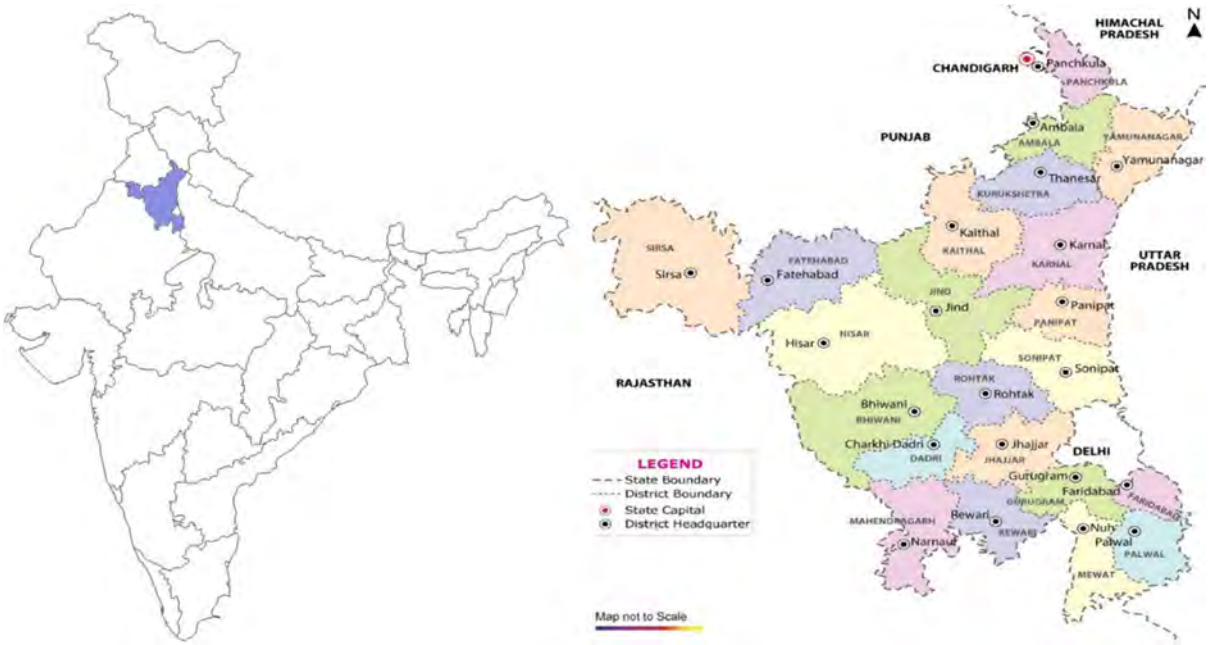

Figure 1.1 Geographic location of Haryana and its district-wise map

Haryana has witnessed a healthy growth in its gross state domestic product (GSDP) during the last couple of decades which has made it a significant contributor to India's fast-paced economic growth. Since 2004-05, the average growth in Haryana's GSDP has been 8.6% per annum (at constant prices). The state's GSDP growth rate has outperformed India's GDP growth rate for 9

years out of the 13 years since 2004-05 (Chart 1.1). Due to this high economic growth, the estimated percentage of people living below the poverty line within the state have halved from 24% in 2004-05 to 11.2% in 2010-11.

In 2016-17, Haryana's per capita income was INR 180,174 per annum which was significantly more than the national average of INR 103,818 (Chart 1.1).

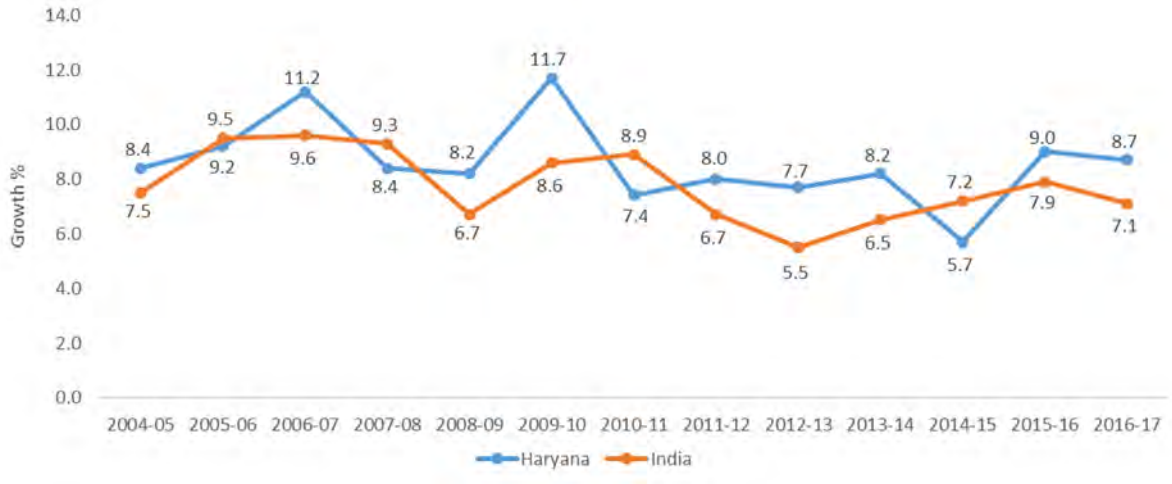

Chart 1.1 GSDP/GDP growth rate of Haryana and India (at constant prices)

Source: Govt. of Haryana Vision 2030 Report (2017)

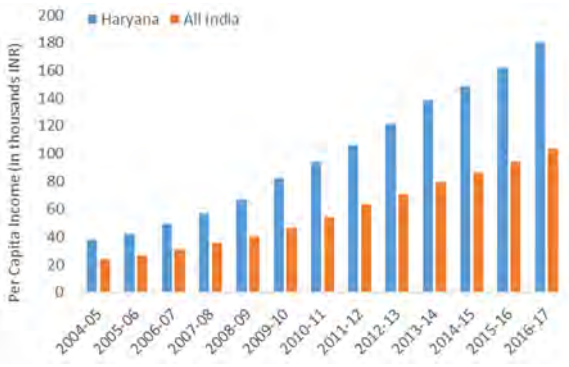

Chart 1.2 Per Capita Income (INR) of Haryana and India (2005-2017) at current prices

Source: Statistical Abstract of Haryana 2016-17

Sectoral composition of the Gross State Value Added (GSVA) for the period 2011-12 to 2017-18 has been shown in the Chart 1.2. As per the chart, GSVA (at constant prices 2011-12) of Haryana has increased by a CAGR of 7.52% from the fiscal year 2011-12 to 2017-18, with Tertiary sector registering the highest growth, whereas, the primary sector has grown at the slowest pace. In 2013-14, contribution of the primary sector (agriculture and allied sector) to the state's GSVA was around 17% while it employed more than 51% of the rural workforce.

Thus, the majority of rural population which is employed in the primary sector has only a slim share in the state's GSDP and therefore not been able to come out of poverty easily. On the contrary, the tertiary sector employs 67% of the urban workforce at present and it contributes more than 50% to the state's GSVA. To further eradicate poverty there is a need to promote manufacturing sector, so that more and more people from rural areas can be employed and dependence on agriculture sector can be reduced.

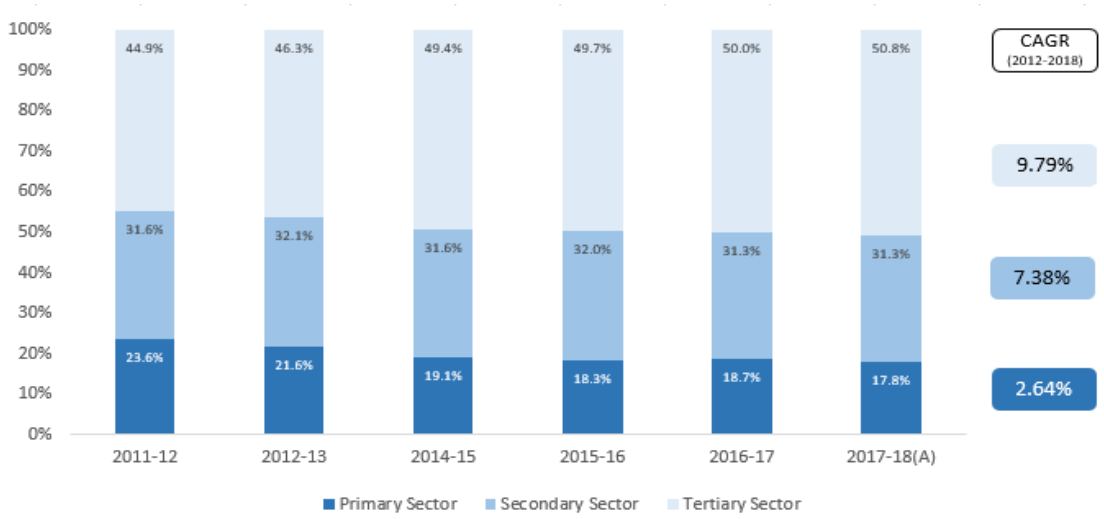

Chart 1.3 Changing Sectoral Composition of GSVA in Haryana (at constant prices 2011-12)

Source: Statistical Abstract of Haryana 2016-17

Table 1.1 Haryana at a glance

Item (unit)	Year	Haryana Status	All India Status
		Geographical Area	
Area (in sq. km)	2011	44,212	32,87,469
		Administrative Setup	
(a) Divisions (number)	2018	6	-
(b) Districts (number)	2018	22	-
(c) Sub-Divisions (number)	2018	73	-
(d) Tehsils (number)	2018	93	-
(e) Sub-Tehsils (number)	2018	49	-
(f) Blocks (number)	2018	140	-
(g) Towns (number)	2011	154	-
(h)Villages (including inhabited) (number)	2011	6,841	-
		Population	
(a) Total (in millions)	2011	25.35	1,210.57
(b) Male (in millions)	2011	13.49	623.12
(c) Female (in millions)	2011	11.86	587.45
(d) Rural (in millions) Percentage of Rural Population	2011	16.51 65.12	833.46 68.85

(e) Urban (in millions) Percentage of Urban Population	2011	8.84 34.88	377.11 31.15
(f) Density of Population (in sq. km)	2011	573	382
(h) Sex Ratio (females per thousand males)	2011	879	943
(g) Literacy Rate (%) Male	2011	84.1%	80.9%
Female	2011	65.9%	64.6%
Total	2011	75.6%	74.0%
Item (unit)	**Year**	**Haryana Status**	**All India Status**
Power			
(a) Total Installed Capacity (in MW)	2015-16	11,053	3,02,087
(b) Power Available for Sale (in million kWh)	2015-16	44,511	11,67,584
(c) Total Consumption (in million kWh)	2015-16	32,172	-
(d) Electricity Consumers (in millions)	2015-16	5.75	263.03
(e) Annual per Capita Consumption (in kWh)	2015-16	1,284	684
State Income (at current prices)			
(a) Gross State Domestic Product (GSDP) (in billion INR)	2016-17	5,453	152,537
(b) Gross State Value Added (GSVA) (in billion INR)	2016-17	4,903	138,416
(c) Agriculture and Allied Sector GSVA (in billion INR)	2016-17	966	24,840
(d) Industry Sector GSVA (in billion INR)	2016-17	1,544	40,541
(e) Services Sector GSVA (in billion INR)	2016-17	2,392	73,035
(f) Per Capita Income (in INR)	2016-17	178,890	103,870

Source: Economic Survey of Haryana 2017-18; Statistical Abstract of Haryana 2016-17

1.2. Current State of Economic and Social Infrastructure

1.2.1. Economic Infrastructure

1.2.1.1 *Power*

Haryana became a fully electrified state in 1970. For the Government of Haryana, HPGCL (Haryana Power Generation Corporation Limited) is responsible for the setting up and maintain of generation power stations. Meanwhile HERC (Haryana Electricity Regulatory Commission) regulates the tariff, procurement and facilitation of generation, supply, transmission and distribution.

Total installed power generation capacity in the state, as of 2018, is 11,242 MW, which is merely 3% of the total power generation capacity in India. The power generated which was available for sale during 2016-17 was 45,466 MU vis-à-vis demand of 33,520 MU. Thus there is almost a 36% surplus power generation over required consumption (Chart1.4).

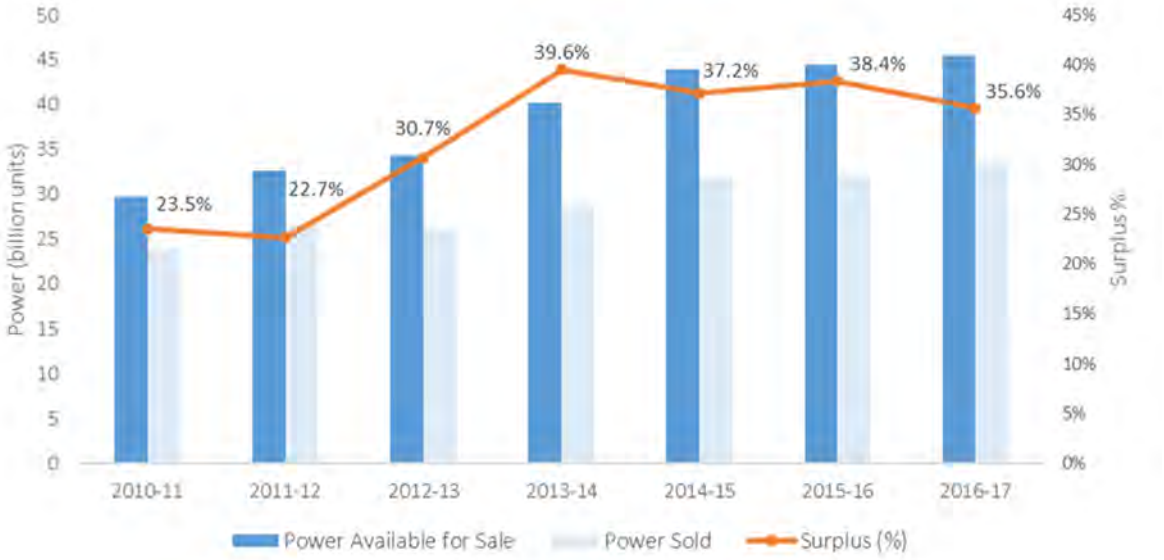

Chart 1.4 Comparison of Power Available and Power Sold in Haryana (2010-11 to 2016-17)

Source: Economic Survey of Haryana 2017-18

Energy generation sources in the state include thermal energy (coal, gas, diesel, miscellaneous), hydro energy, renewable energy (RES) and nuclear energy. Thermal energy currently dominates the production with almost 80% share in total power generation followed by Hydro (Chart 1.5). Meanwhile power generation through non-conventional energy sources like renewable are also currently on the rise. Nuclear energy generation is currently low and at a nascent stage though plans are in place for its growth.

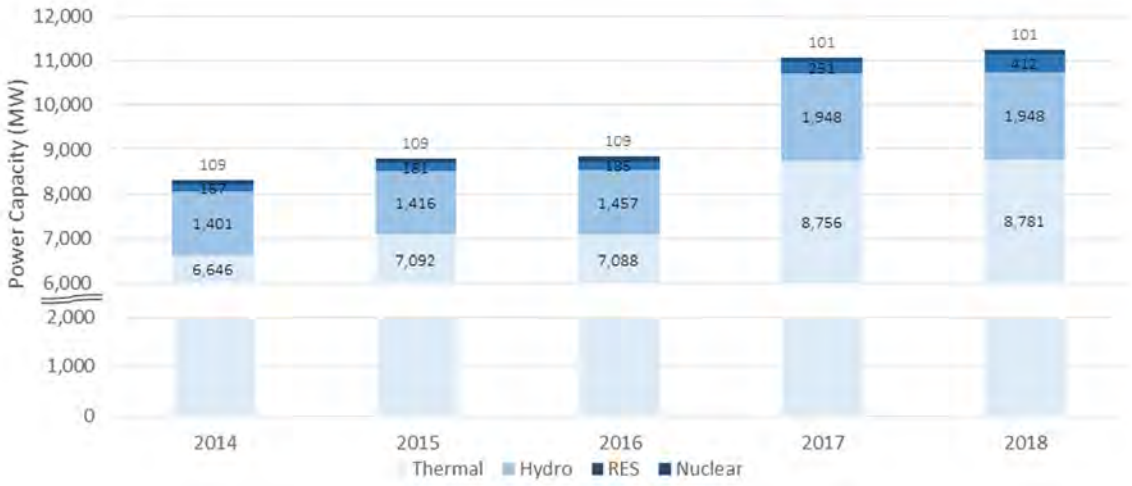

Chart 1.5 Comparison of Total Generation Capacity across different sources (2014-2018)

Source: Installed Capacity, Monthly Report, CEA, 2014 – 2018

The consumption of electricity in the State during 2016-17 was 33,519.73 Million Units (MUs), with industries being the largest consumer followed by agriculture (Chart 1.6).

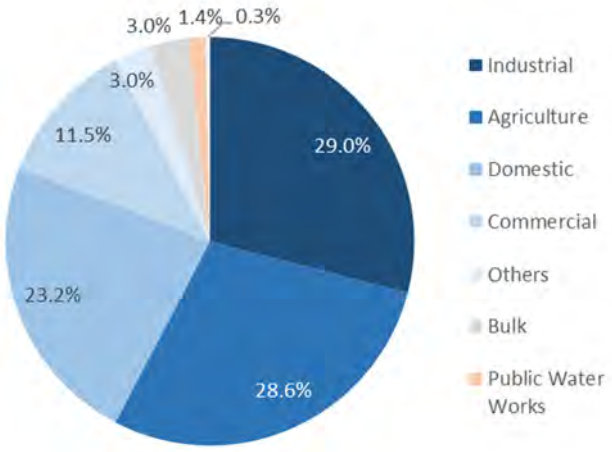

Chart 1.6 Consumption of electricity by Consumer's Sector (2016-17)

Source: Economic Survey of Haryana 2017-18

From government data it seems electricity supply is sufficient in Haryana and there may be no issues related to electricity supply. However, as per industries, power supply quality is not very good. Power cuts and voltage fluctuations are common and these get intensified during summers. In recent past, situation has improved, but still there is lot of scope for improvement. Currently, most industries have to invest in diesel genset as a power back-up system. It seems generation capacity is sufficient but there is need to invest in the T&D infrastructure. Distribution lines in the industrial areas should be moved under-ground so as to reduce electricity faults, which in turn will reduce unplanned power cuts.

1.2.1.2 *Water*

Ground water forms a major source of water in the NCR. The state is drained by two major rivers Ghaggar and Yamuna. There are four major water sources which are primarily used for irrigation: 1. Western Yamuna canal, 2. Bhakra canal, 3. Agra canal and 4. Ghaggar canal. However, the ground water availability for industries is limited and several factories have to depend on under-ground water to meet their requirements. Districts with high level of industrialisation, such as Gurugram and Faridabad, have low water table (Figure 1.2).

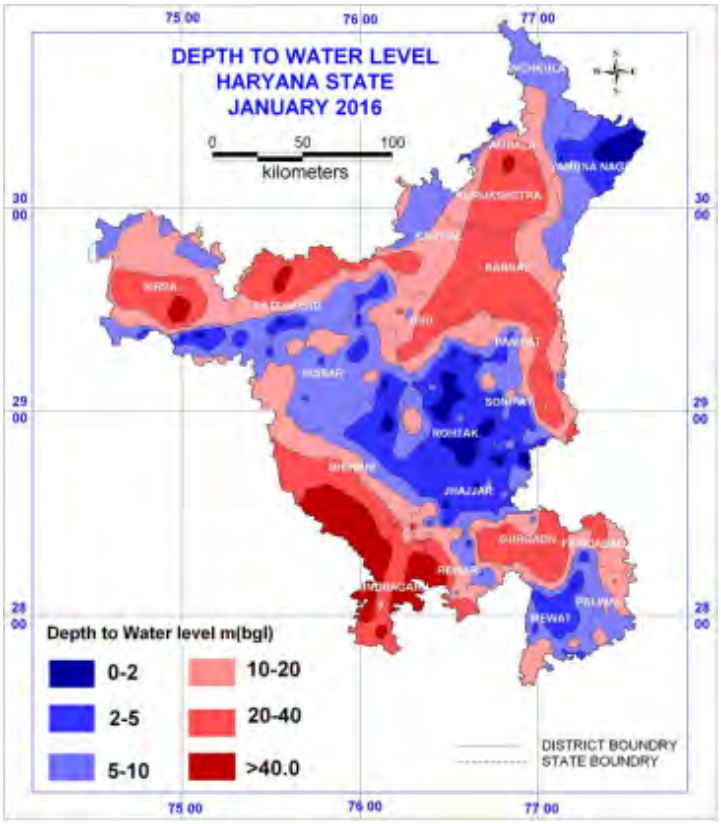

Figure 1.2 Depth of Ground Water Level across Districts (2016)

Source: Groundwater Year Book of Haryana State (2015- 16)

Many industries are facing problems due to non-availability of ground water. In case of water shortage, they have to dependent either on the underground water by digging wells and/or by purchasing expensive water through tankers. There is need to find alternate sources of water supply to industries. This could be in form of setting up water pipelines from nearby rivers/canals to industrial areas. Further there is need to evaluate options to re-use industrial waste water as well as setting up of municipal sewage treatment plants and suppling treated water to industries.

In 2018, to improve the water supply situation, government has allocated INR 6 billion to nine projects in seven towns under second phase of the Atal Mission for Rejuvenation and Urban

Transformation (AMRUT) Scheme. Under this scheme, drinking water supply, sewerage, and drainage system will be improved in the state of Haryana. However, most of this investment will go for improving the domestic water supply. Similar kind of capital/initiatives are required for industries as well.

1.2.1.3 *Road*

Haryana is amongst the few states in India to have almost 100% metalled road connectivity with rural areas. Haryana has shown tremendous success due to large investments in the development of infrastructure. Road structure in the state is primarily organised as National highways (2,505 km), State Highways (1,801 km), Major district roads (1,395 km) and other district roads (20,430 km) (Value in bracket represents length of road). Thus the state of Haryana has a total road connectivity of 26,131 km as of December, 2017 (Figure 1.3) which is maintained by PWD (B&R), Haryana.

Haryana still lacks behind the average metrics for road length as compared to India. India has 166 km per 100 square metre of road length which is higher as compared to Haryana with 105 km per 100 square metre. Haryana is ranked 19th among all the states and union territories on this metric. With respect to the population, Indian road network is 452 km long per hundred thousand population of people. The state road network is significantly smaller with 183 km per hundred thousand population of people. Haryana fares poorly and is second-to-last among all the states and union territories being ahead of just Jharkhand (129 km per hundred thousand).

This represents that Haryana road caters to much higher traffic than they are built for. This leads to congestion and traffic jams especially in and around the key industrial and commercial areas. Further current roads are not maintained well as there are pot holes and street lights may not work. All these increase commuting time as well as logistic cost. Further other issue which is commonly faced by industries located in Gurugram, Bawal, Jhajjar is the lack of by-pass road through Delhi. Once Kundli – Manesar – Palwal (KMP) Expressway become operational, this problem is expected to be solved. Another issue is related specific bottlenecks at few locations, leading to unnecessary delays. For e.g.: Congestion at the Toll Plaza of Gurugram and Manesar is severe. There is need to either shift that toll Plaza to some other location or make it more efficient by adding more lanes for collecting toll. Similarly, the road between Gurugram and Jhajjar Industrial area have some bottleneck, that slow down the speed of moving traffic and sometimes lead to Traffic Jams. There is need to remove bottlenecks by demolishing or by constructing new by-pass or fly-overs and/or underpass, to ease the movement of traffic.

Figure 1.3 Road Map of Haryana

Source: Maps of India Website

1.2.1.4 *Sewage and Wastewater Treatment*

Haryana has shortage of water and government is trying to put Sewage Treatment plants and supply treated water to industries. As on March 2015, Haryana had 41 Sewage Treatment Plants (STPs) with a total capacity of 852.7 MLD (Table 1.2). It is 3.7% of the total STP capacity of India, that is, 23,277.3 MLD.

Table 1.2 Total capacity of STPs in Haryana and India (2014-15)

Region	Item (unit)	Total	Operational	Non-Operational	Under Construction	Proposed
Haryana	STP (Number)	41	38	2	1	-
	Capacity (MLD)	852.7	805	2.7	45	-
India	STP (Number)	816	522	79	145	70
	Capacity (MLD)	23,277	18,883	1,237	2,528	629

Source: Inventorisation of Sewage Treatment Plants (March 2015) by Central Pollution Control Board

Gurugram, with a total of 225 MLD (2 STPs), has the highest capacity of STPs among the districts of Haryana. Faridabad, with 5 STPs, has the highest number of STPs in the state. Whereas seven districts are such where there is no STP present. Figure 1.4 shows the district-wise distribution of STPs in Haryana.

There is a lot of scope for improvement in this area as a major part of the state is still without any STP. This results in more pollution and more demand of water. Hence, the state government is required to improve the situation by establishing more STPs which will result in less pollution and reuse of sewage water in industries and agriculture.

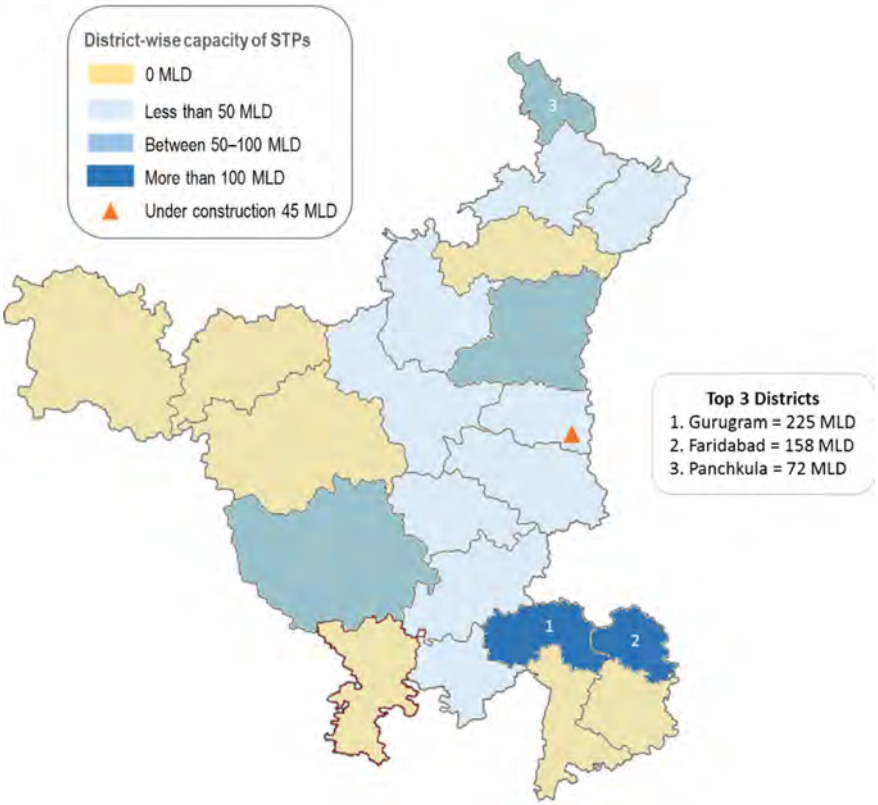

Figure 1.4 District-wise distribution of STP capacity in Haryana (2014-15)

Source: Inventorisation of Sewage Treatment Plants (March 2015) by Central Pollution Control Board

For industrial waste treatment, government is promoting development of common effluent treatment plant (CETP). In 2009, Haryana had only 1 CETP with a capacity of 1.1 MLD. This number rose to 9 CETPs (48.3 MLD capacity) in 2011, and to 16 CETPs (159 MLD capacity) in 2018. Chart 1.7 shows the growth of CETPs in the state.

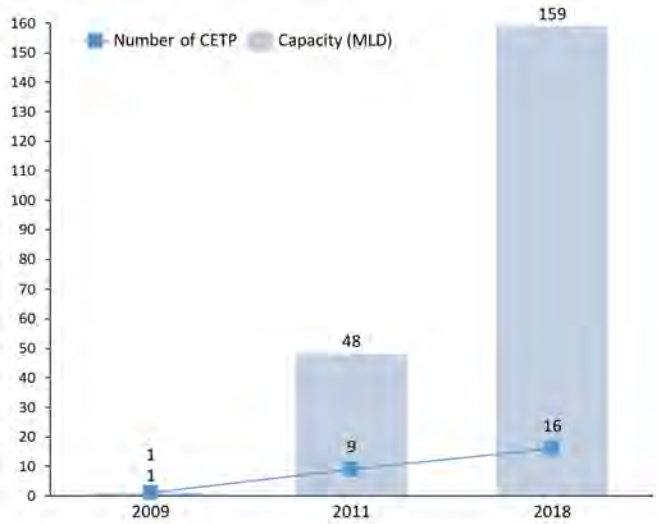

Chart 1.7 Growth of CETPs in Haryana (2009-2018)

Source: SIWI Report - Water Governance Mapping Report: Textile Industry Water Use in India (2016)

Chart 1.8 shows district wise distribution of CETPs. There is a lot of need to establish more CETPs in the state as a lot of the industrial areas are not yet covered.

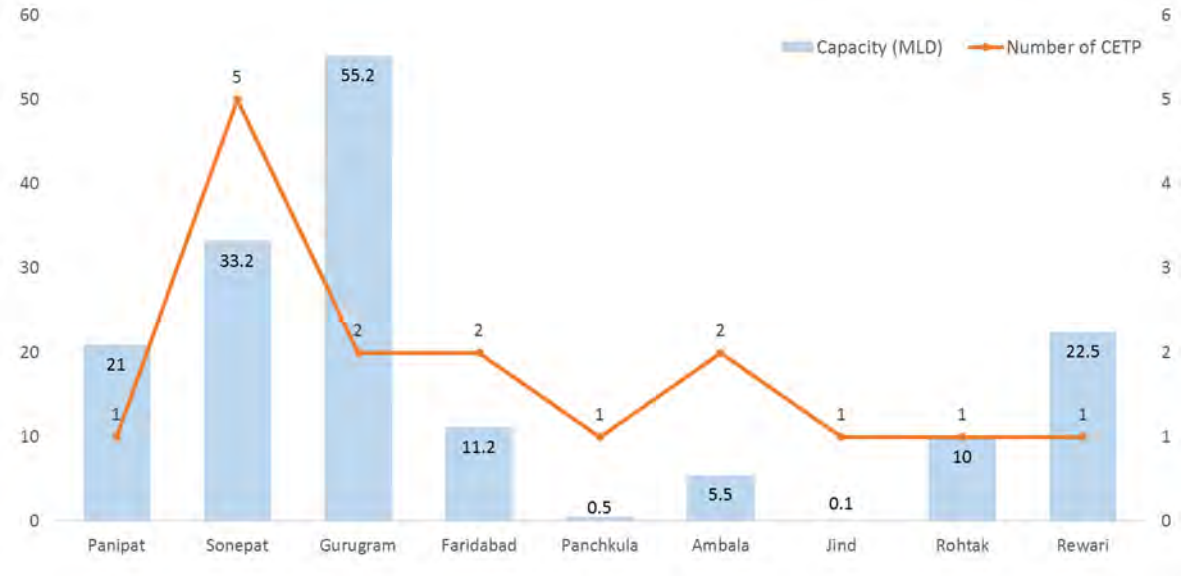

Chart 1.8 District-wise distribution of CETPs (2018)

Source: http://demosl56.rvsolutions.in/ernet/website-162/sites/default/files/CETPM.pdf

1.2.2. Social Infrastructure

1.2.2.1 *Hospitals*

The state of Haryana has witnessed considerable improvement in social infrastructure including Education and Health. Due to the sincere efforts of State Government, health facilities are expanding and consequently promoting the health status of people in the State. The life expectancy of male and female is round 65.5 and 70.0 years respectively, whereas, for India as a whole it is 64.6 and 67.7 years for male and female respectively. Chart 1.9 shares the district-wise presence of Government Medical Institutions in the state.

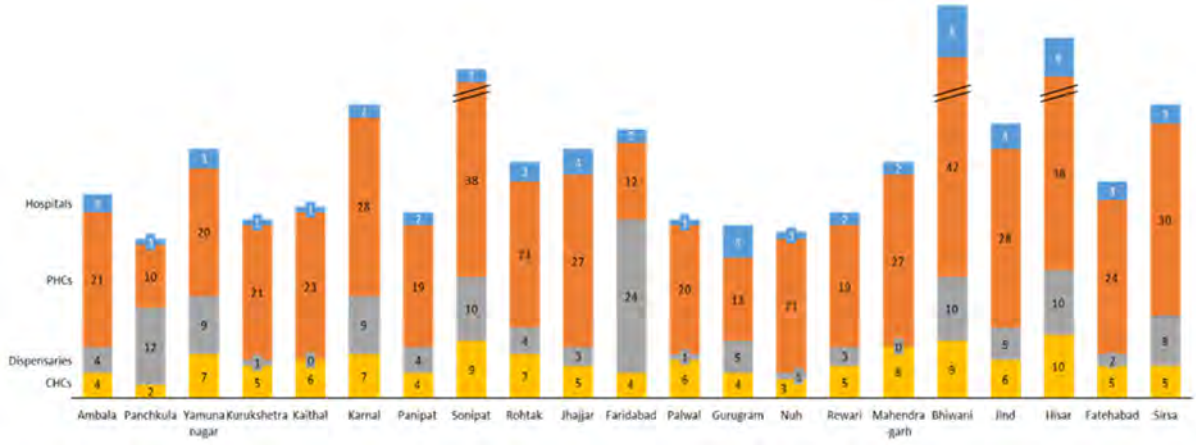

Chart 1.9 District-wise presence of Govt. Medical Institutions in Haryana

Source: Statistical Abstract of Haryana 2016-17

* PHC: Public Health Centre, * CHC: Community Health Centres

In addition to the Govt. hospitals, Haryana hosts some of the best private hospitals of India. Patients not just from all over India, but also from other countries visit to them for medical tourism. Few of the well-known hospitals are Medanta, Medicity, Fortis etc.
However, most of the hospitals are located in the city areas far from the industries. Officers and workers have to travel to nearby city for treatment. However, this is not a big issue as long as connectivity between industrial area and nearest hospital is good.

1.2.2.2 *Schools*

Literacy rate in Haryana has seen an upward trend and is 76.6% compared to 64.8% in India. Male literacy stands at 85.38 percent, while female literacy is at 66.67 percent. There has been an increase in the number of operating schools in the state.

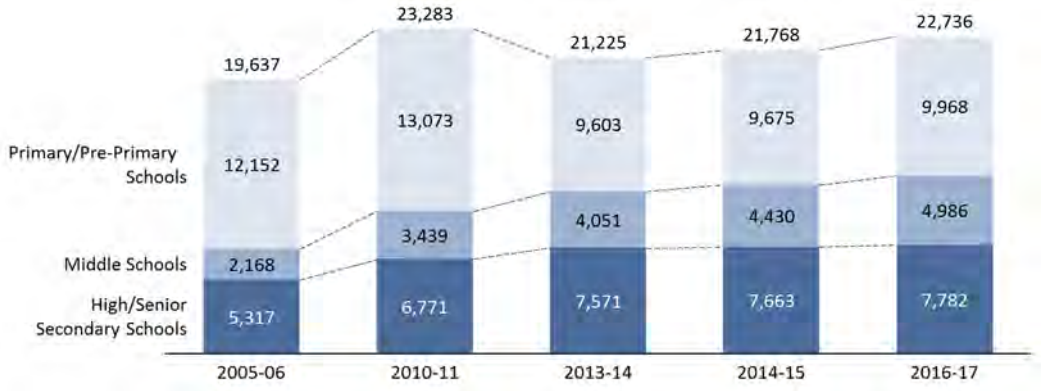

Chart 1.10 Number of Recognised Schools in Haryana

Source: Statistical Abstract of Haryana 2016-17

The primary government schools are available almost throughout Haryana. Most industrial areas should be having a government school, which may suffice the requirement of workers. However, for children of expats and senior officers', there might be a good private school located near to industrial area. Like hospitals this should also be not an issue as long as road connectivity is good between industrial area and nearby major city.

1.3. Current State of Industrial Development

1.3.1. Industrial Structure and Location

The industrial sector has been supporting the growth of Haryana's economy for the last couple of decades now. According to the Department of Economic and Statistical Analysis of Haryana, the Gross State Value Added (GSVA) of the state was INR 4.23 trillion in 2017-18 at constant basic prices of 2011-2012. While the GSVA during the year 2011-12 was INR 2.74 trillion. This shows a CAGR of 7.52% during the period of last six years. The secondary sector of economy, which consists of the manufacturing and construction industries, had a contribution of 31.32% in the state's GSVA during 2017-18. The CAGR of the secondary sector during the last six years, that is 2011-12 to 2017-18, has been 7.38%. The focus of Haryana's state government has been on developing the secondary and tertiary sector and to shift the dependence of the majority of workforce of the state from the primary sector (agriculture and allied sector) to the secondary and tertiary sectors.

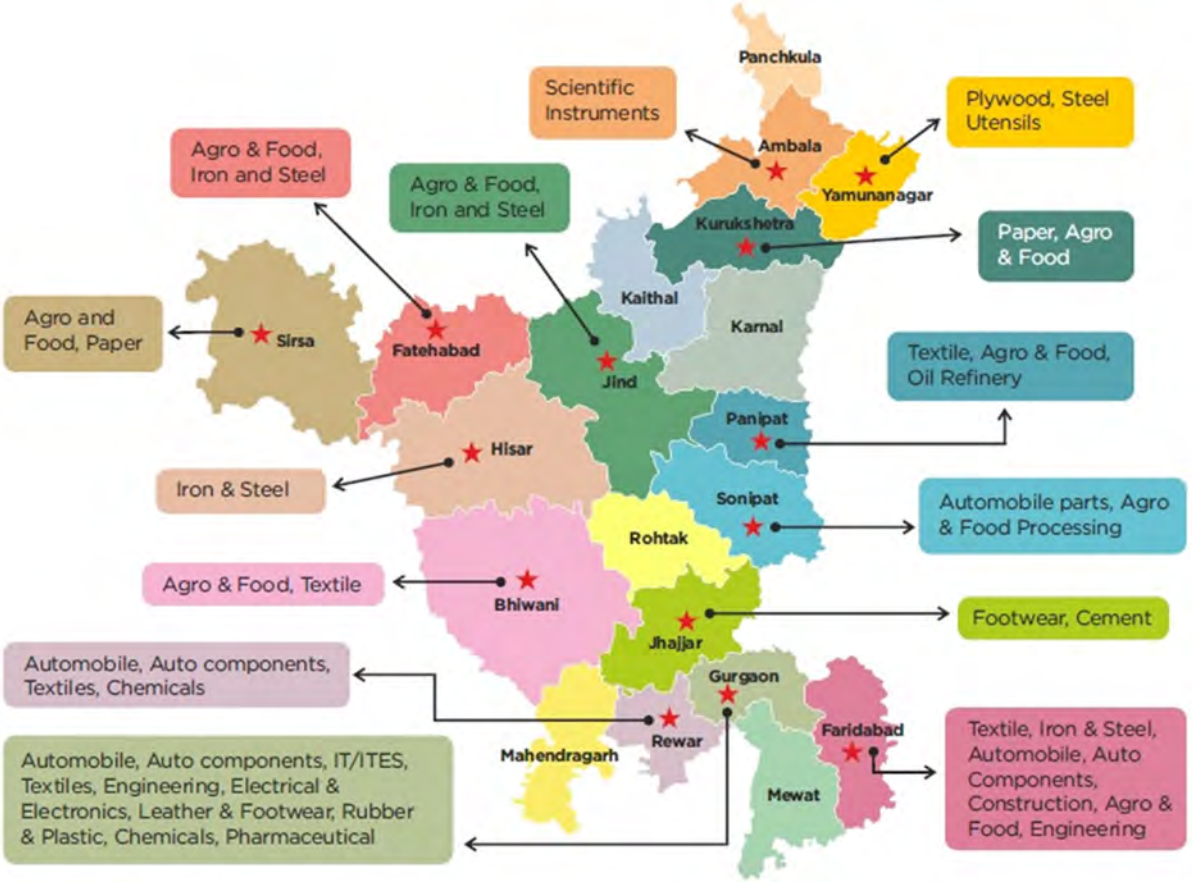

Figure 1.5 District-wise Industrial Clusters of Haryana

Source: State Government of Haryana Vision 2030 Report (2017)

The major industrial hubs of the state have been the districts of Faridabad, Gurugram, Sonepat, Ambala, Hisar, and Rewari. The major industrial clusters that are present in different districts of the state have been shown in Figure 1.5. The main industrial clusters of the state include the Automobile, Automobile parts, Iron & Steel, Light Engineering, IT/ITeS, Textile, and Agro & Food. The major companies (domestic and foreign) present in the four regions of the state have been shown in Figure 1.6.

The southern districts of Haryana are hub of Automobile and Automobile parts manufacturing with companies like Maruti Suzuki, Honda Two Wheelers, Hero MotoCorp, Suzuki Two Wheelers, Yamaha, Eicher Motors, JCB India, Escorts, etc. The district of Gurugram is also a major centre for the IT/ITeS services in the tertiary sector as well as the manufacturing of apparel for export. Among the western districts, Hisar has the presence of companies like Jindal Stainless Limited which is one of India's largest producer of stainless steel and other companies which manufacture steel pipes and other steel products. Bhiwani has the presence of Hindustan Gum which is India's largest producer of Guar Gum powder for industrial use. The northern districts are famous for production of scientific instruments and have presence of companies like JainCo Export which is a major manufacturer and exporter of scientific instruments.

Figure 1.6 Region-wise presence of major companies in Haryana

Source: Web research and NRI analysis

Manufacturing facilities of companies like Bharat Electronics Limited and HMT Machine Tools Limited are also present in the northern districts. The eastern region of Haryana has one of the largest petrochemical refineries of India by Indian Oil which is situated in the district of Panipat. Factories of major food companies like Nestle, Parle, and Yakult are also present in the eastern parts of Haryana.

The total number of registered factories in the state has almost doubled from 6,498 in the year 1995 to 11,995 in the year 2016 (Chart 1.11). The CAGR over this period of 21 years (1995-2016) has been 2.96%. As per the Statistical Abstract of Haryana 2016-17, the estimated number of workers employed in the 11,995 registered factories of Haryana was 898,466 in the year 2016 (Chart 1.11).

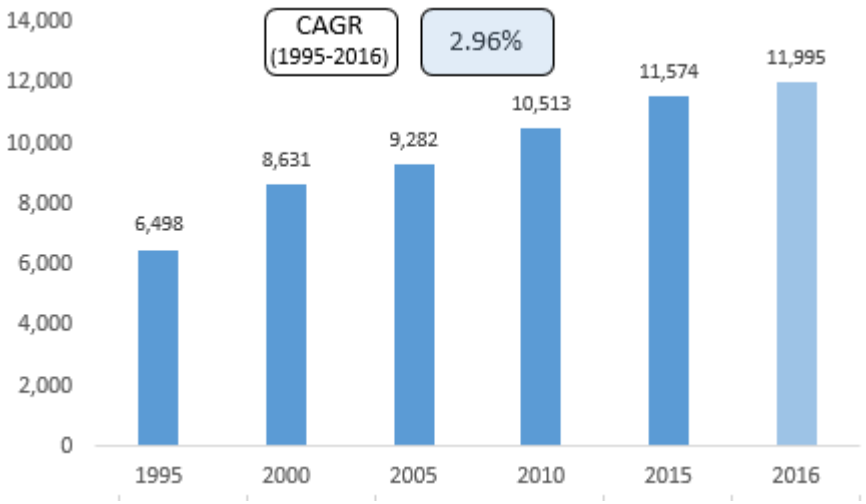

Chart 1.11 Total number of Registered Factories in Haryana (1995-2016)

Source: Statistical Abstract of Haryana 2016-17

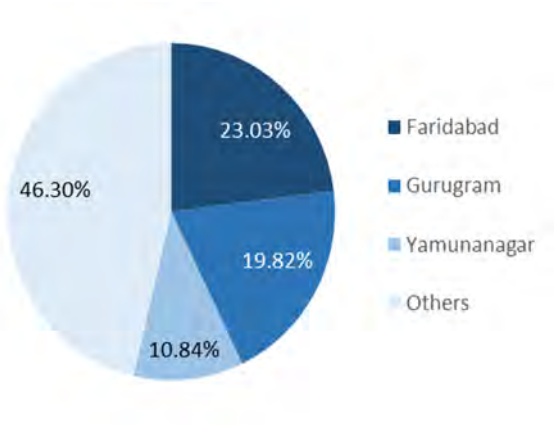

Chart 1.12 Top 3 Districts with highest % of Registered Factories in Haryana (2016)

Source: Statistical Abstract of Haryana 2016-17

The top 3 industrial districts of Haryana are Faridabad, Gurugram, and Yamunanagar as these three districts have the highest percentage of the state's factories (Chart 1.12). The chart shows that more that 53% of the total number of factories in the state are registered in these 3 districts only. This means there is a lot of mismatch in terms of industrial presence in the state as only a few districts amount for a large number of industries. The same trend can be seen in the estimated number of workers employed by these 3 districts as well. One of the main

reasons of this disparity in the economic development of Haryana has been the proximity of some districts to Delhi. The districts which are closer to Delhi and fall under the National Capital Region have been developed more as compared to the districts which are far from it.

1.3.2. Status of MSMEs

The MSMEs (Micro, Small, and Medium Enterprises) sector has been recognised as the engine of growth all over the world. In India, the definitions of Micro, Small, & Medium Enterprises are in accordance with the provision of Micro, Small & Medium Enterprises Development (MSMED) Act, 2006. The classification of MSMEs is shared in Table 1.3.

Table 1.3 Classification of Micro, Small, & Medium Enterprises in India

Source: Ministry of Micro, Small & Medium Enterprises, India (Website)

Item	Manufacturing Enterprises	Service Enterprises
Basis of Classification	Investment in plant & machinery	Investment in equipment
Micro Enterprises	Does not exceed INR 2.5 million	Does not exceed INR 1 million
Small Enterprises	More than INR 2.5 million but does not exceed INR 50 million	More than INR 1 million but does not exceed INR 20 million
Medium Enterprises	More than INR 50 million but does not exceed INR 10 million	More than INR 20 million but does not exceed INR 50 million

Total number of MSMEs registered in the state during the 10-year period of 2007-17 has been 46,243 which include the registration of 32,358 Micro Enterprises, 13,150 Small Enterprises, and 735 Medium Enterprises. There is a great disparity in the district-wise number of MSME registrations in the state as the top 3 districts (Gurugram, Panipat, and Faridabad) account for 44.4% of the total MSME registrations in the state (Figure 1.7). Though MSME numbers are increasing, there is a need to further attracts foreign MSME's in the state. These MSMEs provide raw-materials, parts etc. to the major companies and help in attracting further big investments. These are key companies to create a complete eco-system for promotion of industries.

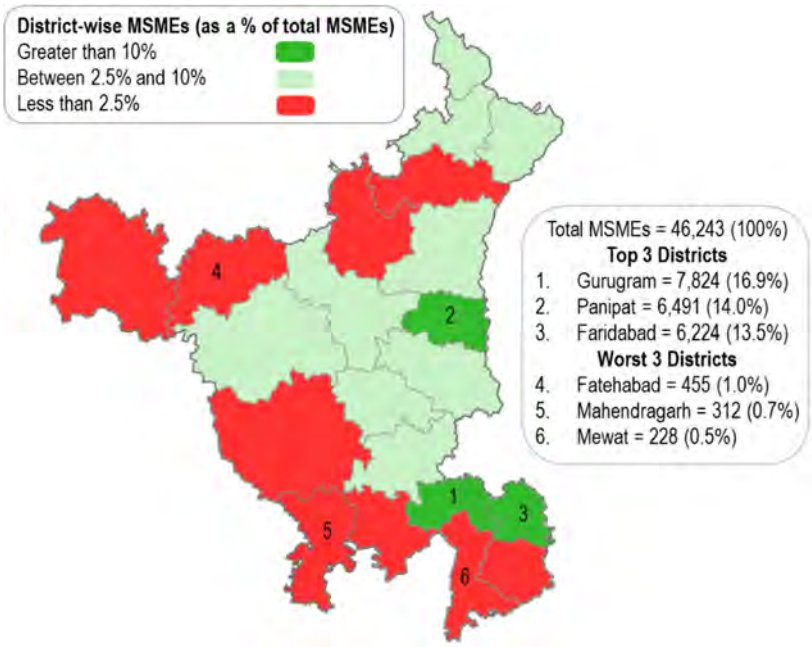

Figure 1.7 District-wise Registrations of New MSMEs during 2007-17

Source: State Industrial Profile of Haryana 2015-16 and 2016-17 (Websites of MSME- Development Institute, Karnal and Development Commissioner MSME)

1.4. Investment Policies, Procedures, and Implementation Systems

1.4.1. Haryana Government Organisational Structure

The Government of Haryana comprises various departments/ministries which take care of policy making and implementation of the respective department. Each department/ministry is headed by a cabinet/state minister. The bureaucratic structure of the departments includes the presence of Chief Secretary, Principal Secretary, Joint Secretaries, Directors etc. The ministries/departments of the government are helped by the presence of various Boards and Corporations which serve specific purposes related to that department. Figure 1.8 shows some of the major ministries and boards & corporations associated to them.

Haryana State Government		
Categories	**Ministries/Departments**	**Boards and Corporations**
Finance	• Finance • Institutional Finance and Credit Control • Excise & Taxation	• Haryana Financial Corporation (HFC) • Haryana State Cooperative Supply and Marketing Federation Limited (HAFED)
Industry	• Department of Industry and Commerce	• Haryana State Industrial & Infrastructure Development Corporation Limited (HSIIDC) • Haryana Enterprises Promotion Board (HEPB) • Haryana Enterprises Promotion Centre (HEPC) • Bureau of Industrial Policy and Promotion (BIPP)
Social	• Health • Hospitality • Women & Child Development	• State Counselling Board • Social Welfare Board • Haryana State Health Resource Centre , Health Department Haryana • Haryana Women Development Corporation
Energy, Power, and Utilities	• Power • Renewable Energy • Urban Local Bodies	• Haryana Power Generation Corporation Limited (HPGCL) • Uttar Haryana Bijli Vitran Nigam Limited (UHBVN) • Dakshin Haryana Bijli Vitran Nigam (DHBVN) • Haryana Vidyut Prasaran Nigam Limited (HVPNL) • Renewable Energy Development Agency (HAREDA)
Human Resource	• Labour and Employment • Technical Education • Education • Health and Medical Education • Industrial Training Department (ITI)	• Haryana Board of School Education • National Health Mission , Health Department Haryana • Haryana School Shiksha Pariyojna Parishad (SSA) • State Council of Education Research & Training (SCERT)
Infrastructure	• Transport • Town & Country Planning and Urban Estates • Public Works Department (PWD - B&R Department) • Architecture	• Command Area Development Authority • Mewat Development Agency • Haryana State Roads & Bridges Dev. Corpn. Ltd (HSRDC) • Shivalik Development. Board • Gurugram Development Authority • Haryana Urban Development Authority (HUDA)
Agriculture and Allied	• Agriculture • Irrigation • Animal Husbandry & Dairying • Horticulture • Forest • Fisheries • Food & Drugs Administration	• Haryana State Agricultural Marketing Board (HSAMB) • Dairy Development. Coop Fed • Khadi & Village Industrial Board • Handloom & Handicrafts Corpn. Ltd • Haryana Forest Development Corporation (HFDC)
Others	• Electronics and IT • Revenue and Disaster Management	• Haryana State Electronics Development Corporation (HARTRON) • Haryana State Pollution Control Board (HSPCB)

Figure 1.8 Major Ministries and related Boards under Government of Haryana

Source: Website of Haryana Government; NRI Analysis

While investing into a state, there are some agencies (boards and corporations) which play a major role in promoting the investments, issuing necessary permits, providing necessary infrastructure, monitoring the industrial activity, etc. Figure 1.9 provides the names of such important agencies which are related to industrial investment along with a brief description of their roles and responsibilities.

Agency	Description
HEPC - Haryana Enterprises Promotion Center	• It's main objective is to simplifying the business environment in Haryana by providing the **Single Roof Clearance System** for the benefit of the new units or units under expansion • It also provides help to investors in investing into the businesses more conveniently by lowering the paper work and quickly resolving the queries
HSIIDC - Haryana State Industrial and Infrastructure Development Corporation	• It's main objectives are to develop industrial infrastructure in the State of Haryana under the control of Department of Industries and Commerce. • It Proved to be a catalyst for promoting and accelerating the pace of industrialization in the State through development of industrial infrastructure in the State and providing a wide spectrum of services under one roof with the concept of "Total Industrial Support" for its clientele
HUDA - Haryana Urban Development Authority	• The main objectives of HUDA is the development of urban areas in a systematic and planned way and also to acquire sell and dispose off property, both movable and immovable • It uses the acquired land for residential, industrial, recreational and commercial purpose • To make available developed land to Haryana Housing Board and other bodies for providing houses to economically weaker sections of the society
HSPCB - Haryana State Pollution Control Board	• The main objective of HSPCB is to prevent, control or abatement of pollution of streams and wells as well as of air in the State • It also collaborate with the Central Board in organizing the training of persons engaged or to be engaged in programs relating to prevention, control or abatement of pollution and to organize mass education programs • It also advise the State Government with respect to the location of any industry the carrying on of which is likely to pollute a stream or well or suitability of any premises or location for carrying on any industry which is likely to cause air pollution.
HARTRON - Haryana State Electronics Development Corporation Limited	• It's main objective is to provide IT Infrastructure services to the state, and to develop the Infrastructure facilities for promotion of IT, ITES/ Electronics manufacturing Industry • It also supports in education, training and skill development in the state, services to the citizens in electronics mode and services to the state government

Figure 1.9 Major State-level agencies related to industries

Source: Websites of HEPC, HSIIDC, HUDA, HSPCB, HARTRON

1.4.2. Difference between Centre Government and State Government Policies

Central level policies are applicable to all the Indian states whereas State level policies are applicable and followed in the respective states in proposed fields. There are some differences which exist for policies adopted Centrally and at State level. Table 1.4 shows some of the major differences between the Centre and State Policies.

Table 1.4 Centre Government vs State Government Policies

Subject	Central Government Policies	State Government Policies
Level of ownership	• Strategic level initiatives to promote industrial development e.g. Make in India, National Manufacturing Policy etc. • Set direction for state governments to create suitable policy environment	• Operational level initiatives to promote industrial development e.g. Ease of Doing Business etc. • Implementation based on policy directions from central government initiatives
Coverage	• Applicable on entire country but sometimes focus on specific regions which require promotion	• Generally applicable for all districts within a state. • Special incentives/schemes for underdeveloped areas can be provided
Incentives	• Provides sector-wise incentives such as corporate tax concessions, import duty exemption, capital subsidy etc.	• Provides incentives such as low power tariff rates, refund of stamp duty on land transactions, VAT (now GST) etc.

Source: NRI Analysis

1.4.3. Permits required to start a business in the State

There are various permits (State/Centre) required to start a business in Haryana. Table 1.5 shares the list of such permits, along with defining the Government involved to provide those permits. It is not a comprehensive list, but it covers all the major permits required.

Table 1.5 Major approvals required for establishing an Industrial Project in Haryana

S. No.	Approval Type	Authority	Government Involved		
			State	Central	Others
		Industrial Approval			
1	MSME Registration	District Industries Centre	✓		
2	Industrial Entrepreneurship Memorandum(IEM)	Secretariat For Industrial Approval(SIA), New Delhi		✓	
		Business Constitution			
1	Registration as Firm	District Registrar of Firms & Societies	✓		
2	For approval of Name of Private/Public Limited Company and Incorporation thereof	Registrar of Companies		✓	
3	Cooperative Society	Assistant Registrar of Cooperatives		✓	
		Land for Project			
1	Allotment of plot/shed in Industrial Estate	HSIIDC	✓		
2	Agricultural Land	Purchase through negotiation	✓		
		Environment Clearance			
1	No Objection Certificate	Haryana State Pollution Control Board	✓		
2	Environmental Clearance (EC)	Ministry of Environment and Forest (MOEF)	✓	✓	
3	Consent and Authorization	Haryana State Pollution Control Board	✓		
		Construction of Building			
1	Plan Approval in Industrial Estate	HSIIDC	✓		
2	Plan Approval in controlled area	Town and Country Planning Department	✓	✓	
3	Plan Approval in Municipal Limit	Municipal Council	✓		
		Power Requirement			
1	Power requirement	DHVBN/UHBVN	✓		
		Financial Requirement			
1	Capital Issue	SEBI		✓	
2	Term Loan/ Working Capital	Financial Institutions or Bank			✓
		Final Approval			

1	MSME	District Industries Centre (DIC)	✓	
2	Large Units	Secretary Industrial Approvals (SIA)		✓
		Registration of Establishment		
1	Registration under Shops & Establishment Act	Local Authority/Municipal Corporation	✓	
2	Registration as Factory	Chief Inspector of Factories	✓	

Source: State Industrial Profile of Haryana 2016-17 (Websites of MSME- Development Institute, Karnal and Development Commissioner MSME)

*Others: Include Banks, Financial Institutions etc.

1.4.4. Overall Investment Promotion Policy: Haryana Enterprises Promotion Policy 2015

The State Government of Haryana launched a new industrial promotion policy during the year 2015-16 for providing people with a cost effective environment for executing their business, endorsing entrepreneurship, innovation, etc. This new industrial promotion policy was named as Haryana Enterprises Promotion Policy 2015 and it succeeded the previous industrial promotion policy of the state launched in 2011. The Vision and Mission of the Enterprises Promotion Policy 2015 are: -

1.4.4.1 Vision

To position Haryana as a pre-eminent Investment destination and facilitate balanced regional and sustainable development supported by a dynamic governance system, wide scale adoption of innovation & technology, and skill development for nurturing entrepreneurship and generating employment opportunities.

1.4.4.2 Mission

i) Reposition Haryana as a "Pre-eminent Destination" for doing business;
ii) Facilitate State GDP growth rate in excess of 8%;
iii) Employment generation for 400,000 persons;
iv) Investments into the State of INR 1 trillion;
v) Increase contribution of secondary sector in the State GDP from 27% to 32% in tandem with the Government of India's National Manufacturing Policy and 'Make in India' initiative;
vi) Promote balanced regional development through geographical dispersal of industry;
vii) Increasing the competitiveness of the MSMEs through cluster development and adoption of "Zero Defect Zero Effect" manufacturing practices.

Table 1.6 Haryana Enterprises Promotion Policy 2015

Focus Point	Sub-parts	Description
Ease of Doing Business (NIRBAAD H – New Industrial Regulation by Automatic Approval and Delegation in Haryana)	Two tier system for project clearance	• Empowered Executive Committee (EEC) is a single point clearance committee for projects with investment of more than INR 100 million and requiring Change of Land Use (CLU) certification for more than one-acre land • District Level Clearance Committee (DLCC) is the single point clearance committee for projects with investment up to INR 100 million and requiring Change of Land Use (CLU) certification for up to one-acre land in conforming zones
	Single Window Clearance System	• Haryana Enterprises Promotion Centre (HEPC) is a unique Single Roof Clearance System inaugurated in February 2017 for the benefit of new units or units under expansion • Applications are accepted only in online mode without any physical touch point for the investor • All State Level Industrial clearances /services are granted in a maximum of 45 days, "Deemed Clearance" is provided after the completion of 45 days • More than 70 clearances of 14 different departments are granted under one roof • New Rapid Assessment System (RAS) for capturing investors' feedback with a focus to improve service delivery
Ease of Doing Business (NIRBAAD H – New Industrial Regulation by Automatic Approval and Delegation in Haryana)	Single Window Clearance System	• 23 officers from all the Departments are seated permanently under one-roof • 27 relationship managers for handholding the Investors supported by 12 Relationship Executives • Dedicated Investor Help Desks set up in Delhi and Panchkula for expedited query resolution of investors • Multiple helpline numbers for investor to answer all their queries
	Minimal Clearances	• No requirement for getting a Change of Land Use (CLU) certificate / NOC when setting up industrial units in 31 blocks of the state • Provision of automatic CLU in another 75 blocks with an automatic dispensation of deemed clearance • In case of thrust area/ focus cluster/ rural function clusters, CLU will be permissible in agriculture zone
	Liberalised and Simplified Estate Management Procedures (EMP)	• Revised EMP were announced by the HSIIDC and HUDA which include provisions of self-certification, third party verifications, and online approval / clearances for industrial plots • Simplified mechanism for Industrial Licenses for setting up of Private Industrial Parks • Easy land availability as land is available on lease hold basis for 33 years
	Labour and Environmental reforms	• Relaxation for employment of female workers during night hours in factories as well as other commercial establishments • Number of Contract Labour for applicability of Contract Labour Act increased to 50 from 20 • Freedom given to industrial units with up to 300 workers to shut down without govt. permission • Self-Certification allowed for Compliance Management without any checking/ inspection • Allowed 3rd Party verifications and reduced frequency of inspections for environmental issues • NOC and Consent to Establish (CTE) not required for industries in Green and Non Red Category • Inspection is only required for Consent to Operate (CTO) • Allowed NOC for self-declaration for all categories of industries

Enhancing Competitive ness of the Industry	Reducing Cost of Doing Business	• No enhancement on land cost to be charged from the plot holders by HSIIDC • Higher Floor Area ratio (FAR) of 150% for industrial projects • Employment Generation Subsidy of INR 36,000 per annum for SC/Women and INR 30,000 per year for General category for 5 years for capacity building of persons (Skilled / semi-skilled) belonging to Haryana
Balanced Regional Growth	Incentive led Geographical Dispersal	• The state has been divided into four categories of Development Blocks viz. A, B, C and D; category D blocks are 41 in number and do not have any large or medium sized industrial unit • Various incentives are being provided to the industries which are establishing units in B, C, and D category blocks • Special incentives for creation of mega projects / mother units in aerospace / defence / ESDM sector in the state
	Maha Nivesh Yojana	• The state has launched a special incentive scheme for iconic-ultra mega projects in manufacturing, tourism, logistics, wholesale markets involving land of minimum 500 acres and investment worth INR 60 billion
	State Industrial Corridors	• Manufacturing and industrial corridors are being planned to leverage the dedicated freight corridors, for example Delhi Mumbai Industrial Corridor, Amritsar Kolkata Industrial Corridor, Kundli Manesar Palwal Industrial Corridor
Supporting the MSME Sector	Cluster Development Program	• Six Common Facilities Centres (CFCs) have been approved for the SMEs which include facilities like Common Production/Processing Centre, Design Centres, Testing Facilities, Training Centre, etc. • Two Tool Rooms/ Technology Centres for skill development in the MSME sector are being established in Rohtak and Ambala
	Encouraging Entrepreneurs hip and Start-ups	• One Incubation Centre is being setup in Panipat for supporting the new and promising entrepreneurs • Power tariff subsidy of INR 2 per unit for SMEs setup in C and D Category blocks for 3 years from the date of release of electricity connection • Exemption from state levied taxes for a turnover of INR 30 million or three years (whichever is earlier) for start-up enterprises by first generation professionally and technically qualified youth

Source: Enterprises Promotion Policy-2015 document by the Department of Industries & Commerce; State Industrial Profile of Haryana 2016-17 by MSME-DI, Karnal; various news articles; http://www.yesinstitute.in/reports/statereport/Invest%20in%20Haryana.pdf

1.4.4.3 *Implementation Structure of Haryana Enterprises Promotion Policy 2015*

The implementation structure of the Haryana Enterprises Promotion Policy 2015 was included in the Haryana Enterprises Promotion Act (HEPA). The act focused on creation of institutions, mechanism and processes to facilitate industrial development:

i) Economic Advisory Council: This is a high profile advisory council which has been constituted to harness the intellectual capital in the State on Policy matters and other issues of overall economic development of the State. This council is headed by the Chief Minister of the state and its members would constitute the Cabinet Ministers of the State, Additional Chief Secretaries/Principal Secretaries of various Departments, MD of HSIIDC, Industry Leaders, etc. as members. The council meets bi-annually.

ii) Bureau of Industrial Policy and Promotion: The already existing Investment Promotion Centre has been changed to the Bureau of Industrial Policy and Promotion (BIPP). BIPP is responsible for policy outreach, investment promotion, inter-government interface, Foreign Direct Investment, NRI issues and Foreign Investment Promotion Board. It consists of a Foreign Investment Promotion Board and NRI Cell in New Delhi. BIPP would be headed by the Additional Chief Secretary or Principal Secretary of Industries and Commerce Department with Director General or Director as CEO.

iii) Policy Monitoring Mechanism: A three-member committee headed by the Principal Secretary, Industries and Commerce, to monitor the implementation of the Enterprises Promotion Policy-2015 has been constituted by the Haryana Govt. The role of this committee is to include monitoring of the status of implementation of various provisions under the Promotion Policy-2015, and identification of hurdles or bottlenecks in the implementation of these provisions.

iv) Grievance Redressal Committee: There is a 3-tier system for grievance redressal.

- District Level Committee – District level committee headed by the Deputy Commissioner of the district, to meet once a month.
- Administrative Secretary Level Committee – State level committee headed by the Administrative Secretary of Industries and Commerce Dept., to meet once in two months.
- Haryana Enterprise Promotion Board – Apex level committee under the Chairmanship of the chief Minister of the state.

v) Enterprise Assistance Group: The District Industries Centres have been strengthened and repositioned as Enterprise Assistance Group to provide all necessary support to the industry; particularly the MSMEs, by positioning / appointing young professionals / consultants in the fields of Finance, Marketing and Operations etc.

Figure 1.10 shows the implementation structure of the Haryana Enterprises Promotion Policy 2015 with its main constituent bodies and their features.

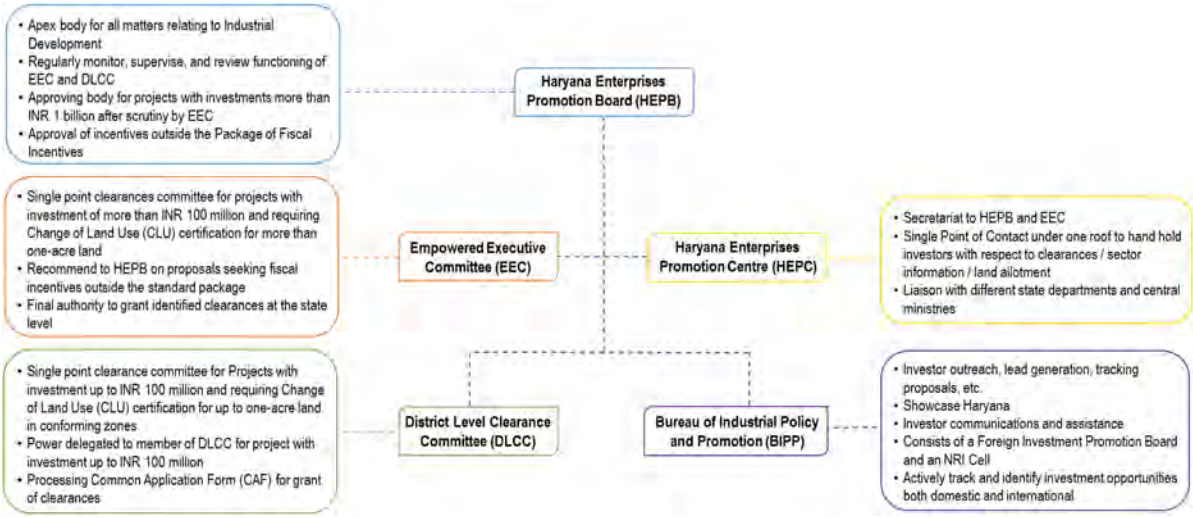

Figure 1.10 Implementation Structure of the Haryana Enterprises Promotion Policy 2015

Source: Enterprises Promotion Policy-2015 document by the Department of Industries & Commerce; State Industrial Profile of Haryana 2016-17 by MSME-DI, Karnal

Haryana government's Single Roof Clearance System is quite useful and several approvals can be granted online. However, currently only limited approvals have been offered through this system. Companies have to visit other departments physically and get approvals from them. There is scope to include more approvals from different departments. Another issue is with the approvals for obtaining construction permits. Investors are not aware about which all approvals are required for entire construction period and process of getting is cumbersome. There is scope of simplifying this process.

Further, as of now through Single Roof System approvals are granted for setting up of new factories only. If approvals related to licence renew can also be included in this system, it will be of great convenience to industries.

1.4.5. Sector Specific Investment Promotion Policies

Apart from the Investment Promotion Policy 2015, the state government of Haryana has implemented various sectoral policies or have passed various acts during the past few years in order to improve the industrial situation of the state. Table 1.7 shows a list of some of the sectoral policies implemented by the state government.

Table 1.7 Sectoral Industrial Policies of the State

Policy	Year	Objectives
Aerospace & Defence Policy (Draft)	2016	• To attract orders for at least 15% of all offset obligations discharged by companies in India by leveraging the existing ancillary base and promoting new MSMEs dedicatedly for A&D sector • To attract investment of over INR 250 billion throughout the value-chain including research, design, development, manufacturing, maintenance, quality control and training
IT & ESDM Policy (Draft)	2017	• To attract US$ 2.79 billion as investments in Information Technology (IT) & Electronic System Design and Manufacturing (ESDM) sector in the next five years • Provide employment to 120,000 people in the sector • To increase IT & ESDM sector's contribution to the state's GDP from 9.4% to 15%
Industrial Infra Development Scheme	2017	• To promote uniform regional and sustainable growth across the state, including in backward areas • To provide sufficient width of road connectivity between the nearest states
Public Private Partnership Policy	-	• To facilitate private sector participation in upgrading, developing and expanding the state's physical and social Infrastructure
Entrepreneur and Start-up Policy	2017	• To attract INR 5 billion investments into the incubation and start up ecosystem in Haryana during policy period • To establish at least 10 technology /business incubators / accelerators in each of the different sectors in the state in different regions of the state • To develop 1 million sq. ft. of incubation space • To facilitate venture capital funding of a minimum of INR 2 billion • To encourage/facilitate/incubate at least 500 start-ups

Source: Department of Industries and Commerce (Govt. of Haryana); Department of Information Technology (Govt. of Haryana)

1.4.6. Micro, Small, and Medium Enterprises (MSME) Policy/Schemes

The major policies/schemes being implemented by the state government of Haryana for MSMEs have been mentioned in Table 1.8. As of 31st March, 2018, the Office of Development Commissioner (MSME) has approved 6 Common Facility Centres (CFCs) development projects for Haryana under the Micro & Small Enterprises - Cluster Development Programme (MSE-CDP) Apart from these CFCs, Haryana has also received approval for 28 Infrastructure Development (ID) Projects. The process of applying for the project of cluster development was defined by the Office of Development Commissioner (MSME).

Table 1.8 Status of MSME related Policy/Schemes in Haryana

Policy/Scheme Name	Objectives	Implementation in Haryana
Micro & Small Enterprises - Cluster Development Programme (MSE-CDP)	i) Creation of Common Facility Centres (CFCs) like Common Production/Processing Centre, Design Centres, Testing Facilities, Training Centre, R&D Centres, Effluent Treatment Plant, Marketing Display/Selling Centre, Common Logistics Centre, Common Raw Material Bank/Sales Depot, etc. ii) Infrastructure Development Projects for facilities like power distribution network, water, telecommunication, drainage and pollution control facilities, roads, banks, raw materials storage and marketing outlets, common service facilities and technological backup services for MSEs in the new/ existing industrial estates/areas.	i) As on 31st March, 2018, six Common Facility Centres (CFCs) have been approved out of which one has been completed in the district of Karnal and work is still ongoing for the remaining five CFCs. ii) As on 31st March, 2018, 28 Infrastructure Development (ID) Projects have been approved out of which 25 ID Projects have been completed and work is still ongoing for the remaining 3 ID Projects.
MSME Sector Skill Development	Establishing Tool Rooms/ Technology Centres for skill development in the MSME sector.	i) Two projects are being set-up at IMT Rohtak (19.8 acre) and at Industrial Growth Centre, Saha (10 acre) with estimated investment of more than INR 1 billion in each project. ii) HSIIDC has already provided land for the two projects.
Incubation Centre for MSME Sector	To setup Incubation Centres for supporting the new and promising entrepreneurs	i) As on Oct. 2014, the Ministry of Textiles (Govt. of India) gave an in-principle approval for HSIIDC's proposal for setup of an Incubation Centre in Apparel Manufacturing at the Industrial Estate Panipat for INR 134.5 million. ii) 1 acre of land would be provided by the HSIIDC for the project.

Source: State Industrial Profile of Haryana 2016-17 (Website of MSME- Development Institute, Karnal)

1.5. Overview of Special Economic Zones (SEZs) and Industrial Estates (IEs)

Haryana is one of the preferred location for setting up industries in the country. The state government of Haryana has been focusing to develop various efficient and reliable industrial infrastructure facilities in the state. Special Economic Zones (SEZs), Industrial Model Townships (IMTs), Industrial Estates (IEs), and Industrial Clusters / Theme Parks are among the different kinds of industrial infrastructure present in the state. Haryana has a total of 6 operational SEZs, 3 operational IMTs, 22 operational IEs, and 14 special Industrial Clusters / Theme Parks. Apart from this, Haryana also has 24 formally approved SEZs, 3 planned IMTs, and 2 planned IEs. There is also a private industrial estate "Model Economic Township Limited" being developed by India's largest conglomerate, Reliance Industries Limited spread over 8,250 acres (4,000 acres being developed currently) in Jhajjar.

1.5.1. Public Sector Industrial Estates (IEs)

1.5.1.1 Haryana State Industrial & Infrastructure Development Corporation Limited (HSIIDC)

HSIIDC is the nodal agency for development of industrial infrastructure in the state. After acquisition of land through the Department of Industries (Govt. of Haryana), HSIIDC prepares a detailed plan for its development. Thereafter, it executes various development works such as construction of roads, provision of water supply, sewage, drainage and electrical infrastructure. This is followed by provision of secondary level of facilities such as the Sewage Treatment Plant, development of plantation (green belts), commercial and institutional sites, common parking facilities, etc. In addition to the above, HSIIDC also undertakes need based provisions depending upon the size of the industrial estate, its planning, and the costing pattern adopted. These facilities include R&D Centres, Skill Development Centres, Conferencing & Entertainment, Exhibition & Display facilities, Cargo Logistic Centres/Custom-bounded Warehousing, Petrol & Service Stations, Idle parking, etc.

The structure of Board of Directors of HSIIDC is shared in Figure 1.11, and it includes the Principal Secretary to Chief Minister, Haryana as the Chairman. However, Department of Industries & Commerce is the key agency for HSIIDC for all approvals.

Figure 1.11 Board of Directors of HSIIDC

Source: Website of HSIIDC

1.5.1.2 Industrial Model Townships (IMTs) and Industrial Estates (IEs)

According to HSIIDC, an Industrial Model Township (IMT) is an Industrial Estate (IE) which has been developed over an area of more than 1500 acres at a particular place. Haryana has 3 operating IMTs and there are 3 more IMTs which are under development. Figure1.12 shows the locations of operating and planned / under development IMTs in the state. Apart from IMTs, there are 22 operating Industrial Estates (IEs) and 2 IEs which are planned / under development. Figure 1.13 shows the locations of IEs in Haryana.

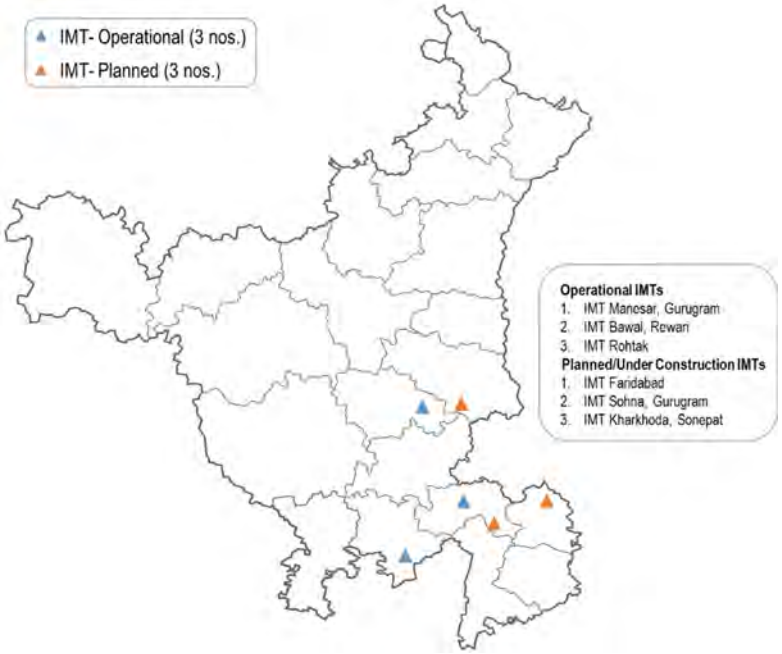

Figure 1.12 Location of Operational and Planned / Under Development IMTs in Haryana

Source: Website of HSIIDC

Majority of the industrial infrastructure of Haryana is located in and around the NCR (National Capital Region). This has been one of the reasons of regional disparity in the industrial growth of the state. The districts under the NCR have better infrastructure and hence higher industrial growth. Districts like Gurugram and Faridabad are the industrial bases of Haryana as they have better industrial infrastructure as compared to the other regions. The state government of Haryana has been trying to balance the economic growth by providing industrial infrastructure to the industrially less developed regions.

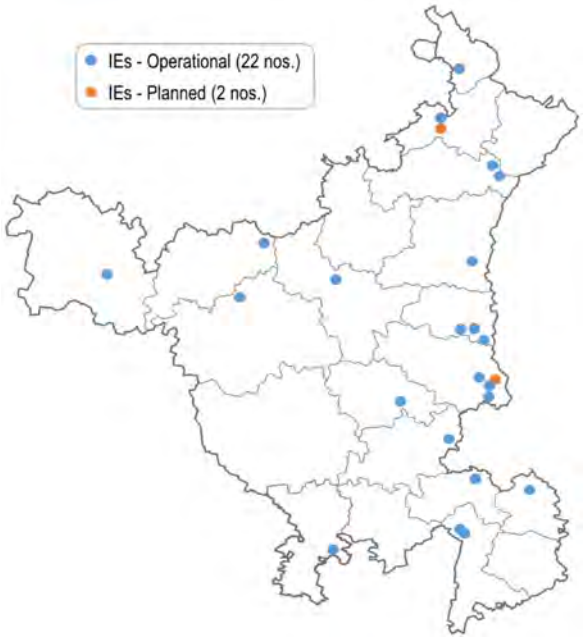

Figure 1.13 Location of Operational and Planned Industrial Estates (IEs) in Haryana

Source: Website of HSIIDC

Table 1.9 List of Operational Industrial Model Townships (IMTs) and Industrial Estates (IEs) in Haryana

S. No.	Name	District	Total Area (in acres)	Major Companies
Industrial Model Townships (IMTs)				
1.	IMT Manesar	Gurugram	3,925.35	Maruti Suzuki, Honda Motorcycle & Scooters India, Hero Motors, Munja Kiriu, Munjal Showa, Amul Co-Operative Dairy
2.	IMT Bawal	Rewari	3,366.21	M/s Becton Dickinson India, M/s YKK India (P) Ltd., M/s Technico Industries Ltd, M/s Keihin Fie (P) Ltd., India Japan Lighting (P) Ltd.
3.	IMT Rohtak	Rohtak	3,680.64	M/s Asian Paints Limited, M/s Maruti Suzuki India Limited, M/s Aisin Automotive Haryana Private Limited, M/s Sabarkantha District Co-operative Milk Producers' Union Ltd, M/s Nippon Carbide India Pvt. Ltd.
Industrial Estates (IEs)				
1.	IE Ambala Cantt.	Ambala	-	N.K. Jain Instruments Pvt. Ltd, Labotech Microscopes India Pvt. Ltd, M/s Shiv Dayal Sood & Sons, M/s Advance Meditech Inc.
2.	IE Bahadurgarh	Jhajjar	731.91	M/s Yokohama India Pvt., M/s Relaxo Footwears Ltd, M/s Everest Blower Systems Pvt. Ltd., M/s Neolite ZKW Lightings Pvt. Ltd., M/s Balaji Aluminum Extrusions Pvt. Ltd., M/s BNG Fashion Gears Pvt. Ltd., M/s Rinder India Pvt. Ltd.
3.	IE Barhi	Sonepat	1,255.06	M/s Kaico Deer Abrasive Pvt. Ltd., M/s EOC Polymers India Pvt. Ltd., M/s Manohar Filaments Pvt. Ltd., M/s Srishti Metal Pvt. Ltd., M/s Paramount Blankets Pvt. Ltd.,

4.	IE Barwala	Panchkula	660.74	M/s India Circuits Ltd, M/s Micron Instruments (P) Ltd., M/s Nector Life Science Ltd., M/s Parabolic Drugs Ltd., M/s Industrial Equipment Company
5.	IE Faridabad	Faridabad	60.78	M/s Synmedic Laboratories, M/s Demco Solution, M/s Tide water Oil, M/s Poly medical Devices, M/s JBM Motors Ltd, M/s Metal Coating (India) Pvt. Ltd
6.	IE IGC Saha	Ambala	660.18	Sungro Seeds Ltd., Osaw Argo Products Ltd. , EPICU Agro Food Products Pvt. Ltd., Mount Shivalik Breweries Ltd., Allied Blenders & Distillers Pvt. Ltd., Kandhari Beverages Pvt. Ltd., Perfect Breads
7.	IE Kalka	Panchkula	17.4	M/s Kalka Steels, M/s Mile Stone
8.	IE IIDC Sirsa	Sirsa	75.33	M/s Sharda cotton Industries, M/s Shiva Breads, M/s Shree Gopal Industries, M/s Durga Parshad, M/s Shiv Steel Fabrication
9.	IE Panipat	Panipat	926	M/s Ambadi Enterprises Ltd.
10.	IE Karnal	Karnal	417.35	Beri Udyog Pvt. Ltd., Partap Iron Works, Nitin Pharmaceuticals, D.S. Enterprises (MBD Group), Modern Industries
11.	IE Khutana	Rohtak	149.09	M/s Tightwell Fasteners, M/s Rohit Steels, M/s Singla Forging Pvt. Ltd., M/s Bhagwan Precision Pvt. Ltd, M/s Dynamic Transmission Ltd.
12.	IE Kundli	Sonepat	1,248.31	M/s Osram India Pvt. Ltd., M/s Kay International Ltd., M/s MetBreaks India Pvt. Ltd.
13.	IE Manakpur	Yamunanagar	393.41	"M/s Kay Bouvet, Kirtiman Cement, P.R.Steels, Indo International, Yamuna Packages
14.	IE Rai	Sonepat	923.3	M/s. Fiem Industries Ltd., M/s. Yakult Danone India Pvt. Ltd., M/s Ketan Buttons, Sh. Raj Kamal Jindal, M/s Todays Diaries India (P) Ltd., M/s. Sain Packaging (P) Limited, M/s. Raksan Transformer (P) Limited, Victoria Foods Pvt. Ltd., Rajdhani Flour Mills Ltd., GPA Foods Pvt. Ltd.
15.	IE Roz Ka Meo	Mewat	8.42	-
16.	IE Samalkha	Panipat	25	-
17.	IE Sonepat	Sonepat	4.8	-
18.	IE Tohana	Fatehabad	36.38	M/s Bulbul Enterprises, M/s World Glass Polymers, Sh. Inder Pal, M/s Arihant Spices, M/s Wazir Zinc Allied
19.	IE Jind	Jind	25.4	M/s Haryana Leather Chemical, M/s Hindustan Surgical, M/s Jind Surgical, M/s Krish Surgical, M/s Jai Durga Surgical
20.	IE Udyog Vihar, Gurugram	Gurugram	1,124.5	Educomp Solutions Limited, Polaris, KV Impex, Bharat Enterprises, Gaurav International, Motherson Sumi
21.	IE Narnaul	Mahendragarh	7.99	-
22.	IE Yamunanagar	Yamunanagar	42	-

Source: Website of HSIIDC

The State Government of Haryana, through its nodal agency HSIIDC, has been focusing on developing Industrial Clusters/ Theme Parks to help the growth of certain sub-sectors of industry which are already prevalent in that area. These Industrial Clusters/ Theme Parks have usually been developed in/around an already existing Industrial Estate by further expanding the infrastructure. There are 14 such Industrial Clusters/ Theme Parks which have been developed for sub-sectors like apparel manufacturing, textile, food processing, electronic hardware manufacturing, leather and footwear, IT/ITeS, etc. A list of the Industrial Clusters/ Theme Parks of Haryana is provided in Table 1.10.

Table 1.10 Industrial Clusters / Theme Parks developed by the HSIIDC in Haryana

S. No.	Name	District	Total Area (in acres)
1.	Apparel Park, Barhi	Sonepat	332
2.	Electronic Hardware Technology Park, Kundli	Sonepat	98
3.	EPIP (Export Promotion Industrial Park), Kundli	Sonepat	108
4.	Food Park, Rai	Sonepat	115
5.	Food Park, Saha	Ambala	70
6.	Footwear Park, Bahadurgarh	Jhajjar	316
7.	Industrial Growth Centre, Saha	Ambala	Phase I = 345 / Phase II = 226
8.	IIDC (Industrial Infrastructure Development Centre) Narwana	Jind	108
9.	IT Park, Manesar	Gurugram	141.8
10.	IT Park, Rai	Sonepat	56
11.	Mega Food Park, Rai	Sonepat	95
12.	Technology Park, Panchkula	Panchkula	72.87
13.	Textile Hub, Panipat	Panipat	88.32
14.	Theme Park, Kundli	Sonepat	10

Source: Website of HSIIDC

Note: Theme Parks are Industrial Parks with a specific theme of industries present in them. For example, an industrial park/estate containing mainly textile industries could be called as a Textile Theme Park.

Apart from the above mentioned infrastructure development projects, HSIIDC is also working on developing some Mega Projects in the state. These projects are of very high scale and investment. Some of the Mega Projects are: -

i) Kundli-Manesar-Palwal Expressway (KMP Expressway or Delhi Western Peripheral Expressway): The Government of Haryana is constructing a four/six lane Kundli-Manesar-Palwal Expressway in Haryana Territory by- passing Delhi by NH-1, NH-8 and NH-2, with a total length of 135.65 km. HSIIDC is planning to develop logistic parks as well as other industries near to this road.

ii) Delhi Mumbai Industrial Corridor (DMIC) Project: The Government of India (GOI) is establishing a Dedicated Freight Corridor (DFC) between Delhi and Mumbai, covering a length of nearly 1500 km. HSIIDC is the nodal agency for DMIC Project in Haryana sub-region. Four investment nodes have been identified in Haryana which will be developed Phase-wise. Phase-I (A) includes Manesar-Bawal Investment Region (MBIR), Phase-II (A) includes Kundli-Sonepat Investment Region. Phase-I (B) consists of Faridabad-Palwal Investment Area and Phase-II (B) consists of the Rewari-Hisar Investment Area. In Future, these IRs are expected to drive industrial growth in the state.

1.5.2. Private Sector Industrial Estates

The State Govt. has been shifting towards adopting the Public Private Partnership (PPP) model for the development of industrial infrastructure in Haryana. Involving the private sector for the development of infrastructure increases the availability of budget, improves the quality of infrastructure, and decreases the time taken to develop the infrastructure. Majority of the SEZs (Special Economic Zones) are developed by private sector developers. Haryana has a total of 6 Operational SEZs, all of which are present in Gurugram. Apart from this, there is a presence of 24 formally approved SEZs.

1.5.2.1 Special Economic Zones (SEZs)

Special Economic Zones (SEZs), in India, are certain localities which offer tax and other incentives to their resident businesses. The SEZs of the country are governed by the SEZ Act 2005 and is supported by SEZ Rules. Haryana has its own act to regulate the SEZs in the state known as The Haryana Special Economic Zone Act, 2005. As on Dec. 1, 2017, India has a total of 222 operating SEZs out of which 6 are in Haryana. Also, there are 423 formally approved SEZs in India out of which 24 are located in Haryana.

The SEZ Act 2005 has mentioned some incentives and facilities which are offered to the units in SEZs and the SEZ developers, for attracting investments into the SEZs, including foreign investments. Table 1.11 lists down such incentives and facilities available to the units and the developers.

All the six operational SEZs of Haryana are located in Gurugram and all of them cater to IT/ITeS industry. Also, 18 of the 24 formally approved SEZs are located in Gurugram. The 18 formally approved SEZs of Gurugram have 16 SEZs for IT/ITeS industry and 1 each for Electronic Hardware and Biotechnology. The remaining 6 formally approved SEZs of the state consist of 4 IT/ITeS SEZs and 1 each for Agro and Food Processing Products and Handicrafts. Figure 1.14 shows the locations of SEZs in the state.

Table 1.11 List of Incentives and Facilities Offered to the Units in SEZs and the SEZ Developers

S. No.	For the Units in SEZs	For SEZ developers
1.	Duty free import/domestic procurement of goods for development, operation, and maintenance of SEZ units	Exemption from customs/excise duties for development of SEZs for authorized operations approved by the BOA (Board of Approval)
2.	100% Income Tax exemption on export income for SEZ units under Section 10AA of the Income Tax Act for first 5 years, 50% for next 5 years thereafter and 50% of the ploughed back export profit for next 5 years. *(Sunset Clause for Units will become effective from 01.04.2020 wherein no Income Tax exemption would be given to SEZ units which will be setup after 01.04.2020)*	Income Tax exemption on income derived from the business of development of the SEZ in a block of 10 years in 15 years under Section 80-IAB of the Income Tax Act. *(Sunset Clause for Developers has become effective from 01.04.2017)*
3.	Exemption from Central Sales Tax, Exemption from Service Tax and Exemption from State sales tax. These have now subsumed into GST and supplies to SEZs are zero rated under IGST Act, 2017.	SEZ developers are also entitled for GST (CGST, SGST, and IGST) exemption.
4.	Single window clearance for Central and State level approvals.	SEZ Developers are deemed licensees for setting up of an electricity production or distribution unit within the SEZ. They do not require a separate distribution license for electricity distribution.

Source: Website of Special Economic Zones in India

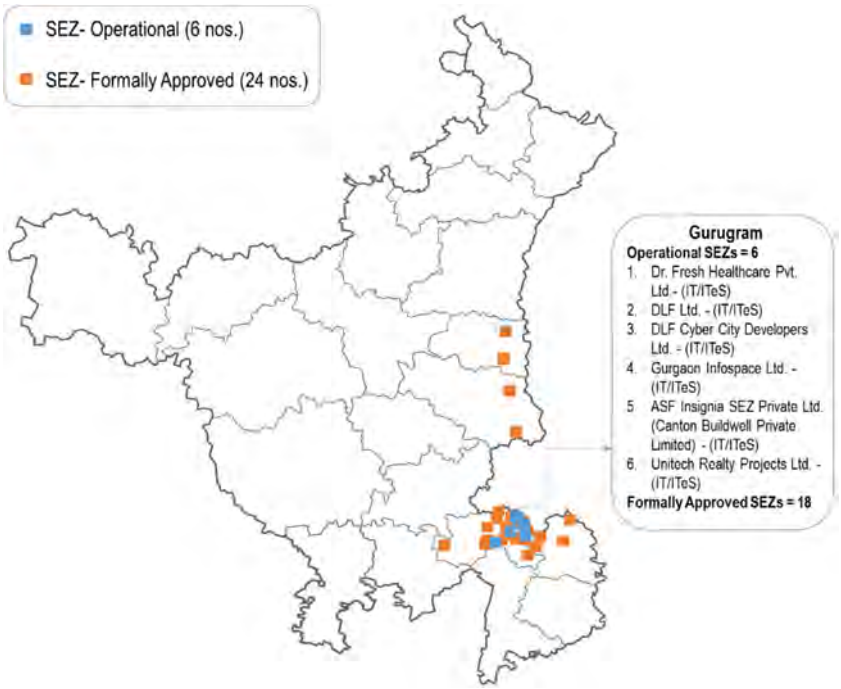

Figure 1.14 Location of operational and formally approved SEZs in Haryana

Source: Website of Special Economic Zones in India

1.5.2.2 *Reliance MET (Model Economic Township)*

Reliance MET is a private Industrial Estate which is owned and developed by Reliance Industries Limited over a total area of 8,250 acres in the district of Jhajjar. Out of the total area, 4,000 acres is currently being developed in five phases. The MET is located within the influence area of the Delhi Mumbai Industrial Corridor (DMIC) Project and the Government of Haryana has recommended it as a node of the DMIC. MET is also connected to the western Dedicated Freight Corridor (DFC). Table 1.12 shares some of the important details regarding the Reliance MET.

Table 1.12 Important details of the Reliance MET

S. No.	Characteristic	Details
1	Size	• Total Size: 8,000 acres • Under development: 4,000 acres • Phases: A+E (1,600 acres), B (210 acres), C (600 acres), and D (1529 acres)
2	Physical Infrastructure	• Power: 220/33 kV GIS substation approval received for reliable power supply • Gas: Pipeline already laid by Gas Authority of India Limited (GAIL) for industrial use • Water: Approval received for 100 MLD water supply from NCR Water Channel • Sewage and Wastewater: CETP and STP to be setup by Reliance • Roads: 18m / 24m / 36m wide roads network
3	Clearances	• Environment Clearance (EC) already obtained for 1,860 acres of development • EC for additional 250 acres under process
4	Industrial Project	• License received and development of Industrial colony over 365 acres under process • Panasonic India Pvt Ltd. (~ 75 acres) and Denso Haryana Pvt Ltd. (~18 acres) already started operations and are employing ~2000 persons • License for additional 1,230 acres is under process
5	Residential Project	• 15%-25% of the total licensed land to be used for residential development • Plans of creating 'walk to work' concept • Plots to be available for group housing and individual housing
6	Commercial Project	• Premium commercial plots of varying sizes planned • 5% of total licensed land to be used for residential retail markets as well as Industrial / Commercial wholesale markets
7	Private Freight Terminal (PFT)	• Land in place for development of a Private Freight Terminal (PFT) / logistics hub with Rail Sidings • Land for last mile rail connectivity acquired by the State Govt. • Provision of Inland Container Depot (ICD) along with EXIM provisions • Approval received from Railway Ministry
8	Development around MET	• AIIMS: Second campus of All India Institute of Medical Sciences (AIIMS) is being developed (300 acres) within the MET area • IIT: Indian Institute of Technology (IIT) Delhi, has taken possession of ~50 acres of land for an R&D Centre

	• XLRI: Xavier School of Management-XLRI, a premier management institute of the country, has started construction of a Higher Secondary School (40 acres) • SGT University: It has a residential campus (~60 acres) with Medical college, Dental college, Engineering college, Law and many more courses • Sehwag International School: It is one of the best residential schools with Cricket Academy in the region • Cricket Stadium: Haryana Cricket Association (HCA), affiliated to Board of Control for Cricket in India (BCCI), is the apex body for promotion of cricket in Haryana and it is developing a Cricket Stadium and Academy in the region

Source: Website of the Reliance MET

The MET is situated in an industrially backward block- Block C (as per Haryana Enterprises Promotion Policy 2015) of the state and hence enjoys the incentives and subsidies related to SGST (State Goods & Service Tax), electricity duty, EDC charges, power tariff charges, etc. Figure 1.15 shows the location of the MET in the NCR and the connectivity options including all the major roads, railway lines, and airports. The MET is situated at a distance of 50 km from the Indira Gandhi International Airport (IGI) in Delhi. It has a very good road connectivity as the Western Peripheral Expressway (KMP Expressway) passes right through it and provides connectivity with all the National Highways-- NH-2, NH-8, NH-71, NH-10 in the NCR.

Figure 1.15 Location of MET and connectivity options

Source: Website of Reliance MET

MET is a good industrial area with several companies already having factories there e.g.: Panasonic, Denso etc. Further, MET Jhajjar, is one of the 11 candidates identified by India-Japan

to be developed as “Japan Industrial Townships”. Also, Marubeni Corporation is promoting it as a potential site for Japanese companies and others. However, industries located in MET, mentioned that commuting between Delhi/Gurugram to Jhajjar is an issue due to traffic congestion on the Highway (road). To increase the attractiveness of MET area, there is need to remove the bottlenecks mainly related to road connectivity.

1.6. Investment by Japanese and Other Foreign Businesses

1.6.1. Foreign Direct Investments (FDI)

Haryana has been able to attract sizeable investment from multinational companies, large business houses, foreign investors, Non-Resident Indians, and small scale entrepreneurs. This becomes clear when we have a look at the Cumulative Foreign Direct Investment (FDI) inflow data from all the countries in India over the period of Jan. 2000 to Dec. 2016 (Chart 1.13). The RBI doesn't report's Haryana data separately and it is included in the New Delhi Regional Office data. Thus, it is better to use the FDI data from the RBI's New Delhi Regional Office as a representative of the state of Haryana.

According to the RBI, New Delhi Regional Office (includes Delhi, Haryana, and parts of UP) has a share of 21% (approx.) in India's cumulative FDI inflows and ranked 2nd after the regional office of Mumbai (which includes the state of Maharashtra, Union Territories of Dadra & Nagar Haveli, and Daman & Diu).

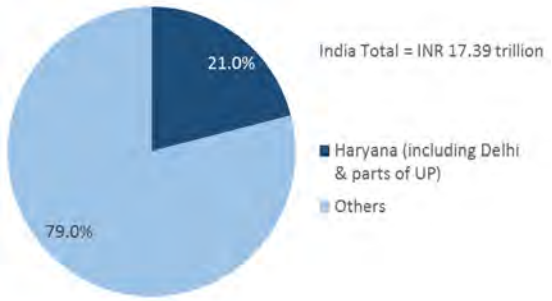

Chart 1.13 Cumulative FDI Inflows from all Countries during Jan. 2000 to Dec. 2016

Source: Website of the Reserve Bank of India (RBI)

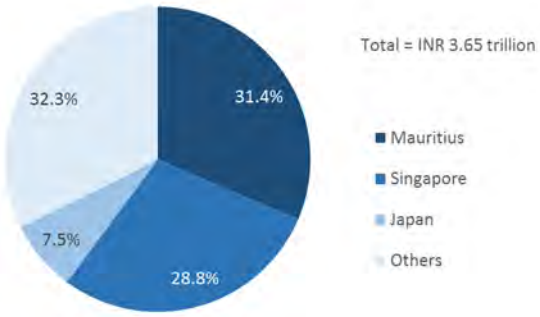

Chart 1.14 Share of Top 3 Countries contributing to the Cumulative FDI inflows in Haryana (including Delhi and parts of UP) during Jan. 2000 to Dec. 2016

Source: Website of the Reserve Bank of India (RBI)

Chart 1.14 shows the share of top 3 countries contributing to the Cumulative FDI inflows in Haryana (including Delhi and parts of UP) during Jan. 2000 to Dec. 2016. Mauritius and Singapore are leading and accounts for around 60% share of the cumulative FDI inflows in Haryana and Delhi NCR. One of the main factors for this is the tax friendly structure of these two countries. The third position is occupied by Japan with a contribution of INR 274.39 billion (7.6% of the total). This can be justified with the fact that this region accounts for the highest number of Japanese companies operating in India.

Chart 1.15 shows the share of top three sectors in the cumulative FDI inflows of Haryana (including Delhi and parts of UP) during the period of Jan. 2000 to Dec. 2016. The Services

Sector has received the highest FDI inflows of INR 630.02 billion (17.2% of the total). The top three sectors account for 38% (approx.) of the cumulative FDI inflows in the region.

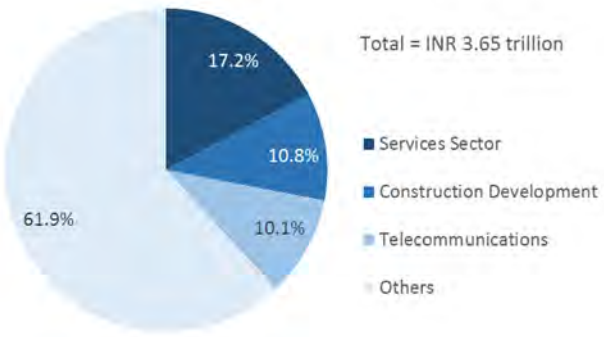

Chart 1.15 Share of Top 3 Sectors contributing to the Cumulative FDI Inflows in Haryana (including Delhi and parts of UP) during Jan. 2000 to Dec. 2016

Source: Website of the Reserve Bank of India (RBI)

1.6.2. Recent Investments (Domestic and Foreign)

Haryana has been a go to region for various foreign companies as more than 100 of the Fortune 500 companies are present in the state. The State Govt. of Haryana has taken a lot of initiatives during the past few years to woo the investors from around the globe to invest in the state. Haryana's first-ever global investors summit, named as Happening Haryana Global Investors Summit, was held in Gurugram in March 2016. It was very successful as the initial target of getting investments worth INR 1 trillion was overachieved. The State Govt. was able to sign a total of 357 MOUs worth a potential investment of INR 5.84 trillion in the state. Apart from the Global Investors Summit, the Haryana Govt. Officials have been conducting various roadshows around the globe to invite investors. Table 1.13 shows some of the major investments that have been signed with the State over the last few years.

Table 1.13 Major Investments declared in Haryana

S. No.	Name	Declaration Year	Potential Investment Amount (in billion INR)	Details
1.	Happening Haryana Global Investors Summit	March, 2016	5,840 approx.	• 359 number of MOUs signed. • 500,000 number of jobs to be expected. • 40% of total amount for manufacturing projects. • 26% of total amount to originate from MSMEs. • 37 MOUs worth INR 1.28 billion for investment in non-NCR Haryana. • 22% of the total MOUs for the focus sectors of Haryana. • Japan to invest INR 2 trillion for Japanese Integrated Industrial Township at Jhajjar.

2.	World Food India	November, 2017	20.69 approx.	• 44 number of MOUs signed. • 5,000 number of jobs to be expected. • All the MOUs signed were for the focus sector of Agri-Business and Food Processing Industry.
3.	Chief Minister's delegation to the UK	May, 2018	15 approx.	• 10 number of MOUs signed. • 1,000 number of jobs to be expected. • MOU signed with Pontaq (UK India Innovation Fund) focusing on FinTech, smart cities and emerging technologies. • MOU with UK India Global Business Limited for promoting technology transfer, support services and establishing UK/European companies especially focused on Aerospace and Defence Sectors. • MOU with Xelba Limited and AU Capital Partners Limited for undertaking Internet of Things (IOT) initiative. • MOU with WKCIC Group for undertaking collaboration in skill development in Haryana.

Source: Various news articles and web research

1.6.3. Presence of Japanese Companies

The state has been a preferred destination for the Japanese companies as shown by the data from the Embassy of Japan in India. According to this data, Haryana has the highest number of Japanese companies in India with 369 companies, followed by Maharashtra (220 companies) and Karnataka (215 companies). One of the main reason for this high concentration of Japanese companies is the presence of a few of the large companies such as Suzuki, Honda Two Wheelers, Yamaha, Panasonic, Asahi Glass, Kansai Nerolac, etc. Once a few of the large companies are present in any region, a lot of medium and small sized ancillary companies could thrive in the same area. That is why there are a lot of auto ancillary companies present in the regions of Gurugram, Faridabad, Rewari, etc.

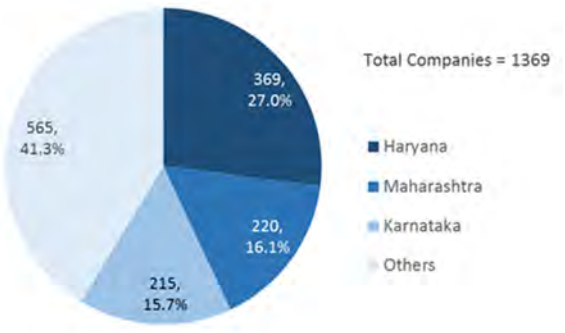

Chart 1.16 Top 3 States of India with highest number of Japanese Companies (as of October 2017)

Source: Website of the Embassy of Japan in India

In terms of growth of Japanese Business Establishments in India, they have grown by a CAGR of 21.5% to a total of 4,838 during the last 10 years (2008-2017). The highest number of Japanese Business Establishments is 923, situated in the region of Haryana + Delhi.

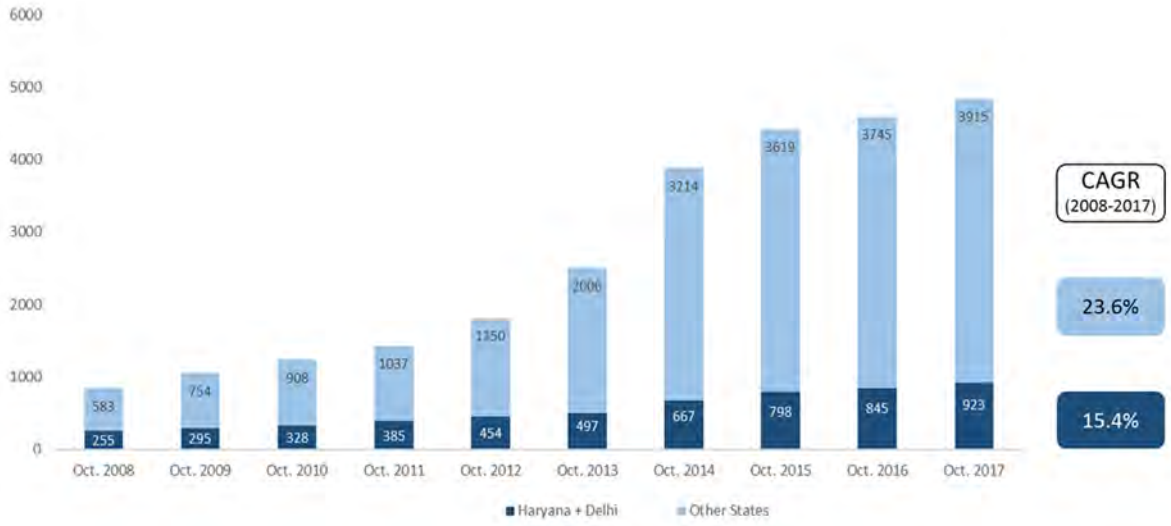

Chart 1.17 Year-wise number of Japanese Business Establishments in Haryana + Delhi / India (2008-2017)

Source: Website of the Embassy of Japan in India

1.7. Labour Information and Working Environment

1.7.1. Key Labour Statistics

In 2015-16, Haryana had over 20 million persons which were of the age 15 years or more. This is 2.1% of the 926 million persons, of age 15 years or more, residing in the whole country. Haryana had 10.5 million males and 9.6 million females of the working age (15 years or more). 61.5% of the total working age population lives in the rural areas.

Labour Force Participation Rate (LFPR) is defined as the number of persons in the labour force per 100 persons of working age (15 years & above). Overall LFPR of Haryana is 43.7 which is lower than that of the whole country 50.3 (Table 1.14). This means that there is need to create additional employment opportunities or Labour force in Haryana is not employable. Further LFPR of females in Haryana is just 14.5 which is way less than the national LFPR of 23.7 for women. The urban women of Haryana have even less participation in the state's economic activities as their LFPR is just 11.8. This is a situation of concern because it shows that there are some bottlenecks because of which women are not able to contribute to the labour force and economic activity of the state.

Table 1.14 Labour Force Participation Rate (%) for persons aged 15 years & above in Haryana / India (2015-16)

Description	Men	Women	All
Haryana			
Rural	71.7	15.6	44.9
Urban	68.2	11.8	41.1
Rural + Urban	70.6	14.5	43.7
India			
Rural	77.3	26.7	53.0
Urban	69.1	16.2	43.5
Rural + Urban	75.0	23.7	50.3

Source: Fifth Annual Employment - Unemployment Survey (2015-16) Labour Bureau, Govt. of India

The main effects of having a low female participation in the Workforce include that it does not allow the economic growth of the region to be at an optimum level. Secondly, the unemployment rate of the region goes up. Haryana is facing both of these effects. The Unemployment Rate (UR) of any region can be defined as the number of persons unemployed per 100 persons in the labour force (employed + unemployed persons). The UR of women in Haryana is 9.3 which is higher than the national UR of women, that is, 8.7 (Table1.15).

In Haryana, the urban unemployment rate is 5.7 which is way more than the national urban unemployment rate of 4.9. Whereas, the state fares better in terms of unemployment in the rural areas. This is mainly because Haryana has fertile land and majority of rural population can engage in Agriculture sector.

Table 1.15 Unemployment Rate (per 100) for persons aged 15 years & above in Haryana / India (2015-16)

Description	Men	Women	All
Haryana			
Rural	4.0	6.1	4.3
Urban	3.7	18.6	5.7
Rural + Urban	3.9	9.3	4.7
India			
Rural	4.2	7.8	5.1
Urban	3.3	12.1	4.9
Rural + Urban	4.0	8.7	5.0

Source: Fifth Annual Employment - Unemployment Survey (2015-16) Labour Bureau, Govt. of India

As per the Fifth Annual Employment –Unemployment Survey (2015-16) carried out by the Labour Bureau (Govt. of India), the Manufacturing sub-sector employed 10.1% of the workforce of Haryana and 10.5% of the national workforce (Chart 1.18).

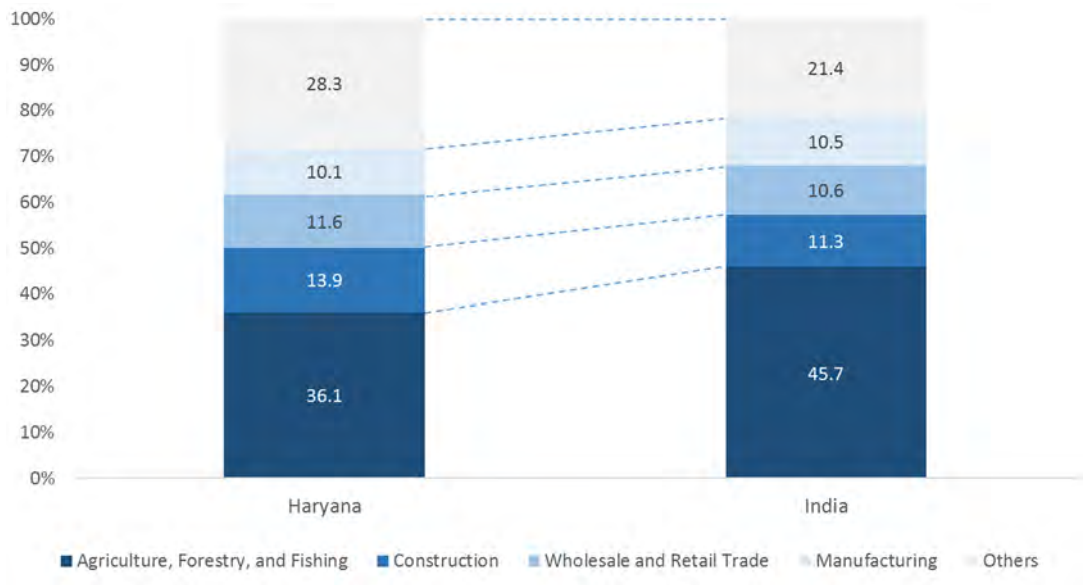

Chart 1.18 Distribution of Workers (aged 15 years & above) by Industry in Haryana / India (2015-16)

Source: Fifth Annual Employment - Unemployment Survey (2015-16) Labour Bureau, Govt. of India

Since 2011-12, the distribution of workforce in the Agriculture, Forestry, and Fishing sector has decreased for Haryana whereas it has increased for Wholesale and retail trade indicating, people are moving from Agriculture sector to service industry (Chart 1.19).

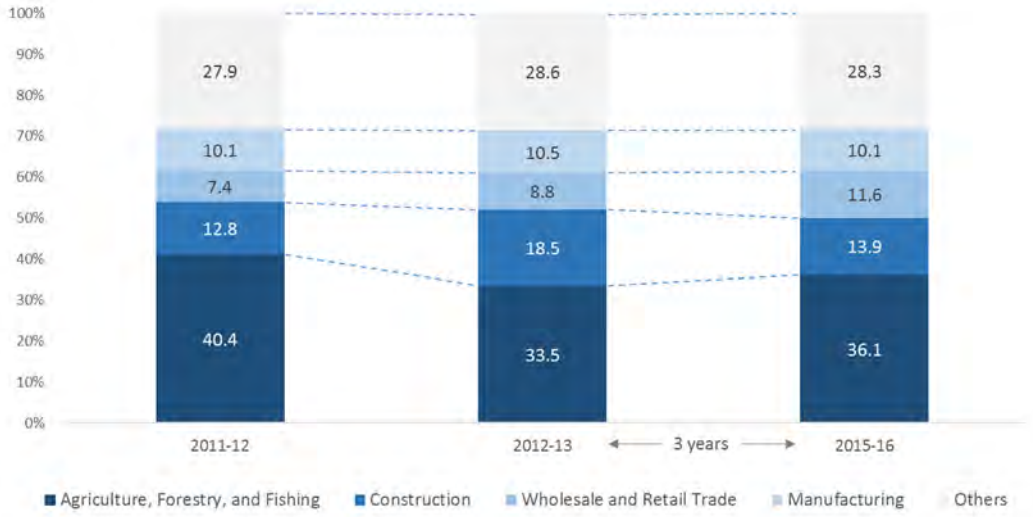

Chart 1.19 Distribution of Workers (aged 15 years & above) by Industry in Haryana (2012 to 2016)

Source: Fifth Annual Employment - Unemployment Survey (2015-16) Labour Bureau, Govt. of India

Haryana is one of the states with highest rate of minimum wages paid to the workers. The minimum wages are revised every six months based on the Consumer Price Index. The minimum wages for the last five half years (January 2016 to January 2018) for the state have been mentioned in the table provided in Table 1.16. There has been an increase in the minimum wages with a CAGR of 3.22% over this period.

Table 1.16 Minimum Wage Rates in Haryana from January 2016 to January 2018

S. No.	Category	Monthly Minimum Wages (in INR) for a period of six months starting from				
		Jan-18	Jul-17	Jan-17	Jul-16	Jan-16
1	Unskilled	8,498	8,222	8,280	8,070	7,976
2	Semi-Skilled-A	8,922	8,634	8,694	8,474	8,375
3	Semi-Skilled-B	9,369	9,065	9,129	8,898	8,794
4	Skilled-A	9,837	9,518	9,585	9,343	9,233
5	Skilled-B	10,329	9,994	10,065	9,810	9,695
6	Highly Skilled	10,845	10,494	10,568	10,300	10,180
7	Clerical & General Staff (minimum wage for various posts)	8,922 to 11,388	8,634 to 11,019	8,694 to 11,096	8,474 to 10,815	8,375 to 10,689
8	Data Entry Operator	9,837	9,518	9,585	9,343	9,233
9	**Driver**	**10,329**	**9,994**	**10,065**	**9,810**	**9,695**
10	Security Inspector / Security Officer / Security Supervisor	10,845	10,494	10,568	10,300	10,180

Source: Website of the Labour Department Haryana

1.7.2. Female Labour

The female workforce in Haryana is 1.3 million (approx.) out of the total workforce of 8.4 million (2015-16). This means that there are only 15% females in the total workforce of the state. The participation of female labour in Haryana started to decline after 2004-05 according to the World Bank (Chart 1.20). The Female Labour Participation Rate of Haryana is among the lowest of the country.

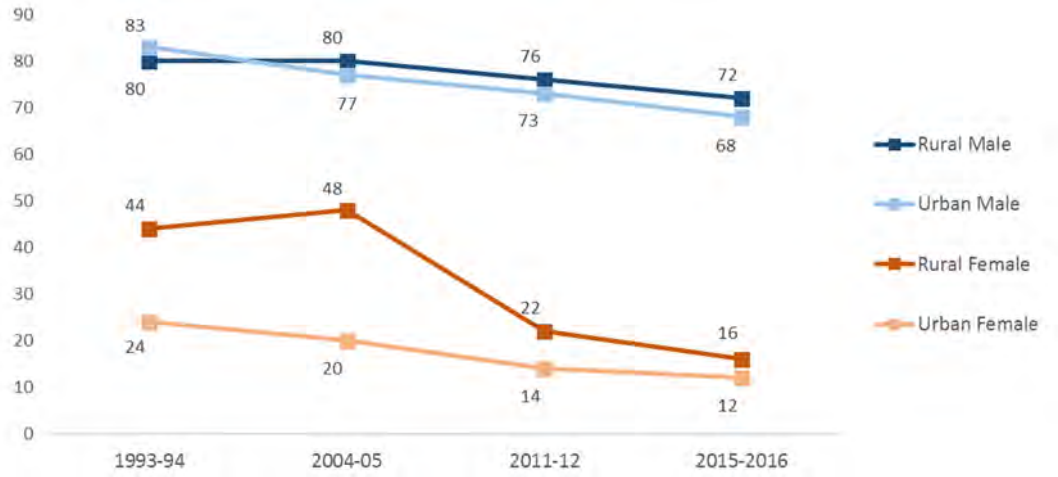

Chart 1.20 Decline in Female Labour Force Participation Rate in Haryana (1994-2016)

Source: Fifth Annual Employment - Unemployment Survey (2015-16) Labour Bureau, Govt. of India; World Bank document on Haryana – Gender

The situation is particularly poor for the urban females as their Labour Force Participation Rate is just 12%. A few of the reasons which could be associated with the low workforce participation of women in the state includes (not exhaustive): increasing rate of crimes against women (high rates of stalking women, rapes, dowry-deaths, etc.) which make it very difficult for the women to go out for work. Another reason is the high aspirations for a government sector job (which are very limited in number). Government jobs are highly respected, whereas, the private sector jobs are generally looked down upon or considered as only temporary jobs. In order to improve the poor situation of labour force participation of females in Haryana, the State Government has made amendments to the labour laws so that women are able to work during night as well (Table 1.17). The employers are required to be compliant of some rules in order to avail this benefit.

Table 1.17 Recent amendments in Labour Laws related to Female Labour

Original Act	Amendment Act Name / Notification	Amendment / Notification Year	Amendment(s) / Exemptions Provided	Implications
Section 30 of The Punjab Shops And Commercial Establishm	Exemption provided by the Governor of Haryana vide Section 28 of The Punjab	2005	Women have an option to work during night shifts subject to the employer having the necessary safety and security measures in place.	Gurugram is one of the major hubs of IT/ITeS companies which usually work round the clock to serve their clients present in different time zones. This exemption has allowed

ent Act, 1958	Shops And Commercial Establishment Act, 1958			them to employ female workforce without worry. This exemption has helped in making the tertiary sector as the major contributor to the GSDP of Haryana.
Section 65(1)(b) of The Factories Act, 1948	Provided vide Haryana Government's notification dated August 17, 2017	2017	The State Government of Haryana allowed the employment of women workers in the factories during night shifts i.e. from 07.00 P.M. to 06.00 A.M. In order to avail this benefit, there are 25 different compliances required to be adhered by the employer which relate to women employees' safety, proper working conditions, and availability of other necessary facilities.	This amendment would encourage the manufacturing establishments to employ a diverse workforce. It is in line with the Government of Haryana's focus on developing the state as one of the major manufacturing hubs of the country. The working conditions at manufacturing facilities would become better because of the conditions required to be fulfilled by them. It would help in bringing gender equality and encouraging more women employees to take up manufacturing sector jobs.

Source: Website of the Labour Department Haryana; various news articles; NRI analysis

1.7.3. Amendments in Labour Laws

Government keeps on amending labour laws time to time in order to create an environment feasible for industrial growth as well as matching the needs of labour. Recent amendments focuses on relaxing regulatory control and requirements, to encourage more businesses to come forward and not shy away from taking bigger risks.

Table 1.18 Recent amendments in Labour Laws in Haryana

Original Act	Amendment Act Name / Notification	Amendment / Notification Year	Amendment(s) / Exemptions Provided	Implications
Contract Labour (Regulation and Abolition) Act, 1970	Contract Labour (Regulation and Abolition) Haryana	2017	Applicability of the Contract Labour (Regulation and Abolition) Act, 1970 for establishments and contractors has been increased from twenty contract workers to fifty contract workers.	This amendment has made it easier for some of the small and medium sized companies which have less than 50 contract workers. They do not have to fulfil the condition of registration and getting a license for employing less than 50 contract workers. Earlier, all the establishments which had 20 or more contract workers had to get themselves registered and get a license for the contract workers.
Section 25-K of The Industrial Disputes Act, 1947	Amendment Act, 2016	2016	Allowed industrial units with up to 300 workers, to shut down and lay off without Government permission. However, the State Government may apply the original rules to an industrial establishment employing less than 300 but more than 100 workmen in order to maintain industrial peace or prevention of victimization of workmen.	This amendment allowed and gave more freedom to industrial units employing up to 300 workers, to shut down and lay off workers, without fulfilling the requirement of permission from the relevant government authorities.
Payment of Wages Act, 1936	Industrial Disputes (Haryana Amendment) Act 2016	2016	The central government became the competent authority to fix or revise wage limits of persons employed in industrial establishments. The existing limit of such wage was INR 18,000 per month which was removed through this amendment.	This amendment meant that the persons employed in the industrial establishments which were getting wages at a higher rate (more than INR 18,000 per month) could go to agitate their claim in case of delayed payment of wages or illegal deduction from their wages before the statutory authority appointed under the Act.

Source: Website of the Labour Department Haryana; various news articles; NRI analysis

1.7.4. Labour Relations

Haryana has been infamous due to some of the most violent cases of industrial disputes in the country during the past couple of decades. As per the Statistical Abstract 2016-17 of the state, the total number of industrial disputes, number of workers involved in the strike, and the number of man-days lost, all of them have been decreasing since 2000. The year 2000 had witnessed 8,798 industrial disputes in the state with 54 strikes and lock-outs by 18,534 workers which resulted in a loss of around 1.2 million man-days. Whereas, during the year 2016, there were 4,358 disputes registered with 2 strikes and lock-outs by 844 workers involved which resulted in a loss of 77,498 man-days. Chart 1.21 shows the number of industrial disputes, number of workers involved in strikes, and the number of man-days lost from the year 2000 to 2016.

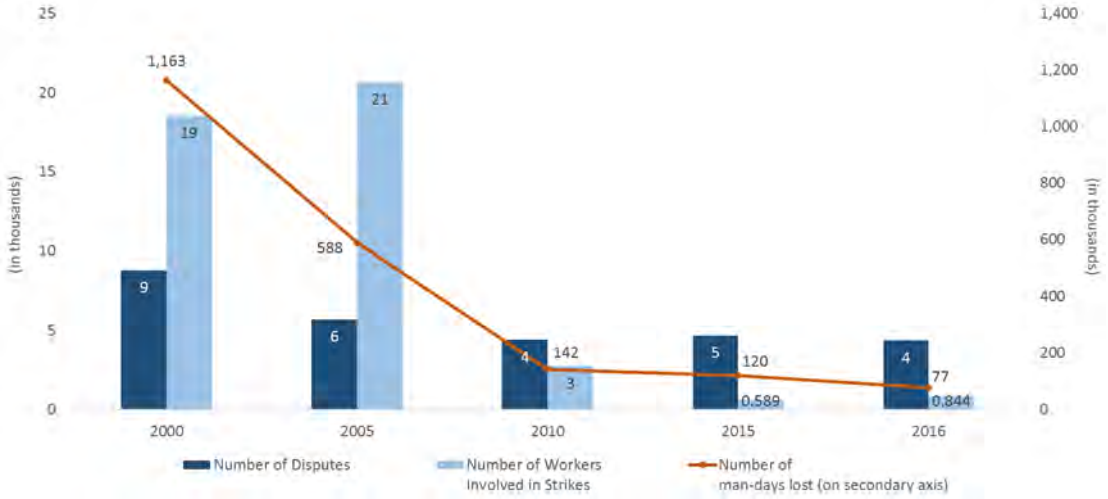

Chart 1.21 Number of Industrial Disputes in Haryana from 2000 to 2016

Source: Statistical Abstract of Haryana 2016-17

The main causes of the industrial disputes could be categorised into the following six categories: wages and allowances, bonus, reinstatement of terminated / suspended workers, leave and hours of work, retrenchment, and others. The most number of strikes (30 strikes) have been caused by the reasons of 'reinstatement of terminated/ suspended workers' during the period 2000-2016. Chart 1.22 shows the causes of strikes in the last 16 years. The total number of strikes has been 89 during the last 16 years.

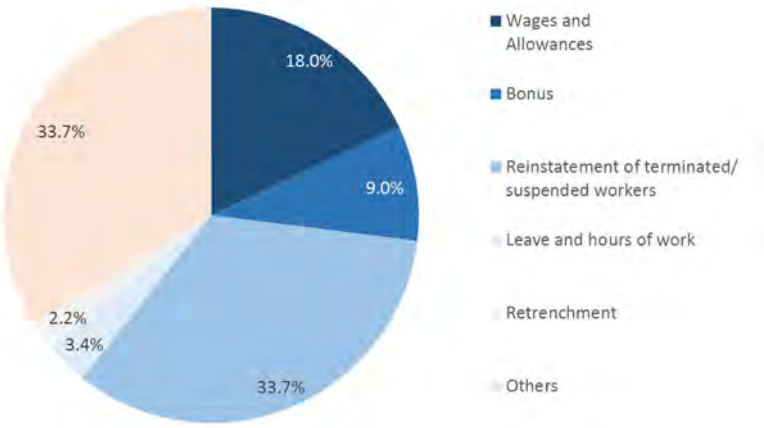

Chart 1.22 Causes of Industrial Disputes (%) resulting in Strikes and Lock-outs (2000-2016)

Source: Statistical Abstract of Haryana 2016-17

Industrial Disputes is one of the key issue for any manufacturing company who is either operating or planning to set up a factory in Haryana. There is need to provide training to workers from the primarily schools/ITIs. Government should modify curriculum to include behavioural skills and impart periodic training to the workforce.

1.8. Development of Human Resource

1.8.1. Status of Universities and Colleges

Development of skilled manpower is pre-requisite for economic and industrial growth. Haryana realised this fact and has been focusing on infrastructure development and providing technical education to its youth during the past couple of decades. As per the Statistical Abstract of Haryana 2016-17, the state had a total of 43 Universities, 274 Arts and Science Colleges, 175 Technical Universities/ Engineering Colleges, and 491 Teachers' Training Colleges (Chart1.23). These numbers have increased manifolds since 2000-01. Maximum growth has been showed in the number of Teachers' Training Colleges. This shows that the State Government of Haryana has not only been focusing on providing adequate number of seats but also good quality of education to the youth.

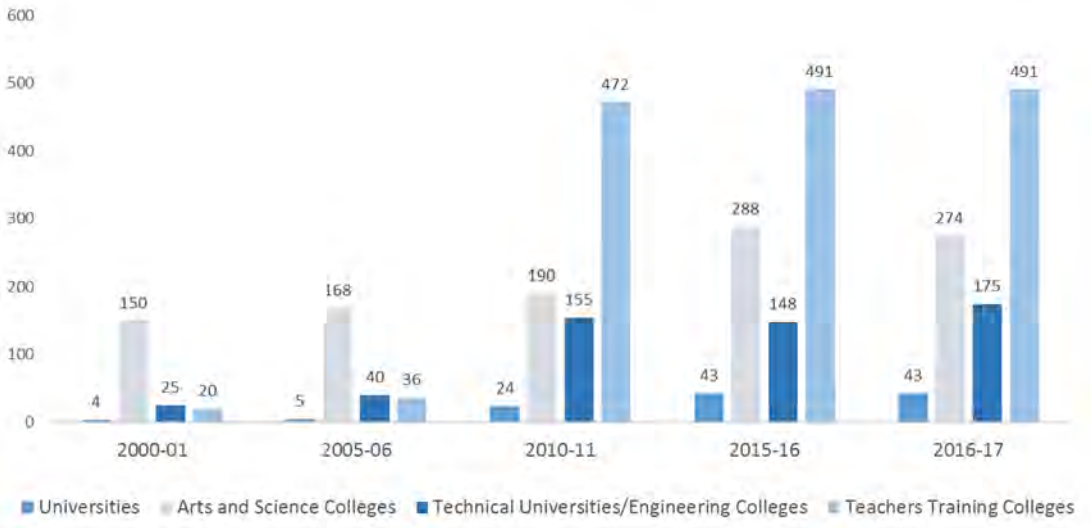

Chart 1.23 Number of recognised Universities/Colleges/Institutions in Haryana (2001-2017)

Source: Statistical Abstract of Haryana 2016-17

The Technical Education Department of Haryana is the responsible department for imparting requisite technical skills in the field of Engineering and Technology, Architecture and Urban Planning, Management, Pharmacy, Hotel Management, Fine Arts, Applied Arts & Crafts and Design. There are 4 State Technical Universities in Haryana and besides this, 320 Technical Institutes are also running with an intake capacity of 96,251 students. The detail of Technical Education Institutions along with intake capacity and admissions in the academic session 2017-18 is given in Table 1.19.

Table 1.19 Technical Education Institutions, Intake Capacity and Admissions in Haryana during 2017-18

Course	Number of Institutes			Sanctioned Intake			Admissions for 2017-18 Session			Percent Vacancy
	Govt. / Aided	Private	Total	Govt. / Aided	Private	Total	Govt. / Aided	Private	Total	
Eng. Degree (B. Tech.)	37	144	181	13,855	38,015	51,870	10,183	14,097	24,280	53.19
Architecture Degree (B. Arch.)	2	10	12	120	490	610	115	228	343	43.77
Diploma (Eng. & Pharmacy)	13	114	127	3,831	39,940	43,771	2,341	11,572	13,913	68.21
Grand Total	52	268	320	17,806	78,445	96,251	12,639	25,897	38,536	59.96

Source: Economic Survey of Haryana 2017-18

The State Government of Haryana has also setup 8 new Govt. Polytechnics (Engineering Diploma) in the state during the last couple of years. Now government is trying to include Industry in imparting training to the students as well as updating the curriculum. 31 MOUs have been signed by the Polytechnics with local Industries for quality upgradation, training and placements of students. One such MOU was signed between Haryana State Board of Technical Education, Maruti Suzuki India Ltd and Government Polytechnic Education Society Manesar for quality up gradation of Govt. Polytechnics and Diploma Engineering program for MSIL Associates on Oct. 10, 2017.

1.8.2. Status of Industrial Training Institutes (ITIs)

The Skill Development and Industrial Training Department provides certificate courses training to about 105,634 trainees (Govt.-71,106 + Pvt. 34,528) in Haryana. For this purpose, there are 156 Government Institutes (123 Co-ed. Govt. Industrial Training Institutes (ITIs), 33 Govt. ITIs for Women), 232 Private ITIs, 7 Govt. Teacher Training Centres, and 2 Private Teacher Training Centres (Figure 1.16). These institutes are not only supplying skilled craftsmen to the industries but also generate avenues for self-employment.

Skill Development is a priority area for the state govt. and they have been increasing the budgetary allocation towards this. As per the Haryana Budget for Fiscal 2018-19, the Finance Department has increased the outlay for the Skill Development and Industrial Training Department in 2018-19 to INR 6.6 billion, which is 43.4% over and above INR 4.6 billion provided in the previous Fiscal Year 2017-18.

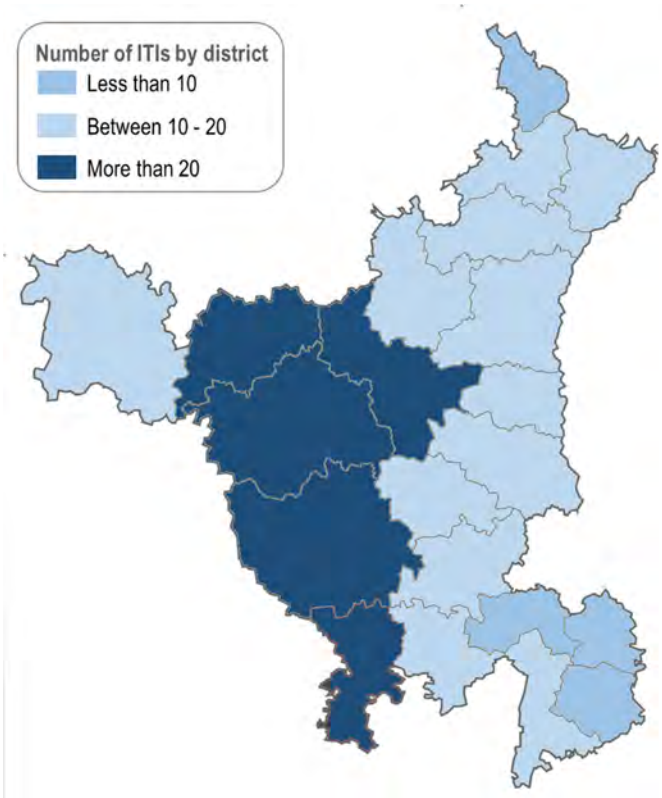

Figure 1.16 District-wise presence of ITIs in Haryana (2017)

Source: Website of the Skill Development & Industrial Training Department, Haryana

To make the training relevant and accountable to users, 60 Govt. ITIs have been adopted by 30 Industry Partners for up-gradation. 72 Societies have been constituted covering 78 Govt. ITIs to provide them functional, financial and managerial autonomy. Chart 1.24 shows the number of ITIs opened in the state during the last 10 years. There has been a tremendous growth in the presence of ITIs in Haryana. This shows that the State Governments of Haryana during these years have recognised that skill development is of utmost importance for industrial growth.

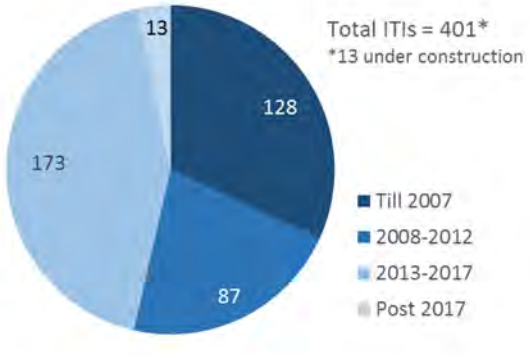

Chart 1.24 Number of ITIs established in Haryana

Source: Website of the Skill Development & Industrial Training Department, Haryana

The ITIs present in the state provide various schemes: Craftsmen Training Scheme (CTS) in 47 engineering & 31 non-engineering trades, Crafts Instructor Training Scheme (CITS) for trainers in 8 engineering trades from 1 Govt. & 4 Pvt. Institutes of Training to Trainers (IToT), and Apprenticeship Training Scheme (ATS) is present for skill-upgradation by training at the workplace.

As per industry, there is no shortage of good talent in urban areas such as Gurugram, Faridabad and Panchkula. However, for Industrial areas far from the main city, sourcing talented workers is difficult. Another issue is lack of good quality technical people which can perform maintenance (troubleshooting and preventive check) of the machine. Further there is need to upgrade curriculum of ITIs etc. to include knowledge/training on the modern manufacturing and technology.

1.9. Emerging Opportunity: Delhi Western Peripheral Expressway

1.9.1. Details of the Project

Delhi Western Peripheral Expressway is more commonly known as KMP Expressway or Kundli-Manesar-Palwal Expressway. It is a six lane (3+3) expressway that has an estimated total length of 135.65 km. This expressway is being developed by the Haryana State Industrial and Infrastructure Development Corporation (HSIIDC). Table 1.20 provides some basic information about the KMP Expressway.

Table 1.20 Details of the KMP Expressway

S. No.	Category	Details	Status
1	Length	135.65 km	Segment-1 (between NH-1 & NH-10): 35 km Segment-2 (between NH-10 & NH-8): 47.68 km Segment-3 (between NH-8 & NH-2): 52.97 km
2	Location	Kundli to Palwal	Starts from NH-1 near Kundli (district Sonepat) Ends at NH-2 near Palwal
3	Developer	HSIIDC	Haryana State Industrial and Infrastructure Development Corporation (HSIIDC) is developing the Expressway on behalf of the State Government of Haryana
4	Completion	February 2019	Segment-1 and Segment-2 (total 82.68 km) have a scheduled completion date of February 2019 Segment-3 (52.97 km) was completed in 2016 and is operational
5	Project Cost	INR 33.41 billion (estimated)	Estimated total cost for the entire stretch of the project is INR 33.41 billion Unit cost per km of Road has been assessed as INR 246.4 million per km
6	Concessionaire	Essel Infra Group	M/s Essel Infra Projects Limited is constructing Segment-1 and Segment-2 of the Expressway and M/s KCC Buildcon Private Limited-Dilip Buildcon Private Limited (JV) was the concessionaire which constructed the Segment-3
7	Finance	Govt. of Delhi: Govt. of Haryana: Govt. of Uttar Pradesh :: 50:25:25	Total Project Costs of the Delhi Western Peripheral Expressway and the Delhi Eastern Peripheral Expressway would be borne by the Govt.'s of Delhi, Haryana, and UP in the ratio of 50:25:25

Source: HSIIDC EIA Report- Construction of Kundli-Manesar-Palwal Expressway (135.65 km) In State of Haryana

1.9.2. Benefits of the Project

The KMP Expressway would provide various benefits to the region. Some of these benefits have been mentioned below: -

i) **Economic Benefit**: The project is a major link for development of industrial estates in Haryana, Delhi and other States of the country. It will connect 4 of Haryana's important industrial centres, intersect 4 of India's busiest national highways. With the commissioning

of the project overall conditions will improve. This will facilitate the rural population to move from one place to another to bring and sell their produce. With the development of the project, it is likely that more people from the region will be involved in trade, commerce and allied services. With the availability of dependable road connection, commercial growth of the region is also likely to witness accelerated growth. The main economic benefits generated by the project will be vehicle operating cost savings, reduced travel time, and cost savings from reduced accidents. The saving of freight cost and resource cost shall arise from diversion of freight from rail to highway.

Figure 1.17 Map of KMP Expressway

Source: http://epaper.timesofindia.com/

ii) **Nation Benefit**: The demand for expressway travel is relatively inelastic; therefore, increase in toll fees will result in a significant increase of economic benefits to the Nation. The money collected from the toll fees shall utilize for the development works as research, safety and security of nation and other development work. Infrastructure development shall facilitate direct and indirect development with regard to the communities. It will increase the economic status of the public that induce the person to live in better environment. On commissioning, the Expressway will improve connectivity with New- Delhi, provide faster access to international airport in the capital, and facilitate the development of new economic corridor. It will also provide high speed connectivity to north Haryana with its southern districts such as Sonepat, Jhajjar, Gurugram and Faridabad. Serving as a significant artery, the expressway will facilitate smooth flow of heavy traffic coming from west and south India and going to Haryana, Punjab and U.P. It will also save Faridabad and Gurugram- bound traffic the trouble of passing through Delhi, and hence decongestion of Delhi Roads.

iii) **Social Benefit:** The Infrastructure development shall induce new establishment and construction of Commercial, Industrial and Residential structure as Hotel, Dhabas, Motel,

Restaurant, petrol pumps with vehicle maintenance facilities that provide good business opportunity resulting direct and indirect generations of employment that improve the living standard of the local communities.

1.9.3. Industrial Development Plan for the Project

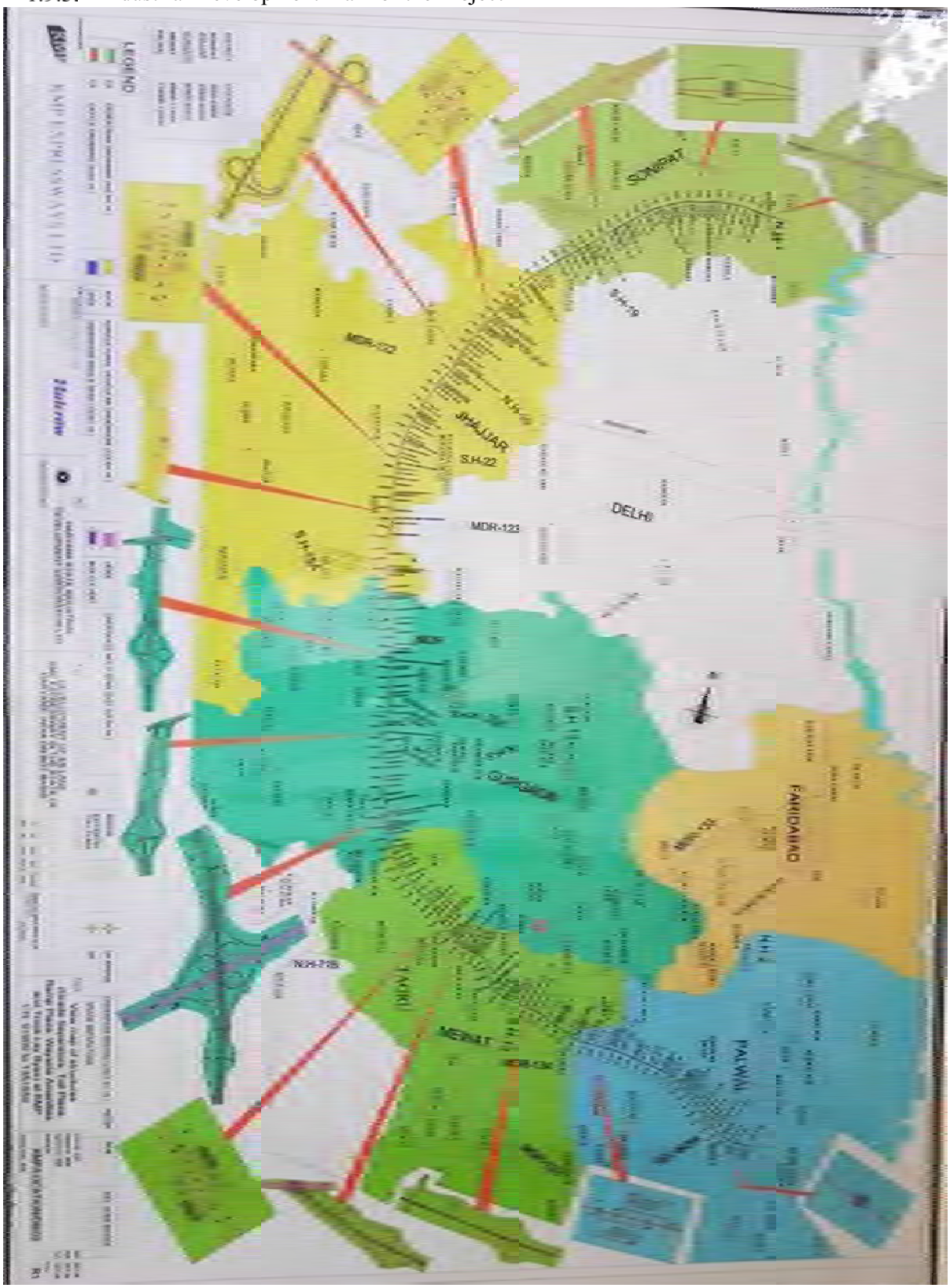

Figure 1.18 Proposed alignment of KMP Expressway

Source: HSIIDC EIA Report- Construction of Kundli-Manesar-Palwal Expressway (135.65 km) In State of Haryana

The State Govt. of Haryana has announced that it will develop one km stretch on both sides of the KMP Expressway for industrial development. Around 10 industrial clusters will be developed along the expressway. The State govt. has also planned to develop 144 smart villages, one near Sohna (Gurugram), and 13 theme cities (such as leather hub, sports hub, etc.) along the Expressway. The State Govt. is also focusing on developing logistics and warehousing infrastructure along the KMP Expressway. One upcoming Integrated Multi Modal Logistics Park at Bawal, Rewari (spread over 1200 acres) is already present in the vicinity of the Expressway. However, a special taskforce will also be constituted which would be responsible for creation and implementation of Logistics Masterplan for the state with a dedicated roadmap for Kundli-Manesar-Palwal expressway. The Department of Town and Country Planning will conduct need assessment survey in identifying logistic hubs around KMP Expressway.

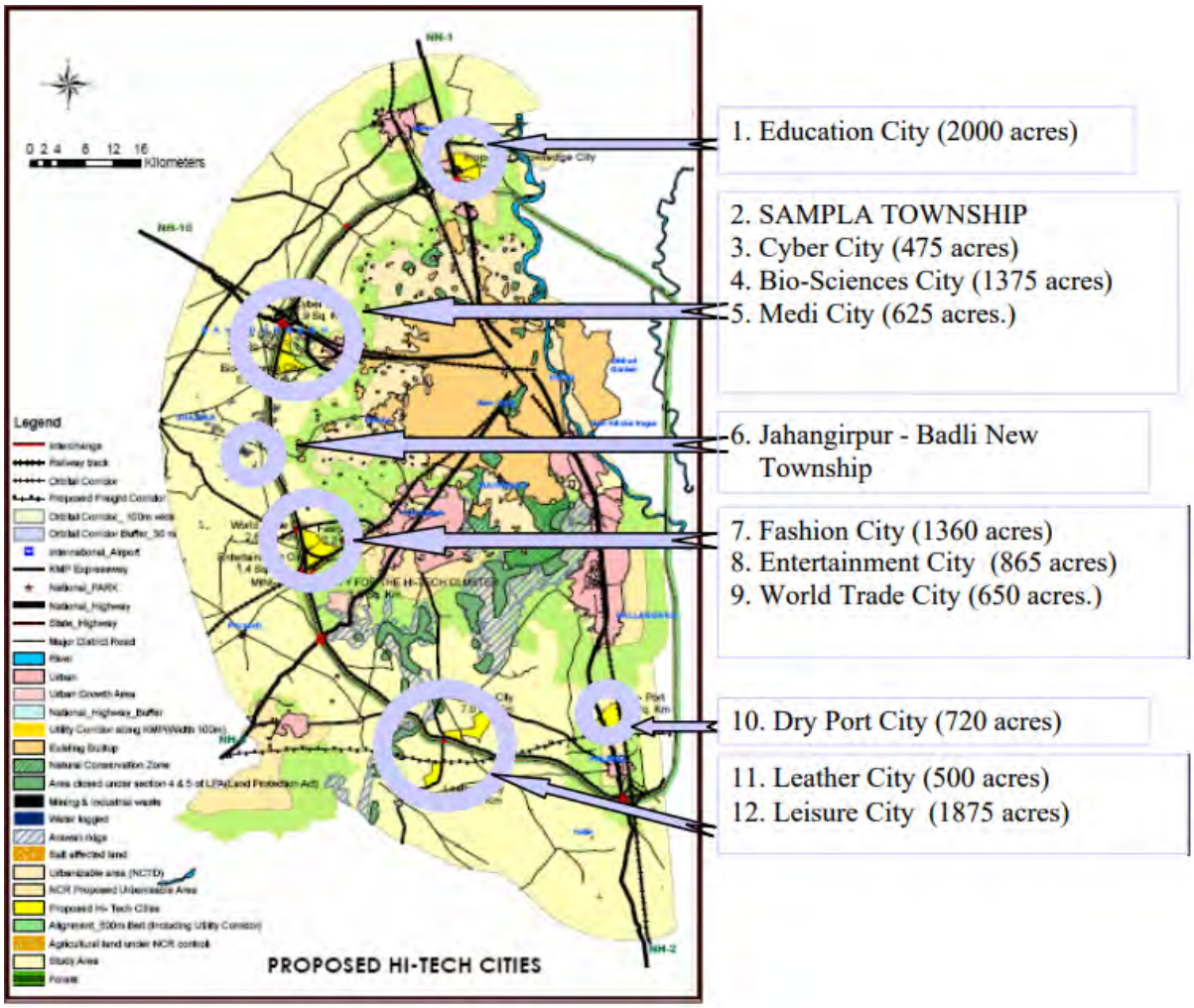

Figure 1.19 Proposed Plan for KMP Global Corridor

Source: http://ncrpb.nic.in/pdf_files/Chapter%2013_FNPLTr_RP%20&%20Other%20Prop..pdf

1.10. Results of questionnaire survey in Haryana State

We conducted questionnaire targeting companies having entered Haryana asking about problems of investment environment in Haryana, and demands for the government. This questionnaire gathered answers from 62 companies including Japanese companies (half of the total). It was conducted in various means such as mail survey, e-mail/online questionnaire, and phone interview. The summary is as follows. Respondents mainly belong to automobile industry, establishment type is production center (factory), and the purpose is development of Indian market.

Table 1.21 Summary of questionnaire on Haryana

Targets	Automobiles, auto-parts Consumer goods Chemicals Medicines Electronic/information and communication equipment General machine Gum product Metallic products Metals Logistics Distributor/retail finance/insurance Service Others	Number of questions	27
		Methods	Phone interview, e-mail, mail
		Conducting period	2018/6
		Number of answers	62 samples Japanese companies:32, Non-Japanese companies:30

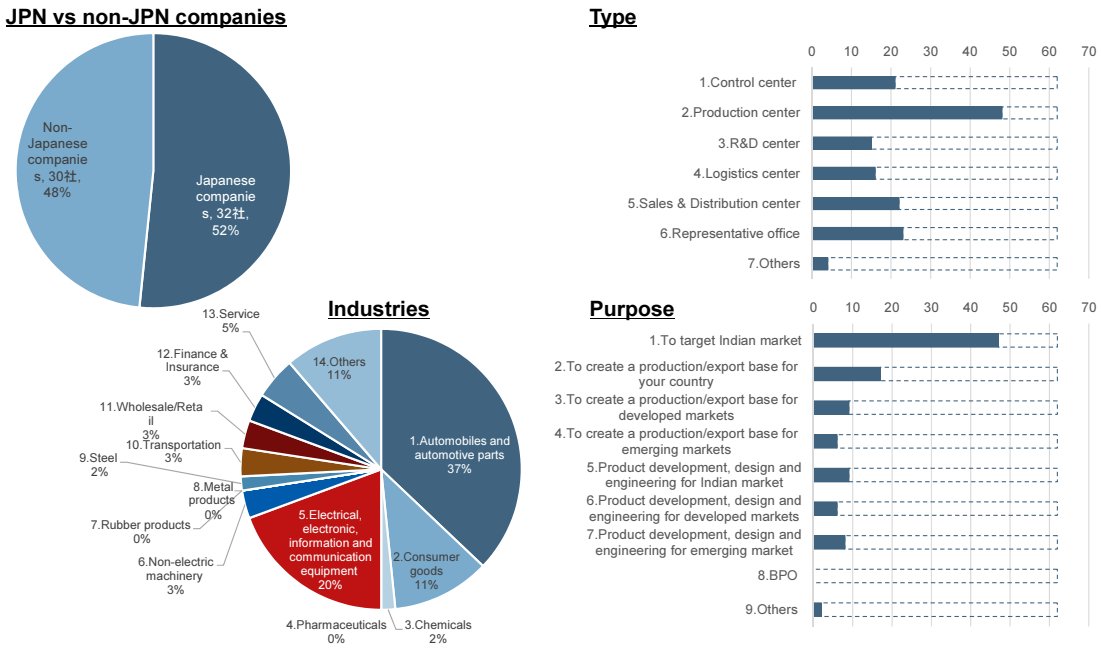

Chart 1.25 Attributions of the questionnaire's respondents

First of all, we asked companies which operate in Haryana the degree of satisfaction about investment environment. As a whole, "Satisfied" overrides "Dissatisfied". However, on category basis, "Dissatisfied" rate is relatively higher in infrastructure aspect such as roads, electricity, water, housing. This is clearly reflecting dissatisfaction on the poor maintenance of NH8, traffic jam on daily basis, and shortage of electricity and water in factory-concentrated area. On the other hand, the rate of "satisfied" is higher in investment window, road, electricity, water, hospitals/schools. As for electricity and water, it could be inferred there are huge differences depending upon area and industry as "Dissatisfied" is also high in those categories. Concerning as industrial policies and housing for employees, it seems there is room for improvement since the rate of "Satisfied" and "Dissatisfied" are both low.

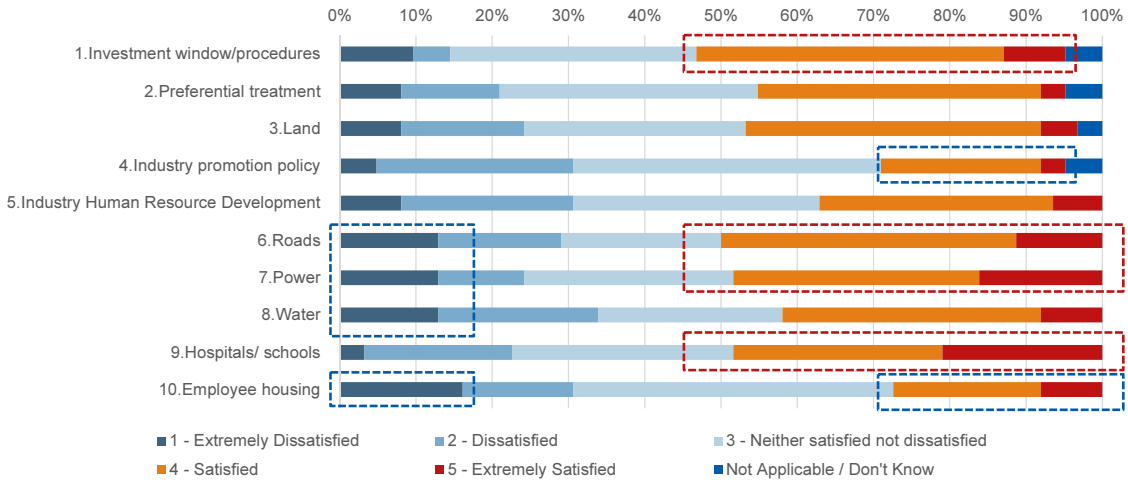

Chart 1.26 Company's satisfaction with the investment environment in Haryana

Below are the status quo problems and demand for the state's government for each category. As for investment recipient counter and procedures, there is demand for reduction of required approvals and shortening the time of procedures. Approximately 30% of companies commented "8. Too many permits/approvals", followed by the comment "5. Procedures take time/deadlines are not observed". As demands for state government, "5. Create system for checking progress of procedures", and "7. Draw up plan to streamline permit/approvals" were major opinions. Concrete proposals such as "Procedures should be tracked as delays and corrupted way of dealings are innumerous" were also gathered. In addition, the comment "1. Setting up One-stop counter" was also gathered by many companies. Although there is a feedback "One-stop service shortened procedure time", some insist "We don't know how to use online portal", "We want online portal more user-friendly". Thereby there is room for improvement.

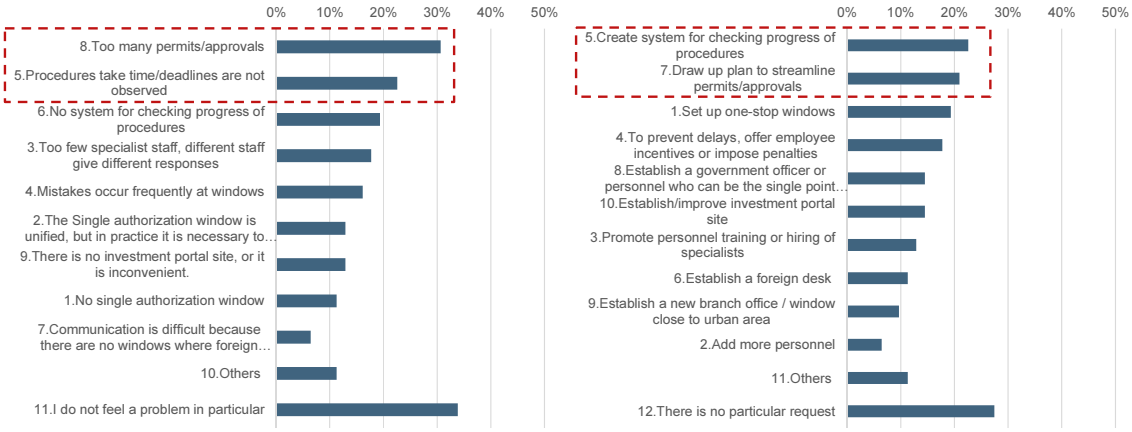

Chart 1.27 Problems of investment recipient counter and procedure in Haryana（left）& demands for the state's government （right）

As for incentive, not few of them insist"2. The contents of financial incentives not attractive", "1. No financial incentives", "3. Conditions and procedural aspects make it difficult to use financial incentives". Moreover, "1. Subsidies for investment costs" occupied 30% of the answers as a demand for the state's government, followed by "3. Reduce electricity costs", "6. Update of incentives to match companies' demand". Concrete problems and demands were gathered; "Promoting incentives for auto mobile industry is imperative", "State's government has decreased incentives", "We want the policy of tax rebate". Thereby improving cost aspect of incentives in order to promote investment.

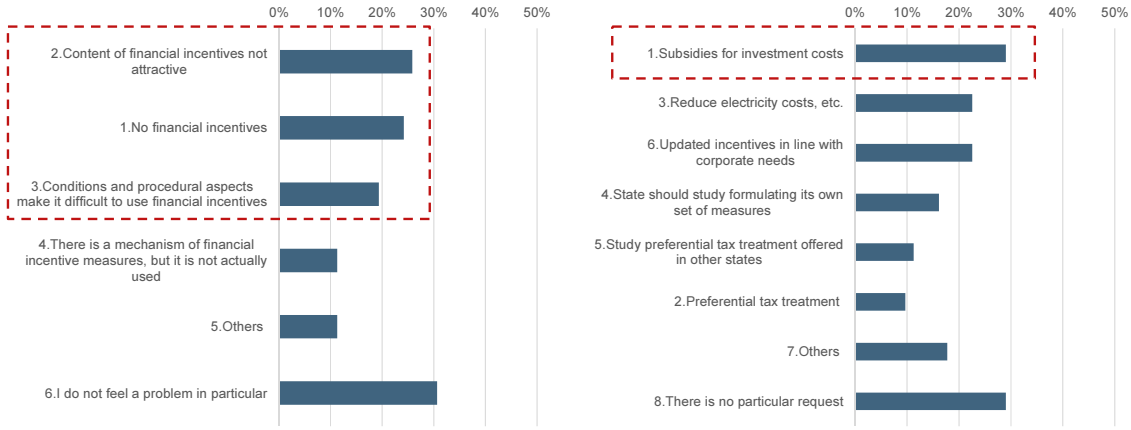

Chart 1.28 Problems of incentives in Haryana （left） & demands for the state's government （right）

As for land seizure, they pointed out many problems such as "2. Land prices are high which limit investment", "6. Inadequate infrastructure improvements around industrial estates", and "4.There is a risk that land prices may rise （risk for payment due to litigation）". As demands for the state's government, "2. Government should make more industrial estates available to promote competition" is the most common comment, and it could be inferred that there is a demand for industrial estate which sufficient infrastructure is established with low price. There are also comments caring about litigation risks such as "5. Any dispute related to land should be dealt by the state and the company should not be responsible", and "3. Review ordinary land purchase agreements（ex. Abolition of enhance condition）". In addition, there are opinions dissatisfied with procedures such as "Policy change regarding to land seizure should be notified in advance", "Approval procedure is complicated and takes time".

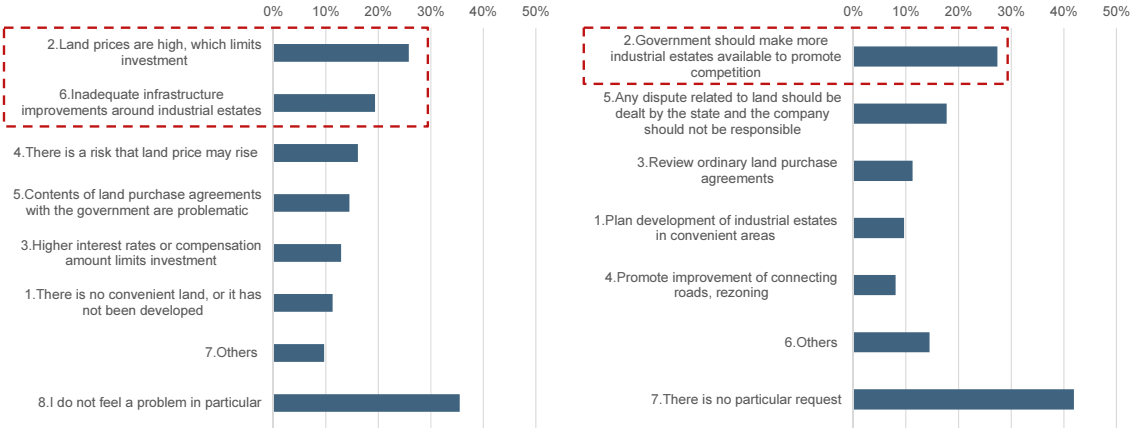

Chart 1.29 Problems of land seizure in Haryana （left）& demands for the state's government（right）

As for industrial policies, the answer “5. No policy of industrial promotion from state” occupies 40%, it is reflecting the view of dissatisfied companies located there as the direction of Haryana’s industrial promotion is opaque. Moreover, demands for the state’s government shows same situation as more than 40% companies answered “5. Establish the industry Promotion Vision by State”. This situation represents companies’ demands. This is because concrete statements from manufacturers which want investment environment that attract more related companies such as “Government should make policies recognized”, “Policies are existent, but not practiced” were gathered although there is an opinion “the government has already promoted attracting SME plan”.

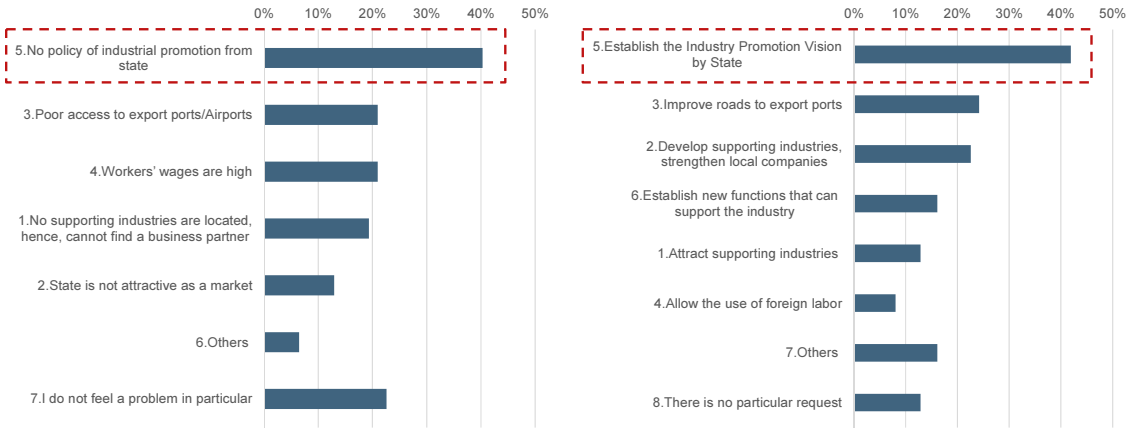

Chart 1.30 Problems of industrial policies in Haryana （left） & demand for state’s government （right）

As for raising talents, “W5. Not enough skilled workers” was the most common answer, followed by “7. Not enough schools for learning skills”, and “4. High attrition rate”. Likewise, as for demand for the state’s government, “3. Improve technical programs” exceeded 40%, “1. Formulate a state human resource development plan”, “7. Provide technical training programs （JICA technical support）”. It was made clear that every company feels local staff’s lack of skill and demanding the state’s government to raise appropriate talents. To be concretely, there is high demand for basic skill such as “manipulate machines” rather than expertise. Moreover, some argue “ALthou there are programs and schools provided by the government, those are not recognized”.

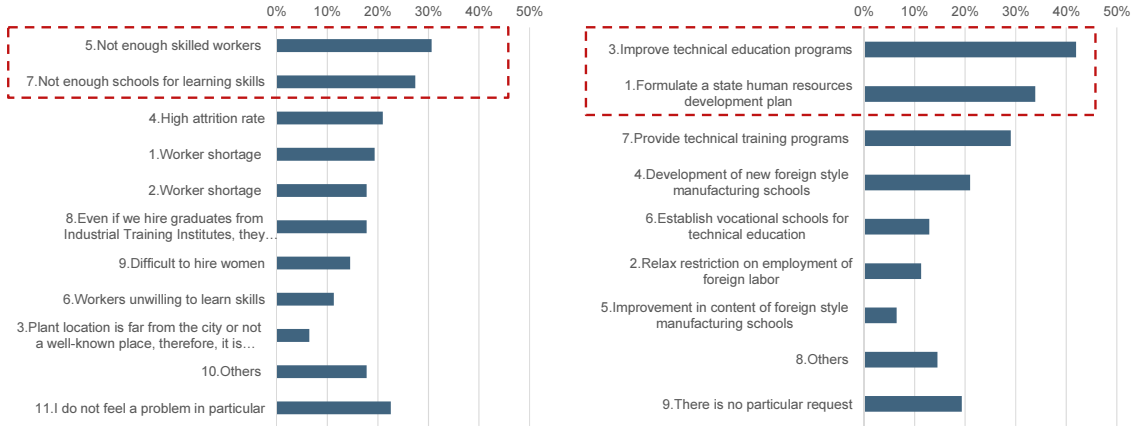

Chart 1.31 Problems of raising industrial talents in Haryana （left）& demands for the state's government（right）

As for roads, 35% of companies answered "4.Cargo and passenger traffic are not separated" and that is most common answer, followed by "5.Lack of street lights, not enough paved roads, poor safety", and "3.Roads in and around cities are congested". Concerning as demands for the state's government, most common answer is "4. Set up truck-only roads or truck priority times, relocate logistics facilities" answered by 35% of companies, followed by "5. Build sidewalks, install pedestrian traffic lights and street lights". Thereby, there is demands not only for maintenance of roads, but also for easing traffic congestion by setting the rule and improvement of safety. As for demands for particular area, although those were mainly for their companies' locations, there are strong demands for maintenance of "NH8", and "Road connecting national roads and factories".

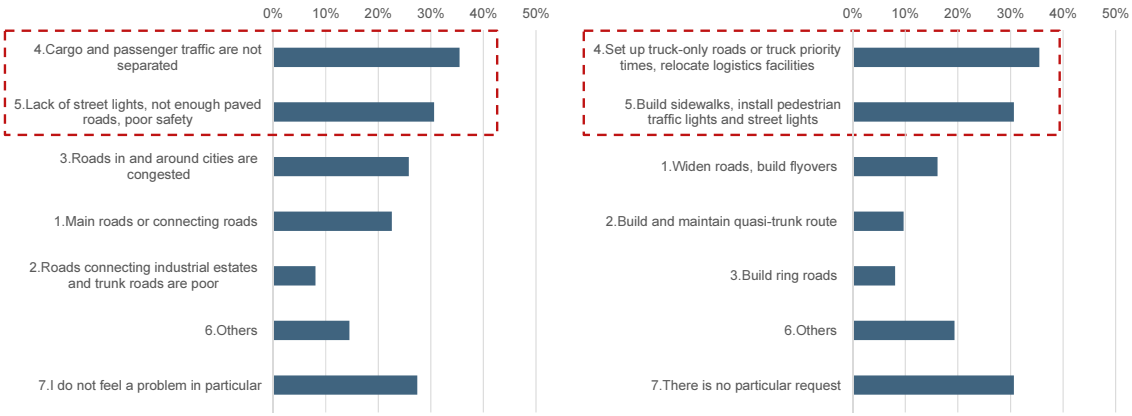

Chart 1.32 Problems of roads in Haryana （left） & demands for the state's government（right）

As for electricity, the most common answer is "2.Power supply is not stable, flash power outages" by 30% of companies, followed by "1.Power supply is not stable, power outages occur frequently", and "4.Private power generator is necessary, which increases the cost". As demands

for the state's government, the most common answer is "3.Build distribution network" by approximately 30% of companies, followed by "4.Review power distribution plans", and "2.Build substations, install power generators or power storage facilities in industrial estates". Some say "It has been improving", "It is not problematic", but others say "the price is so high". Though electricity distribution has improved, fixing flash power outage and support for reducing the cost of purchasing electricity and private power generation is needed.

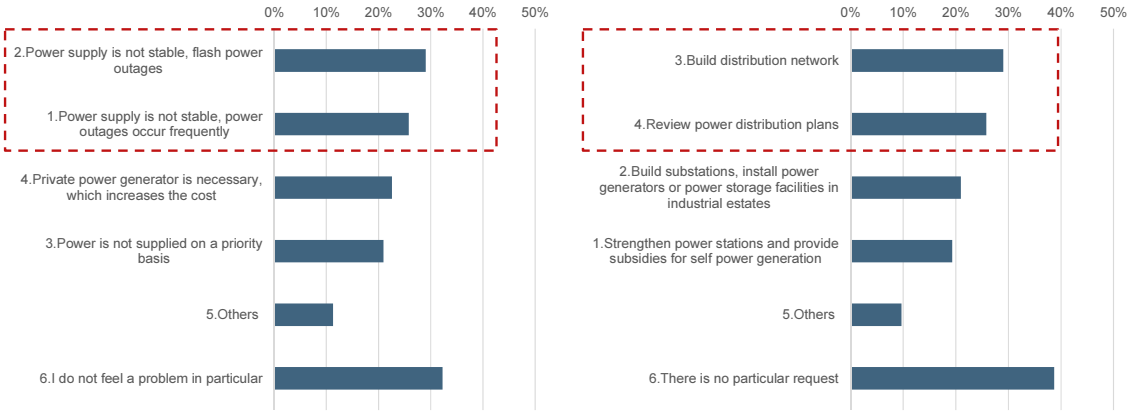

Chart 1.33 Problems of electricity in Haryana （left） & demand for the state's government（right）

As for water supply/sewage, approximately 40% companies answered "1.Insufficient water supply" reflecting the shortage of industrial water. Answers such as "3.Ground water cannot be used", "6.High processing cost in CETP（Common Effluent Treatment Plant）etc." follow. As demands for the state's government, almost 40% companies answer "2.Create a master plan for industrial use", and there are opinions "we need to secure industrial pipeline and the cost for private water processing", seemingly reflecting dissatisfaction towards unclear policy or plan as the government despite water shortage. "1. Build or strengthen water filtration plants on sewage treatment plants", "3. Make suggestion to government for easing groundwater use".

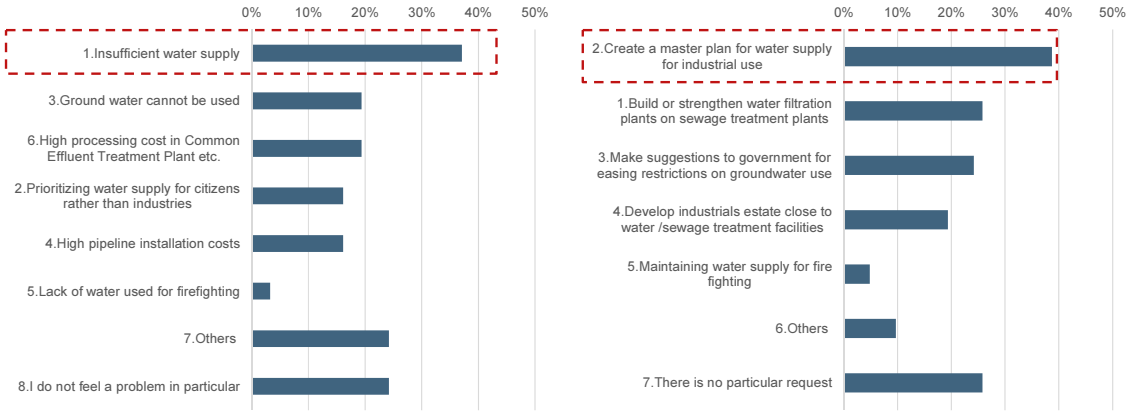

Chart 1.34 Problems of Water supply/sewage in Haryana （left） & demand for the state's government （right）

As for hospitals and schools, “5. Far from offices/plant”, “4.Far from residence” are common answers, reflecting employees’ dissatisfaction towards the location of their facilities. As demands for the state’s government, “1. Set up school and hospitals for experts” is the most common answer given by 30% of companies. It shows the demand for setting up social infrastructure led by the state’s government. Particularly concerning as hospitals, many comments and demand for cost and service aspects such as “basic infrastructure is awful”, “cost reduction and improvement of quality is needed”, “Better service with low cost is necessary”.

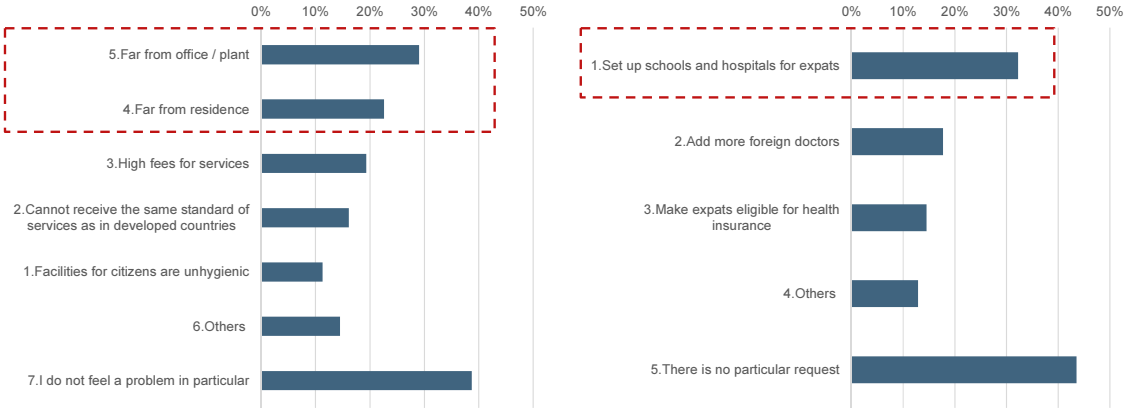

Chart 1.35 Problems of hospitals and schools in Haryana （left） & demand for the state’s government（right）

Concerning as housing for employees, “4.Ho/not enough public housing” is the most common answer answered by 35% of companies, followed by “2. No quality facilities available to rent as housing, no shared facilities”, and “Costs are too high, so employees cannot afford to build their own homes”. As for demands for the state’s government, there is also huge expectation; 40% answered “4. Build public housing for young people”, more than 35% answered “1.Establish a rent subsidy system”. For example, there are opinions such as “If government provide housing, that would be fantastic”, “Though the program for poor labors started, it has not been practiced”.

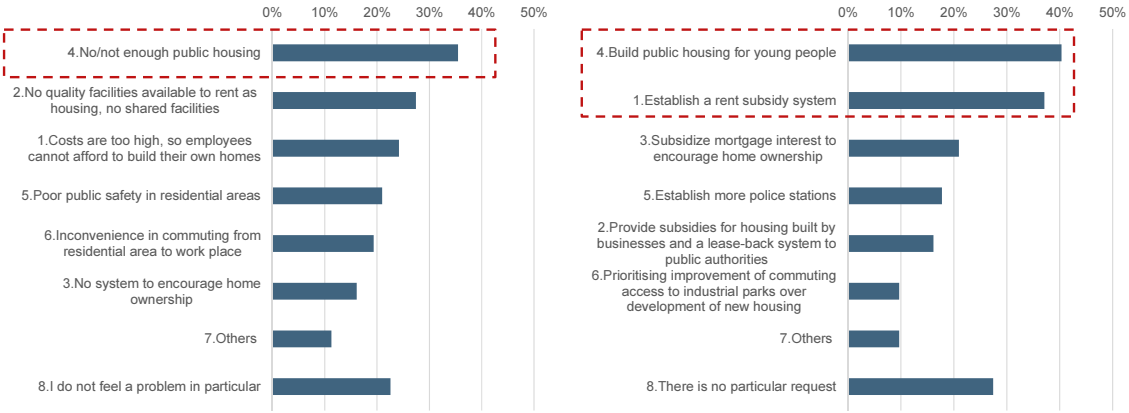

Chart 1.36 Problems of housing for employees in Haryana （left） & demands for the state’s demand （right）

There are some opinions which do not fit for above topics; “Observance and deterrence is necessary as air pollution in industrial estates is severe”, “Security enhancement during the night is necessary as a way to tackle with deteriorated safety”.
In next chapter, the result of more detailed interview is summarized, mainly about same topics in this chapter. While summarizing the result, setting up the prioritization towards problems in the state and detailed demands depending upon industry and area are reported.

1.11. Interviews with companies / associations in Haryana State

We conducted interviews about same topics as questionnaire survey concerning as status quo problems and demands for the government towards the investment environment in Haryana on companies and organizations to figure their opinions and demands out more. We mainly visited Japanese companies located in Gurgaon, Manesar, and Jhajjar. Those regions are near Delhi. We summarized companies' voices from interview results in a form of the list from the next pages. And, dialogue of each interview is attached as the last reference of this report.

As a result of the interview, problems in Haryana are found out be diverse. So diverse problems and demands are pointed out depending upon area, industry, and size. Among them, 3 topics which are common and having dire necessity to be improved are as follows; promoting maintenance of infrastructure dominated by roads, improvement of investment counter/ procedures, and raising talents.

Many of Japanese companies argue improvement of roads is the most priority in Haryana. As for MH8, though maintenance has proceeded to great extent compared to the past, there is a strong demand for solving terrible traffic congestion in morning and evening. As examples of ways to tackle with the issue, following ideas are proposed; moving tollgate, setting traffic light and campaign to let people abide by the rule, banning U-turn in certain areas. Not only improving NH8, for industrial estates or concentrated are in Manesar, Jhajjar, Bawal where is bit far from NH8, there is a demand for improving the quality of roads connecting NH8 and those areas. Particularly, as for the industrial estate "MET" in Jhajjar that Reliance conducted maintenance, maintenance of roads connecting NH8 so called Jhajjar road and MET became big problem. Concrete problems and demands such as setting bypass ditching building and interchange connected to KMP are heard. There problems are needed to be solved imminently as affecting both of commutation and logistics.

Moreover, there are so many frustration about investment counter and procedures in Haryana and demands to improve them. There has been historically dissatisfaction towards procedures' content and how those are conducted. The state's government unified counters (so called 1-roof service) and set up online portal. However, there are still huge dissatisfaction against inefficient operations and obscure rules. Not only Japanese companies but also CII (The Confederation of Indian Industry) argue the government often propose problems right before 45 days of timeline for auto-approval and prolong the timeline further 45 days, although they operate with no problems as usual.

Lastly, as for human resource development, there are different problems and demands depending upon workers, engineers, and managers. For workers, there are huge frustration or demand for 5S, language, morality, learning attitude. On the other hand, they lack management personnel who can manage workers, it is an important issue for Japanese companies in India how to recruit and train them. A training institution "G&G Skills Developers" provides Indian citizens with various training. However, the policy of the government is to secure poor people's job by

focusing them, not prioritizing increasing high-skilled talents required by foreign countries' companies including Japanese ones. Furthermore, ITI (Industrial Training Institute) in Faridabad has not updated trainer's skill, introduced opportunities, and curriculum for long-term, it is dubious if they raise appropriate talents required by industries.

Table 1.22 The summary of interview result targeting Japanese companies in Haryana

		current problem	Company voice
POLICY (Software infrastructure)	Investment acceptance window / procedures (information)	The procedure remains cumbersome after the introduction of 1-roof service, which takes time to approve	· The provincial government established the 1-roof service but the procedure of the company remains cumbersome. I would like you to subdivide the procedures and promote improvement. · Entrance became one place by 1-roof service, but cumbersome communication with each department remained. It takes 3 to 6 months for up to 20 permits. · Communication at the window is required after online registration. Although the 1-roof service was created, the on-site operation has not been improved. · It is also a problem that the state government (Chandigarh) is far from Delhi suburbs. For example, how about placing HSIIDC's base in Gurgaon or Jhajjar?
		There are many improvements in the portal site	· User-friendly portal site maintenance is necessary. The provincial government says that the portal site was set up as a response to the request for proposal documents and made one-stop, but the information is only address information (English) of the vacant property, and it is inconvenient that registration cannot be made unless a purchase place is decided. · We also need a notification function for new information. Currently, organizations are transmitting information individually.
		Knowledge related to licensing and approval is not accumulated from vertical disorganization organization, ambiguity of rules, etc.	· Global standards efforts will not proceed due to absence of longitudinal slash organization and full-time owner / organization. · Knowledge accumulation · training for teaching is necessary. A retired person cannot be taken over to protect his / her work as a consultant. · There are various rules on licensing and approval, but ambiguity. In particular, the difference between the correspondence between the central and state permits is a problem.
		The mechanism of automatic approval in a certain period has been invalidated	· Although it is a mechanism that automatically approves in 3 months after various applications, automatic approval is effectively invalidated by pointing out by dispensing every three months, after all it took about nine months to approve There. · Can you shorten the approval period of automatic approval to half?
	Preferential treatment (money)	Usability of the incentive system is bad / not known	· We have not received any preferential treatment from the state government. · Currently, there are no incentives for companies entering Haryana State. On the contrary, corporate tax on foreign companies is high, making it difficult to enter new businesses. · There is no preferential treatment of industrial estates such as ASEAN, investment recovery cannot be expected, so it is difficult for small companies to enter, cheap and good quality parts cannot be supplied.
	land (mono)	In the land contract with HSIIDC, there is a problem that payment to landowners who gave in after the expropriation occurs	· Land contract with HSIIDC is a mechanism that becomes self-responsible when paying to landowners who came later. · At the time of acquisition of land 5-6 years ago, some problems occurred due to environmental problems and rights relations with landowners. Even now, I hear similar stories from other companies. · There is a landowner problem, and it is very hard. It took about 5 years to apply for registration at factory establishment. Because HSIIDC will not help, I would like to do future land expropriation in a well-developed industrial park. · It has been said that there will be a possibility of paying about two more times in the future, since 2000 ~ 30 million rupees will be paid to landowners based on the land contract with HSIIDC in the past. I would like to seek improvement of contract contents.
Industrial Promotion & Human Resource (industrial promotion · industrial human resources	Industry promotion policy (Industrial base)	There is no characteristic industrial promotion policy (attraction of supporting industries is not progressing)	· Living environment is attractive, but there is no characteristic of corporate economic activity (lagging in industrial development compared to urban development). The target to be attracted is not clear, and the industrial park is not asked much compared with other states. We should clarify the industry to attract and advance infrastructure development accordingly. · I have never heard that you will attract a certain industrial field in the future. Especially the supporting industry is weak, iron etc is made in inland parts where industrial water can be used. There is no environment where supplier companies can come out to Haryana State.

			· To the southern part where the automobile industry and the textile industry accumulate, the northern part cannot be said to be good only in the automobile industry. Maintenance according to the development phase of the industry, logic to give incentives to industries you want to call for is required. · Although most local procurement partners are Japanese-affiliated companies entering the field, it is difficult to enter the supporting industries centering on small and medium-sized enterprises.
		Industry promotion utilizing Delhi Airport and KMP is not progressing	· The location around the KMP road is close to the airport and the location is very good and the potential is very high. Should we attract more industries and warehouses? However, the state government has no plans to proceed. · When KMM connects Delhi Airport and MET, the possibility of industrial sites other than automobiles also increases. It might be possible to consider Delhi Airport Air Freight Enhancement by development of a clinical logistics complex like Narita, Inland Container Depot Development (mechanism of customs clearance outside the airport) etc.
	Industrial Human Resource Development (Human)	I would like to ask workers for minimum advance education such as 5S and language	· I do not expect to advance expertise education, communication and learning attitude in English is the most important. In addition, mathematics and general common sense should also be provided. It is still better to know the electrical system and machine operation, but in the end you need your own education according to the machine you use. · Lack of talent shortage in the central city is not heard, but if you are out of the center like Jhajjar, there is a decline in the quality of talent and shortage of human resources. · Indians who are not moral educated work because they move on an ad hoc basis, so they will also heat the strike. Behavior education (habit setting such as 5S) is necessary. Although I hear that if I teach from time to time I will remember it, I feel that I want it from a single company.
		There is a shortage of engineers who are good at machine maintenance technology	· No engineers can perform machine maintenance (troubleshooting and preventive check). · Regarding maintenance, it is also a problem that there is no license of electrical engineering chief etc. · Because conservation (facility maintenance) and type technicians have a feeling of shortage and training takes time, it is appreciated if there are trained students. I hear that there are such schools in the south (NTTF).
		There are insufficient managers to manage workers	· It is necessary to collect and nurture the Indian talent who can manage the worker layer performing simple work. · We need personnel for simple work, but excellent graduates and equipment with university graduates who can do quality check of parts etc in India are necessary.
		It is difficult to promote employment depending on women's work restrictions and work environment	· Request deregulation of night work. Recently women's night work up to 24 o'clock has become possible on security collateral, but since then it has not been accepted, it is hard to incorporate in shift. We believe deregulation will open the door to the utilization of women at the worksite. However, it is difficult for the company to secure security from bus stops to private homes for their own bus commuters. · Recently, women are actively adopted, and the proportion of women is increasing. In the Gurgaon office it is 1-2%. We are also making nurseries and being utilized. If you dare to say, I'd be happy if there is subsidy for the operation funds. · No women work as employees at Jhajjar factory. It is a bottleneck that commuting time is taken.
SUB PROJECT (Industrial infrastructure, Social Infrastructure)	road	Congestion occurs at NH8	· The greatest demand for improving traffic infrastructure. If the following four issues are improved, it will be a great support in terms of distribution and commute. (1) Stagnation of migration to Serrauan village of tollgate of money shop, (2) Improvement of industrial road to approach NH8 from Jhajjar (especially industrial bypass road to detour Falk Nagar and interchange from Jhajjar Road to KMP), (3) Jhajjar to approach IMT Manesar directly (4) Improvement of transportation infrastructure will smooth the flow of people and things, demand for various social infrastructure will increase, nature and maintenance will be advanced as well. · How do you view the opportunity losses of the Neemurana and Bawal shipping to the Rajasthan state rather than the Haryana State due to the traffic jam of the NH8 as a state government? · In the logistics between the port of Gujarat State and Haryana State, traffic congestion in NH8 in Haryana State is a problem. · It is necessary to improve traffic congestion of the NH8. I want you to install a signal, but it will not work if there is no traffic literacy before that.
		Jhajjar Road (LINE 15 A) is not in place	· There is a strong demand for road improvement leading to MET. When Ambassador Hiramatsu talked with Prime Minister Haryana in May 2017, I asked for road improvement such as ring road and bypass village. Considering logistics, it is thought that Jhajjar area value will be improved by advancing not only LINE 15 A but also KMP etc together.

			· Many livestock appear on the road. In the winter night as well, the fog cannot see the way very much. Without street lights, we cannot respond to these, and the danger is very high. Accidents occur frequently at 1 to 2 times per week, and fatal accidents are also occurring. In a settlement there will be one lane, causing traffic congestion. The priority of bypass to bypass Falunagar and maintenance of Rail over Bridge in the eastern part is high. Also, since employees commute this way by bus, maintenance is essential. It may take 1 hour 15 minutes to Gurgaon and 2.5 hours to Delhi when it takes time. Half of our employees commute from Gurgaon. · Jhajjar made an entry in the first place that the trunk line (KMP) passed. Since connection with Manesar is important, I want you to proceed early.
		Due to logistics to the east, we need a road to bypass Delhi	· Logistics to Noida, via Delhi is indispensable, getting into traffic jam. A highway that bypass Delhi is necessary. · It is necessary to maintain a Delhi detour.
	Power	Power supply to the factory is unstable	· In the summer, power consumption is high because power consumption is concentrated due to concentration of air conditioners. There is a backup, but even now j will power out more than 20 times a week. · I hear that overpowering in Haryana State as a whole, but because there is insufficient supply in the factory area, I would like to have a unique substation. · Although the 240 KV power transmission network is not a problem, there is a problem in the 33 KV to 11 KV distribution network connecting the companies and residences from the substation. A power pole collapses due to a strong wind and a blackout occurs, and farmers move the utility pole without permission. Distribution network maintenance is done by the state distribution company, but it is delayed due to shortage of funds. We hope to maintain electricity constantly in the factory and improve it if possible in the form of being grounded. · It is necessary to improve both quantity and quality, but because power company is struggling to collect toll and fund shortage, support is necessary. · Confirmation of the line is required every time an instantaneous blackout occurs frequently, and defective products are also generated. I have a backup power supply at my company, but it is not enough.
		High electricity price (there is no private electric distribution company)	· There is no private enterprise that provides cheap electricity supply such as in Rajasthan province or Karnataka state.
	Sewage	Water supply is inadequate and permission to use groundwater is difficult to approve	· IMT Manesar is using two lines of its own well finally approved by the central government and the industrial park water, but it is not ample. Semiconductors, foods, steel materials, etc., which use a lot of water and electricity, are difficult to enter this area, and now many assembler is located. · In the northern part of Haryana State, industries using water as a raw material, such as the beer industry, accumulated, but since the provincial government strengthened the regulation of the over-exploitation area of the groundwater, a large enterprise that can acquire its own license and dig water A situation where you cannot advance. The water shortage in the center is chronic and can only enter the automobile industry which does not use much water. The fundamental solution is difficult. · Since water is not supplied in the first place (even if you twist the water supply, it does not come out), you are using groundwater for sure. We have applied for groundwater use permission to CGWA (Central Ground Water Authority), but it has not been approved yet more than 6 months later. I got an unofficial permission, but the person in charge of HSIIDC has changed, and I have the risk of incurring the penalty associated with being regarded as unauthorized use of groundwater.
	Hospitals · schools · fire fighting	Insufficient hospitals and schools near the industrial estate	· There is a request from the factory to set up a hospital. However, there are voices that there is no problem if road access is improved. · It is good that hospitals and schools are located near the industrial estate, but improvement of the road environment should proceed. · You should bring hospitals and schools located in places that are difficult to access from Gurgaon to the factory area. Originally there was a story saying that Jhajjar could be a university hospital. It is also important to improve traffic infrastructure that ambulance is easy to access. · Because there are no ambulances, there are cases where Japanese expatriates died due to poor physical condition, so they feel a sense of crisis.
		There is no firefighting function in the industrial estate	· There is a request from the factory for a fire station / facility. However, there are voices that it will be OK if road access is improved. · Because there is no fire department in MET area, we are discussing establishment of fire department at enterprise level.

			· I am struggling with permission and approval at factory expansion. He received various opinions from the state government's Fire officer, such as pillars, sprinklers, partitions, etc. The ambiguity of the legal basis and the fact that it is written to follow the judgment of Fire officer eventually is a problem. Pleas for the state government is necessary and business cannot proceed.
	For employees A house	There is no provision of cheap housing mainly for workers or subsidy mechanism	· It is good if inexpensive housing is near the industrial estate. In RJ State there is subsidy (5,000 Rs./ month) for the construction of affordable housing for workers. · Engineers are hiring more talents from other states, so it will be appreciated that there is a cheap accommodation in an area close to the company. Recently, not only Delhi and Gurgaon, Bawal and others have high rent. In order to lower turnover rate, supply of inexpensive housing is necessary. · If you can make a dormitory with subsidy from the government, it will be helpful for women's safety and cost. However, as many Indian people complain of complaints, quality is also important because it is assumed that complaints such as hot and narrow are expected only by cheap.
Other		Long-term contract with gas corporation cannot be changed	· Contract with Gas Corporation is a recent issue. We have a long-term contract with Gary in Haryana State for 20 years but we are constantly contracted to purchase a certain amount, so we will not be able to change the purchaser according to price fluctuation, and want to review the contract. I would like the state government to expect changes to contract contents that will shorten the basic contract period with Gas Corp. and make it possible to review the contract term.
		There are problems with labor unions and it is hard to recruit	· Because collecting people from the area will result in unions, we need to collect from various regions. · Labor relations should be a problem in the future as Indian income levels rise. Can we adopt people who can be relieved among them in the factory? · The occurrence of multiple strikes lowers the sense of trust from customers, the loss of order acceptance opportunities and the maintenance cost of external warehouse that is being used according to customer's request is a big problem. Even if an arrestor comes out, it cannot be dismissed immediately under the law of India and it is "suspended" (It is obliged to pay 25% of salary in the first 3 months, after that, 75%, and due to obstruction of employees who are suspended The dismissal process does not advance, payment continues). · We understand measures to maintain and protect employment of workers, such as training of industrial human resources, but we do not want to revise excessive ordinance. The provincial government should treat the union with a resolute attitude. They always make payment negotiations with strikes as shields. Each company has trouble coping with the labor union, and the salary of the worker's tier reverses the salary of the administrative staff, and the situation that the motivation of the staff goes down also is.

Source:NRI

1.12. Identifying Issues and Proposal of policy matrix for Haryana State

1.12.1. Issues of policy, system, and procedure that industries are facing

Based on the voice of companies in the state, this study identified issues to be solved regarding policy, system and procedure for investors. For each issue, there are no or less actions currently undertaken by GoH. In order to improve environment of investors, these issues are expected to be solved.

Table 1.23 Identified issues of policy, system, and procedure for investors

Category	Issues to be solved	Voice from companies	Current situation and/or Fact
Investment application process	1. Procedure done by each division shall be improved.	Even though one stop service has been established, application windows of each division remains complicated and unfriendly process.	HEPC created Single Roof Clearance System and applications are accepted in online mode
	2. Deadline to give permission shall be kept and not be suspended to review certificate process.	Applications for permission are not processed in time, and delays often happen, especially in each department.	State Industrial clearances services are granted in a maximum of 45 days. However investors used to face deadline has suspended
Investor Facilitation	3. Assign Relationship Manager for each new investment application and complete all process done by single person.	Contact officer for an investor using HEPC changes every time. Instructions given by these officers are different from person to person, which causes confusion.	27 relationship managers for handholding the Investors supported by 12 Relationship Executives
	4. Examine to set new window office for investors in Gurugram and supporter who can speak Japanese.	Distance between the location of the companies (Gurugram) and GoH is too far to travel for Chandigarh to conduct each application process	23 officers from all the Departments are seated permanently under one-roof
	5. Central Inspection System for compliance inspections to be Integrated in HEPC.	In order to in sync the mentioned departments, there is a need to have a compliance inspection system in place under HEPC.	Currently, departments do not have any sync with each other. They run compliance inspections in silos.

Further promotion of robust industrial clusters	6. Promote supporting industries, especially foreign companies including small and medium companies that have advanced technologies to create some incentives such as tax, land fee, or utilities	Existing auto components companies are relying on imports for parts, die & mould etc. They would like to procure locally but quality, cost and delivery speed of local suppliers are not satisfactory.	Policy actions for MSME sectors are implemented only for domestic companies
	7. Advance level of value chain function that is suitable for metropolitan citizens, such as R&D and logistics. To promote target functions to create some incentives such as tax, land fee, or utilities	Existing companies are considering upgrade of their value chain function in HR State from simple assembling to marketing, design and product development	There are not enough incentives in HR State for advanced industries compared to other state(s)
	8. Improvement of Facilitation of Infrastructure for Industries. Industrial growth is not uniformly spread across the state.	(None)	The majority of development has taken place in and around the NCR region and in urban areas.

Source:NRI

1.12.2. Infrastructure projects that companies expect to build

Regarding result of interviewing and questionnaire, these potential sub-projects below are listed up. Many companies think improvement of roads is the most priority in Haryana. MH8 is a matter of NH, central government, however connectivity between NH8 and industrial area is weaken. Even though GoH promote “MET” in Jhajjar area, LINE15 is congested heavily and it takes over two hours from MET to Gurugarum. And it improves efficiency of economic activities to create Rind road surrounding NCR region. Road problems are needed to be solved imminently as affecting both of commutation and logistics.

Comparing with serious situation of road, power and water is not heavy issue. However, in order to promote high advanced electrical and food, supply chain industries, quality of power and water supply shall be increased.

Table 1.24 Infrastructure projects that companies expect to build

	Sector	Road		
	No.	1	2	3
1	Name of the project / policy initiative	Bypass some villege in LINE15A (Jhajjar Road)	Direct connectivity between Delhi airport and Jhajjar	Interchange between KMP road and LINE 15A
2	Company needs	Heavy traffic jam always happens around some villege. It is necessary to connect with NH8 and Jhajjar area.	In order to increase potentiality to locate airport industries and foreign investors, direct road is important.	There are no plan to build interchange. Connectivity of KMP road affects to increase potentiality among metropolitan region.
3	Administrative Department	HSIIDC	N.A.	NH
4	Implementing Agency	HSIIDC	N.A.	NH
5	Project cost	N.A.	N.A.	N.A.
6	Project readiness rating	Under implementation	Conceptualization	N.A.
7	Mode of PPP, in case of PPP	-	-	-
8	Funding sources	N.A.	N.A.	N.A.
9	Identified and share of funding proposed from each source	N.A.	N.A.	N.A.
10	Expected timeline for the project	In 2018	N.A.	N.A.
11	Description	In result of discussion, our proposal to change route is impossible.		

*Model Economic Township

	Sector	Power	Water	Others
	No.	4	5	6
1	Name of the project / policy initiative	Install substation and distribution lime in underground in MET*	New NCR Canal – 100 MLD	Fire Station in MET
2	Company needs	Inside the MET area, there are no substation and weak distribution line. Over ground line is easy to break by strong wind.	Manufactures in MET procure industrial water from underground. It's necessary to supply a lot of water.	There are no fire station in MET area. It's huge risk that fire expand around.
3	Administrative Department	Energy dep.	Water dep.	N.A.
4	Implementing Agency	N.A.	N.A.	MET (Companies)
5	Project cost	N.A.	N.A.	N.A.
6	Project readiness rating	Conceptualization	Conceptualization	Conceptualization
7	Mode of PPP, in case of PPP	-	-	Association of company located in MET
8	Funding sources	N.A.	N.A.	N.A.
9	Identified and share of funding proposed from each source	N.A.	N.A.	N.A.
10	Expected timeline for the project	N.A.	N.A.	N.A.
11	Description			

Source: NRI

1.12.3. Issues of human resource development that industries are facing

Based on the voice of companies, this study identified issues to be solved regarding human resource development for investors. For each issue, there are no or less actions currently undertaken by GoH. In order to improve environment of investors, these issues are expected to be solved.

Table 1.25 Identified issues of human resource development for investor

Category	Issues to be solved	Voice from companies	Current situation and/or Fact
human resource development	Basic and soft skills of factory operators are lower than expectation by employers.	Factory workers (operators) are lacking basic knowledge and practice of behaviour in factory, such as 5S, reading and writing English or Hindi. Due to this issue, employability of ITI graduates remains low. In the questionnaire to industry, most common answer was "Not enough skilled workers" Some companies mentioned that government ITIs are not recognized well by industries.	30 private companies are supporting for upgrading the quality of training at ITIs.
	Engineers' skills are out-dated and not practical enough.	Engineers are lacking practical and up-to-date knowledge, especially in maintenance of machinery, facility and die & mould etc. In the questionnaire survey, as for the demand for the state's government, more than 40% of respondents pointed that "Improve technical programs" and "Formulate a state human resource development plan" and "Provide technical training programs" follow.	There is no specific policy action for upgrading the quality of training of polytechnics schools supported by private sector.
	Secure and safe working environment is still an issue for promoting female labour participation.	Even though factories registered under the Factories Act 1948 now can exemption from employing women in the night	The Female Labour Participation Rate of Haryana is among the lowest of the country.

		shift from 7pm to 6am, it is still difficult to ensure the safety and security of female employees during commuting. This hinders employment of women in factories.	
			Through the program of "E-Karma" GoH will educate the unemployed youth/ Final year degree students on the national/international Freelancing platforms and generate the Self Employment opportunity in the state.
	To create more training facilities like Govt. ITIs and Institutes of training of Trainers(ITOT)	Industry people mention that there is more needs on skilled labours than currently produced. In the questionnaire to industry, more than 25% respondents pointed that "Not enough schools for learning skills"	Poor /NO requisite infrastructure in Technical and Vocational Training Institutes for facilitating/Enabling Skill Development
	To create virtual learning platform at ITIs		Lack of quality instruction system on modern manufacturing/learning technology.
	To upgrade existing NCVT Trades under Dual mode of Training System	Expedite Dual Mode of Learning	
	To create training capacity institutes to train the existing trainers of Govt. ITIs	Knowledge and experience of trainers are getting out-dated.	Training of Trainers as per latest methodology

Source; NRI

1.13. Summary and our proposal

In order to improve environment of industrial promotion and be more attractive to promote future industries, we set 5 pillars of policy and 15 challenges described in below matrix under the industrial promotion program of Haryana (HIPP).

1. Improvement of investment application process
2. Investor Facilitation
3. Improvement of industrial human resource development (entrepreneurship)
4. Improvement of industrial human resource development (manufacturing skill)
5. Improvement of business environment to attract further investment

These policy pillars and challenges are executed by the proper department of government and agencies. Responsible agencies are as follows,

1. HEPB (Haryana Enterprise Promotion Board)
2. HEPB / HSIIDC
3. Department of Industries and Commerce
4. Department of Skill Development & Industrial Training
5. Department of Industries and Commerce, HSIIDC, Department of Skill Development & Industrial Training

Detailed challenges and action for 3 years are proposed in the draft of Policy Matrix that are referred in the next page

Table 1.26 Draft Policy Matrix proposed by NRI

	1. Improvement of investment application process					Guidance Bureau / HEPB (Haryana Enterprise Promotion Board)		
No.	Current Challenges	Goals achieved through Program	Evaluation Indicator	Baseline: Jan 2018	Target :Mar 2021	Policy Action CY2018	Policy Action CY2019	Policy Action CY2020
1-1	Limited services are being granted through Single Roof System (Haryana Enterprises Promotion Center: HEPC) and Investors have to physically visit and apply to individual departments for other State industrial services which are not covered under HEPC.	To expand the reach of HEPC, following State Industrial clearances are to be covered under the ambit of HEPC *Department of Industries* • Registration of Partnership firm • Registration of Societies *HSIIDC – Haryana State Industrial Infrastructure Development Corporation* • Permission for Transfer of Ownership land • Extension of Time for obtaining Building Completion Certificate • Permission for leasing • Permission of Sub Division of Plot • Permission of change in activity • Permission of change in usage of plot • Surrender of plot & refund • Application form for change in name of company	• Standard Process Timeline from start to completion of the investment application process: ▲▲ days	•	• ●● days	• Blue Print and mechanism for integration & development of Services are submitted from ● to ACS Industries	• Newly added services are launched on HEPC. • System awareness orientation program is conducted for all the District officers deputed in DICs in 22 districts of Haryana.	• Study report on assessment of possibility of inclusion of more services under the ambit of HEPC is submitted from ● to ACS Industries
1-2	Services such as authorization under e-waste and change of land use under MC Limit etc. cannot be completed via online system without manual intervention at various level.	End to end integration of following services removing manual intervention/ Physical touchpoint HSPCB • Authorization under e-waste • Registration under plastic manufacture, sale and usage Urban Local Bodies - ULB • Change of Land Use under MC Limit Haryana Urban Development Authority - HUDA • Occupation or Completion Certificate (Form BR-IVB) Department of Agriculture • License to manufacture insecticides • Application form for fertilizer manufacture certificate PWD B&R • Clearance for entry or exit from State Highway or Scheduled road under MORT&H guidelines Food & Supplies Department • License for Brick Kiln Mines & Geology Department • License for Stone Crushers • Permit for manufacturing of bricks Environment • Environment Clearance under 'Aravali Notification' Department of Ayush • Drug License of Ayurvedic Medicine				• Blue Print and mechanism for development of Services are submitted from ● to ACS Industries	• Newly added services are launched on HEPC. • System awareness orientation program is conducted for all the District officers deputed in DICs in 22 districts of Haryana.	• Study report on assessment of possibility of inclusion of more services under the ambit of HEPC is submitted to ACS Industries
1-3	• Approval process for obtaining construction permit is very cumbersome and investor is not aware about which all approvals are required for entire	• Integrated Common construction form covering various services such as Building plan, Fire services, Electricity, Sewage, NMA, AAI, pollution, Forest etc. • In addition to above, a software to be developed for auto scrutiny of Building plan as a service of various departments such as TCP, ULB, HUDA,				• Blue Print of mechanism is prepared, tender for vendor is completed and integration and development are implemented	• Implementation is completed and Newly added services are launched on HEPC. • System awareness orientation program is conducted for all the District officers deputed in DICs in 22	• Information Update in the online system is conducted in line with regulations (in case of any change)

	• construction period. • An integrated common construction application form is required	HSIIDC.					districts of Haryana.	
1-4	Hassles/ Difficulty in coordinating with different department to get the services approval and multiple visits to the department to get approval of services carrying same set of documents again and again.	• An online Common Application Form (CAF) on single window is implemented for combining applications of all services wherein common information such as applicant's name, project details, address etc. and common documents are required to be provided only once • A "Digi locker" facility is to provided and integrated with CAF to store all the data provided by the investors at one place with the requisite data security provisions in place.				Blue Print of mechanism is prepared, tender and implementation is started, which targets to cover 15 services for Digi locker as Phase I	• System Development is conducted and completed, which targets to next cover 15 services for Digi locker as Phase II. • Conduct awareness raising campaigns about features of system for potential and existing investors in Haryana	• System Development is conducted and completed, which targets to next cover 15 services for Digi locker as Phase III. • Conduct awareness raising campaign about features of system for potential and existing investors in Haryana
	2. Investor Facilitation					**Guidance Bureau / HEPB (Haryana Enterprise Promotion Board)／HSIIDC**		
2-1	Dedicated helpdesk and investor facilitation desk is required to be established for query handling	Dedicated call center to be established. • Tender to be published for onboarding of Call Centre operator • Establishment of Call Centre	• ▲% SLA against in time query resolution	•	• 70% SLA against in-time query resolution	• Tender to be published for onboarding of Call Centre operator • Establishment of Call Centre	• Call Center Service is launched • Capacity Building of Call Center Staff is conducted	• Capacity Building and team augmentation is conducted.
2-2	• Contact officer for an investor using HEPC changes every time. Instructions given by these officers are different from person to person, which causes confusion. • Japanese investors need support of Japanese speaker in their application process	Assign Relationship Manager for each new investment application/ renewal of application. Their Scope of Work is: • (please fill out) • (please fill out) • (please fill out) Japan Desk would facilitate applications of Japanese Investors The Scope of Work is: • (please fill out)	• Standard Process Timeline from start to completion of the investment application process: ▲▲ days • Japan Desk: Not Established	•	• ●● days • Japan Desk: Established	• Additional 25RMs are appointed as per government order No.XX-XXXX • Japan Desk is established	• RM structure is restructured as per government order No.XX-XXXX • A report on User-feedback is finalized and submitted from Guidance Bureau to ACS industries • Awareness raising campaign about Japan Desk is conducted.	• User survey about the restructured RM service is conducted and feedback report is submitted from Guidance Bureau to ACS Industries
2-3	Currently, departments do not have any sync with each other. They run compliance inspections in silos. In order to in sync the mentioned departments, there is a need to have a compliance inspection system in place under HEPC. The system will have a feature to publish list of units where inspections will be conducted jointly (in sync) with other departments.	Central Inspection System for compliance inspections to be Integrated in HEPC. Central Inspection System to include following 3 departments: • Department of Labour & Factories • Department of Industries (Boiler) • Haryana State Pollution Control Board	• All inspections are conducted in silos	•	• 30 compliance inspections shall be done using that system	• Blueprint of mechanism to be prepared and implementation is initiated	• Service is launched • Capacity Building of staff and workshops for information dissemination are conducted	• Study report on inclusion of more departments under central inspection system is submitted from ● to ACS Industries • User feedback shall be obtained through existing feedback system
	3. Improvement of industrial human resource development (1)					**Department of Industries and Commerce (3-1)**		

3-1	Haryana has gradually evolved as knowledge based economy due to the abundance of capable and qualified human capital. It has immense opportunity to establish its distinctive footing not only in the country but in the world. However, there is a need to further develop and empower this human capital to ensure the state's competitiveness at the global platform. Empowering Youth of Haryana and making them educated and self-reliant has always been one of the prime concerns and focus of the state government.	E-Karma • Further, in order to promote the Self Employment or Entrepreneurship in the state of Haryana, Department of Industry & Commerce (In partnership with Department of Higher Education) wants to propose a new initiative "E-Karma". • Through this program, Government of Haryana will educate the unemployed youth/ Final year degree students on the national/international Freelancing platforms and generate the Self Employment opportunity in the state. Through this program, Government will not only enhance the entrepreneurship but also increase the inflow of foreign currency, as the income from most of the freelancing portals comes in US Dollars.	• Employment / Self-employment of selected college students	• 0	• More than 50%	• EoI to be published • RfP to be published • Selection of vendor is completed • Onboarding of vendor • Finalization of list of courses to be conducted and completed • Finalization of Students is completed	• Impact assessment study report is submitted from ● to ACS Industries • A committee for discussing action plan for next year is held at least once a year • A discussion meeting between Department of Industries and Commerce and industry is held	• Plan about updated courses as per industry demand start to be prepared
	4. Improvement of industrial human resource development (2)					**Department of Skill Development & Industrial Training**		
4-1	Poor /NO requisite infrastructure in Technical and Vocational Training Institutes for facilitating/Enabling Skill Development	To create more training facilities like Govt. ITIs and Institutes of training of Trainers(ITOT)	• N/A	•	• Setting up of 23 Govt.ITIs in the State with popular trades like Electrician, Fitter, Turner, Machinist, COPA, Geo Informatics Assistant and Soil Testing etc.	• Setting up of 7 Govt.ITIs	• Setting up of 8 Govt.ITIs	• Setting up of 8 Govt.ITIs
4-2	Lack of quality instruction system on modern manufacturing/learning technology.	To create virtual learning platform at ITIs	• n/a	•	• To prepare E-Learning material of 35 Trade courses	• E-Learning material of 10 Trade courses is to be arranged/ prepared.	• E-Learning material of 10 Trade courses is to be arranged/prepared	• E-Learning material of 15 Trade courses is to be arranged/prepared
4-3	Expedite Dual Mode of Learning	To upgrade existing NCVT Trades under Dual mode of Training System	• n/a	•	• To upgrade 35 number of trade units under Dual mode of Training	• 10 trade units to be upgraded into dual mode	• 10 trade units to be upgraded into dual mode	• 15 trade units to be upgraded into dual mode
4-4	Training of Trainers as per latest methodology	To create training capacity institutes to train the existing trainers of Govt.ITIs	• n/a	•	• To train approximate 2400 trainers of Existing Govt.ITIs	• To train approximate 700 trainers of Existing Govt.ITIs	• To train approximate 800 trainers of Existing Govt.ITIs	• To train approximate 900 trainers of Existing Govt.ITIs
4-5	Training of youths	To create training capacity institutes to train the youths	• n/a	•	• To train approximate 1,70,000	• To train approximate 45,000 youths through ITIs	• To train approximate 55,000 youths through ITIs	• To train approximate 70,000 youths through ITIs
4-6	There is a gap in notion of "basic skills" between State Government and Industry Side including Japanese companies.	To enable State Government to improve trainings for ITI students, based on an accurate understanding of "basic skills" which Industry Side requires for factory workers.	• Little interaction between State Government and Japanese companies.	•	• Periodical interactions between State Government are coducted.	• For the purpose of Identifying needs on training of workers (operators) from industry, meetings with Industries are held.	• For the purpose of Identifying needs on training of workers (operators) from industry, meetings with Industries are held. • Necessary modification and addition in training program	• For the purpose of Identifying needs on training of workers (operators) from industry, meetings with Industries are held. • Feasible implementation

							for trainers and students are discussed.	plan on improvement of the training program is discussed.
	5. Improvement of business environment to attract further investment					**Department of Industries and Commerce, HSIIDC, Department of Skill Development & Industrial Training**		
5-1	Acceleration of Infrastructure Development. A comprehensive funding and implementation scheme is required for small infrastructure projects benefitting for improvement of investment climate	Small infrastructure Project Empowered Committee will select the priority projects and allocate budget properly. The administrative departments and implementing agencies will appropriately monitor and facilitate the priority projects	N/A	•	• ●●(figure) small infrastructure projects are prioritized and facilitated during the program period	• Potential small infrastructure projects are selected.	• Pool fund for implementing the priority small infrastructure projects as budgeted • Small infrastructure Project Empowered Committee will select priority small infrastructure projects • Establish a Project Monitoring Matrix for the selected priority small infrastructure projects • Facilitate implementation of the priority small infrastructure projects in accordance with the established Project Monitoring Matrix	• Implementation of at least ●● (figure) priority small infrastructure projects in accordance with the established Project Monitoring Matrix is facilitated

2. Rajasthan

2.1. An Overview

Rajasthan, with a geographical area of 342 thousand sq. km, is the largest State in the country. It is a land-locked state and is situated in the north-western region of India where it is surrounded by the states of Punjab, Haryana and Uttar Pradesh in the north-east, Madhya Pradesh in the South-east and Gujarat in the south-west (Figure 2.1). It also has a long international frontier with Pakistan. Jaipur is the capital of Rajasthan. The topography of the State is dominated by the Aravalli hills, one of the oldest mountain systems in the world. The Aravalli hills range runs from south-west to north-east through the heart of the State. The west and the north-west part of the State, is either desert or semi-desert and known as the Great Indian Desert "The Thar". Administratively, the State has been divided into 7 divisions and 33 districts, comprising 295 'panchayat samities', 9,891 village panchayats, and 43,264 inhabited villages. As per the Census of 2011, population of the state was 68.5 million persons. Rajasthan consists of 10.5% of India's total area while only 5.6% of India's total population inhabits the state. This shows that the state of Rajasthan is one of the least densely populated states with a density of 200 persons per sq. km. 75% of the state's population (51.4 million persons) still lives in the rural areas which is 6 percentage points more than the 69% of India's urban population.

Figure 2.1 Geographic location of Rajasthan and its district-wise map

Rajasthan has been one of the Low Income States of India, however, it has witnessed a healthy growth in its Gross State Domestic Product (GSDP) during the last few years. As per the 'State

Domestic Product 2016-17' Report published by the State Government of Rajasthan, state's GSDP in 2016-17 was INR 5.83 trillion (at constant prices 2011-12). The GSDP at constant prices has increased by a CAGR of 6.05% during the period 2011-12 to 2016-17 (Chart 2.1). During the same period, India's GDP (at constant prices 2011-12) increased by a CAGR of 6.89%, indicating lower growth rate for Rajasthan compared to whole India.

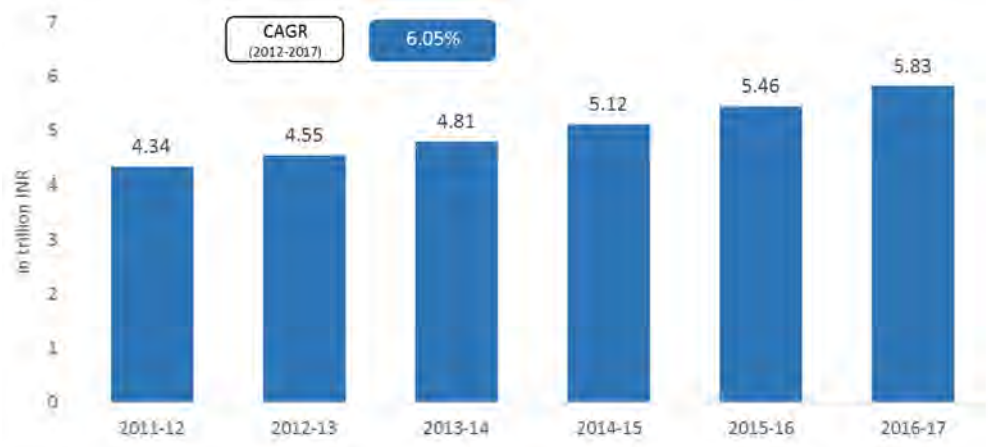

Chart 2.1 Gross State Domestic Product (GSDP) of Rajasthan at Constant Prices 2011-12

Source: Govt. of Rajasthan's State Domestic Product 2016-17 Report

Chart 2.2 shows the comparison in the growth rates of Rajasthan's GSDP and India's GDP over the last five years

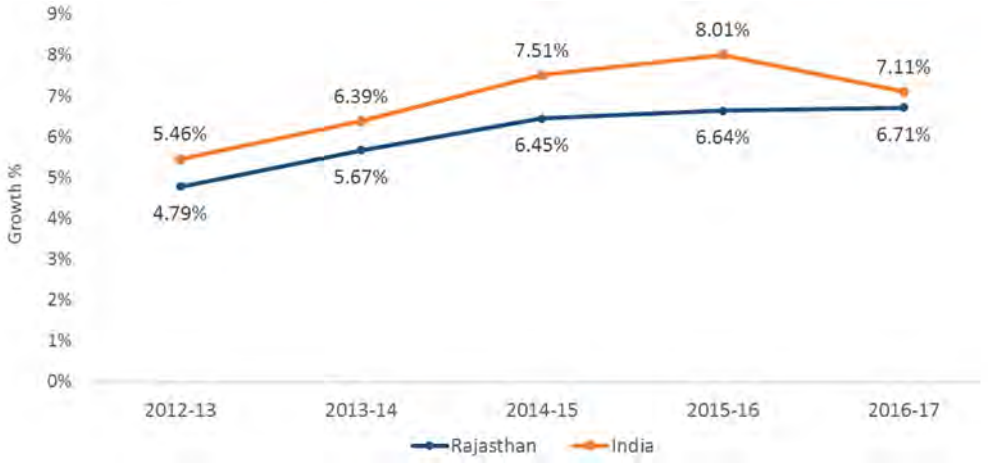

Chart 2.2 GSDP/GDP Growth Rates of Rajasthan and India (at Constant Prices 2011-12)

Source: Govt. of Rajasthan's State Domestic Product 2016-17 Report

Figure 2.2 shows the Top 3 and Bottom 3 districts in terms of their GDDP in the year 2016-17. During the period of 2012-17, the district of Barmer has seen the highest CAGR of 15.8% in its GDDP whereas, the district of Jaisalmer has seen the lowest CAGR of 2.7% during the same period. The Barmer is doing good because of presence of Oil wells in that district. A total of 12 districts had a CAGR of more than 6.05% (state's CAGR) in their GDPs during the last 5 years (Chart 2.3). This shows that only a few districts have been fuelling growth in the state and a majority of the districts have been struggling to match up to the state's economic growth. In 2016-17, Rajasthan's Net Per Capita Income (at Current prices) was INR 90,447 which was lesser than that of the national average of INR 103,219.

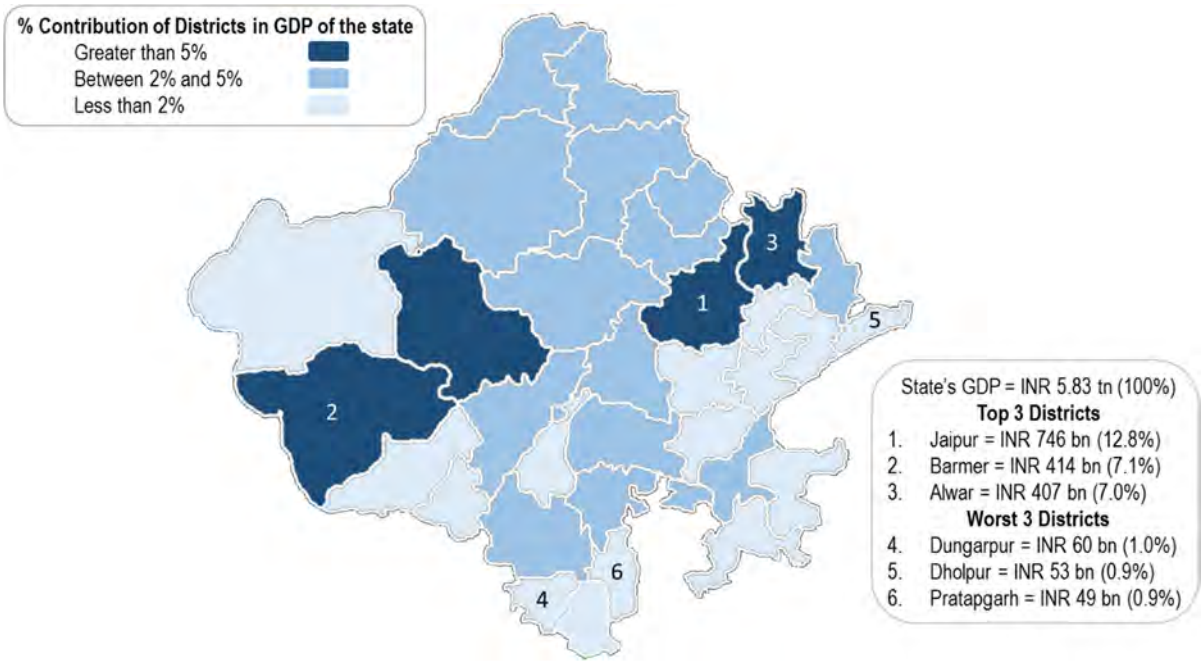

Figure 2.2 GDP contribution of Rajasthan's districts in 2016-17 (at Constant Prices 2011-12)

Source: Directorate of Economics & Statistics Department of Planning, Rajasthan's 'Estimates of District Domestic Product of Rajasthan (2011-12 to 2016-17) Report'

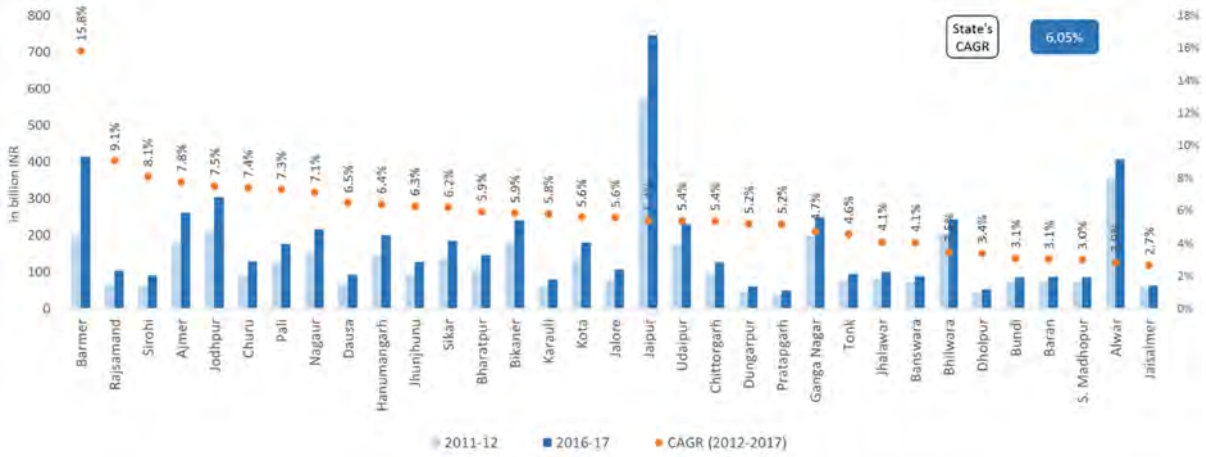

Chart 2.3 Gross District Domestic Product (GDDP) of Rajasthan's districts (at Constant Prices 2011-12)

Source: Directorate of Economics & Statistics Department of Planning, Rajasthan's 'Estimates of District Domestic Product of Rajasthan (2011-12 to 2016-17) Report'

A comparison of Rajasthan's Net Per Capita Income (at current prices) with that of India has been shown in Chart 2.4. There are 13 districts which have Net Per Capita Income higher than that of the state's. The district of Barmer has the highest Net Per Capita Income of INR 141,102 (at Current prices) whereas, the district of Dungarpur had the least Per Capita Income of INR 50,767. This shows there is huge income disparity among the districts.

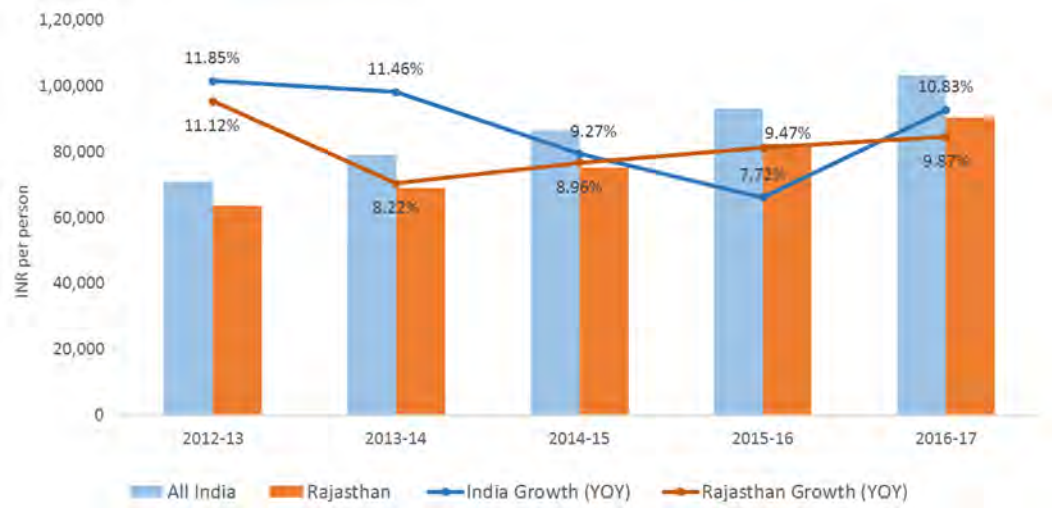

Chart 2.4 Net Per Capita Income (at Current Prices) of Rajasthan & India with YoY Growth Rate

Source: Govt. of Rajasthan's State Domestic Product 2016-17 Report

The Tertiary Sector (Services Sector) had the highest contribution of 44.8% to the Gross State Value Added (GSVA) of Rajasthan during the year 2016-17. It was followed by the Primary

Sector (Agriculture and Allied Industry) with 33.1% contribution and then the Secondary Sector (Industrial Sector) with 22% contribution (Chart 2.5). The Tertiary Sector had a CAGR of 9% during the period 2012-17, whereas, the Secondary Sector had the worst CAGR of 0.67% during the same period. This shows that the industrial sector is still under-developed in the state and there's a lot of room for improvement.

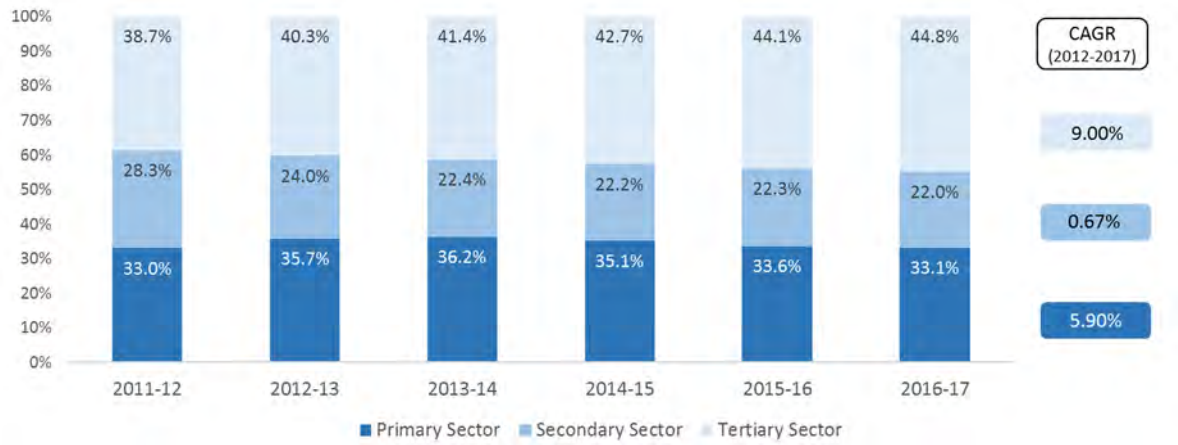

Chart 2.5 Sectoral distribution of Gross State Value Added (GSVA) of Rajasthan (at Constant Prices 2011-12)

Source: Govt. of Rajasthan's State Domestic Product 2016-17 Report

The general trend of low industrialisation is not seen in the districts of Barmer, Alwar, and Rajsamand. These three districts have the Industrial Sector providing major contribution in districts domestic product (Chart 2.6). The districts of Hanumangarh, Jaisalmer, and Ganga Nagar are more dependent on the Agriculture and Allied Sector which contributes the majority portion of their district domestic products. The districts of Dungarpur, Jaipur, and Jhunjhunu have a higher contribution from the Services Sector to their respective district domestic products.

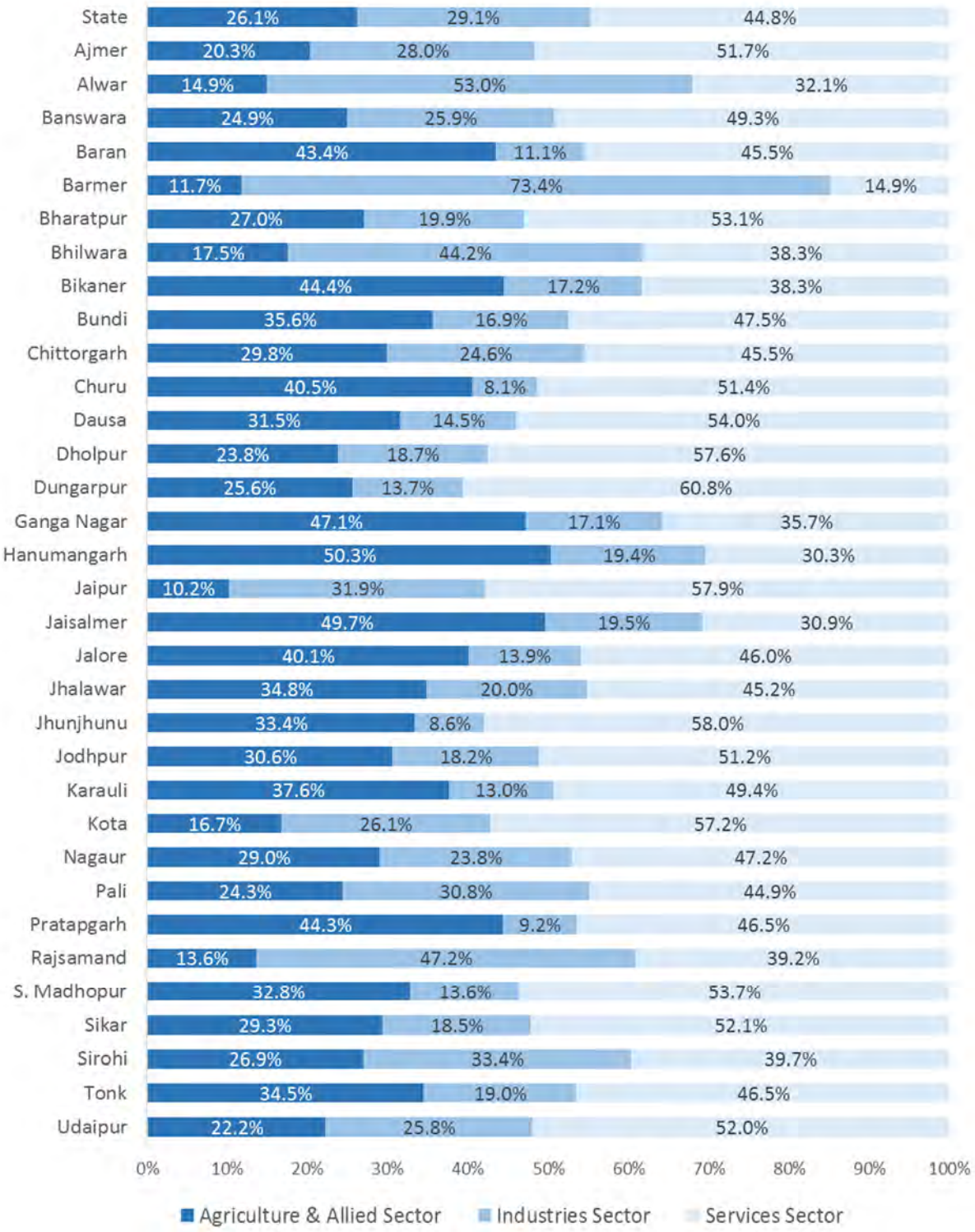

Chart 2.6 Sector-wise composition of Gross District Value Added (GDVA) at Constant Prices(2011-12) for the year 2016-17

Source: Directorate of Economics & Statistics Department of Planning, Rajasthan's 'Estimates of District Domestic Product of Rajasthan (2011-12 to 2016-17) Report'

2.2. Current State of Economic and Social Infrastructure

2.2.1. Economic Infrastructure

2.2.1.1 Power

Rajasthan is power surplus state with Power generated exceeds the consumption. Sources of power generation range from conventional sources such as coal, lignite, natural gas, oil, hydro and nuclear power to viable non-conventional sources, such as wind, solar and agriculture & domestic waste. Through the years 2001-02 to 2016-17, total power available for sale (including electricity generated and electricity purchased) in the state increased by a CAGR of 7.2% to 74 billion units. Whereas the consumption of power increased by 8.6% to 51 billion units. There was surplus power generated of 31.3% in the year 2016-17(Chart 2.7).

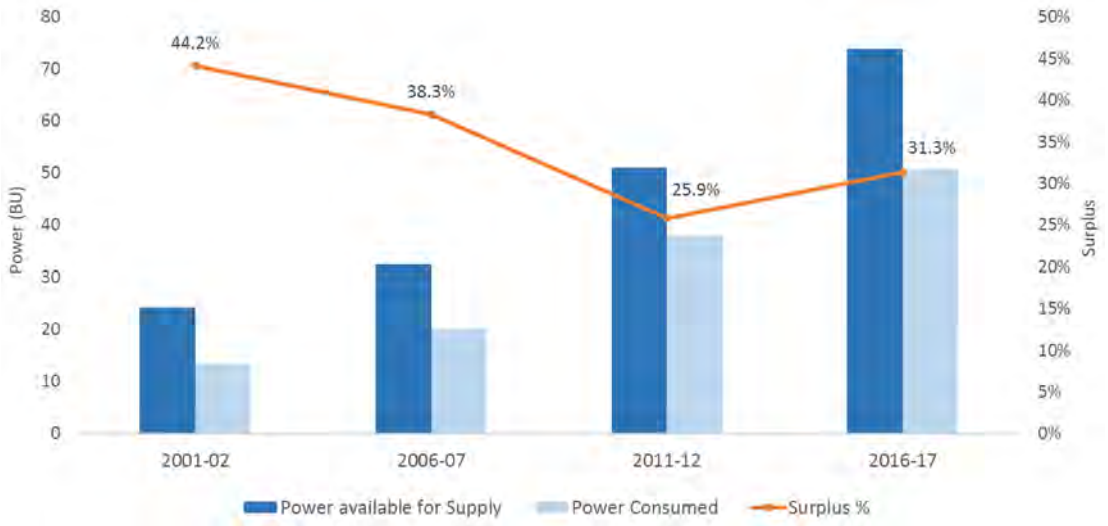

Chart 2.7 Comparison of Power Available and Power Consumed in Rajasthan (2001-02 to 2016-17)

Source: Compendium of Some Development Statistics About Rajasthan (1951-52 to 2015-16); Statistical Yearbook of Rajasthan 2017

Total installed power generation in the state, as of Dec. 2017, is 19,537 MW. The current state power generation capacity has increased to 1.36 times of the capacity it had 5 years ago. Power generation of the state is majorly done through thermal generation, however, during the recent few years, renewable sources like wind generation and solar generation have seen a good growth and 30% of the total capacity consists of renewable generation (as of December 2017).

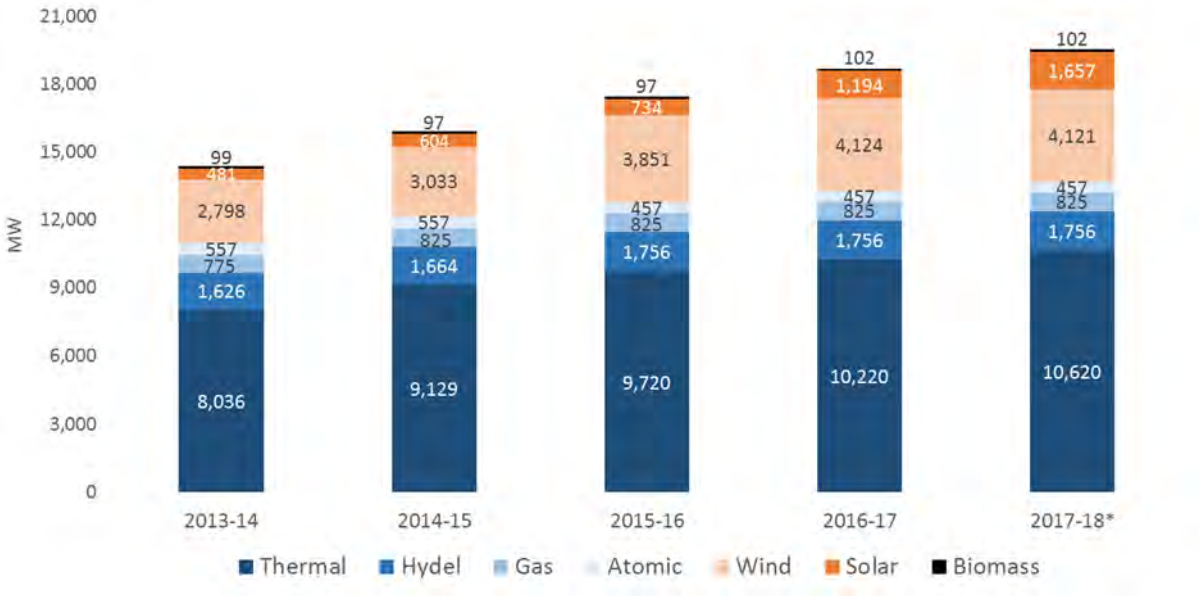

Chart 2.8 Year-wise Installed Capacity (MW) of Rajasthan

Source: Economic Review of Rajasthan 2017-18

*Up to December, 2017

Total consumption in the state during 2016-17 was 29,371 Million Units (MU) with the Agriculture sector being the largest consumer with 21,392 MU and Industrial sector being the third largest consumer of power with 10,388 MU (Chart 2.9). Also, it is worth noting that the consumption by the Industrial sector has shown the least CAGR of 5.4% over the period 2001-02 to 2016-17. Whereas, Agricultural sector has shown the highest CAGR of 11.3%. The total consumption has grown by a CAGR of 7.2%.

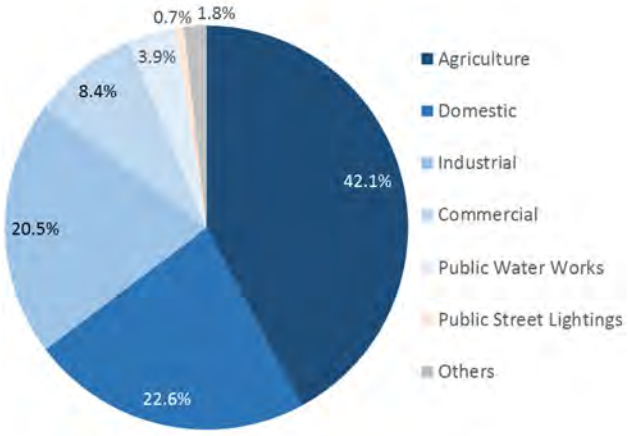

Chart 2.9 Consumption of electricity by consumer's sector (2016-17)

Source: Statistical Yearbook of Rajasthan 2017

Rajasthan is blessed with Maximum Solar Radiation Intensity of about 6-7kWh/ Sq. m/ day and maximum sunny days (more than 325 days in a year) with a very low average rainfall. As per the assessment of Rajasthan has a potential of 142 GW of electricity from solar energy. Because of this, government has focus on developing solar energy. As on Q2 2019, Rajasthan has total installed capacity of 3.5 GW of solar.

In terms of Transmission, the total Extra High Voltage (EHV) Transmission network of the State as on March, 2012 was 28,363 Ckt.km (circuit km) only which has increased to 35,972 Ckt.km up to March, 2017. The total Transmission network has increased by 26.83% during 2011-12 to 2016-17. During the same period, the Power available for sale in the state increased by 44.6% and the Power consumption increased by 33.9%. This shows that the Transmission network has not increased with the required growth rate when compared with power generation and consumption.

Since there was 31% surplus power available for sale in the state in 2016-17 so it seems that there's enough power generated in Rajasthan to cater to consumers' requirements. However, the supply of power to the industries is not stable. There are power outages and instantaneous blackouts in the industrial areas. This shows that improvement is required in transmission and distribution (T&D) of power in the state. There has been some improvement in this area during the recent times but still a lot of investment is needed. Having separate sub-stations and distribution systems for industrial estates and villages/domestic supply would be of great help. Also, having proper monitoring and maintenance systems for the T&D network are required.

2.2.1.2 Water

Rajasthan faces one of the greatest scarcity of water resources in the country. It is the largest state with about 10% of the country's total area but it has only 1.16% of the total surface water (21.7 billion cubic metre (BCM)) and 1.7% of the total ground water (11.36 BCM). Apart from this, depending upon the river inflows 17.88 BCM is allocated through inter-state agreements with states of Uttar Pradesh, Haryana Himachal Pradesh, Delhi, Punjab and Gujarat, however it is non-dependable due to political compulsions of the other states. Total economically usable water resources in the state are 45.09 BCM out of which 35.72 BCM (79%) of the water is used.

Agricultural use of water accounts for the consumption of 83% of available water resources in the state, drinking water for 11%, and industry/other uses 6%. The demand-supply deficit was 7.7 BCM in 2005, it went up to 9 BCM by 2015, and is expected to widen to 9.4 BCM by 2045. The average per capita water availability is expected to drop below 450 cubic meters by 2050, which is below the international minimum of 500 cubic meters or absolute water scarcity. Industrial water demand in Rajasthan was around 45.5 MCM/year in 1995, projected to grow to 138.44 MCM/year in 2045. In 2015, the industrial water demand was expected to be around 71.4 MCM.

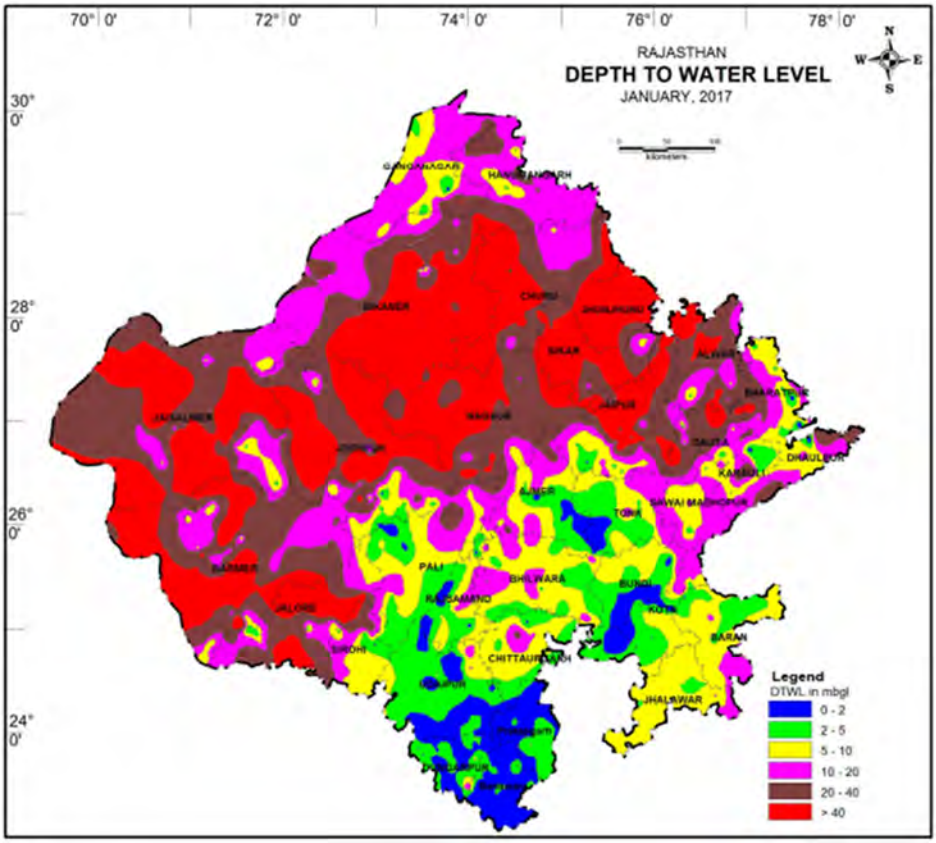

Figure 2.3 Depth of Ground Water Level across Districts (January, 2017)

Source: Groundwater Year Book of Rajasthan State (2016-17)

The industrial water demand is fulfilled mainly through the groundwater resources in Rajasthan. According to the central government, Rajasthan has been allowed to use maximum groundwater in the country for industrial purposes during the period 2012-17 compared with other states. The Central Groundwater Authority (CGWA) issued No-Objection Certificates for utilisation of more than 40.4 MCM of groundwater in Rajasthan - the volume used in the state every year is 37% more than what is recharged.

Table 2.1 High Ranked State where Industry used groundwater

Rank	State	Groundwater used for Industrial Purpose (crore cubic meter)
1	Rajasthan	4.04
2	Uttar Pradesh	3.44
3	Chhattisgarh	3.31
4	Odisha	2.27

The board report says around 10.82 BCM of groundwater is available in Rajasthan every year after recharge but around 13.13 BCM is exploited for irrigation and 1.70 BCM for domestic and industrial purposes. This has resulted in the creation of a critical stage as far as groundwater in Rajasthan in concerned. The groundwater level has dipped 15 metres in Nagaur, Jhunjunu, Jalore, Jaipur and Sikar districts because of overexploitation in last 30 years. Alwar and Dausa districts registered 10-15 metres decline in ground water level. The level is under 5 meters in Ajmer, Baswara, Baran, Bharatpur, Bhilwara, Bundi, Dholpur, Dungarpur, Kota, Sawai Madhopur, Tonk and Udaipur districts.

This has resulted in the CGWA not renewing industrial permits for ground water pumping during the last year. Water is one of the most serious problems which the industrial sector is facing in Rajasthan. Possible solutions include having more STPs and CETPs in the state. Also, rainwater harvesting systems should be made compulsory in every industrial estate. The state government needs to build the required infrastructure for the same. Public Private Partnerships (PPP) are also viable options for the same. However, the state government needs to provide suitable policies and implementation framework for the same.

2.2.1.3 Road

Rajasthan's road network consists of different class of roads such as National Highways, State Highways, District Roads, Village Roads, etc. As on March 31, 2017, total road length of Rajasthan was 226,854 km, out of which, the National Highways were 8,202 km long. Among the Indian states, Rajasthan has third longest network of National Highways after Maharashtra and Uttar Pradesh. The road density of Rajasthan is 66.29 km per 100 sq. km. It is very low when compared with the India's road density of 166.5 km per 100 sq. km. The road density of Rajasthan is also very low at 33.11 km per million people when compared with All India's road density of 43.64 km per million people.

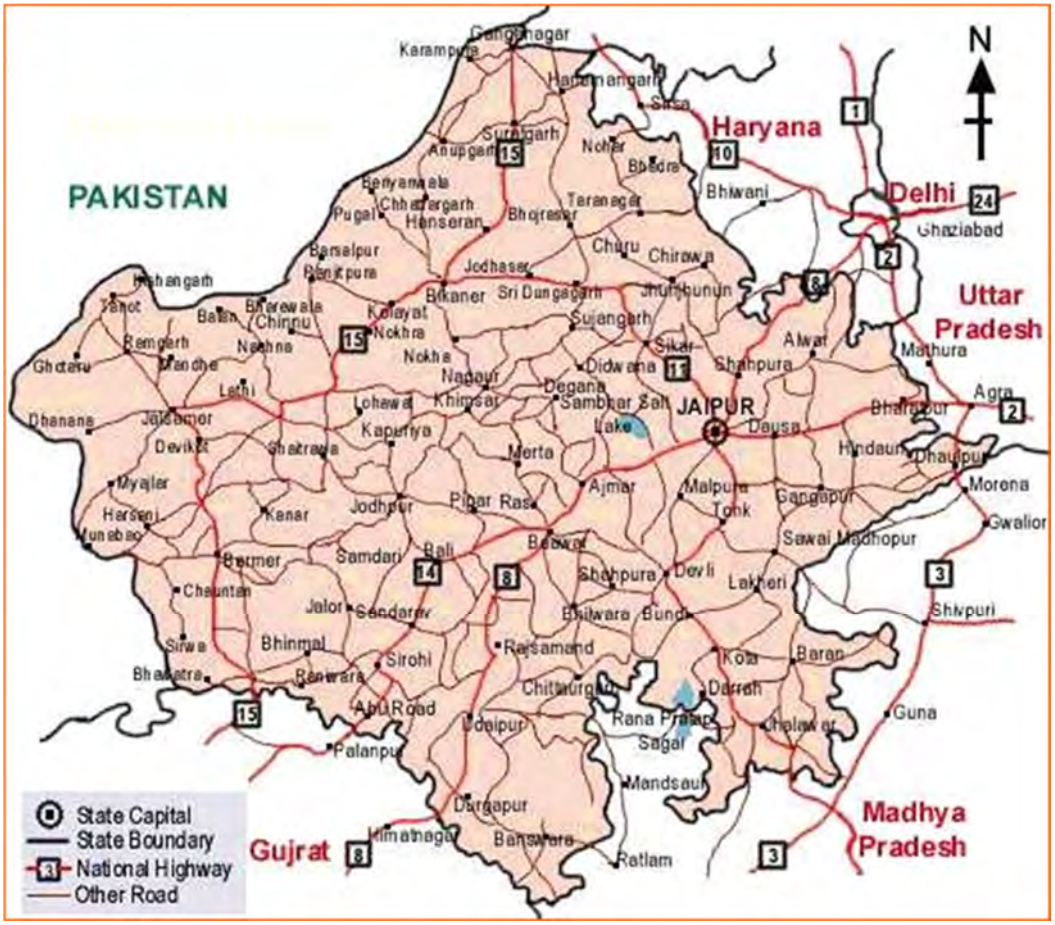

Figure 2.4 Road network of Rajasthan

Source: http://www.indovacations.net/Rajasthan-Tour-Package/raj-maps.htm

Apart from the central organisation National Highway Authority of India (NHAI), the major state level organisations which are responsible for development of roads in the state include the Public Works Department (PWD), Rajasthan State Road Development & Construction Corporation (RSRDC), and Rajasthan Road Structure Development Company (RIDCOR). The state govt. has focused on the Public Private Partnership (PPP) model as well for developing its road network. A lot of projects have been started on Build operate and Transfer (BOT), Design Build Finance Operate (DBFO), etc.

Road network of the state has to improve a lot in order to continue with the recent industrial growth. While significant advances have been made in improving the road network in the state in the recent years, yet there are huge gaps which need to be considered. There needs to be a better designing and planning of the link roads which connect the industrial estates with the national highways. Proper drainage systems for the link roads need to be used. Apart from this, proper maintenance of roads is required, especially during the rainy season.

2.2.1.4 Sewage and Wastewater Treatment

As per the Ministry of Environment, Forest and Climate Change (Govt. of India), sewage generation from the urban areas of Rajasthan is 2,736 MLD while the total capacity of sewage treatment is 866 MLD. Thus, over 65% of the total sewage water generated is disposed-of untreated. In March 2015, total number of Sewage Treatment Plants (STPs) present in the state were 63 out of which 16 were operational, 11 were under construction, and 36 were in the proposed stage. The operational STPs are present in 8 major cities i.e. Jaipur, Jodhpur, Alwar, Udaipur, Bikaner, Sawai Madhopur, Pali and Bhilwara.

Table 2.2 Total capacity of STPs in Rajasthan and India (2015)

Region	Item (unit)	Total	Operational	Non-Operational	Under Construction	Proposed
Rajasthan	**STP (Number)**	**63**	**16**	**-**	**11**	**36**
	Capacity (MLD)	**866**	**385**	**-**	**149**	**332**
India	**STP (Number)**	**816**	**522**	**79**	**145**	**70**
	Capacity (MLD)	23,277	18,883	1,237	2,528	629

Source: Inventorisation of Sewage Treatment Plants (March 2015) by Central Pollution Control Board

In order to improve the situation, the state govt. launched a sewage and waste water policy in 2016 and became the first state of India to do so. In the first phase of the Rajasthan State Sewerage and Waste Water Policy 2016, STPs would be implemented in 76 cities and towns of the state. The policy is framed to provide for wastewater collection, treatment facilities and reuse in irrigation and industrial areas. This policy has been framed in such a manner that it would take care of the requirements for the next 30 years. It would be compulsory for every house in the state to connect with sewage systems in those cities which have 100% sewage system in the next 5 years. The objective of this policy is to overcome the shortage of water, for different purposes, use of potable water should mostly be for drinking purposes and re-use of water up to a certain quality after proper treatment of water for non-drinking purpose and last but not the least scientifically disposal of the remaining waste is the object behind formulating this policy.

As per the Central Pollution Control Board (CPCB), Rajasthan has 124 units of highly polluting industries which include 29 cement manufacturing units, 37 thermal power plant units, 28 fertilizer units, 10 distilleries, etc. Apart from this, Rajasthan also has clusters of small scale textile industries located at Pali (approx. 551 units), Balotra (approx. 400 units), Jasol (approx. 69 units), Bithuja (approx. 214 units), Jaipur (approx 250 units), Jodhpur (approx. 227 units), Bhilwara (approx. 35 units) and Bhiwadi (approx. 05 units). These units are operating in clusters

and contributing a lot of wastewater which is being treated in Common Effluent Treatment Plants (CETPs). There are 14 CETPs in Rajasthan which are located at Pali (5), Balotra (3), Jasol (2), Bithuja (1), Jodhpur (1), Bhiwadi (1) and Manpur Macheri (1). Total capacity of the CETPs present in Rajasthan is 145.68 MLD. Though there are 14 operational CETPs in the state, but still the Rajasthan State Pollution Control Board (RSPCB) does not have any comprehensive plan for establishing CETPs in the industrial hubs. As per a report released by the Comptroller and Auditor General (CAG), there are a lot off polluting units in the districts such as Alwar, Bikaner, Hanumangarh where objective of prevention, control and abatement of water pollution suffered due to non-establishment of CETPs. Corrective measures are required to be taken in order to improve the situation of quantity and quality of water in the state.

2.2.2. Social Infrastructure

2.2.2.1 Hospitals

According to the Health Index Report released by the NITI Ayog (Govt. of India), Rajasthan was rated as second worst state among the 21 states considered for the index. Rajasthan has fared very poorly in child and maternal healthcare. Also, it has one of the lowest per capita health expenditure of INR 2,943 which is way less than the national average of INR 3,826 during 2014-15.

There are 114 Govt. Hospitals present in Rajasthan in 2017. Apart from this, there are 194 Primary Health Centres, 2,131 Dispensaries, and 118 Maternity & Child Welfare Centres. The Govt. Medical Institutions have 47,241 beds for the population of Rajasthan. As on Dec. 31, 2016, 42,952 number of persons were served by every medical institution. Also, an area of 19 sq. km. was served by every medical institution and a population of 1,451 persons was being served by each bed in a medical institution.

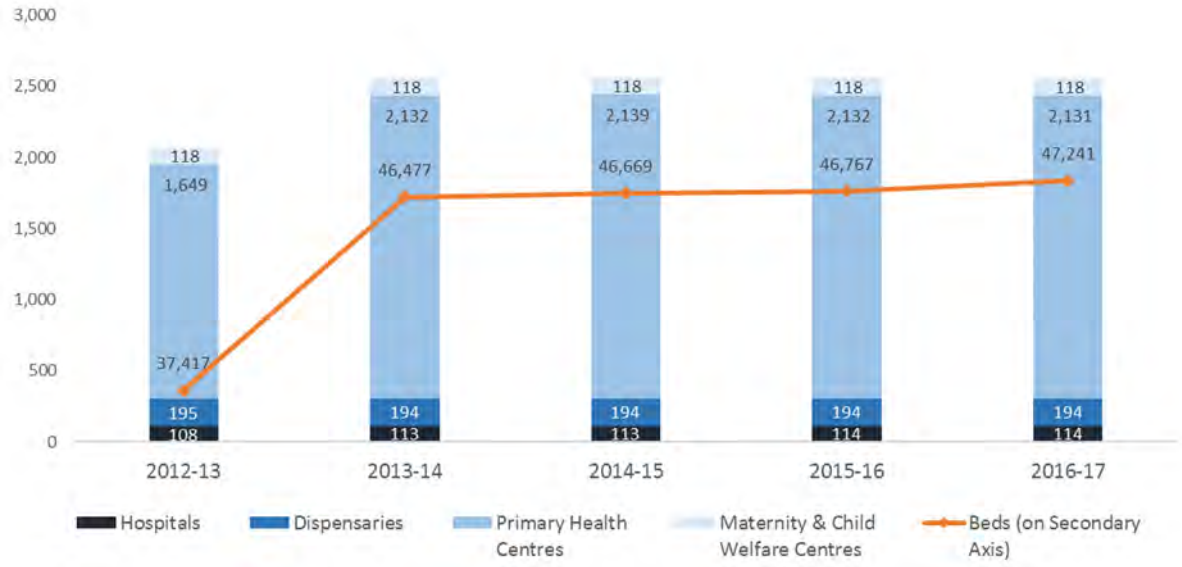

Chart 2.10 Presence of Govt. Medical Institutions in Rajasthan

Source: Compendium of Some Development Statistics About Rajasthan (1951-52 to 2015-16); Statistical Yearbook of Rajasthan 2017

As per the Statistical Yearbook of Rajasthan, the district of Nagaur has the highest number of govt. medical institutions in the state with 1,020, followed by Alwar with 933 and then Jaipur with 908. Whereas, Pratapgarh with 253 govt. medical institutions is at the bottom of the list.

Apart from the capital city Jaipur, there aren't many renowned private hospitals in the state. Patients from other districts have to visit either large cities like Jaipur or Gurugram (Haryana). So, there is a requirement to focus on making good health services available to the residents of the industrial areas as well as other common people of that area.

2.2.2.2 Schools

Literacy rate of Rajasthan (66.1%) is lower than that of India overall (73%). Male literacy rate of the state stands at 79.2%, while female literacy is at 52.1%. Rajasthan's female literacy rate and its gender gap in Literacy rate (27.1) are among the worst from Indian states.

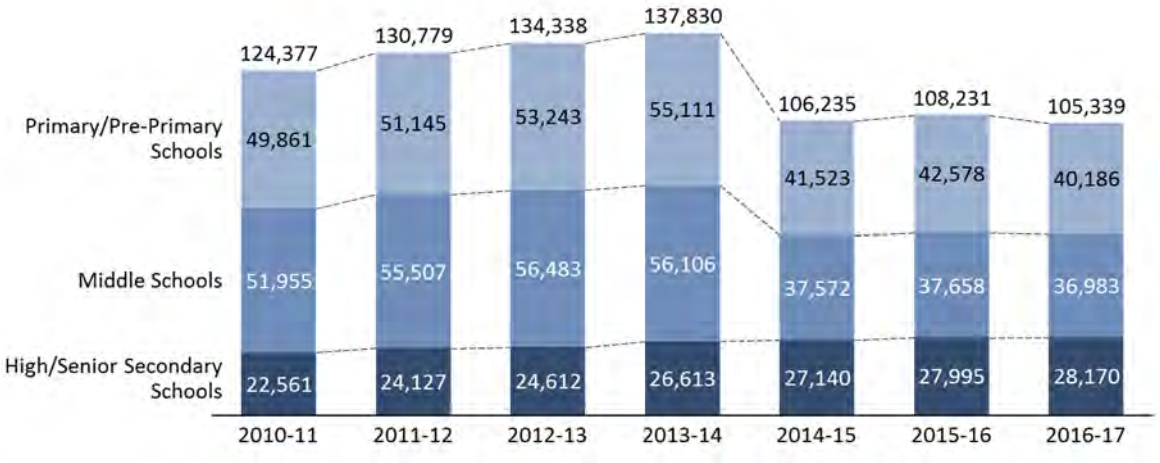

Chart 2.11 Number of Recognised Schools (Govt. + Pvt.) in Rajasthan

Source: Statistical Yearbooks of Rajasthan 2011-17

The quality of education provided in most of the Govt. schools is also not up to the mark. The dropout rate of school children is also very high in Rajasthan. Education is another sector where Rajasthan has a lot of catching up to do.

Most industrial areas should be having a government school, which may suffice the requirement of workers. However, for children of expats and senior officers', there should be a good private school located near to industrial area.

2.3. Current State of Industrial Development

2.3.1. Industrial Structure and Location

The industrial sector has been the less developed sector of Rajasthan with only 22% contribution to the GSDP during 2016-17. The focus of state govt. of Rajasthan has been on developing the secondary sector and in order to carry this out, various pro-industrial policies and changes in rules have been made during the past few years. The district-wise industrial scenario of Rajasthan has been shared in Figure 2.5. The north-eastern district of Alwar has the presence of a lot of general industries including the auto and auto parts manufacturing. In terms of production value, the textile industry, dominates the large and medium category of industries. This is followed by industries catering to agro-based, food and allied products; cement and cement products: chemical gases, lubricants and plastic; heavy machinery; metal allied products, automobile parts and machine tools parts; electrical and electronics –related products; minerals, stones and lime; drugs and pharmaceuticals; ceramics and glass wares; and leather and footwear. The state is almost the sole producer in the country of certain minerals like wollastonite, zinc and copper. Besides this, it is also a leading producer of crops such as mustard, bajra, barley, maize, cotton and spices.

Figure 2.5 District-wise Industrial Scenario of Rajasthan

Source: Website of MSME-Development Institute, Jaipur

Figure 2.6 Region-wise presence of major companies in Rajasthan

Source: Web research and NRI analysis

As per the Department of Industries, Rajasthan, the north-eastern district of Alwar has the presence of highest number of large scale industries, that is, 120 companies as of 31st March, 2017. Alwar has well established industrial areas like Bhiwadi, Neemrana, Tapukara, etc. The first ever Japanese Investment Zone is also present in the district of Alwar. The capital district Jaipur, is also a major industrial zone and has some of the largest service sector and industrial sector units. The major companies which are present in this region include Honda, Daikin, Unicharm, NTN, Nissin, Bosch, JCB, Unilever, Pepsico, Gillette, Hero Motocorp, Saint-Gobain, Hanon Systems, ITC etc. The eastern district of Bhiwara is the textile hub of Rajasthan. The eastern region has companies like Chambal Fertilizers, DCM Shriram, Adani Power, Adani Wilmar, Schneider Electric, Sutlej Textile, Dabur, etc. The southern region has presence of companies such as Ultratech Cement, JK Cement, Wonder Cement, Hindustan Zinc Ltd., BSL Textiles, Miraj Group, RSWM Ltd. The western region is mostly the desert land and has companies like Cairn, Godawari Power, Azure Power, Binani Cement, Shree Cement, Metalizing Equipment Co., etc. The northern region is the least industrialised and has only a few large scale companies such as Rajasthan Sugar Mills, Vikas WSP, and Bikaji. Most of the companies present in this region are agro-based.

There are 12 sectors which are being focused upon by the state govt. of Rajasthan. These are being shown in Figure 2.7.

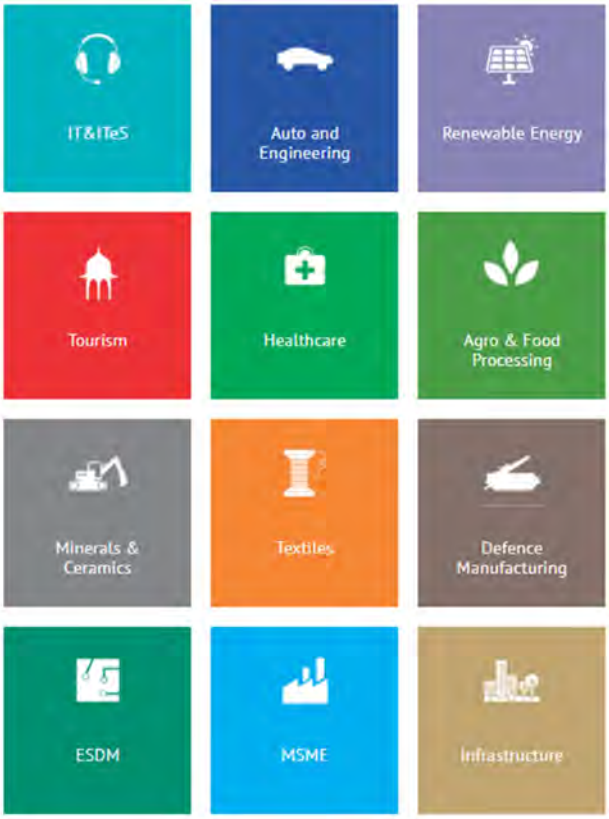

Figure 2.7 Focus Sectors of Rajasthan Govt.

Source: Website of Resurgent Rajasthan

Total number of registered factories in the state has increased from 8,442 in the year 1995 to 10,432 in the year 2015 (Chart 2.12). The CAGR over this period of 20 years (1995-2015) has been a mere 1.1%. As per the Economic Review of Rajasthan 2017-18, during the year 2017-18 (up to December, 2017), 313 new factories and 89 new boilers have been registered by the department in which approximately 25,032 workers have got the employment.

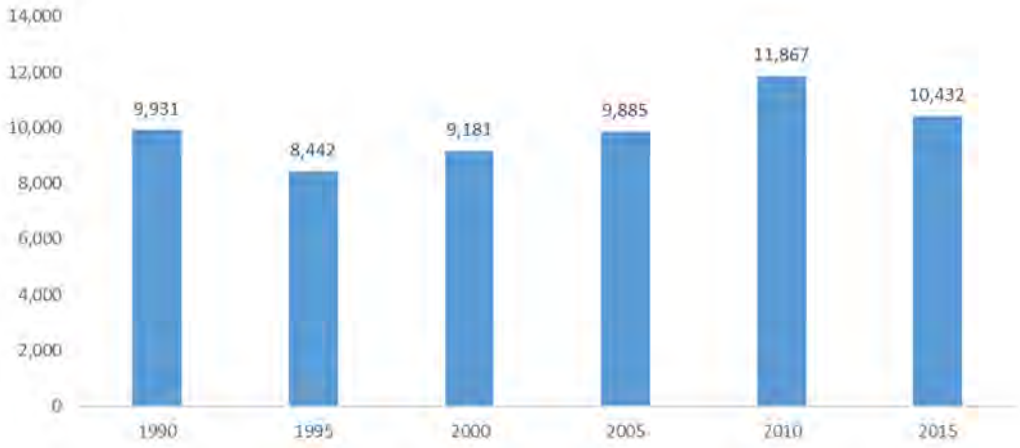

Chart 2.12 Total number of Registered Factories in Rajasthan (1995-2015)

Source: Compendium of Some Development Statistics About Rajasthan (1951-52 to 2015-16)

2.3.2. Status of MSMEs

The MSMEs (Micro, Small, and Medium Enterprises) sector has been recognised as the engine of growth all over the world. In India, the definitions of Micro, Small, & Medium Enterprises are in accordance with the provision of Micro, Small & Medium Enterprises Development (MSMED) Act, 2006. The classification of MSMEs is shared in Table 2.3.

Table 2.3 Classification of Micro, Small, & Medium Enterprises in India

Item	Manufacturing Enterprises	Service Enterprises
Basis of Classification	Investment in plant & machinery	Investment in equipment
Micro Enterprises	Does not exceed INR 2.5 million	Does not exceed INR 1 million
Small Enterprises	More than INR 2.5 million but does not exceed INR 50 million	More than INR 1 million but does not exceed INR 20 million
Medium Enterprises	More than INR 50 million but does not exceed INR 10 million	More than INR 20 million but does not exceed INR 50 million

Source: Ministry of Micro, Small & Medium Enterprises, India (Website)

Total number of MSMEs registered in the state during the last seven years (2010-17) has been 233,557 which have provided employment to almost 1.4 million persons and have invested INR 356 billion. There has been tremendous growth during the last couple of years as in 2015-16, a total of 38,339 MSMEs were registered and in the year 2016-17, more than 99,000 MSMEs were registered providing employment to more than 572 thousand persons. This shows that the state govt.'s pro-industrial policies have started to give results. Though, there is still a lot of improvement remaining. Chart 2.13 shows the trend of MSMEs registration and employment generated in the state.

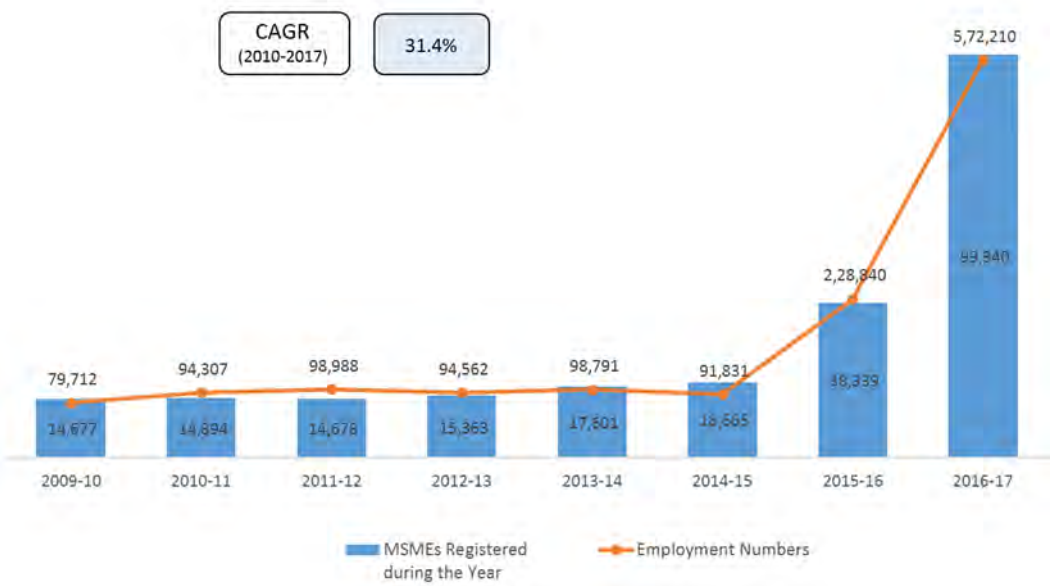

Chart 2.13 MSMEs registered and Employment generated in the state (2009-10 to 2016-17)

Source: Profile of (MSME) Industries in Rajasthan: Office of the Commissioner of Industries

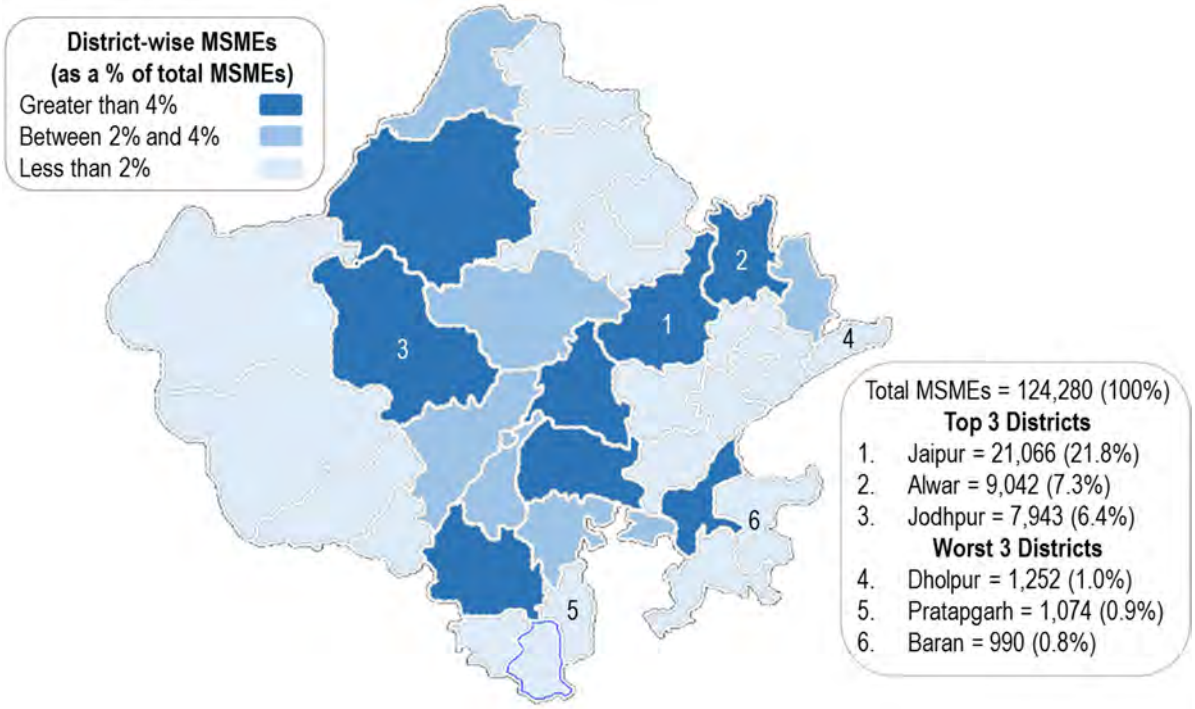

Figure 2.8 District-wise status of MSMEs in Rajasthan (2014-15)

Source: State Industrial Profile 2014-15: MSME- Development Institute, Jaipur

The number of MSMEs is not uniform throughout the state and there is disparity in the district-wise number of MSMEs in the state as the top 3 districts (Jaipur, Alwar, and Jodhpur) account

for 35.4% of the total MSMEs in the state (Figure 2.8). Though MSME numbers are increasing, there is a need to further attracts foreign MSMEs in the state. These MSMEs provide raw-materials, parts etc. to the major companies and help in attracting further big investments. These are key companies to create a complete eco-system for promotion of industries.

2.4. Investment Policies, Procedures, and Implementation Systems

2.4.1. Rajasthan Government Organisational Structure

The State Government of Rajasthan comprises various departments/ministries which take care of policy making and implementation of the respective department. Each department/ministry is headed by a cabinet/state minister. The bureaucratic structure of the departments includes the presence of Chief Secretary, Principal Secretary, Joint Secretaries, Directors etc. The ministries/departments of the government are helped by the presence of various Boards and Corporations which serve specific purposes related to that department. Figure 2.9 shows some of the major ministries and boards & corporations associated to them.

Rajasthan State Government		
Categories	**Ministries/Departments**	**Boards and Corporations**
Finance	• Finance • Commercial Taxes • Excise • State Directorate of Revenue Intelligence • Registration & Stamps	• Rajasthan Financial Corporation • Rajasthan Revenue Board • Rajasthan State Power Finance Corp. Ltd. • The Rajasthan State Co-operative Bank Ltd.
Industry	• Industries • Factories and Boilers Inspection • Cooperative	• Bureau of Investment Promotion (BIP) • Rajasthan State Industrial Development and Investment Corp. Ltd. (RIICO) • Office of Commissioner of Industries • Rajasthan Small Industries Corp. Ltd. • Rajasthan Khadi & Industries Vikas Board (RKIVB)
Social	• Food & Civil Supply • Women and Child Development • Medical Health and Family Welfare	• State Counselling Board • Social Welfare Board • Rajasthan Medical Services Corp. Ltd. • Rajasthan State Food and Civil Supplies Corp. Ltd.
Energy, Power, and Utilities	• Power • Public Health Engineering (PHED) • Petroleum • Water Resources	• Rajasthan Rajya Vidyut Prasaran Nigam Ltd. • Jaipur Vidyut Vitran Nigam Ltd. • Ajmer Vidyut Vitran Nigam Ltd. • Rajasthan Rajya Vidyut Utpadan Nigam Ltd. • Jodhpur Vidyut Vitran Nigam Ltd. • Rajasthan Renewable Energy Corp. Ltd. • Rajasthan Jal Vikas Nigam Ltd.
Human Resource	• Education • College Education • Technical Education • Medical Education • Employment • Labour • Skills, Employment and Entrepreneurship (SEE)	• Rajasthan Knowledge Corp. Ltd. (RKCL) • Rajasthan Skill and Livelihood Development Corp. Ltd. (RSLDC) • Board of Secondary Education • Board of Technical Education
Infrastructure	• Planning • Town Planning • Urban Development & Housing • Transport • Public Works Department (PWD) • Delhi Mumbai Industrial Corridor (DMIC)	• Rajasthan Housing Board • Rajasthan State Road Transport Corporation • Rajasthan State Road Development & Construction Corp. Ltd. • Jaipur Metro Rail Corp. Ltd. • Rajasthan Land Development Corporation • Board of Infrastructure Development and Investment (BIDI) • Rajasthan State Warehousing Corporation
Agriculture and Allied	• Agriculture & Horticulture • Animal Husbandry • Fisheries • Watershed Development & Soil Conservation	• Rajasthan State Agriculture Marketing Board • Rajasthan State Handloom Development Corp. Ltd. • Rajasthan State Ganganagar Sugar Mills Ltd. • Rajasthan State Seeds Corporation Ltd. • Rajasthan State Agro Industries Corp. Ltd.
Others	• Environment • Science & Technology • Tourism • Mines & Geology • Economics & Statistics	• Rajasthan State Pollution Control Board (RSPCB) • Rajasthan State Hotels Corp. Ltd. • Rajasthan Tourism Development Corp. Ltd. (RTDC) • Rajasthan State Mineral Development Corp. Ltd. (RSMDC) • Rajasthan State Mines and Minerals Limited (RSMML)

Figure 2.9 Major Ministries and related Boards under Government of Rajasthan

Source: Website of Government of Rajasthan; NRI Analysis

While investing into a state, there are some agencies (boards and corporations) which play a major role in promoting the investments, issuing necessary permits, providing necessary infrastructure, monitoring the industrial activity, etc. Figure 2.10 provides the names of such important agencies which are related to industrial investment along with a brief description of their roles and responsibilities.

Agency	Description
BIP - Bureau of Investment Promotion	• Provides an interface between Investors and the Government for speedy clearances and redressal of issues, acting as a single point of contact for the investors • It also helps in exploratory, implementation, and operational phases of the projects in Rajasthan. • Provides sector-specific information, identification and coordination for site selection, information on clearances and required permissions, receiving permit/license applications via single window mechanism, facilitate contact with government entities for obtaining land, etc.
RIICO - Rajasthan State Industrial Development and Investment Corporation	• RIICO provides support in setting up the industrial areas in Rajasthan. This also acts as a financial institution by providing loan to large, medium and small scale projects • RIICO has set up 28 regional offices all over Rajasthan to administer the development and management of the industrial areas. Physical infrastructure development includes roads, power, street light, water supply, drainage etc. RIICO has so far developed 338 Industrial Areas by acquiring around 82,000 acres of land
RFC - Rajasthan Financial Corporation	• Provides long term financial support to tiny, small and medium scale industries in Rajasthan and helps varied entrepreneurial section of society for their financial requirements • Also works as the catalyst of planned and balanced development of industries in the State, particularly in the small and tiny sectors
Rajasthan State Pollution Control Board (RSPCB)	• It was constituted with the objectives of prevention, and control of water pollution and maintaining or restoring of wholesomeness of water • Also entrusted with the responsibilities of prevention, control and abatement of Air Pollution under the provisions of Air (Prevention and Control of Pollution) Act, 1981 • Under the Water (Prevention and Control of Pollution) Cess Act, 1977, has been given powers to collect Cess on the basis of water consumed by the industries etc.

Figure 2.10 Major State-level agencies related to industries

Source: Websites of BIP, RIICO, RFC and RSPCB

2.4.2. Difference between Centre Government and State Government Policies

Central level policies are applicable to all the Indian states whereas State level policies are applicable and followed in the respective states in proposed fields. There are some differences which exist for policies adopted Centrally and at State level. Table 2.4 shows some of the major differences between the Centre and State Policies.

Table 2.4 Centre Government vs State Government Policies

Subject	Central Government Policies	State Government Policies
Level of ownership	• Strategic level initiatives to promote industrial development e.g. Make in India, National Manufacturing Policy etc. • Set direction for state governments to create suitable policy environment	• Operational level initiatives to promote industrial development e.g. Ease of Doing Business etc. • Implementation based on policy directions from central government initiatives
Coverage	• Applicable on entire country but sometimes focus on specific regions which require promotion	• Generally applicable for all districts within a state. • Special incentives/schemes for underdeveloped areas can be provided
Incentives	• Provides sector-wise incentives such as corporate tax concessions, import duty exemption, capital subsidy etc.	• Provides incentives such as low power tariff rates, refund of stamp duty on land transactions, VAT (now GST) etc.

Source: NRI Analysis

2.4.3. Overall Investment Promotion Policy

In order to promote investment in the State of Rajasthan, and to generate employment opportunities through such investment, the State Government of Rajasthan, in public interest, issued The Rajasthan Investment Promotion Scheme, 2014 (RIPS-2014). RIPS was issued in order to promote investment made by Enterprise(s) for establishment of new unit and/ or investment made by the existing Enterprise(s) for expansion and/ or investment made for revival of sick enterprise. RIPS came into effect in Oct. 2014 and shall remain in force up to March 31, 2019.

Table 2.5 Rajasthan Investment Promotion Scheme 2014

S. No.	Type of Enterprise	Benefits
1.	Manufacturing Enterprises	(i) Investment subsidy of 30% of VAT and CST which have become due and have been deposited by the enterprise for seven years. (ii) Employment Generation Subsidy up to 20% of VAT and CST which have become due and have been deposited by the enterprise, for seven years. (iii) Exemption from payment of 50% of Electricity Duty for seven years, provided that for enterprises engaged in tourism sector, it shall be restricted to 25% of the Electricity Duty; (iv) Exemption from payment of 50% of Land Tax for seven years; (v) Exemption from payment of 50% of Mandi Fee for seven years; (vi) Exemption from payment of 50% of Stamp Duty on purchase or lease of land and construction or improvement on such land; and (vii) Exemption from payment of 50% of conversion charges payable for change of land use
2.	Service Enterprises	(i) Reimbursement of 50% of amount of VAT paid on purchase of plant and machinery or equipment for a period up to seven years from date of issuance of the entitlement certificate, provided that for enterprises engaged in providing entertainment, the reimbursement shall be restricted to 25% of such amount of VAT paid; (ii) Exemption from payment of 50% of Entertainment Tax for seven years; (iii) Exemption from payment of 50% of Electricity Duty for seven years, provided that for enterprises engaged in providing entertainment, it shall be restricted to 25% of the Electricity Duty; (iv) Exemption from payment of 50% of Land Tax for seven years; (v) Exemption from payment of 50% of Stamp Duty on purchase or lease of land and construction or improvement on such land; and (vi) Exemption from payment of 50% of conversion charges payable for change of land use.
3.	Manufacturing / Service Enterprises (Special provisions for Women / Scheduled Caste / Scheduled Tribe / Person With Disability Enterprises)	(i) A manufacturing enterprise shall get additional Investment subsidy to the extent of 10% of VAT and CST which have become due and have been deposited by the enterprise; (ii) A service enterprise shall get additional 10% reimbursement of VAT paid on the plant and machinery or equipment for a period up to seven years from date of issuance of the entitlement certificate for this purpose.

4.	Manufacturing Enterprises (in a Backward / Most Backward Area)	A manufacturing enterprise, other than a cement manufacturing enterprise, making investment in a Most Backward Area shall, in addition to benefits already mentioned above, get additional investment subsidy of 20% of the VAT and CST which have become due and have been deposited by the enterprise for a period of seven years.
5.	Service Enterprises (in a Backward / Most Backward Area)	A service enterprise making investment in a backward area shall, in addition to benefits mentioned above, get additional 10% reimbursement of VAT paid and a service enterprise making investment in a most backward area shall, in addition to benefits mentioned in other clauses of the Scheme, get additional 20% reimbursement of VAT paid on the plant and machinery or equipment for a period up to seven years from the date of issuance of the entitlement certificate for this purpose.

Source: Department of Industries (Govt. of Rajasthan)

There are some focus sectors of the state govt. which have been provided with additional benefits apart from the benefits mentioned in Table 2.5. The focus sectors are known as thrust sectors and the incentives have been shared in Table 2.6.

Table 2.6 Benefits for the Thrust Sectors under Rajasthan Investment Promotion Scheme 2014

S. No.	Thrust Sector	Minimum Investment Size Required	Benefits Available
1.	Ceramic and Glass Sector	INR 50 million	(a) Investment Subsidy of 50% of VAT and CST which have become due and have been deposited by the enterprise for ten years; and (b) Employment Generation Subsidy up to 10% of VAT and CST which have become due and have been deposited by the enterprise, for ten years
2.	Dairy Sector	INR 250 million	(a) Investment Subsidy of 50% of VAT and CST which have become due and have been deposited by the enterprise for ten years; (b) Employment Generation Subsidy up to 10% of VAT and CST which have become due and have been deposited by the enterprise, for ten years; and (c) 50% exemption from payment of Entry Tax on capital goods, for setting up of plant for new unit or for expansion of existing enterprise or for revival of sick industrial enterprise, brought into the local areas before the date of commencement of commercial production/operation

3.	ESDM Sector	INR 2.5 million	(a) Investment Subsidy of 75% for first four years, 60% for next three years and 50% for the last three years, of VAT and CST which have become due and have been deposited by the enterprise for ten years; (b) Employment Generation Subsidy up to 10% of VAT and CST which have become due and have been deposited by the enterprise, for ten years; and (c) 50% exemption from payment of Entry Tax on capital goods, for setting up of plant for new unit or for expansion of existing enterprise or for revival of sick industrial enterprise, brought into the local areas before the date of commencement of commercial production/operation
4.	Industrial Gases Sector	INR 500 million	(a) Investment Subsidy of 60% of VAT and CST which have become due and have been deposited by the enterprise for seven years; and (b) Employment Generation Subsidy up to 10% of VAT and CST which have become due and have been deposited by the enterprise, for seven years.
5.	Pharmaceutical Sector	INR 500 million + minimum employment to 200 persons	(a) Investment Subsidy of 50% of VAT and CST which have become due and have been deposited by the enterprise for seven years; (b) Employment Generation Subsidy up to 10% of VAT and CST which have become due and have been deposited by the enterprise, for seven years; and (c) 50% exemption from payment of Entry Tax on capital goods, for setting up of plant for new unit or for expansion of existing enterprise or for revival of sick industrial enterprise, brought into the local areas before the date of commencement of commercial production/operation
6.	Plastic to Oil Manufacturing Sector	INR 10 million	(a) Investment Subsidy of 60% of VAT and CST which have become due and have been deposited by the enterprise for ten years; (b) Employment Generation Subsidy up to 10% of VAT and CST which have become due and have been deposited by the enterprise, for ten years; and (c) 50% exemption from payment of Entry Tax on capital goods, for setting up of plant for new unit or for expansion of existing enterprise or for revival of sick industrial enterprise, brought into the local areas before the date of commencement of commercial production/operation
7.	Power Loom Sector	INR 2.5 million + minimum employment to 10 persons	(a) 30% additional reimbursement of VAT on purchase of yarn for even years

8.	Textile Sector	INR 2.5 million	(a) 5% interest subsidy; (b) additional 1% interest subsidy for enterprises making investment more than INR 250 million; (c) 7% interest subsidy for Technical Textile Sector; (d) Capital Subsidy on zero liquid discharge based effluent treatment plant equivalent to 20% of amount paid to the suppliers for the plant excluding civil work, subject to a maximum of INR 10 million; (e) 50% reimbursement of VAT on purchase of yarn, fibre, recycled fibre yarn, cotton and pet bottles for use in manufacture of goods within the State, for sale by him; and (f) 50% exemption from payment of Entry Tax on capital goods, for setting up of plant for new unit or for expansion of existing enterprise or for revival of sick industrial enterprise, brought into the local areas before the date of commencement of commercial production/operation
9.	Tourism Sector	-	(a) Investment Subsidy of 50% of VAT and CST which have become due and have been deposited by the enterprise for seven years; (b) Employment Generation Subsidy up to 10% of VAT and CST which have become due and have been deposited by the enterprise, for seven years; (c) Reimbursement of 25% of amount of VAT paid on purchase of plant and machinery or equipment for a period up to seven years from the date of issuance of the entitlement certificate; (d) Exemption from payment of 50% of Entertainment Tax for seven years; (e) Exemption from payment of 100% of Luxury Tax for seven years; (f) Land allotment in urban and rural areas at DLC rates; (g) 25% additional exemption from payment of stamp duty chargeable on the instrument of purchase or lease of more than 100 years old heritage property in the State, for the purpose of hotel development under the Scheme declared by the Tourism Department as provided in notification no. F.12 (20) FD/Tax/2005- 219 of 24.03.2005; and (h) 50% additional exemption from payment of conversion charges for heritage property converted into a heritage hotel

Source: Department of Industries (Govt. of Rajasthan)

2.4.4. Single Window Clearance System

Rajasthan's Single Window Clearance System (SWCS) is a single point of contact to reduce the time and efforts involved in various clearances and approvals of layouts/applications for the proposed investment submitted by investors. This online application provides transparency to the system, thereby facilitating investors with quick and time-bound clearances and approvals. The whole SWCS is an advanced online portal which provides a single point interface and a time-bound clearance system by acting as a one-stop information/ registration/ approval/ tracking centre for clearances/approvals. This system was setup under the Rajasthan Enterprise Single Window Enabling and Clearance Act, 2011 and came into effect from 1 April 2011 in all the districts of the state. There have been several amendments in the act to improve the situation, latest of them being through The Rajasthan Enterprises Single Window Enabling and Clearance (Amendment) Rules, 2016. Under these amendments, timelines have been provided for obtaining various approvals/licences. Currently it provides approvals for 87 services from 15 departments. Investor also has the right to appeal against the decision of rejection by the Department before the State Empowered Committee.

Table 2.7 Key approvals provided through Single Window clearance System for establishing an Industrial Project in Rajasthan

S. No.	Department	Approval Type	Timeline (in days)
		Pre-Establishment Approvals	
1.	Rajasthan State Industrial Development and Investment Corporation (RIICO)	1) Allotment of Land (Normal / Preferential) 2) Possession of Allotted Land 3) Execution of Lease Agreement 4) Building Plan Approval 5) New Water Connection	15 to 90
2.	Co-operative Department	1) Registration of Co-operative Society under the Rajasthan Co-operative Societies Act, 2001 2) Registration of Societies	30 to 60
3.	Factories and Boilers Inspectorate	1) Factory Building Plan Approval Under Factories Act, 1948	30
4.	Labour Department	1) Registration Under Building & Other Construction Workers (Regulations of Employment and Conditions of Service) Act, 1996	15

5.	Local Self Government / Urban Development and Housing (UDH)	1) Allotment of Land for Various Purposes in Urban Areas Under Allotment Policy, 2015 2) Change of Land Use in Urban Areas Under "Rajasthan Urban Area Change in Land Use Rules, 2010" 3) Conversion of Land (Agriculture to Non-Agriculture) Under Rajasthan Land Revenue Rules 2012 4) Approval for Building Plan	7 to 69
6.	Public Works Department (PWD)	1) Permission for Road Cutting 2) Right Of Way (Row)	10
7.	Public Health and engineering Department (PHED)	1) New Water Connection	7
8.	Department of Energy	1) Generator Permission Certificate 2) Transformer / Line Energization Certificate	7
9.	Medical & Health Department	1) License under FSS Act	7
10.	State Environmental Impact Assessment Authority (SEIAA)	1) Environmental Clearance under EIA Notification 2006 by Govt. of India 2) Environmental Clearance under Aravali Notification 1992 for Alwar	90 to 210
11.	Revenue Department	1) Conversion of Land Use under Rajasthan Land Revenue (Conversion of Agricultural Land for Non-Agricultural Purposes) Rules 2007	90
12.	Vidyut Vitran Nigam Limited	1) Application for Power Connection	7
13.	Rajasthan Urja Vikas Nigam Limited (RUVNL)	1) Signing of Power Purchase Agreement (PPA)/WBA	7
		Pre-Operational Approvals	
1.	Factories and Boilers Inspectorate	1) Registration of Boilers under Boilers Act, 1923 2) Registration of Economizers under Boilers Act, 1923 3) Approval for Boiler Manufacturer / Drawing Approval & Certification under Boilers Act, 1923 and Indian Boilers Regulation, 1950 4) Steam Pipeline Drawing Approval under Boilers Act, 1923	15 to 60
2.	Department of Industries	1) Registration of Partnership Firms	7
3.	Labour Department	1) Registration under Rajasthan Shops & Commercial Establishments Act, 1958 2) Registration under Contract Labour (Regulation and Abolition) Act, 1970 (Contractor) 3) Registration under Inter-State Migrant Workmen (Re & Cs) Act, 1979 (Contractor) 4) Registration for Principal Employer under Contract Labour(Regulation and Abolition) Act,1970	10-30

4.	Local Self Government (LSG)	1) Sewer Connection 2) Trade License 3) Building Completion Certificate	3 to 30
5.	Rajasthan State Pollution Control Board (RSPCB)	1) Consent to Establish under Air and Water (Prevention and Control of Pollution) Act 1981 And Water Act 1974 2) Authorization under Solid Waste Management Rules 3) Authorization under E-Waste(Management) Rules 2016 4) Registration under Plastic Waste (Management & Handling) Rules 5) Authorization for Bio-Medical Waste Management 6) Approval of Site Under Manufacturing, Storage, Import of Hazardous Chemical Rules 1989 (Isolate Storage of Hazardous Chemicals)	60 to 120
6.	Department of Agriculture	1) Certificate to Manufacture Fertilizer (Micro Nutrient Mixture) 2) License to Manufacture / Import Pesticides under Insecticides Act 1968 3) Issuance of Phytosanitary Certificate for Exporters of Agriculture Commodity	7 to 45
7.	Tourism Department	1) Application for Approval of a Project of Tourism Unit	45

Source: Websites of Single Window Clearance System (Govt. of Rajasthan)

2.4.5. Tourism Sector and Other Sector Specific Investment Promotion Policies

2.4.5.1 Tourism Sector

Tourism Industry is one of the key sector in Rajasthan. Rajasthan houses the diverse tourism attraction like Heritage Sites, Serene Lakes, Wildlife Sanctuaries, Fairs & Festivals, various Dance & Art forms etc. The tangible and intangible tourism products of the State offer immense potential for growth of the tourism industry. Total number of tourists recorded in the state was 47.5 million during 2017. The number of domestic tourists increased to 45.9 million in 2017 as compared to 33.1 million in 2014. The number of Foreign tourists increased to 1.6 million in 2017 as compared to 1.5 million in 2014. The country-wise distribution of Foreign tourists is shown in Chart2.14.

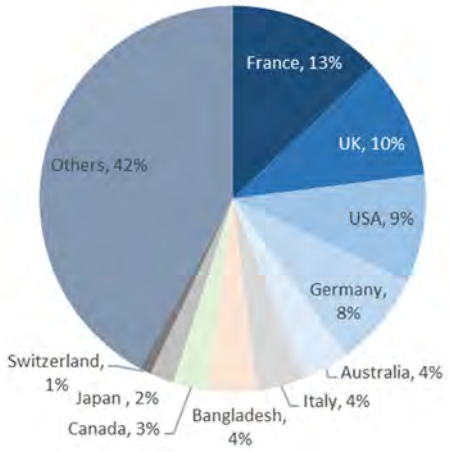

Chart 2.14 Foreign tourists in India as per their Country of Origin

Source: Tourism Department Annual Progress Report 2017-18

Rajasthan is a leading tourism State in the country so the development of tourism resources and increasing both, domestic and foreign tourist arrivals is a high priority area for the state government of Rajasthan. So, it introduced Rajasthan Tourism Unit Policy 2015 to stand with the current trends and to increase tourism growth in the state.

The Tourism sector has seen continuous increase in the budget during past four years. It has increased from INR 611.1 million in 2014-15 to INR 1,635.1 million in 2017-18. In order to impart the required skills for working in tourism sector government of Rajasthan has started courses related to Tourism in various ITI in the state. Centre of Excellence in Tourism Training (CETT), Udaipur has been setup with support from Government of Singapore and ITEES Singapore.

Table 2.8 Tourism Promotion Policy of Rajasthan

Policy	Main points	Incentives
Rajasthan Tourism Unit Policy 2015	Free of cost conversion of land in urban and rural areas for new tourism units. No development charges shall be levied on new tourism units in urban areas	Reimbursement of 50% of amount of VAT paid on purchase of plant and machinery or equipment for a period up to seven years from date of issuance of the entitlement certificate, provided that for enterprises engaged in providing entertainment, the reimbursement shall be restricted to 25% of such amount of VAT Paid
	Land Allotment in Urban and Rural areas will be done as per the DLC rates of the area	Employment Generation Subsidy up to 20% of VAT and CST which have become due and have been deposited by the enterprise, for seven years

	No conversion charges for existing heritage properties and existing heritage hotels in urban and rural areas	Investment subsidy of 30% of VAT and CST which have become due and have been deposited by the enterprise for seven years
	For heritage hotels, Urban Development (UD) Tax shall be charged at residential rates on their covered area, but no UD Tax shall be charged on their open area	Reimbursement of 50% of amount of VAT paid on purchase of plant and machinery or equipment for a period up to seven years from date of issuance of the entitlement certificate
	Tourism units will be allowed Double FAR.(i.e. from General FAR of 2.25 to 4.50)	Exemption from payment of 50% of Entertainment Tax for seven years to service enterprises
	All tourism units shall be eligible to be recognised as training institutions under the Employment Linked Skill Training Program (ELSTP) of Rajasthan Skill and Livelihoods Development Corporation (RSLDC) to train manpower for themselves	A service enterprise shall get additional 10% reimbursement of VAT paid on the plant and machinery or equipment for a period up to seven years from date of issuance of the entitlement certificate for this purpose for Women, Scheduled Castes, Scheduled Tribes and Persons with Disability Enterprise

Source: Website of the Tourism Department, Rajasthan

2.4.5.2 Other Sector Specific Policies

The state government of Rajasthan has implemented various sectoral policies or have passed various acts during the past few years in order to improve the industrial situation of the state.

Table 2.9 Sectoral Industrial Policies of the State

Policy	Year	Objectives
IT & ITES	2016	• To attract investment and utilize country's biggest IT SEZ spread over 460 acres in Jaipur • To provide job opportunity to about 355,000 students of technical education
Renewable Energy	2014	• Developing a global hub of solar power of 25,000 MW capacity and contributing to the long term energy security of Rajasthan • Generating direct or indirect employment opportunity and emerging as the solar centre of excellence • Reducing carbon emission and reducing dependence on fossil fuel, resources like coal, oil and gas

Agro & Food Processing	2015	• To create supply chain infrastructure needed for agro industrial development. • To encourage value addition in agriculture, produce and to reduce post-harvest losses thereby increasing the income of farmers and delivering better quality products to consumers • To create rural employment and improve the quality of life of rural people • To bring in new technologies and practices to modernize agro processing and marketing • To assist small scale agro based processing units to remain competitive in global market • To increase the export of value added agro-products from the State • To accelerate a close interface among research, extension, industries and farmer in agro-sector
Minerals & Ceramics	2015	• To infuse greater transparency and enhance efficiency in grant of mineral concessions by simplifying the procedure and adopting e-governance • To provide conducive framework of procedural, regulatory, fiscal and legal aspects in the investment regime • To develop scientific mining techniques with due regard to safety, productivity, conservation, cost-effectiveness, environmental and social sustainability
MSME	2015	• To encourage increase investments in the MSME sector in the State • Creation of new industrial areas • Encouragement of private industrial parks and MSME Clusters • Focused skill development programmes to provide adequate work force • Time-bound allotment or conversion of land for industry • Providing competitive fiscal incentives and concessions to attract investment
Start-up Policy	2015	• The Rajasthan Start-up Policy 2015 came into force w.e.f. October 9, 2015 and would remain in operation for a period of five years • 50 incubators or incubators like organizations to be established • 500 innovative start-ups to be supported and incubated • Venture capital of INR 5 billion to be mobilised • 100,000 sq. incubation space to be developed and facilitated

Source: Department of Industries (Govt. of Rajasthan)

2.4.5.3 Infrastructure related policies

There is not a single policy for the infrastructure sector. However, the different sub-sectors like road, water, etc. have their own policies/schemes which have been shared in Figure 2.11.

Figure 2.11 Infrastructure Sector related policies of Rajasthan

Source: Website of Resurgent Rajasthan

2.4.6. Micro, Small, and Medium Enterprises (MSME) Policy/Schemes

In order to develop the MSMEs, the state govt. of Rajasthan has launched various schemes which have been discussed in Table 2.10.

Table 2.10 MSME related Policy/Schemes in Rajasthan

Policy/Scheme Name	Objectives	Implementation in Rajasthan
RIICO Industrial Area development	i) RIICO would allocate plots for industry in the industrial areas developed by them ii) All the new industrial areas being developed by RIICO, 30% plots would be reserved for Micro, Small and Medium Enterprises (MSMEs) iii) The concessions in land price to different categories would be provided with the rule of RIICO Disposal of Land Rules, 1979 iv) Financing for purchase of a fresh plot in RIICO industrial area could be availed under RIICO's Scheme for Financing of Industrial Land	i) Rajasthan Government is setting up the second Japanese industrial zone that would focus on the sectors such as ceramics and electronic systems design and manufacturing ii) As on April 8, 2015, RIICO has acquired 1,167 acres of land at Neemrana for the Japanese zone and so far more than 45 Japanese companies have invested Rs.4,200 crore in the zone
Private Sector Industrial Parks	i) The State Government would encourage private sector investment for setting up industrial parks and clusters	

Land by Individual Units	i) Land purchased under RIICO industrial area and private sector industrial parks is for allotment for government land in rural areas ii) The Government of Rajasthan would provide, 50% exemption on stamp duty and 50% exemption of land conversion charge under RIPS- 2014	
Development of MSME Cluster	i) The state Government has adopted cluster development approach as an effective strategy for the development of MSMEs. It is cost effective, inclusive, sustainable and enables competitiveness ii) The Government aims to develop production and service hub for the related industry iii) The Government would also provide support to small & medium enterprises (SMEs) for raising capital with marketing support and rehabilitation if they need re-capitalization	i) A few MSME clusters are expected to be operational in the beginning of 2019

Source: Department of Industries (Govt. of Rajasthan)

2.5. Overview of Special Economic Zones (SEZs) and Industrial Estates (IEs)

2.5.1. Rajasthan Industrial Development and Investment Corporation Ltd.

RIICO is the apex organization for fostering growth of industrialization in Rajasthan. RIICO has pioneered industrialisation of the State of Rajasthan by setting up of industrial areas. RIICO also acts as a financial institution by providing loan to large, medium and small scale projects. Physical infrastructure developed includes roads, power, street light, water supply, drainage etc. along with provisions for basic social infrastructure. RIICO has so far developed 353 Industrial Areas by acquiring more than 84,000 acres of land. RIICO has catalysed investment of around 90 billion with RIICO's contribution to term loan being around INR 33.7 billion and generating employment of around 109 thousand persons. More than 37,000 industrial units are in production in these industrial areas. RIICO has played a catalytic role in the industrial development of Rajasthan. Services provided by RIICO to investors and entrepreneurs include: site selection and acquisition of land, financial assistance to small medium and large scale projects, equity participation in large projects on merit, technical consultancy for project identification and technical tie up, escort services, facilitation of government clearances, merchant banking and financial tie-ups, extending incentives and concessions according to the policy of State Government and Department of Industries.

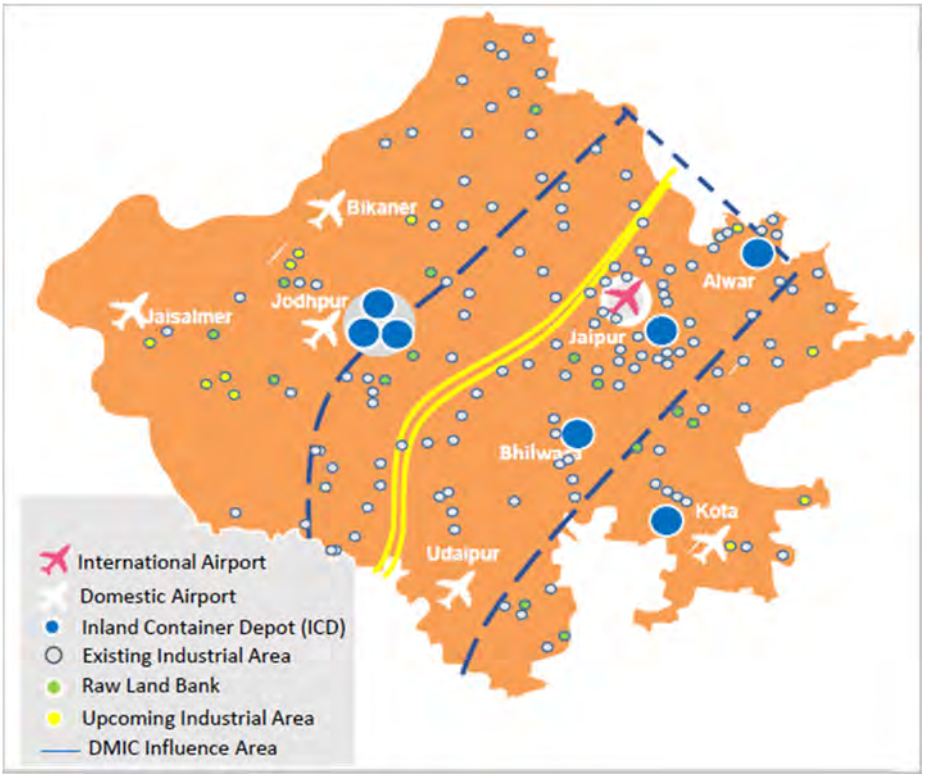

Figure 2.12 Industrial Areas of Rajasthan

Source: Bureau of Industrial Promotion, Rajasthan

RIICO has developed a total of 353 industrial areas in Rajasthan and have allotted 52,510 industrial plots in them. There are 6,038 industrial plots lying vacant, as per the online database of RIICO. This means that there is almost 90% occupancy in the industrial areas that have been developed so far. Apart from this, there are 22 industrial areas which are being developed right now and RIICO has land-banks at 34 places in the state which consists of 22,000 acres (approx.).

2.5.2. Types of Industrial Areas

RIICO has developed various kinds of industrial infrastructure based on the requirements of the industry and the guidelines provided by the centre and the state governments. These include Agro Parks, Export Oriented Infrastructure, country specific zones, etc.

2.5.2.1 Export Oriented Infrastructure

Keeping in view the specific requirements of export-oriented units, RIICO has given emphasis for development of special parks for setting up of such units. RIIICO on behalf of Govt. of Rajasthan is providing and developing these basic infrastructure facilities for the exporting units.

a) Export Promotional Industrial Parks (EPIPs): The EPIPs have been developed / are being developed under the scheme of department of Commerce, Govt. of India. In EPIPs only those units that undertake to export a minimum of 33% of their production, are allotted land. The EPIPs have good infrastructure facilities and house industries from the following sub-sectors: Gems and Jewellery, Electronics, Garment, Handicrafts, Engineering, Leather goods, and IT Park.
b) Special Economic Zones (SEZs): SEZs, in India, are certain localities which offer tax and other incentives to their resident businesses. The SEZs of the country are governed by the SEZ Act 2005 and is supported by SEZ Rules. Rajasthan has its own act to regulate the SEZs in the state known as The Rajasthan Special Economic Zones Act, 2015. As on Dec. 1, 2017, India has a total of 222 operating SEZs out of which 4 are in Rajasthan. Also, there are 423 formally approved SEZs in India out of which 9 are located in Rajasthan.

Table 2.11 List of major Export Promotional Industrial Parks (EPIPs) and Special Economic Zones (SEZs) in Rajasthan

S. No.	Name	Location	Total Area (in acres)	Major Companies
Export Promotional Industrial Parks (EPIPs)				
1.	EPIP Sitapura	Jaipur	365	GE Capital, Poddar Pigments, Autolite (India), Unique Organics, Genus Overseas, MICO etc.
2.	EPIP Boranada	Jodhpur	207	Indian Rayon and Industries Ltd., Alcobex Metals Ltd., Nana Proteins, Haswant Handicraft, Price Art Exports etc.
3.	EPIP Neemrana	Alwar	211	M/s Garima Overseas, M/s Zenith Rubber
Special Economic Zones (SEZs) – Operational				
1.	IT/ITeS SEZ - Mahindra World City (Jaipur) Ltd.	Jaipur	750	MetLife Evolve, Deutsche Bank Evolve, EXL Evolve, Infosys, Nucleus Software, Genpact, etc.
2.	Handicrafts SEZ - Mahindra World City (Jaipur) Ltd.	Jaipur	250	Ratan Textiles, Laxmi International, Kirat Crafts, Jaipur Crafts, Orvi Design Studio, etc.
3.	Engineering and related industries SEZ - Mahindra World City (Jaipur) Ltd.	Jaipur	500	Knit Pro International, Gravita, Marsons, Topline Overseas, Tijaria, Talbros, etc.
4.	Gems and Jewellery - Jaipur SEZ-1 & 2	Jaipur	21.5 (Phase 1) 89.4 (Phase 2)	Shah Gems & Jewelry Manufacturing Co., Venus Jewels, Gem Centre, Pinkcity Jewelhouse
Special Economic Zones (SEZs) – Formally Approved				
1.	Electronics Hardware and Software/ ITES SEZ - Somani Worsted Limited	Bhiwadi	49.4	-
2.	IT/ITeS SEZ - Mansarovar Industrial Development Corporation	Jodhpur	24.7	-
3.	Electronic Hardware and Software including IT/ ITES SEZ - Genpact India	Jaipur	24.7	-
4.	Textile sector SEZ (in-principle approval was granted for woolen sector) - RNB Infrastrucure Pvt. Ltd.	Bikaner	255.5	-
5.	Gems and Jewellery SEZ - Mahindra World City (Jaipur) Limited	Jaipur	25	-

Source: Website of Special Economic Zones in India; Website of RIICO; Web Research

2.5.2.2 *Incentives offered by SEZs*

The SEZ Act 2005 has mentioned some incentives and facilities which are offered to the units in SEZs and the SEZ developers, for attracting investments into the SEZs, including foreign investments. Table 2.12 lists down such incentives and facilities available to the units and the developers.

Table 2.12 List of Incentives and Facilities Offered to the Units in SEZs and the SEZ Developers

S. No.	For the Units in SEZs	For SEZ developers
1.	Duty free import/domestic procurement of goods for development, operation, and maintenance of SEZ units	Exemption from customs/excise duties for development of SEZs for authorized operations approved by the BOA (Board of Approval)
2.	100% Income Tax exemption on export income for SEZ units under Section 10AA of the Income Tax Act for first 5 years, 50% for next 5 years thereafter and 50% of the ploughed back export profit for next 5 years. *(Sunset Clause for Units will become effective from 01.04.2020 wherein no Income Tax exemption would be given to SEZ units which will be setup after 01.04.2020)*	Income Tax exemption on income derived from the business of development of the SEZ in a block of 10 years in 15 years under Section 80-IAB of the Income Tax Act. *(Sunset Clause for Developers has become effective from 01.04.2017)*
3.	Exemption from Central Sales Tax, Exemption from Service Tax and Exemption from State sales tax. These have now subsumed into GST and supplies to SEZs are zero rated under IGST Act, 2017.	SEZ developers are also entitled for GST (CGST, SGST, and IGST) exemption.
4.	Single window clearance for Central and State level approvals.	SEZ Developers are deemed licensees for setting up of an electricity production or distribution unit within the SEZ. They do not require a separate distribution license for electricity distribution.

Source: Website of Special Economic Zones in India

2.5.2.3 *Agro Food Parks*

Rajasthan being primarily an agrarian economy and a leader in producing Bajra, Barely, Pulses, Coriander, has started to develop the infrastructure to host industrial ventures of this sector. For this purpose, Agro Food Parks have been developed in the State. These parks have been approved by the Ministry of Food Processing Industries. These Parks will have requisite infrastructure including Common Effluent Treatment Plant and warehousing. There are 4 state owned (RIICO) Agro Food Parks and 1 privately owned Mega Food Park in the state whose information is given below: -

Table 2.13 Details of Agro Food Parks in Rajasthan

S. No.	Name	Location	Type	Total Area (in acres)	Ownership
1.	Green Tech Mega Food Park Pvt. Ltd.	Ajmer	Multi products	84	Private
2.	Agro Food Park Jodhpur	Boranada, Jodhpur	Multi products	259.5	Public (RIICO)
3.	Agro Food Park	Sri Ganganagar	Multi products	96.4	Public (RIICO)
4.	Agro Food Park Ranpur – 1 & 2	Kota	Multi products	140.9 (Phase 1) 98.8 (Phase 2)	Public (RIICO)
5.	Agro Food Park MIA	Alwar	Multi products	192.7	Public (RIICO)

Source: Rajasthan State Profile by Ministry of Food Processing Industries (Govt. of India)

Apart from the Agro Food Parks, the state govt. is also focusing on developing other special purpose industrial parks (estates) such as: -

a. Stone Parks (Bharatpur and Jodhpur)
b. Leather Park (Jaipur)
c. IT Parks (Jaipur, Jodhpur and Alwar)
d. Bio-tech Park (Jaipur)

2.5.3. Major Industrial Estates

Some of the most attractive industrial estates are present in district Alwar which comes under the National Capital Region (NCR). The district Alwar has major industrial towns such as Neemrana, Bhiwadi, and the district headquarter Alwar. Alwar district has a total of 27 industrial areas and 2 industrial areas are under development. The capital district of Jaipur has 43 industrial areas and 3 industrial land-banks. The proximity of Alwar to Delhi, its presence in the NCR, and the development of Delhi Mumbai Industrial Corridor (DMIC) which passes through this district, are the major reasons for the development of industrial estates. The connectivity is taken care of by the National Highway-8 which connects Delhi to Jaipur while passing through district Alwar. Most of the industrial estates are located in close proximity to the NH-8.

2.5.3.1 Japanese Zone Neemrana

Neemrana has gained recognition as an important industrial town and is well known for the Japanese Zone set up by RIICO to promote the first exclusive Japanese Investment Zone. This industrial zone was a result of an MoU signed between the Rajasthan govt. and JETRO for the development of a separate industrial estate for Japanese companies. This is situated right next to

the NH-8 in New Industrial Complex (NIC) Majrakath village. The industrial areas of Neemrana Phase 1 & 2 and the EPIP Neemrana are situated right opposite to the Japanese Zone. Total area of this zone is 1167 acres and its development was started in 2006 and an investment of over INR 40 billion has been made by the Japanese Companies. This industrial zone has a presence of more than 45 Japanese companies like Nissin Brake India, Mitsui Chemical, Teikoku Piston Rings – TPR, Takata, Mitsubishi Chemical, Daikin India, Nippon Steel, Toyota Kirloskar Engines, Nidec India Pvt. Ltd., Tokai Rubber Auto Parts, Unicharm India Pvt. Ltd., etc.

Companies in the Neemrana Japanese Zone are primarily parts and materials suppliers to local automakers such as Suzuki and Honda. Honda has its plant in Tapukara Industrial Estate in Alwar district and in Manesar (which is at a distance of 30 minutes from Neemrana). The State Govt. has offered various incentives such as tax benefits, land ownership rules are clear and well laid-out in Rajasthan as compared to Haryana, and JETRO also helps provides helps in solving infrastructure issues such as setting up a 5 MW solar plant in the Japanese Zone.

2.5.3.2 Second Japanese Zone in Ghiloth

After the success of first Japanese Investment Zone in Neemrana (Majrakath), RIICO has developed another Japanese Investment Zone in Ghiloth which is 7 km away from Neemrana. The new industrial area in Ghiloth is developed over more than 1,960 acres and includes a dedicated Ceramic & Glass Zone, General Industries Zone, a Japanese Zone, and a Korean Zone. The Japanese Zone is developed over 500 acres (approx.) whereas the Ceramic & Glass Zone has been developed over 750 acres, the Korean Zone has been given 263 acres, and the rest is for General Industries. This industrial zone has access to natural-gas pipeline. Also, various tax incentives have been offered for companies opening their factories in this area as per RIPS 2014.

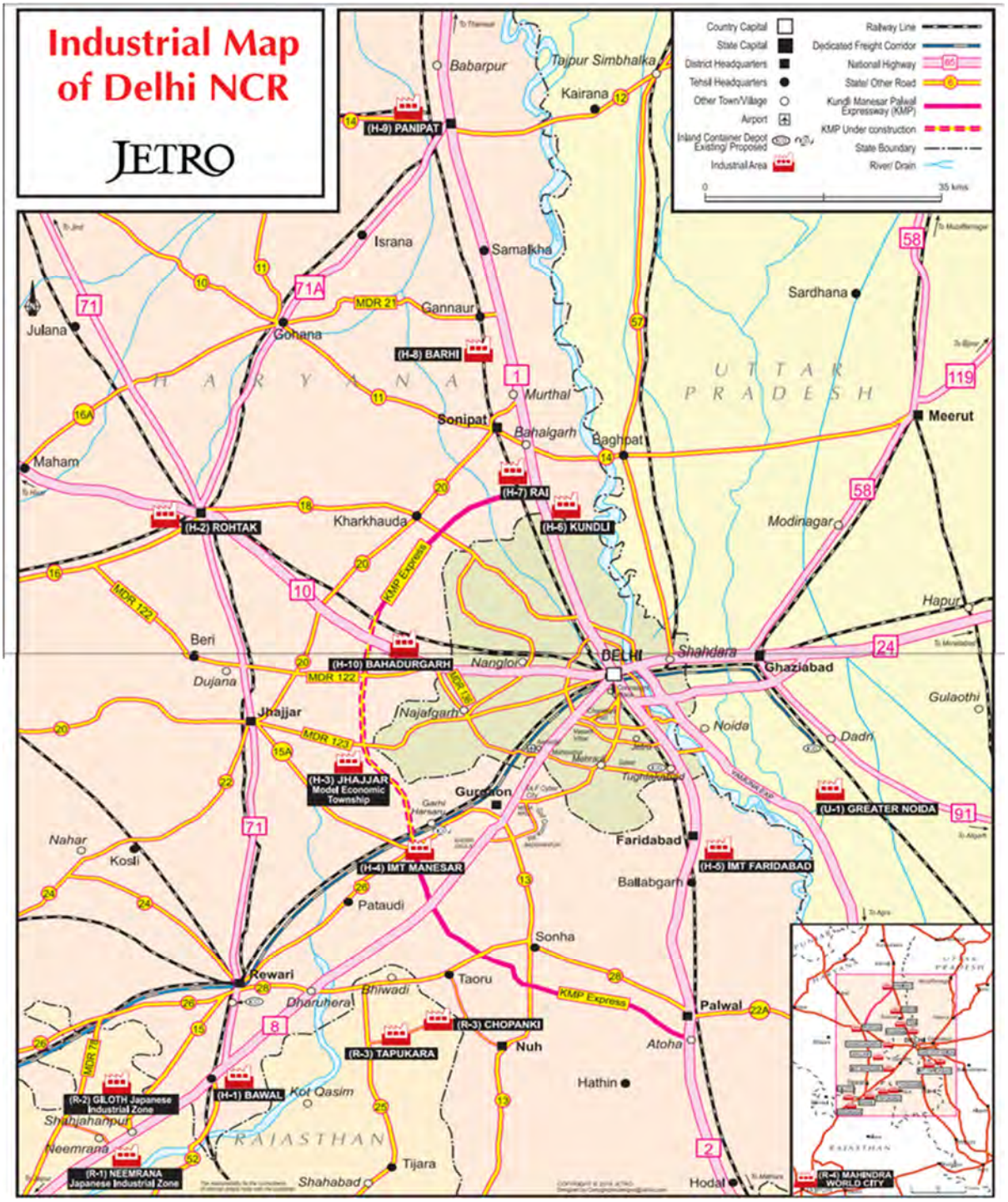

Figure 2.13 Map of Major Industrial Estates of Rajasthan coming under NCR

Source: Website of JETRO

2.5.3.3 *Tapukara Industrial Area and Karoli Industrial Area*

The Tapukara Industrial Area is situated in Khushkhera which is in Alwar district. It has been developed over an area of 781 acres and has the presence of automotive giant Honda Cars India and Honda Two-Wheelers India. This industrial area also has the presence of several auto ancillaries such as Global Auto Part Alliance, Bestex MM India, Sunbeam Auto, Indo Autotech,

etc. These companies (Honda and its key ancillaries) have invested in excess of INR 60 billion in this area and have provided employment to more than 10,000 persons.

As all of the plots are full in Tapukara Industrial Area, RIICO has developed an extension of this industrial area at Karoli. The Karoli Industrial Area (also known as Tapukara extension) is situated near the Tapukara industrial area and has been developed over an area of 971 acres, out of which 306 acres is being developed as Auto Zone. RIICO has reserved a large area of over 60 acres for Honda Cars India Ltd. The Karoli Industrial Area will also have a general zone and electronic manufacturing cluster zone apart from the auto zone.

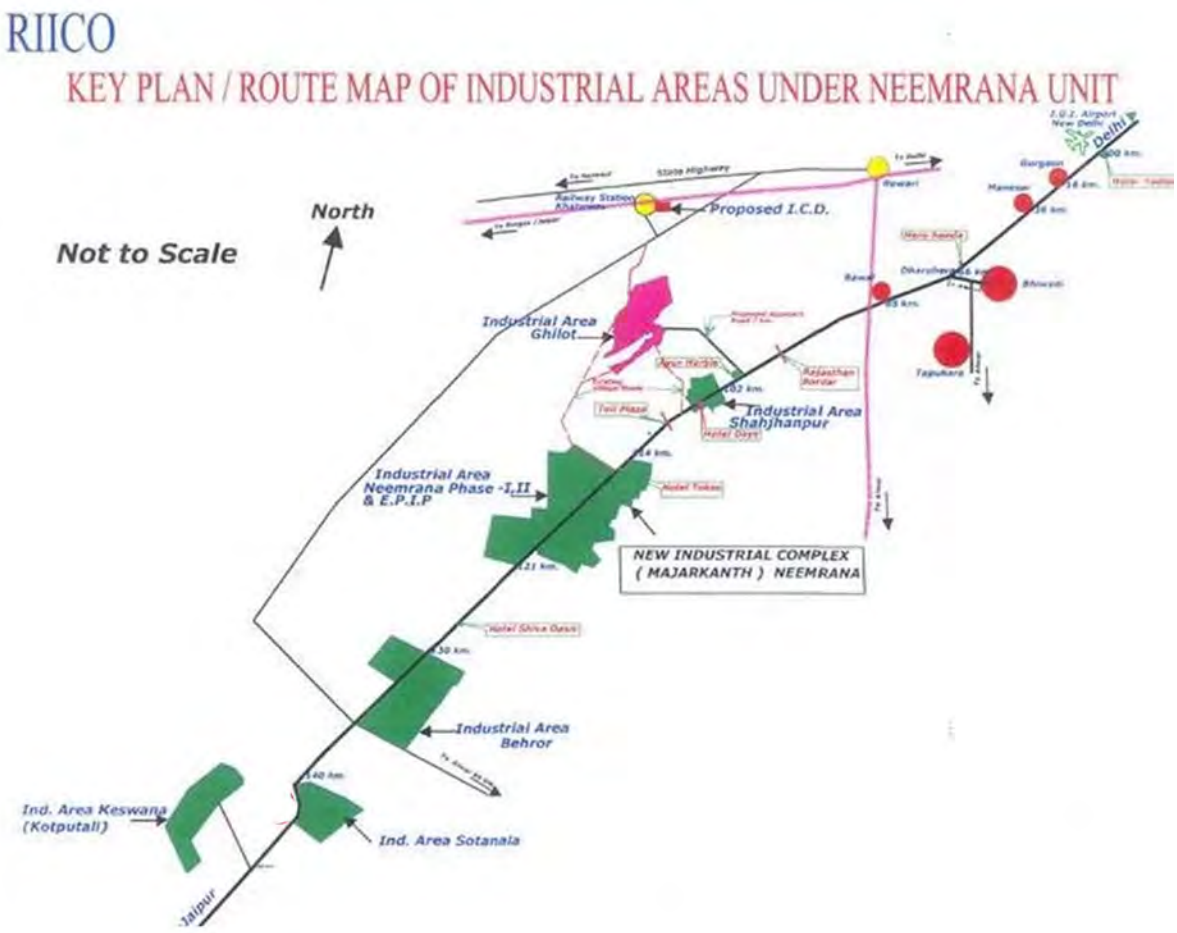

Figure 2.14 Major Industrial Areas of Neemrana Region

Source: Website of 99acres.com

2.5.3.4 *Mahindra World City Jaipur*

Mahindra World City, Jaipur is promoted as a PPP between the Mahindra Group and RIICO has been developed over an area of 3,000 acres provides an attractive destination for companies looking to establish their base in North India. This industrial area is located off NH8 and within the DMIC influence zone, it is spread across 3000 acres The project is a global benchmark in

sustainable development and has a Multi-Product Economic Zone (SEZ) spread across 1500 acres plus Domestic Tariff Area (DTA) spread across 1000 acres, in combination with planned co-located social infrastructure. Currently there are more than 80 national as well as international companies present in this zone. Some of the major manufacturing companies are Ball Corp., JCB, Fackleman, Maxop Engineering, Marsons, QH Talbros, etc.

There are a lot of opportunities for new investment in Rajasthan, especially in the districts of Alwar and Jaipur due to their proximity to the NCR, good infrastructure availability, presence of DMIC in the region. The land prices are also lower as compared to the other industrial zones in NCR. However, there are some bottlenecks which needs to be resolved. There is a shortage of water in the state of Rajasthan and since the govt. has become strict against using groundwater for industrial purpose, the shortage has become even more drastic. According to the industries, the price of water purchased from RIICO is very high, that is, INR 552 per ton, whereas in Haryana it is in the range of INR 12 per ton. So, stable water securing measures are required from the state govt. in this regard. Another issue pertaining to the same problem of water shortage is that it makes disaster prevention very difficult to achieve. We can take an example of the fire in Unicharm's plant which is situated in the Japanese Zone in Neemrana on October 26, 2017. The 40-acre factory was burnt down to the ground as the firefighters from the region were helpless in dousing the fire. Fire tenders from Rewari, Bawal and Gurugram in Haryana were called in to help with firefighting efforts. The shortage of water affects disaster management during such unfortunate events. One more issue is regarding the availability of raw materials from close proximity for an industry. This means that the supply chain cannot be completed from the same region and the raw materials have to be sourced from very far, which increases the overall cost of doing business. The state govt. needs to roll out an industrial policy which encourage the presence of supporting industries in the state. There are some issues regarding security inside the industrial areas like theft, robbery and public violence. Security provided by Rajasthan State Police needs to be strengthened in and around the industrial zones.

2.6. Investment by Japanese and Other Foreign Businesses

2.6.1. Foreign Direct Investments (FDI)

Rajasthan has been one of the low-income states of India and it has not been able to attract sizeable investment from multinational companies, large business houses, foreign investors, Non-Resident Indians, and small scale entrepreneurs. This becomes clear when we have a look at the Cumulative Foreign Direct Investment (FDI) inflow data from all the countries in India over the period of Jan. 2000 to Dec. 2017 (Chart 2.15). The Reserve Bank of India (RBI) maintains this data through its regional offices and it is not maintained separately for the states. However, the Jaipur regional office of the RBI has data for the state of Rajasthan.

According to the RBI, Rajasthan has a share of 0.4% in India's cumulative FDI inflows during Jan. 2000 to Dec. 2017, and is ranked 9th. Top 3 states with highest FDI over the same period have been Maharashtra, Delhi + Haryana, and Karnataka.

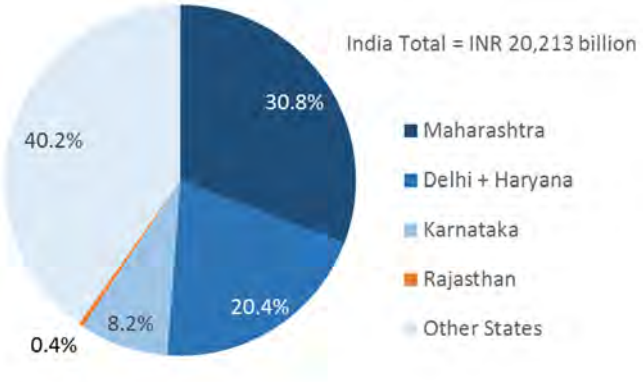

Chart 2.15 Cumulative FDI Inflows from all Countries during Jan. 2000 to Dec. 2017

Source: Website of Dept. of Industrial Policy & Promotion (Govt. of India)

Chart 2.16 shows the year-wise FDI inflows received by Rajasthan during Jan. 2000 to Dec. 2017. There was a CAGR of 12.36% from Jan. 2013 to Dec. 2017. However, it was way less than India's total CAGR of 18.6% during the same period. The year of 2014 was an exception for Rajasthan, as it reported its highest amount of FDI equity inflow during that year, that is, INR 30,880 million.

However, looking at the FDI equity inflows data might not give the exact situation of foreign investments in a particular state. Reason for the same is that a company may report investment transaction in the state where its head office is situated irrespective of the state in which fund has been utilized. Hence, in view of this, it is difficult to find the investment made exclusively for a single state.

Chart 2.16 Rajasthan's year-wise received FDI Equity Inflows from January, 2000 to December, 2017

Source: Website of Dept. of Industrial Policy & Promotion (Govt. of India)

2.6.2. Recent Investments (Domestic and Foreign)

The State Govt. of Rajasthan has taken a lot of initiatives during the past few years to grow the industrial sector of the state and for this, they had to convince the investors (both domestic and global) to invest in the state. Rajasthan's first-ever global investors summit, named as Resurgent Rajasthan, was held in Jaipur in November 2015. It was a successful event as the state govt. was able to sign a total of 295 MOUs worth a potential investment of INR 3.2 trillion.

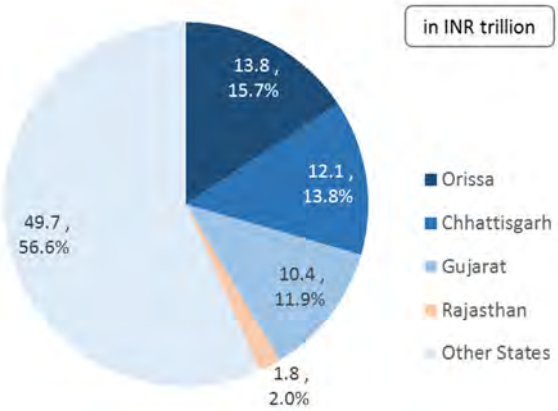

Chart 2.17 Top 3 states and Rajasthan in terms of Industrial Investment Intentions filed during 2007-2017

Source: Website of Dept. of Industrial Policy & Promotion (Govt. of India): SIA Statistics

According to the Dept. of Industrial Policy & Promotion (Govt. of India), the state of Rajasthan received 1,126 industrial investment intentions during the period 2007-2017. The proposed investment of these intentions was INR 1.8 trillion. This is just 1.8% of the total investment intentions received in India of INR 87.75 trillion during the same period. Not all of the industrial investment intentions which are filed gets implemented and result into a new industrial unit or expansion of an existing unit. During the last five years (2012-2017), 120 investment intentions have been implemented in Rajasthan, which accounted for an investment of INR 181 billion. In 2016, 32 industrial investments were implemented which accounted for a total investment of INR 72.8 billion.

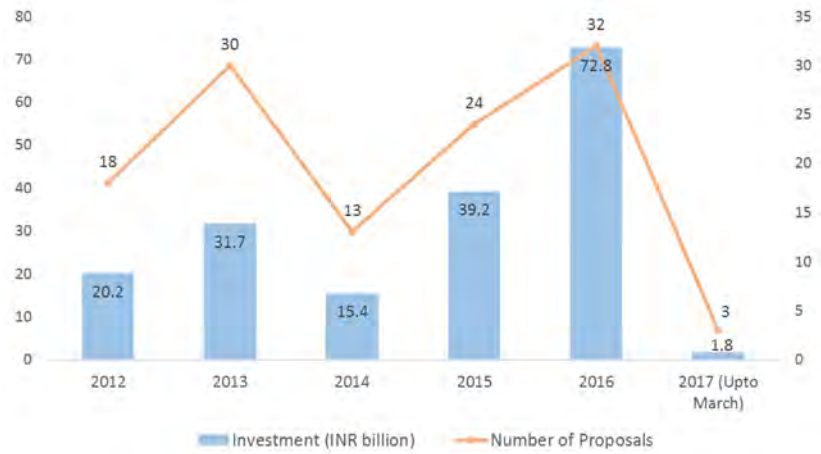

Chart 2.18 Year-wise Industrial Investment Intentions implemented in Rajasthan (2012-2017)

Source: Website of Dept. of Industrial Policy & Promotion (Govt. of India): SIA Statistics

Rajasthan has existing trade relations with a lot of foreign countries where it exports its products. Textile products, gems and jewellery related products, agricultural products, articles of stone, cement, asbestos, etc. have been Rajasthan's strengths. However, after the progress it is making in other industries (such as automobiles, mechanical equipment, etc.) it can look forward to improving the trade relations with other countries. Some of the major countries with which Rajasthan shares good trading relations and also seeks to improve upon them are shared in Table 2.14.

Table 2.14 Existing Foreign Trade Relation of Rajasthan/India

S. No.	Trade Partner	Existing Trade Relation with India/Rajasthan			
	Country	Total Import (USD million)	Export from India (USD million)	Export from Rajasthan (USD million)	Major Items
1	Sweden	141,101	771	28	Apparel and clothing accessories, other made-up textile articles, natural or cultured pearls, precious or semi-precious stones
2	Turkey	198,618	5,090	113	Machinery and mechanical appliances, electrical equipment and thereof, textile and textile articles, articles of stone, plaster, cement, asbestos, mica or similar material
3	Ireland	82,223	536	16	Organic chemicals, apparel and clothing accessories, salt, sulphur, earths and stone, plastering materials
4	Iraq	44,270	1,135	8	Machinery and mechanical appliances, electrical equipment and thereof, vegetable products, articles of stone, plaster, cement, asbestos, mica or similar material
5	Algeria	47,090	823	12	Machinery and mechanical appliances, electrical equipment and thereof, vehicles other than railway or tramway rolling stock, cereals, man-made staple fibres
6	Serbia	19,230	59	0.5	Machinery and mechanical appliances, electrical equipment and thereof, products of the chemical or allied industries
7	Malta	7,182	196	2	Automobiles and transport equipment, mineral fuels, mineral oils and products of their distillation, pharmaceutical products
8	Niger	1,860	120	2	Vegetable products, pharmaceutical products, machinery and mechanical appliances, electrical equipment and thereof
9	Azerbaijan	8,515	34	0.3	Machinery and mechanical appliances, electrical equipment and thereof, Machinery and mechanical appliances, electrical equipment and thereof, vegetable products

Source: Data from Bureau of Industrial Promotion (Govt. of Rajasthan)

2.6.3. Presence of Japanese Companies

Most of the foreign companies present in the state are Japanese companies. Such favourable conditions have occurred after the state govt. signed an MoU with JETRO and developed a Japanese Industrial Zone in Neemrana. This was first of its kind focused industrial zone for companies from a particular country. Now there are plans of another Japanese Industrial Zone in Ghilot, situated just 7 km from the first zone. According to data in a press release from the Embassy of Japan in India, Rajasthan has 47 Japanese companies as of Oct. 2018. Rajasthan is 6th in the list of presence of Japanese companies. Haryana is at the top of this list with 393 companies, followed by Maharashtra (243 companies) and Karnataka (224 companies). Majority of the Japanese companies are present in the Japanese Industrial Zone.

Definition of Japanese company in India as per Embassy of Japan : Japanese company is defined as liaison office/branch office etc. of a Japanese company in India (as a foreign entity) or head office of Indian subsidiary (wholly owned/joint venture) of a Japanese company or business enterprise founded in India by Japanese nationals.

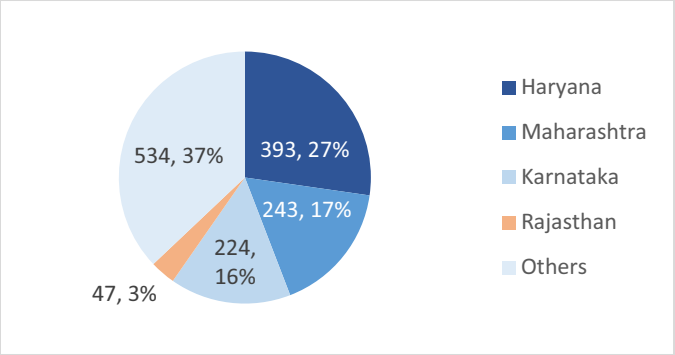

Chart 2.19 Top 3 States of India with highest number of Japanese Companies (as of October 2018)

Source: Website of the Embassy of Japan in India

In terms of growth of Japanese Business Establishments in India, they have grown by a CAGR of 19.8% to a total of 5102 during the last 10 years (2008-2018). Rajasthan has the highest CAGR of 33.7% during the same period and a presence of 183 Japanese Business Establishments, as of Oct. 2018. The highest number of Japanese Business Establishments is 949, situated in the region of Haryana and Delhi combined.

Definition of Japanese Business Establishment in India as per Embassy of Japan : A Japanese Business Establishment in India includes liaison office/head office of a Japanese company in India; head office, branch office, or manufacturing unit of the Indian subsidiary of a Japanese company; business enterprise founded in India by Japanese national(s)

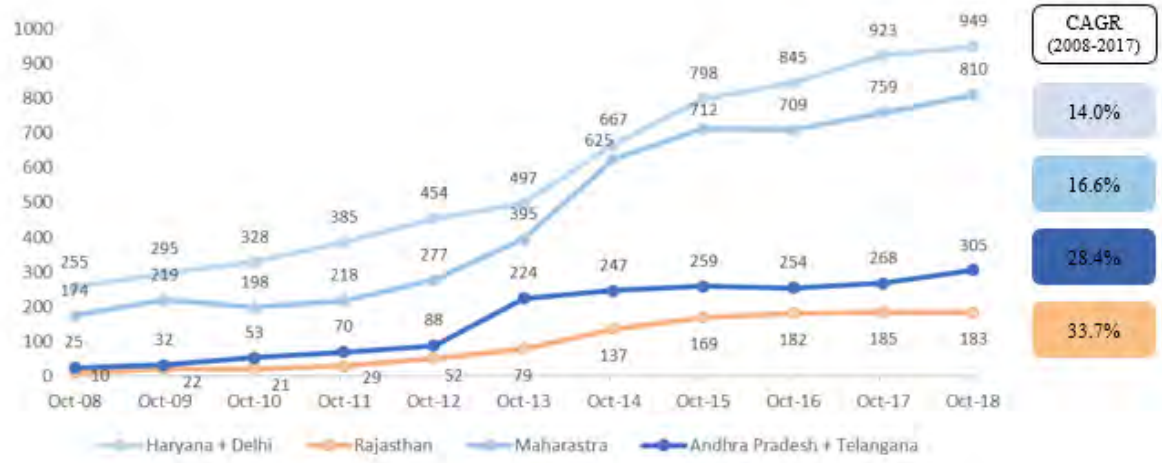

Chart 2.20 Year-wise number of Japanese Business Establishments in Rajasthan, Haryana, Maharashtra, and Andhra Pradesh (2008-2018)

Source: Website of the Embassy of Japan in India

2.7. Labour Information and Working Environment

2.7.1. Key Labour Statistics

As per the estimates of Labour Bureau of India, during 2015-16, Rajasthan had over 50 million persons which were of the working age (aged 15 years or more). This is 5.4% of the 926 million persons, of the working age residing in the whole country. Rajasthan had 25.7 million males and 24.5 million females of the working age. Over 72% of the total working age population lives in the rural areas.

Labour Force Participation Rate (LFPR) is defined as the number of persons in the labour force per 100 persons of working age (15 years & above). Overall LFPR of Rajasthan is 49 which is slightly lower than that of the whole country 50.3 (Table 2.15). This means that either there is a need to create additional employment opportunities or the Labour force in the state is not employable. Further, LFPR of females in Rajasthan is 21.5 which is also lesser than the national LFPR of 23.7 for women. The urban women of Rajasthan have even less participation in the state's economic activities as their LFPR is just 9.1. This is a situation of concern because it shows that there are some bottlenecks because of which women are not able to contribute to the labour force and economic activity of the state.

Table 2.15 Labour Force Participation Rate (%) for persons aged 15 years & above in Rajasthan / India (2015-16)

Description	Men	Women	All
Rajasthan			
Rural	76.1	25.0	51.7
Urban	67.3	9.1	39.5
Rural + Urban	77.2	21.5	49.0
India			
Rural	77.3	26.7	53.0
Urban	69.1	16.2	43.5
Rural + Urban	75.0	23.7	50.3

Source: Fifth Annual Employment - Unemployment Survey (2015-16) Labour Bureau, Govt. of India

The main effects of having a low female participation in the Workforce include that it does not allow the economic growth of the region to be at an optimum level. Secondly, the unemployment rate of the region goes up. Rajasthan is facing both of these effects. The Unemployment Rate (UR) of any region can be defined as the number of persons unemployed per 100 persons in the labour force (employed + unemployed persons). The UR of women in the state is 12.4 which is much higher than the national UR of women, that is, 8.7 (Table 2.16).

In Rajasthan, the urban unemployment rate is 4.3 which is better than the national urban unemployment rate of 4.9. Whereas, the state fares worse in terms of unemployment in the rural areas. Rajasthan's rural UR is 7.7, which is much worse than the national rural UR of 5.1.

As per the Fifth Annual Employment –Unemployment Survey (2015-16) carried out by the Labour Bureau (Govt. of India), the Manufacturing sub-sector employed 8.8% of the total workforce of Rajasthan which is lower than the national workforce working in the manufacturing sector, that is 10.5% (Chart 2.21).

Table 2.16 Unemployment Rate (per 100) for persons aged 15 years & above in Rajasthan / India (2015-16)

Description	Men	Women	All
Rajasthan			
Rural	6.3	12.3	7.7
Urban	3.1	13.8	4.3
Rural + Urban	5.7	12.4	7.1
India			
Rural	4.2	7.8	5.1
Urban	3.3	12.1	4.9
Rural + Urban	4.0	8.7	5.0

Source: Fifth Annual Employment - Unemployment Survey (2015-16) Labour Bureau, Govt. of India

Since 2011-12, the distribution of workforce in the Agriculture, Forestry, and Fishing sector has decreased for Rajasthan whereas it has increased for Wholesale and retail trade indicating, people are moving from Agriculture sector to service industry (Chart 2.22). However, percentage of people employed in the manufacturing sector remained same for the period, that is, 8.8%. This is a situation of concern as it shows that the manufacturing sector has not expanded much or it has not provided enough employment opportunities in the state.

Chart 2.21 Distribution of Workers (aged 15 years & above) by Industry in Rajasthan / India (2015-16)

Source: Fifth Annual Employment - Unemployment Survey (2015-16) Labour Bureau, Govt. of India

Chart 2.22 Distribution of Workers (aged 15 years & above) by Industry in Rajasthan (2011-12 to 2015-16)

Source: Fifth Annual Employment - Unemployment Survey (2015-16) Labour Bureau, Govt. of India

Rajasthan, despite being one of the low income states, has improved upon the rate of minimum wages paid to the workers. The minimum wages are revised very frequently based on the Consumer Price Index. The minimum wages for the last four years (January 2015 to January 2018) for the state have been mentioned in the table provided in Table 2.17. There has been an increase in the minimum wages with a CAGR of 4.1% for the unskilled, 3.9% for the semi-skilled, 3.7% for the skilled, and just 3% for the highly skilled workers during the period 2015-2018.

Table 2.17 Minimum Wage Rates in Rajasthan from 2015 to 2018

S. No.	Category	Monthly Minimum Wages (in INR)			
		2018	2017	2016	2015
1	Unskilled	8,498	8,222	8,280	8,070
2	Semi-Skilled	8,922	8,634	8,694	8,474
3	Skilled	9,369	9,065	9,129	8,898
4	Highly Skilled	9,837	9,518	9,585	9,343

Source: Website of the Labour Department (Rajasthan)

According to Section 24-A of The Rajasthan Minimum Wages Rule, 1959, no worker in any establishment shall be required or allowed to work for more than 9 hours a day and 48 hours in any week: provided that the total number of working hours including overtime shall not exceed 10 hours on any working day. Provided further that the total number of overtime hours worked by any worker shall not exceed 50 hours in a quarter. When a worker works in an employment for more than 9 hours on any working day or for more than 48 hours in any week, he shall, in respect of overtime work, entitled to wages at double the ordinary rate of wages.

2.7.2. Amendments in Labour Laws

After the Indian Govt.'s ambitious plan to transform the country into a preferred manufacturing destination, the Rajasthan government was one of the first states to move towards State-specific amendments to the Industrial Disputes Act, the Factories Act, the Contract Labour Act and the Apprentices Act.

Table 2.18 Key (Recent) amendments in Labour Laws in Rajasthan

Act Name	Original Section	Amendment in Original Section	Implications
Industrial Disputes Act, 1947	Section 2A states that all the disputes between the employer and employees with regard to discharge, dismissal, retrenchment or termination can be raised with the Labour Court or Tribunal for adjudication.	The amendment to Section 2A states that all the disputes between the employer and employees with regard to discharge, dismissal, retrenchment or termination need to be raised with the Labour Court or Tribunal for adjudication within a period of three years.	Earlier there was no time limit for raising disputes. The time limit so prescribed could be amended by a competent authority on sufficient grounds. Sometimes workers raise disputes after a lapse of many years which makes settlement problematic. A time limit for raising disputes will reduce the volume of litigation and discourage filing of fictitious claims.

Industrial Disputes Act, 1947	Section 9D states that any Union which has a membership of not less than 15% of the total number of workmen may apply to the Registrar for registration as a representative Union.	The amendment to Section 9D raises the cap from 15 % to 30 %. The amendment states that any Union which has a membership of not less than 30% of the total number of workmen may apply to the Registrar for registration as a representative Union.	Forming labour unions will be difficult as it will require a membership of 30% of the workforce, against the 15% earlier, before it is recognized. The lower limit allowed many unions to emerge often increasing inter-union conflicts and multiplicity.
Industrial Disputes Act, 1947	Section 25K states that no government nod is required for companies employing up to 100 workers for retrenching, laying off or shutting down units.	The amendment to Section 25K has raised the cap from 100 to 300. It states that no government nod is required for companies employing up to 300 workers.	The raise in cap is expected to provide relief to a large number of companies to realign their businesses. Because of the old norms, even though the promoters wanted to exit loss-making businesses or lay off workers due to tough market conditions, the lengthy process to get permission only added to their woes. In the light of the restrictive cap employers would try to keep the workforce within 100, the amendment should encourage them to hire more workers.
Factory Act, 1948	Section 2 states that "factory" means any premises including the precincts thereof – (i) whereon ten or more workers are working, or were working on any day of the preceding twelve months, and in any part of which a manufacturing process is being carried on with the aid of power, or is ordinarily so carried on, or (ii) whereon twenty or more workers are working, or were working on any day of the preceding twelve months, and in any part of which a manufacturing process is being carried on without the aid of power, or is ordinarily so carried on.	The amendment states that in section 2 of the principal Act- (i) for the existing word “ten", the word "twenty" shall be substituted; and (ii) for the existing word "twenty", the word "forty" shall be substituted.	The definition of a factory has been amended to a unit of 40 workers or more (previously 10), and in any part of which a manufacturing process is being carried on with the aid of power; and a unit of 40 workers or more (previously 20), and in which a manufacturing process is being carried on without the aid of power. Due to increase in manufacturing activities by small units in the State, the amendment is proposed to be made so that establishing of small manufacturing units is promoted resulting in creation of more employment opportunities for workers. Earlier small units were also covered under the definition of 'factory' requiring several compliances while hurting their expansion and growth.

Contract Labor Act, 1970	Section 1 states that the act applies- (a) to every establishment in which twenty or more workmen are employed or were employed on any day of the preceding twelve months as contract labour; (b) to every contractor who employs or who employed on any day of the preceding twelve months twenty or more workmen	The amendment states that the act applies- (a) to every establishment in which fifty or more workmen are employed or were employed on any day of the preceding twelve months as contract labour; (b) to every contractor who employs or who employed on any day of the preceding twelve months fifty or more workmen	Establishments and contractors which employ more 50 people or more (previously 20) will be covered under the act (provided that the State Government may, after giving not less than two months' notice, apply the provisions of this act to any establishment or contractor employing less than 50 workers). Because of the existing threshold limit, principal employers while hiring personnel or procuring commodities find it difficult to execute contracts, as the small units face hardship in ensuring formalities under the act. It has been observed that the lower limit either encourages non-compliance or restricts the engagement of required labor as per demand. The move shall provide more opportunity of employment and facilitate business in small units.
Apprenticeship Act, 1961	Section 6 states that the period of apprenticeship training specified in the contract of apprenticeship shall be such as may be prescribed by the National Council or the Central Apprenticeship Council.	The amendment to Section 6 states that the period of apprenticeship training specified in the contract of apprenticeship shall be such as may be prescribed by the State Apprenticeship Council.	The training period for apprenticeship is being reduced. The period of apprenticeship training shall be such as may be prescribed by State Apprenticeship Council. Previously, the period of apprenticeship training for trade apprentices varied from trade to trade at 6 months to 4 years, which were quite long. With the availability of quality compact modules of shorter durations, neither the apprentice nor the industry prefers long periods of training. Also, instead of the Union, the states, being closely aware of the demands of the sectors, should be empowered to carry out the required changes in consultation with industry

Source: Website of the Labour Department of Rajasthan; various news articles; NRI analysis

2.7.3. Female Labour

The female workforce in Rajasthan is 5.3 million (approx.) out of the total workforce of 24.7 million (2015-16). This means that there are about 21% females in the total workforce of the state. According to the World Bank Report, the participation of female labour in Rajasthan has declined over the last decade (Chart 2.23). The Female Labour Participation Rate of females in Rajasthan is lower than the national LFPR of India.

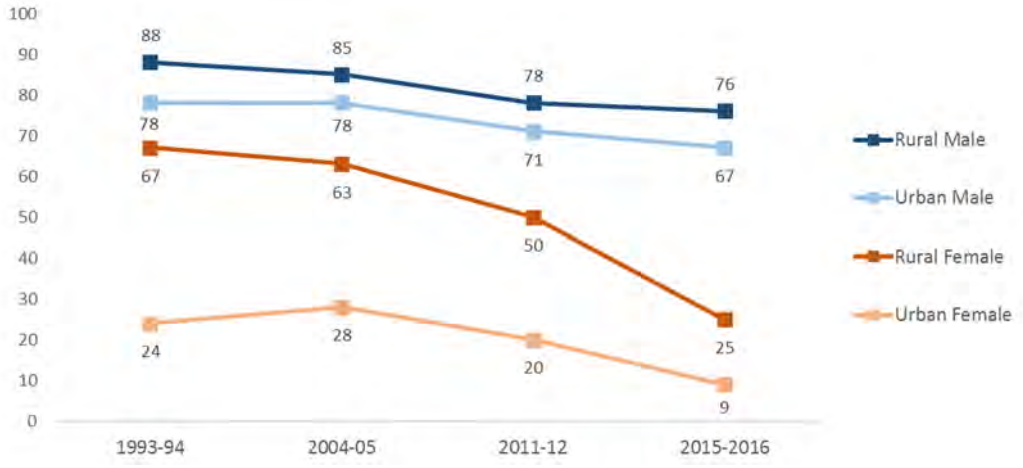

Chart 2.23 Decline in Female Labour Force Participation Rate in Rajasthan (1994-2016)

Source: Fifth Annual Employment - Unemployment Survey (2015-16) Labour Bureau, Govt. of India; World Bank document on Rajasthan

The situation is particularly poor for the urban females as their LFPR is just 9%. According to a survey conducted in 2016 by Social Attitudes Research, India (SARI), a significant share of men and women which were surveyed from the state of Rajasthan felt that married women whose husbands earn a good living should not work outside the home. Such a regressive attitude towards women is one of the many reasons of low female LFPR in the regions where household income is rising (mainly urban areas). Another reason is that Rajasthan has the second lowest female literacy rate (52.1%) among Indian states according to 2011 census. Rajasthan's female literacy rate is worse than the average for the Arab world and "fragile and conflict-affected" countries, according to World Bank data. Apart from this, there's prevalent discrimination against women in the state as Rajasthan holds the record for highest percentage of married females between the ages of 10 and 14, and has one of the lowest sex ratios in India. Considerable steps need to be taken by the state govt. in order to improve the poor situation of labour force participation of females. Improvement in female education, industrial training, making favourable labour laws for females, etc. have to be carried out.

2.7.3.1 Female Employment Promotion

The State Government has already made an amendment to the Rajasthan Shops and Establishment Act 1958 on 19th May, 2017. Under this amendment, all shops and commercial establishments (employing five or more employees) are allowed for employment of women during night shift, for a period of three years from 19th May 2017: wherein subject to the compliance of the conditions laid down in the notification the establishment can remain open throughout the week and women can be employed in night shift respectively. Whereas in relation to employment of women in night shift in the shop and commercial establishment the employer

is a woman, establishment is operated by women and all employees are women, the exemption is valid for four years. Also, in case of the factories, women are allowed to work in a night shift (10 pm to 5 am) as per the notification released on 19th Dec., 2013 by The Factories and Boilers Inspection Department of Govt. of Rajasthan.

Rajasthan Govt. is also focusing on providing employment skills and training to women through Women Industrial Training Institutes (WITIs) and other skill development schemes such as Employment Linked Skill Training Programme (ELSTP). To encourage women entrepreneurship, Mahila Udhyam Nidhi scheme was started under which there are low interest rates and minimum collaterals for women entrepreneurs. The total investment should not exceed INR 2.5 million in case of production & INR 1 million in case of service start-up.

2.7.4. Labour Relations

As per the Statistical Abstract 2011-17 of the state, total number of industrial disputes (strikes and lockouts), number of workers affected, and the number of man-days lost, all of them have been gradually decreasing since 2011. The year 2011 had witnessed 8 industrial disputes in the state with 3,276 workers affected which resulted in a loss of over 93,000 man-days. Whereas, during the year 2017, there were 2 strikes and lock-outs which affected 4,131 workers and resulted in a loss of 12,511 man-days. Chart 2.24 shows the number of industrial disputes, number of workers involved in strikes, and the number of man-days lost from the year 2011 to 2017.

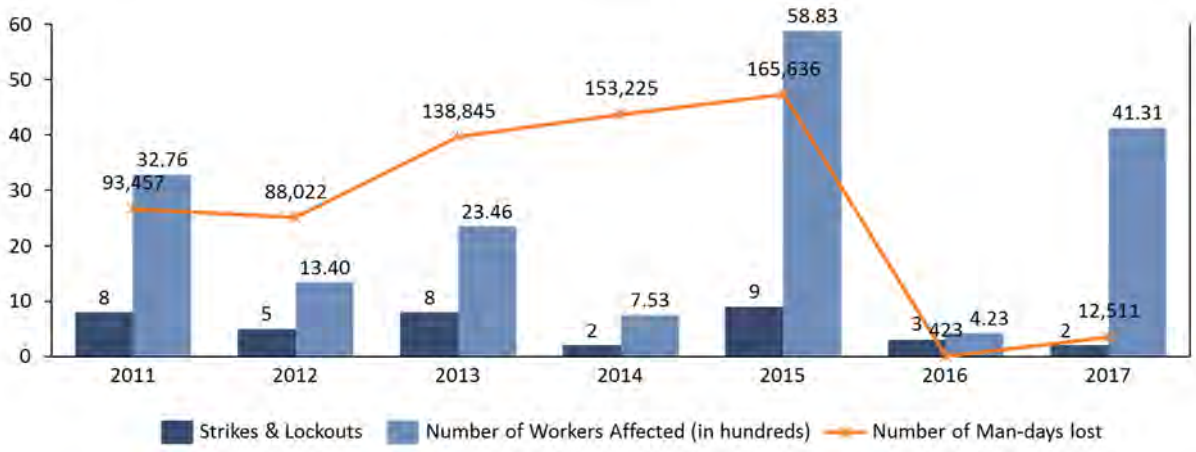

Chart 2.24 Number of Industrial Disputes in Rajasthan from 2011 to 2017

Source: Statistical Abstract of Rajasthan 2011-17

Main causes of the industrial disputes could be categorised into the following six categories: wages and allowances, bonus, reinstatement of terminated / suspended workers, leave and hours

of work, retrenchment, and others. There have been a few cases of industrial disputes in the Japanese Industrial Zones as well. For example, in October 2013, 846 workers of Daikin plant in Neemrana stopped working for 41 days demanding the reinstatement of 125 fellow workers who had been terminated by the management. Another such incident took place during February, 2016 at the Honda Motorcycle & Scooter India's Tapukara plant in Alwar district. Around 4,000 workers had gone on a strike demanding the reinstatement of 10 permanents and 400 contractual workers. However, it is expected that the changes in the labour laws would make it easier for the industries to handle the strike and lockout situations in a better manner and at the same time would maintain workers' rights as well.

2.8. Development of Human Resource

2.8.1. Status of Technical Education Institutions

Development of skilled manpower is pre-requisite for economic and industrial growth. Rajasthan has also realised this fact and has been focusing on infrastructure development and providing technical education to its youth. As per the Annual Progress Report 2017-18 released by the Directorate of Technical Education, Rajasthan, the state had a total of 109 engineering colleges (15 govt. and 94 private), 5 architecture colleges (1 govt. and 4 private), 60 MBA colleges (9 govt. and 51 private), 28 MCA colleges (6 govt. and 22 private), and 182 polytechnic colleges (42 govt. and 140 private) in 2017-18. The trend of the number of technical institutions for the last four years has been shown in Chart 2.25. The total number of technical colleges have decreased from 477 in 2014-15 to 384 in 2017-18. The intake capacity (number of seats) has also decreased from 132,825 to 100,481 during the same period. The main reasons for this decrease in number of colleges include the high percentage of vacant seats due to low quality of education provided by the institutions. According to some reports, just 1/5th of the engineers are employable in India. Rajasthan has also been facing similar issues related to the quality of education provided and as a result, the employment opportunities are also very less.

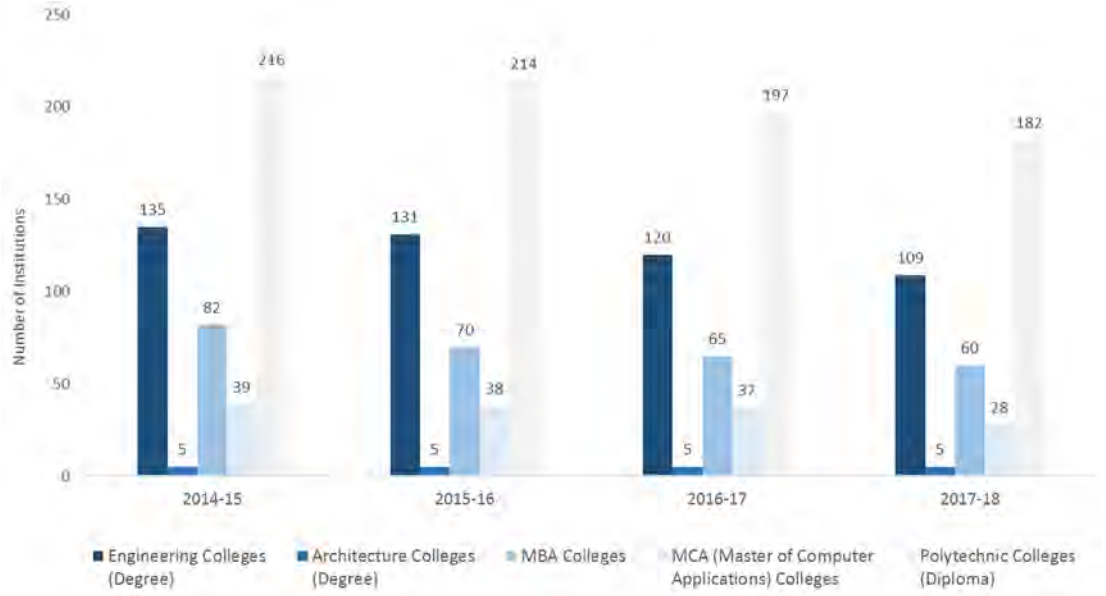

Chart 2.25 Number of Technical Education Institutions (Govt. + Private) in Rajasthan (2014-15 to 2017-18)

Source: Annual Progress Report 2017-18 (Directorate of Technical Education, Rajasthan)

The Departments of College Education, Technical Education (Polytechnic), Medical Education, and Higher Education are the responsible departments for imparting requisite technical skills in the field of Engineering and Technology, Architecture and Urban Planning, Management, and Computer Application. There are 182 Polytechnic (Eng. Diploma) Colleges in the state out of which 34 are Govt. co-ed, 103 are Private co-ed, 6 are PPP (Public Private Partnership) co-ed,

and 13 are Women Polytechnic colleges (8 Govt. + 5 PPP). In these colleges, there are 19 engineering courses (civil, mechanical, electrical, electronics, architecture, computer science, chemical, printing, plastic, instrumentation, etc.) and 6 non-engineering courses (textile designing, costume designing & dress making, commercial art, interior decoration, beauty culture, and modern office management).

Table 2.19 Technical Education Institutions (Govt. + Private) and their Intake Capacity

Course	2014-15		2015-16		2016-17		2017-18	
	Number of Institutions	Intake Capacity	Number of Institutions	Intake Capacity	Number of Institutions	Intake Capacity	Number of Institutions	Intake Capacity
Eng. Degree (B. Tech.)	135	64,830	131	57,686	120	52,768	109	46,906
Architecture Degree (B. Arch.)	5	300	5	270	5	270	5	270
Diploma (Eng. & Non-Eng.)	216	57,735	214	56,735	197	50,585	182	46,645
Business Degree (M.B.A.)	82	6,600	70	5,385	65	4,785	60	4,455
Computer Applications Degree (M.C.A.)	39	3,360	38	3,135	37	2,865	28	2,205
Grand Total	477	132,825	458	123,211	424	111,273	384	100,481

Source: Annual Progress Report 2017-18 (Directorate of Technical Education, Rajasthan)

Budget for the development of engineering colleges for 2017-18 was INR 227 million and for polytechnic colleges was INR 1,759.5 million. This budget has to be spent on opening of new colleges, maintenance & upgradation of existing colleges, scholarships, machinery and equipment, and other schemes.

Table 2.20 Budget Allocation for technical education by the State Govt. of Rajasthan

Types of Institutions	Budget Allocated (INR million)			
	2014-15	2015-16	2016-17	2017-18
Engineering Colleges	173.0	258.5	127.2	227.0
Polytechnic Colleges	1,816.3	1,622.3	1,711.5	1,759.5

Source: Annual Progress Report 2017-18 (Directorate of Technical Education, Rajasthan)

Apart from the state level technical institutions, there are some National level educational institutions present in the state. These include Indian Institute of Technology (IIT), Jodhpur; Indian Institute of Management (IIM), Udaipur; National Institute of Fashion Technology (NIFT), Jodhpur; All India Institute of Medical Sciences (AIIMS), Jodhpur; National Law University, Jodhpur; Birla Institute of Technology and Science (BITS), Pilani.

2.8.2. Status of Industrial Training Institutes (ITIs)

Under the constitution of India, Vocational training is the concurrent subject of both Central and State Governments. The development of training schemes at National level, evolution of policy, laying of training standards, norms, conducting of examinations, certification, etc. are the responsibilities of the Central Government, whereas the implementation of the training schemes largely rests with the State Govt./Union Territory Administrators. The Central Govt. is advised by the National Council of Vocational Training (NCVT), a tripartite body having representatives from employers, workers and Central/State Governments. Similar Councils termed as State Councils for Vocational Training are constituted for the same purpose by the respective State Governments at state levels.

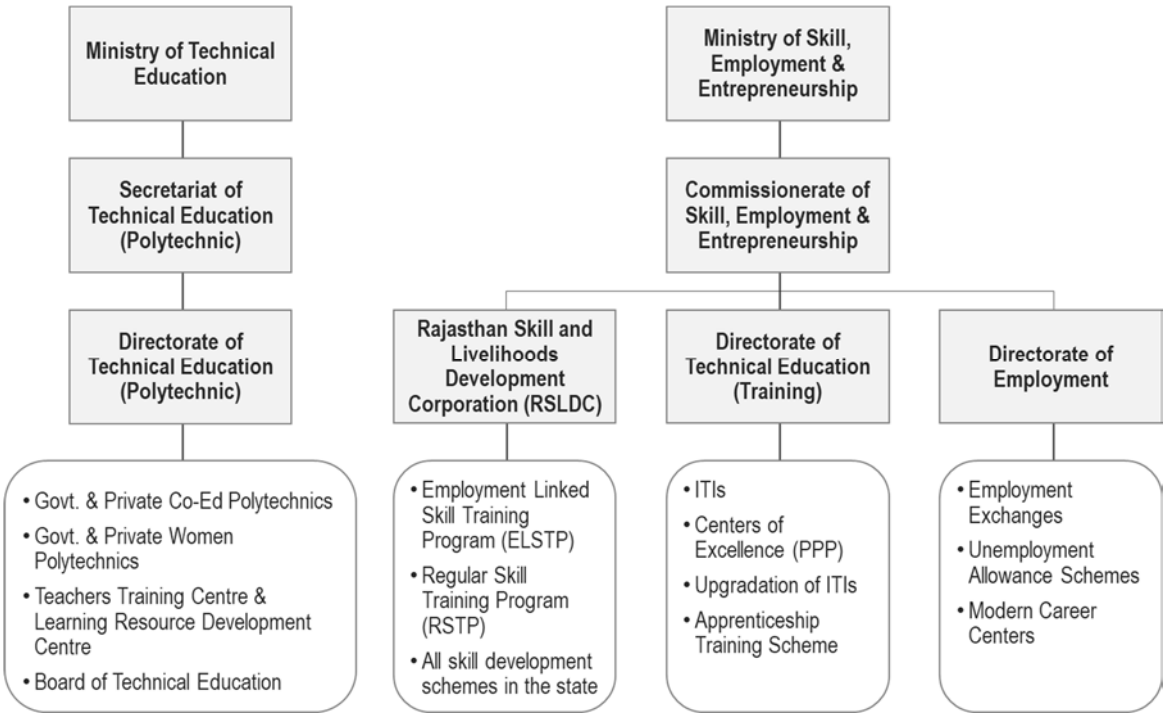

Figure 2.15 Organisational structure for skill development & industrial training in Rajasthan

Source: Various departmental websites; NRI Analysis

Directorate of Technical Education (Training), Rajasthan is entrusted with the responsibility of providing trained technical manpower for the technological upgradation of industrial production, services, productivity and innovation, contributing to the planned growth of the country's economy. For this purpose, there are 1,821 ITIs in the state with 344,828 seats, out of which 223 are Govt. ITIs with 72,979 seats and 1,598 Private ITIs with 271,849 seats. The ITIs have various training schemes on offer such as Craftsmen Training Scheme (CTS), Apprenticeship Training Scheme (ATS), Skill Development Initiative Scheme (SDIS), and Women Training. For Women Training schemes, there are 10 Govt. institutes are sanctioned as Women Industrial Training Institutes: Jaipur, Ajmer, Bhilwara, Jodhpur, Kota, Bikaner, Alwar, Udaipur, Tonk and Banswara.

For development of ITIs, various Centres of Excellence (COE) have been established after signing MoUs with industrial giants like Samsung, ITEES Singapore, CAT, L&T, Toyota, Maruti Suzuki, etc. Apart from this, there have been various MoUs signed with industrial partners for providing latest training to the students: Asian Paints has set up Color Academy and also run “Skill on Wheels” for remote areas, Cisco has set up Networking Academy in ITI Anta (Baran) and plans to cover the whole state, Glass Academy has been set up in ITI Bhiwadi for skill training in Glass sector, Pidilite has set up Skill development center in ITI Jaipur and ITI Jodhpur for skill training in Carpentry and Plumbing sector, and Bosch Bridge Academy is functional at 12 ITIs and is soon to be set up in 19 ITIs as per MoU signed during Resurgent Rajasthan Summit.

2.8.3. Skill Development Initiatives

Understanding the importance of skill development as a vehicle for enhancing employability of working population, the State Govt. of Rajasthan set up Rajasthan Mission on Livelihoods (RMoL) in 2004. Rajasthan Skill and Livelihoods Development Corporation (RSLDC) is the apex agency which takes care of the implementation function of all livelihoods and skilling initiatives in the state. RSLDC's core mandate is to coordinate skilling programs and build capacity at the state level. All skill training institutions/agencies other than Industrial Training Institutes (both government and private) come under the purview of RSLDC. ITIs are implemented by partner organizations but overseen/monitored by the state PMU through RSLDC's district teams. RSLDC delegates the actual implementation of skilling programs to the respective Ministries responsible for their schemes/programs. For example, to implement the Ministry of Rural Development's Deen Dayal Upadhyaya Grameen Kaushalya Yojana16 (DDU-GKY), RSLDC signs Memoranda of Understanding (MoUs) with Project Implementation Agencies (PIAs) which manage implementation at the block level. Similarly, for Ministry of Labour schemes (DGET's Skill Development Initiative, SDI), a Rajasthan Skill Development Initiative Society (RSDIS) has been constituted for management, implementation and for monitoring.

2.8.3.1 Major Schemes implemented by RSLDC

- Pandit Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY)
  It is the skill training and placement programme of Ministry of Rural Development (MoRD), GOI. It aims to provide skills to rural youth, who are poor and provide them jobs with having regular monthly wages equal to or above the minimum monthly wages. Scheme was launched in the year 2014. LIFE-MGNREGA, a new initiative by MoRD has also been converged in DDU-GKY scheme.
- Employment Linked Skill Training Programme (ELSTP)
  This is the flagship program of the state and was launched in the year 2012 with the objective of linking the skill training programmes with employment. The Common Norms of Government of India have been adopted by RSLDC to create uniformity in skilling in terms of branding, delivery and monitoring of training programmes. All the courses executed under this scheme are National Skill Qualification Framework (NSQF) aligned.
- Regular Skill Training Programme (RSTP)
  It is a short term livelihoods based programme and has been the foundation of skill development initiative in the State of Rajasthan, started since 2005-06 under RMOL. The beneficiaries under the scheme are youth, women, person with special abilities (PSA), Jail Inmates and Juvenile home inmates. This scheme has been revised to take up the Entrepreneurship development based livelihood programmes and the training and employability criteria for training of transgender have also been modified under this scheme.
- Pradhan Mantri Kaushal Vikas Yojana (PMKVY)
  Ministry of Skill Development and Entrepreneurship has sanctioned the project for 64,526 youth to be trained under PMKVY 2.0, a component for Centrally Sponsored State Managed (CSSM) scheme in the State to be implemented by RSLDC. In first phase, RSLDC has empanelled 21 Training Partners and has issued Provisional Financial Sanction Order (PFSO) of Category IV job roles for training of 10,550 youth.
- Special Projects
  RSLDC has forged the partnerships under Flexi MoU scheme with the opportunity for industry to customize the course curriculum as per their industry demands and benefit the youth with exposure to industry environment and their 360-degree career development. BOSCH, Samsung India Electronics Pvt. Ltd. are few such leading industries partnered with, under this scheme.

Table 2.21 Progress of Skill Training Programmes in Rajasthan (Dc. 2013 to Dec. 2017)

Scheme Name	Youth Trained (Dec. 2013 – Dec. 2017)	Youth Trained (April 2017 – Dec. 2017)	Active Training Centres (as on Dec. 2017)	Youth under Training (as on Dec. 2017)
Pandit Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY)	34,951	2,583	37	2,542
Employment Linked Skill Training Programme (ELSTP)	163,578	20,622	208	12,957
Regular Skill Training Programme (RSTP)	18,212	3,550	30	1,463
Special Projects	5,001			
Total	221,742	26,755	275	16,962

Source: Economic Review of Rajasthan 2017-18

Due to its continuous efforts for developing required skills in its people, Rajasthan was awarded the prestigious Gold Trophy for the Best State in Skill Development at the 'Skilling India Summit Cum Awards' organised by ASSOCHAM. Rajasthan has won this award for three consecutive years. Though, Rajasthan has taken huge strides towards development of Human Resource but still there are many gaps to be filled. The physical infrastructure of a lot of Govt. ITIs is not up to the mark for modern standards. Some of the Private ITIs are working out of very small area which is not appropriate for imparting training. Apart from this, various machines on which training are provided are outdated and are nowhere to be found in the industry. So, there is a requirement of huge capital expenditure and stringent monitoring of the ITIs for their upgradation to modern industrial requirements. Another issue is with the quality of education imparted in the students. The students are very weak in the soft-skills (such as verbal and written communication) part and seem to have very little knowledge about very common industrial methods such as 5S, safety protocols, etc. There is just one training scheme for training of instructors/trainers, that is, Crafts Instructor Training Scheme (CITS) which is a central govt. scheme. Under this there are two govt. and one private institutions in Rajasthan which provide training to trainers. There is a need of more such schemes and more number of Institute of Training of Trainers for improving the lack of quality in education/training schemes.

Table 2.22 Overview of RISU and BSDU

Institution	Overview
Rajasthan ILD Skill University (RISU)	• RISU is the first skill development university of India established in 2017 in Jaipur. RISU is Government State University, having authority to associate with institutions operating in skill and vocational training. • The prime objective of RISU is to provide skill development training and employment to youth under National Skill Qualification Framework • Twenty-two skill related institutions have been affiliated so far and more than 4000 students are pursuing skill based studies in these institutions. • Some of the affiliated institute include Arch College for Design and Business, Pearl Academy, Indian Institute of Gem and Jewellery (IIGJ), Biyani Shikshan Samiti, Lal Bahadur Shastri Shiksha Samiti, etc. • RISU is offering various programmes such as Leadership Development Programme., Management Development Programme. Skill Development Programme, Entrepreneurship Development Programme., Training Programme
Bhartiya Skill Development University (BSDU)	• BSDU is a State Private University incorporate in 2017 in Mahindra Special Economic Zone, Rajasthan. The concept of BSDU is based on 'Swiss Dual System' which is combination of 'On the job Training' and 'Vocational School'. • BSDU also offers Skill Certificate, Diploma, Advance Diploma, Bachelor of Vocation (B.Voc), Master of Vocation (M.Voc) and Ph.D in various skill areas. • Further, programmes offer in BSDU are supported by UGC Instructions for Vocational Programs, National Skills Qualifications Framework (NSQF), AICTE Instruction for Vocational Programs, NSQF RPL (Recognition of Previous Learning) Guidelines, Guidelines of respective Sector Skill Councils (SSC), National Occupational Standards (NOS), Skills Qualification Packs • BSDU has signed MoUs with various companies and organisations for providing training programmes and establishment of training institutions. Some of the companies or organisation include Daikin Air Conditioning which would be providing Common Interest of imparting trainings related to HVAC, Polycon International Ltd, Jaipur would be providing Skill Development, Training, Production, Placement, Designing, R&D Services and Related Services, Government of Rajasthan & Photonic International Pte. Ltd, Singapore would be providing Collaboration and Support for Establishing the Skill University & Photonics Training and Research Centre, etc.

Source: RISU, BSDU from website

2.9. Results of questionnaire survey in Rajasthan State

A survey was conducted to corporations which have already established the operation in Rajasthan state. The major topics were current issues and the request to local government, based on the investment environment in Rajasthan.

The survey was conducted through various means, including the mail survey using the survey slip, online survey by e-mail and questionnaire by phone interview. 57 samples are collected, of which 30% consist of Japanese MNCs.

The overview of survey is listed as follows. The respondent's industrial pie chart indicates that the dataset consists of wide variety of industries, although the consumer goods and automobile industry have slightly high proportion. The respondents' operation indicates that the establishment mainly appears as the production center, intended to target the Indian market.

Table 2.23 Outline of the survey conducted in Rajasthan

Respondents' industry	Automobile and components Consumer goods Chemicals Pharmaceuticals Electrical, electronic & ITC equipment Non-electric machineries Rubber products Metal products Steel Transportation service Finance& insurance Service Others	N. of questions	27
		Means of data collection	Phone interview, e-mail, letter
		Time period	July 2018
		N. of samples	57 Of which 17 Japanese and 40 Non-Japanese corporations

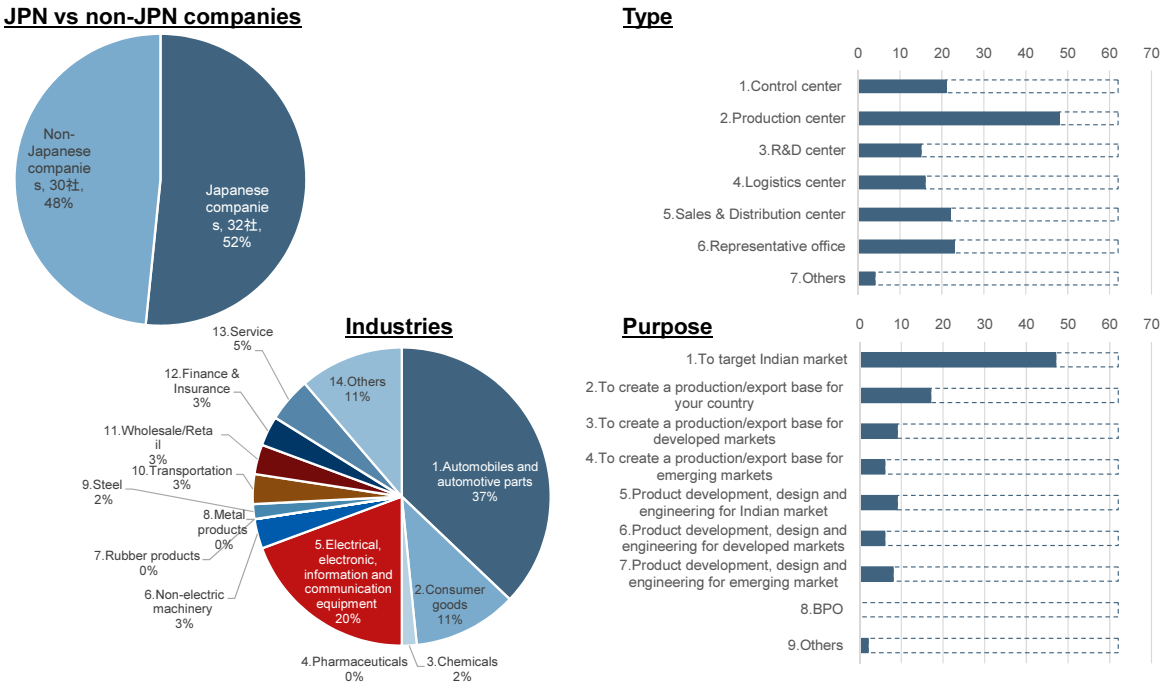

Chart 2.26 The respondent's data collected by survey in Rajasthan

Firstly, a survey of the degree of satisfaction towards investment environment is conducted. As for the holistic review, dissatisfied respondents overwhelm the satisfied companies, especially in the 'Industry promotion policy', 'Industry human resource development', 'power' and 'water' sections. It is conceivable that the underlying dissatisfaction towards delayed formation of industrial clusters and industrial water scarcity has surfaced in the response.

On the contrary, many respondents were satisfied about the land allocation and power supply. The corporate burden on land allocation is relatively low, thanks to RIICO's establishment of industrial park. Although blackout still occurs in Rajasthan, favorable response reflects the improvement in its stability, which is also observable in the interview inserted later.

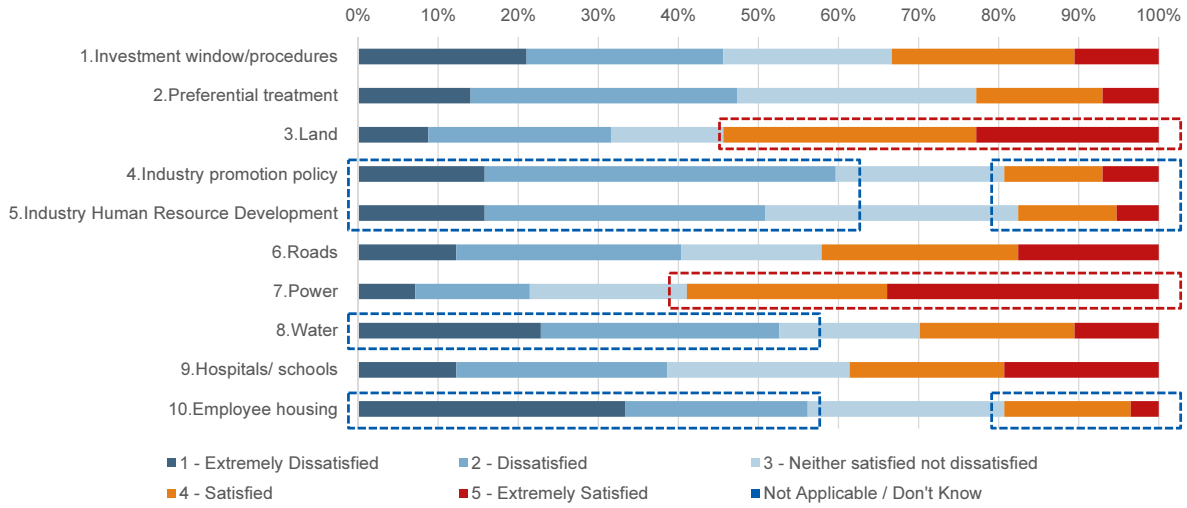

Chart 2.27 How much satsified with the investment environment in Rajasthan each company is

Below are status quo problem and demands for the state's government.

As for investment recipient counter and the procedure, lots of companies feel dissatisfaction as it takes time and is troublesome, approximately 40% of companies answered "Procedures take time/deadlines are not observed. As demands for the state's government, lots of companies answered "1.Set up one-stop windows", "10.Establish/improve investment portal site", " 7. Draw up plan to streamline permits/approvals", and commented "Even if we use portal site, we need to go to the counter anyway", "It is hard to use online portal site in areas with poor connectivity with the internet", "We want the online portal site more user-friendly", so there are lots of demands for improving one-stop windows and portal site.

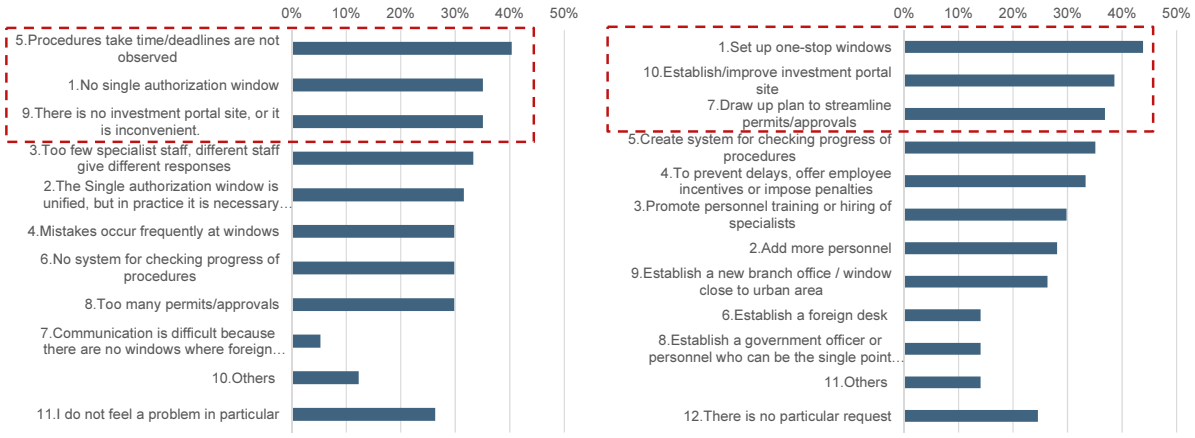

Chart 2.28 Problems of investment recipient counter and procedure in Rajasthan （left） & demands for the state's government （right）

As for incentive, answers such as "1. No financial incentives", "2. Content or financial incentives not attractive" were dominant. Peculiarly, there are comments such as "SME are ignored", "No

incentives for companies in remote places", "No instantaneous incentives as the procedures delay". As for demands for the state's government, the answer "1. Subsidies for individual costs" were gathered by 50% of companies. Since commented by companies as a status quo problem, there is the necessity for further improvement on current incentives from the perspectives of recipients and procedures.

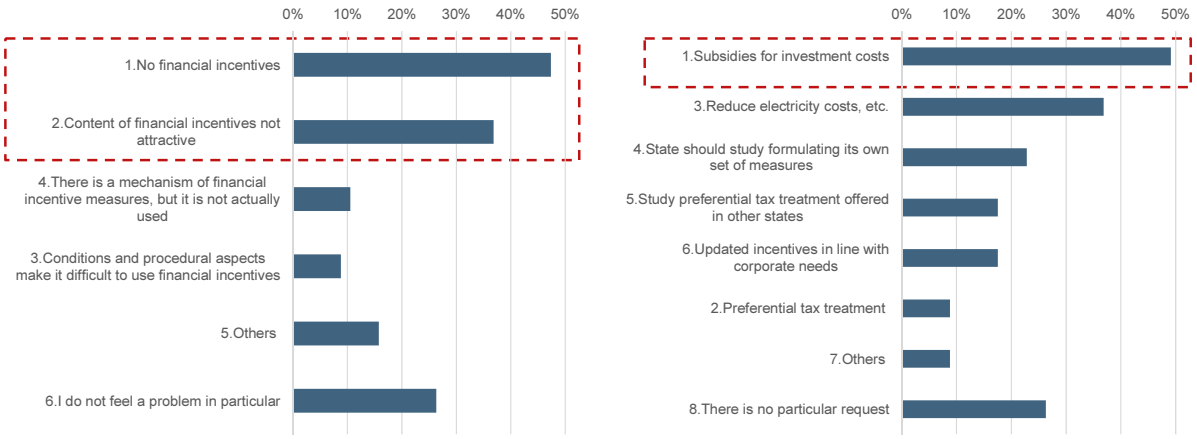

Chart 2.29 Problems of incentivesin Rajasthan （left） & demands for the state's government （right）

As for land seizure, the answer "2. Land prices are high which limit investment", were the most common one. As demands for the state's government, "2. Government should make more industrial estates available to promote competition" is the most common comment, and it could be inferred that there is a demand for industrial estate which sufficient infrastructure is established with low price. On the other hand, there are also comments caring about litigation risks such as "3. Review ordinary land purchase agreements（ex. Abolition of enhance condition）". In addition, there are opinions such as "Land development should be continued", "Policy which rectify industrial estates' land price is necessary".

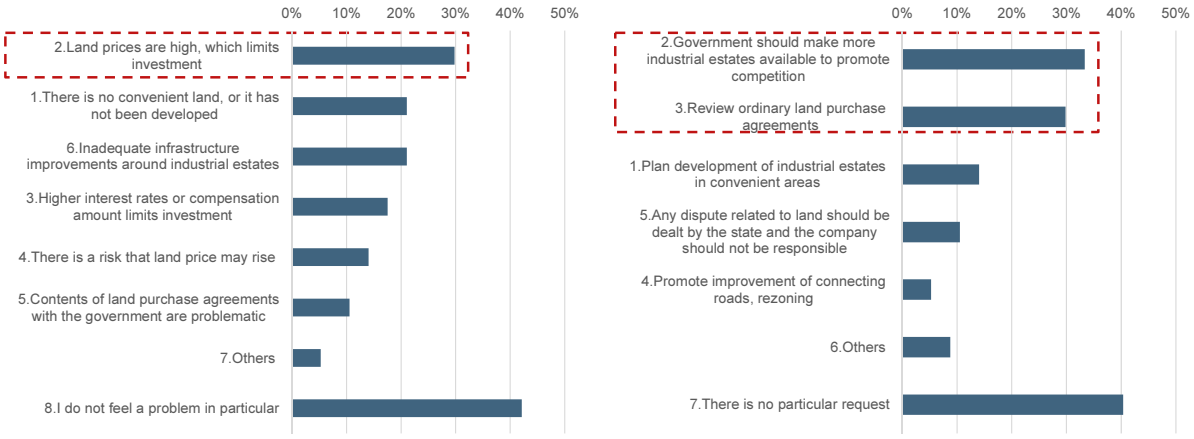

Chart 2.30 Problems of land seizure in Rajasthan （left）& demands for the state's government （right）

As for industrial policies, the answer "5. No policy of industrial promotion from state" occupies almost 50%, it is reflecting the view of dissatisfied companies located there as the direction of Rajasthan's industrial promotion is opaque. Moreover, demands for the state's government shows same situation as more than 50% companies answered "5. Establish the industry Promotion Vision by State". There is a clear demand for the state's government that they establish industrial policy covering various company size and areas. Such demand is reflected as comments such as "Industrial policy should be set up for the whole state as it only covers each area for now", "Although there are policies, they should be made more beneficial for companies", "No policies for SME, so need to be set up".

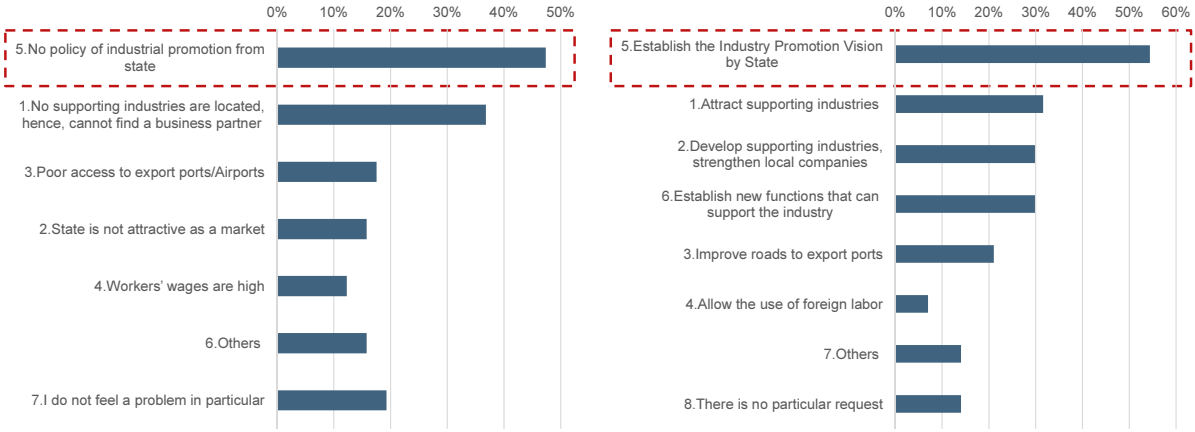

Chart 2.31 Problems of industrial policies in Rajasthan （left） & demand for state's government （right）

As for raising talents, "Not enough schools for learning skills" was the most common answer. Likewise, as demands for the state's government, approximately 50% of companies answered "1. Formulate a state human resource development plan", followed by "4. Development of new

foreign style manufacturing schools". Such answers made it clear that each company strongly feels local staffs lack skills, and demands the state's government develop talents. To be concretely, there is high demand for basic skill such as "manipulate machines" rather than expertise. Moreover, some argue "No sufficient ITI education program", "Educational institutions near industrial estates are necessary", and "Minimum wage in Rajasthan must be increased".

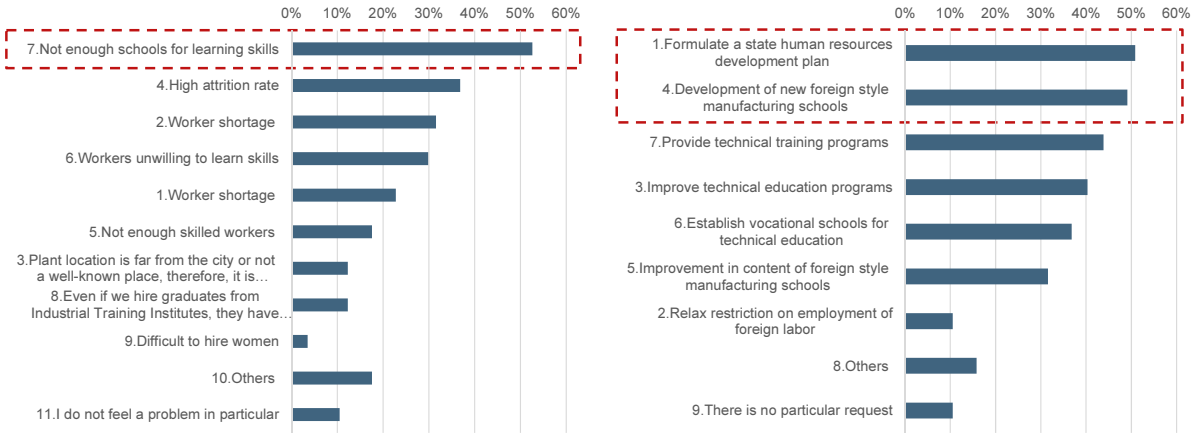

Chart 2.32 Problems of raising industrial talents in Rajasthan （left） & demands for the state's government（right）

Main roads have been established, answers such as "4. Cargo and passenger traffic are not separated", "5. Lack of street lights, not enough paved roads, poor safety" were gathered by lots of companies. As demands for the state's government, likewise, lots of companies answered "Set up truck-only roads or truck priority times, relocate logistics facilities", "Build sidewalks, install pedestrian traffic lights and street lights". Thereby, there is demands not only for maintenance of roads, but also for easing traffic congestion by setting the rule and improvement of safety. As for demands for particular area, although those were mainly for their companies' locations, there are strong demands for maintenance of "NH8", and "Road connecting national roads and factories".

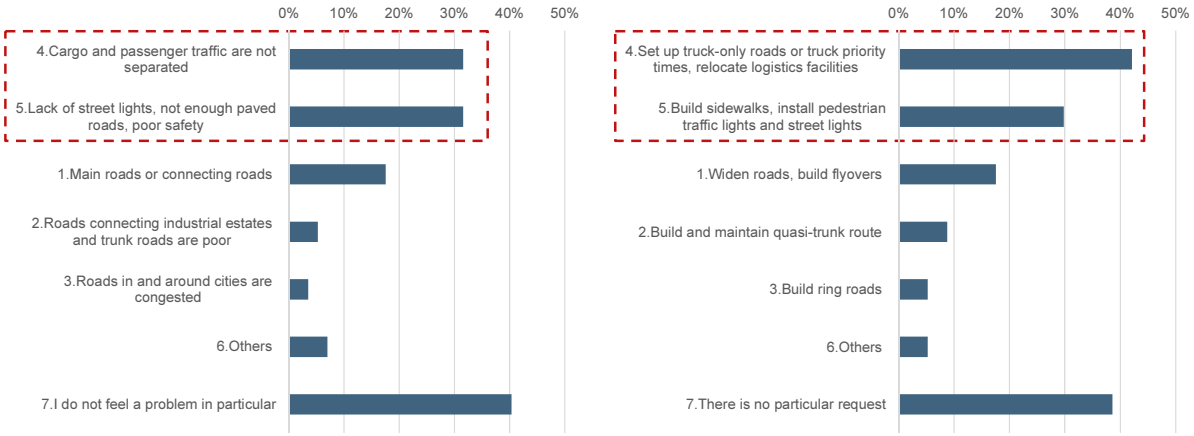

Chart 2.33 Problems of roads in Rajasthan （left） & demands for the state's government （right）

As for electricity, the most common answer is "1.Power supply is not stable, power outages occur frequently" by 30% of companies, followed by, "2.Power supply is not stable, flash power outages" "4.Private power generator is necessary, which increases the cost". As demands for the state's government, the most common answer is "1. Strengthen power stations and provide subsidies for self power generation", by approximately 30%, followed by "2.Strenghen power stations and provide subsidies for self power generation", "3. Build distribution network". Although some comment "It has been improving", there are criticisms about cost such as "Though we have established our own power generation station, there is no subsidy from the government", "Electricity price should be lowered".

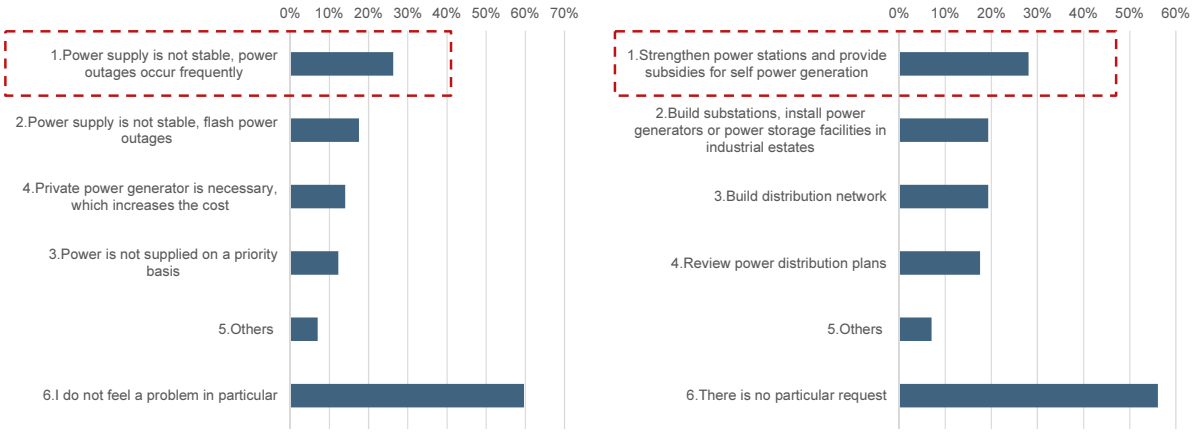

Chart 2.34 Problems of electricity in Rajasthan （left） & demand for the state's government （right）

As for lack of water, it is said the most serious problem in Rajasthan. The results reflected that fact. Approximately 50% of companies answered "1. Insufficient water supply", showing

insufficient supply for industrial water particularly. As demands for the state's government, approximately 50% of companies answered "2. Create a master plan for water supply for individual use", and some commented as " We secure water supply by ourselves", "There is no water supply in our area", and "They should make a plan about the limitation and supply of water". Such answers reflected the dissatisfaction of companies with unclear stance and plan of the government on water supply issue. The answer is followed by "1. Build or strengthen water filtration plants on sewage treatment plants", and "4. Develop industrials estate close to water/sewage treatment plants".

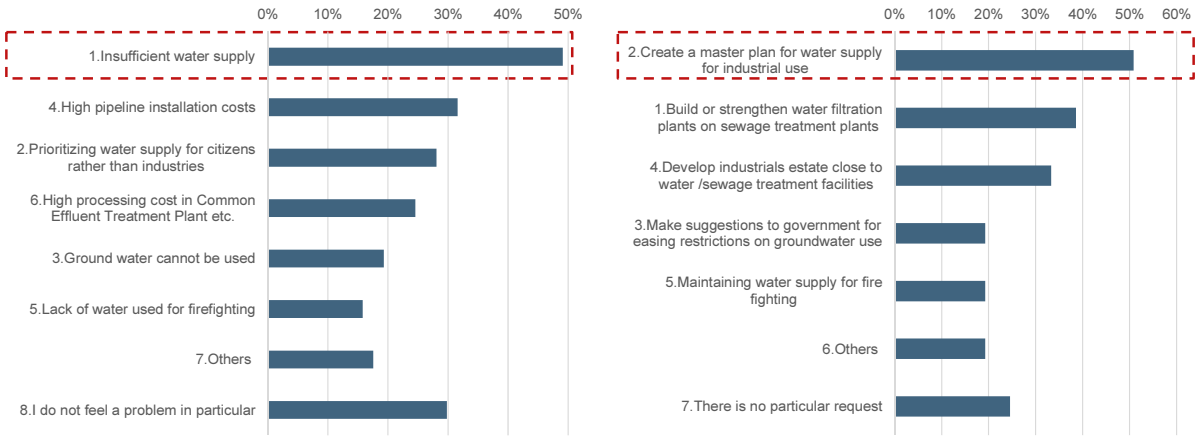

Chart 2.35 Problems of Watersupply/sewage in Rajasthan （left） & demand for the state's government （right）

As for social infrastructure such as hospitals and schools, there is a necessity to improve the quality of them rather than the quantity. As for status quo, the answer "2. Cannot receive the same standard of services as in developed countries" is common. As demands for the state's government, 50% of companies answered "1. Set up schools and hospitals for expats" reflecting the demand that the state's government leads establishing social infrastructure. As for details, there is a comment "We expect the state's government set up better standard hospitals and educational institutions", and especially as for hospitals, there is strong demand for improving the status quo; the state lacks cleanness and medical specialists".

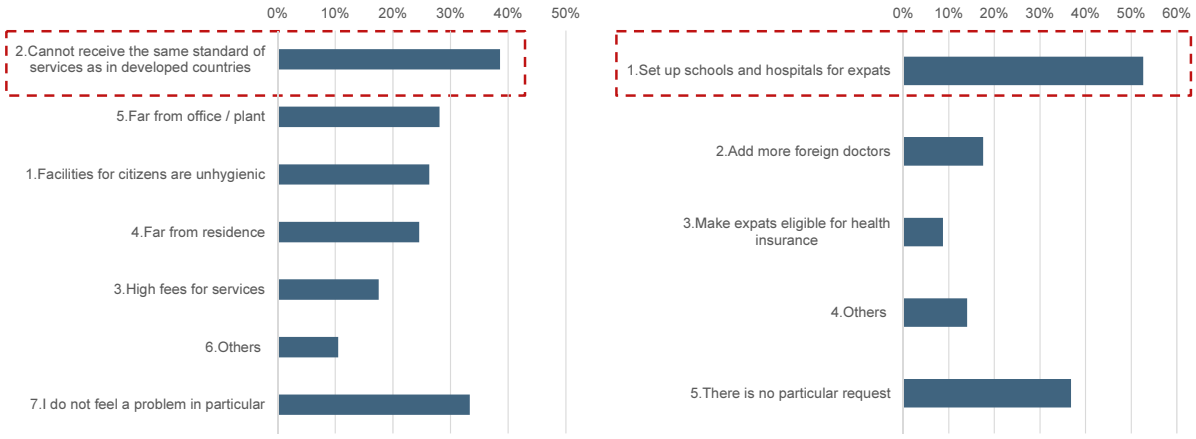

Chart 2.36 Problems of hospitals and schools in Rajasthan （left） & demand for the state's government（right）

Concerning as housing for employees, providing public housing for young employees and subsidy for rents in order to expand the choices where to live are necessary. Answers such as"3. No system to encourage home ownership", "2. No quality facilities available to rent as housing, no shared facilities(poor quality of service)", "4. No/not enough public housing", and"1. Costs are too high, so employees cannot afford to build their own homes" were gathered by approximately 50% of companies. Thereby these topics are highly concerned by each company. In addition, as demands for the state's government's demand, there are high expectations for them as around 50% of companies answered "1.Establish a rent subsidy system", "4. Build public housing for young people", "3. Subsidize mortgage interest to encourage home ownership", "2. Provide subsides for housing built by businesses and a lease-back system to public authorities". To be concrete, there are comments such as "No management support for employees' house", "Only 20% of employees are provided with houses".

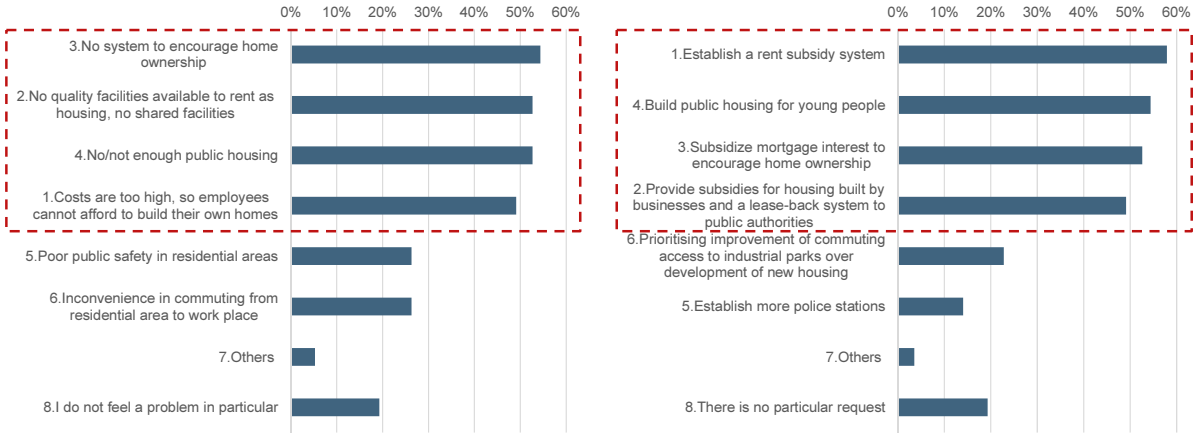

Chart 2.37 Problems of housing for employees in Rajasthan （left） & demands for the state's demand （right）

As other opinions about status quo problems and demands for the state's government which do not belong to above topics, there are "Employee's commutation means are quite serious problem", "Logistics companies provide poor quality service, and logistics is the most serious problem for the companies in remote areas", "In industrial estates, shops along with roads should be gathered into 1 place", and "The government should pay more attention to purification of air and water in cities and industrial estate and preventing epidemics".

In next chapter, interview result discussing details mainly about same topics in this chapter will be covered. While summarizing the result, setting up the prioritization towards problems in the state and detailed demands depending upon industry and area are reported.

2.10. Interviews with companies / association in Rajasthan state

We conducted interviews about same topics as questionnaire survey concerning as status quo problems and demands for the government towards the investment environment in Rajasthan on companies and organizations to find out their opinions and demands more. We mainly visited Japanese companies located in industrial estate “Neemrana”.

We summarized companies’ voices from interview results in a form of the list from the next pages. Furthermore, dialogue of each interview is attached as the last reference of this report.

This interview focused on the investment environment in industrial estate “Neemrana” where a lot of Japanese manufacturing companies are located. As a result of interview, although status quo problems and demands for the governments are diverse, the most common and serious topics could be converged into 3 topics; limited water resource, industrial promotion policies, and promoting raising talents.

Lots of Japanese companies argue that the most serious problem in Rajasthan is securing water resource. Combined with climate factor, Rajasthan has less water resource than the past. So securing industrious water is imperative. For now, lots of Japanese companies in industrial estate “Neemrana” operate through ground water. However, using ground water requires approval by Central Ground Water Authority (CGWA), and the update of license has been getting difficult. Though, they barely operate their business with water provided by RIICO for now, ground water’s base has been lowered, and it is certain that it will be serious problem in mid & long term. Other regions including the industrial estate “Ghiloth” are in same situation. Therefore, investment in Rajasthan’s manufacturer would be prohibited since the situation would become worse to the extent that each company cannot maintain its current production volume in long term. Furthermore, water problem hugely influences prevention of disaster. As a matter of fact, water was the bottle neck for fire extinguishing at huge fire in the industrial estate “Neemrana” happened in 2017. As for this point, supply of water as the state’s government or RIICO, is insufficient and countermeasure for the future is necessary.

Moreover, inexistence of industrial policy that complete whole supply chain of Japanese manufacturing companies by attracting companies including supporting industry’s ones. As supporting industry’s quality is not that high in India, for Japanese OEM manufacturer, the environment SME supplier are located near them as they have in south east Asia is preferable. However, establishing such environment has not been drove as there is no campaign and infrastructure which promote investment in such companies. Moreover, local industry which would supplement such gap have not been supported to grow. For example, CII (The Confederation of Indian Industry) is pointed out following points; human resource development in manufacturing industry has not been proceeded though it has been proceeded in service related

industry, they lack department specifically take in charge of SME in the state, activities/money/policies which promote SME's business are inexistent.

Lastly, as for human resource development, there are different problems and demands depending upon workers, engineers, like Haryana. Among them, as for workers, companies argued they need education in companies at the end of the day as education level in ITI is low, and facilities are outdated.

Related to human resource, we collected various opinion about hiring female employees. Basically, Female are considered to have higher skill in many cases, and companies want to promote hiring of them. However, in "Neemrana", commutation means（especially securing safety when they go back to home in during the night）and reginal environment which lack attractiveness as a residential area are the bottle neck of hiring female employees. Other industrial estates have in common with this problem. Therefore, social infrastructure and crime prevention environment are also important perspective when it comes to female employment, and hiring talents in general.

Table 2.24 The summary of interview result targeting Japanese companies in Rajasthan

		current problem	Company voice
POLICY (Soft infrastructure)	Investment window / procedures	-	(Neemrana industrial park enterprises mainly do JETRO's window with the state government, so there is no particular request for state government)
	Preferential treatment（Financial Incentives）	-	(Enterprises in the Neemrana Industrial Complex are subject to investment incentives from Rajasthan State, so there is no particular request for state governments)
	land	Land in a partially unaccommodated state is sold, it is difficult to construct a factory (outside the industrial park)	• We purchased from the state government because there was an introduction of the factory site at the adjacent place of the factory, but in fact it was decided to buy a toothless land with the entire land inside the premises unavailable. Since a business can not build a factory without a lump of land, we would like you to house the entire land inside the premises and sell it after clearing ownership.
	Industry promotion policy	There are no industrial promotion policies that will accumulate within the state including supporting industries	• There are parts makers in Noida, but road quality is bad and logistics problems occur, so please contact companies in related industries near Neemrana. However, the Neemrana Industrial Park has already been almost buried, and although the Gilot Industrial Park is being constructed separately, the price is high and the infrastructure is not in place, so the barriers to entering are high. Providing places for parts and supporting industries should be good. • Challenge is the low level of casting manufacturers in India. Even if there is void, it is done as good. When there is a problem, they will re-blow if asked, but it takes too much time.

			• Compared to southern India, the accumulation of supporting industries is inadequate. The supply chain is not completed within the province. Since many Chennai and Pune Indian companies are used, it is good to have industrial promotion policies that can be accumulated within the state.
		Technological level of supporting industries is low	• Indians have a low level of technology and knowledge of molds, which is about 1 / 10th the level of Japan, and the level is lower than that of Southeast Asia, so it is difficult to train Indians. As in Thailand and Indonesia, a Japanese supervisor who needs technical guidance is necessary, but if you hire a Japanese person in India alone it costs around 10 million yen, so inviting you at the cost of the company difficult.
	Industrial Human Resource Developme nt	It is necessary to teach worker layer from common sense such as 5S	• For employees in the workforce, we have adopted straightforward people. In-house education after adoption is essential and it is necessary to tell from the fundamental part such as 5S. • What you want for education at an education and training institution is to keep firm 5S etc. and to use basic machine only. • I do not expect to advance knowledge training. What I expect most is English. In addition, mathematics and general common sense should also be provided. It is still better if you understand the electrical system and machine operation, but after all the machines used are different and your company's education is necessary, so if you can communicate in English and have a solid attitude to learn, it is easy to educate. • I do not expect work knowledge or English in advance for worker class. The only thing that is hot, heavy and big is to handle big things and the danger is high, so please educate me about safety (awareness).
		Aging of ITI's training facilities	• Have more hardware assistance than software. The level of ITI is very low, and it is indispensable for companies to develop human resources in their company. Among them, should we eliminate the fact that there are no legitimate equipment machines that can conduct practical training and experiments before supporting the training program.
		You must bear the cost of building the building used for JIM	• Those who have nurtured with JIM are currently using a lot of them at their own company, but in the future they will be raising more talented personnel of other companies. Facilities used for training etc. were obtained through negotiations with the state government, but buildings need to be built on their own. Currently, we use vacant rooms of existing buildings as classrooms, and an independent building will be required in the future, so the burden on the enterprises is significant. I would like the state government to request financial support for JIM's classroom building and I would appreciate it if JICA's support will be there as well. Not to mention Japanese companies, please understand that we are aiming for technology improvement in India according to RJ state industrial policy.
		From the aspect of working time regulation and security assurance, female employment is difficult	• I want to develop a female supervisor who can manage women. Currently, there are 30 female employees. We also have a nursery in our factory. Recently, the extension of overtime hours for women was done • Currently, there is only one woman. There is a possibility that problems between men and women may occur (men have handled women), so it is difficult to positively adopt

Sub-projects (industrial infrastructure, social infrastructure)	road	A part of the road connecting NH8 and Tapukara district is still unpaved, and drainage measures are insufficient (Road flooded every time rain)	• In the rainy season, the drainage function is not sufficient, so the road will be flooded. • Road environment is very bad. For example, although bypass can be made, earth and sand are loaded there and it is not possible to go through, the part from NH to the side road is not maintained, and it will flood when it rains. • Whether the road around the factory is charged and that they are considering employees and factories. If you are looking only as a collection target (Nissan in Chennai, the road with three lanes on one side is being maintained)
		Connection between NH8 and Neemrana Industrial Park flyover in front of the front gate is inhibited	• A flyover has been installed at the entrance of the Neemrana Industrial Park and it is a very bad structure that you do not put it directly from NH8. I do not think this will be fixed as a central government, which is impossible as an industrial estate, is not it to be said as a state government? In addition, its underpass is also very narrow, and the situation of transportation is bad. I would like to seek more useful road infrastructure for the industrial park.
		A part of the road connecting the Gilot Industrial Park from NH8 remains unpaved	• Some roads about 7 km connecting the NH8 and Gilot Industrial Park are partially incomplete. We are building a bridge for the part where gasoline passes through the basement, and I heard that it took a long time to design a high-strength bridge and to coordinate with Gas Corporation
	Electricity	The price of electricity purchased from the state public corporation is high	• Electricity itself is bought from the state public corporation, but the electricity bill is high. • Rajasthan is burdened because it is a state with high electricity price in India. I want you to make efforts to lower electricity bills and improve quality. • Rajasthan electricity price falls into the worst 5 of India as a whole. We are trading with one electric power company rather than a monopoly, but a sudden raise in prices by Ohmi Electric Power Corporation (JVVNL) will occur.
		Power supply is not stable (Although it is improved, instantaneous blackouts still occur)	• As for electricity, there are power outages, etc., and the influence on the casting sector is great. • Although it was said that we will supply electricity to the factory with the highest priority, promises are not being kept. We have installed a private generator to deal with it. • Preventive work such as periodic maintenance for wiring and substation equipment is not performed at all. I would like to seek improvement of the quality of the current facilities rather than installing new equipment. • In addition, despite being an industrial estate, the problem is that the substation facility is also used for neighboring dwellings, and I think that we want to separate residential power and industrial power.
	Water	• The groundwater level is falling • Acquisition of groundwater acquisition permission is difficult	• The pumping up of groundwater is regulated on the grounds of shortage, and as a result RIICO tank water is purchased at a high price. Even if you apply for pumping up, it is hard to get permission. • Central Government Groundwater Bureau CGWA (Central Ground Water Authority) has not approved a request for renewal of groundwater permits since last year.

		• The price of water purchased from RIICO is high	• It turned out that no company got renewal permission for underground water use since last year. Updates are every two years, and most companies are not allowed to renew. • As for disaster prevention, water will eventually become a bottleneck. Currently it is inevitable to extinguish fire with water sold by RIICO. • While the use of groundwater is restricted, the price of water purchased from Rajasthan is very high, INR 552 / ton, whereas the HR state is INR 12 / ton. • I believe it will be the most serious problem in the medium to long term. In the past, the groundwater level has been decreasing with the increase in the number of enterprises in Neemrana, and now it is difficult to obtain permission and approval for groundwater intake. • It is impossible to deny the possibility that the intake restriction will be set, which will inevitably limit the production volumes of each company, so that big problems will emerge • Issues related to groundwater are serious, but as a company it is unknown what sort of thing can be considered as a concrete project for solution.
	Hospitals · schools · fire fighting	Firefighting function is not maintained	• We have been requesting RIICO via JETRO for the enhancement of disaster prevention, specifically the installation of fire department and fire truck, before Unicharm factory fire occurred. For that, it is necessary to prepare water and regime (people, fire protection clothes, cars etc.). The water pressure of the pump is also low. Support for firefighting skills is also necessary. • There are no good schools and hospitals, so married people live in an environment where they are difficult to live. Elders tend to go from Gurgaon.
	For employees Residential / living environment	The living environment in the residential area is not enough (Regional development at the same time as housing development)	• There are few malls, entertainment and cheap residences, so young people are hard to establish (In the industrial estate, there is a relatively high-priced residential area for managers). • There are no good schools and hospitals, so married people live in an environment where they are difficult to live. Elders tend to go from Gurgaon. • There is no entertainment as a living environment, so it is not an attractive work environment for young employees. You have to go to the cinema also to Rwaly. The mall is also not finished. • There are no residential areas where Indians over manager (above middle level) want to live. Some people currently go from Gurgaon. Not only houses, good schools, hospitals, security, entertainment are essential. For that purpose, urban development is necessary, for example, efforts to give incentives to developers are required.
	Crime prevention	Bad security	• In terms of crime prevention, bicycle robberies occur, and poor security is said. It is told not to go out especially at night. • Crime prevention is also an issue. Motorcycle robbery etc. are occurring.

2.11. Identifying Issues and Proposal of policy matrix for Rajasthan State

2.11.1. Issues of policy, system, and procedure that industries are facing

Based on the voice of companies in the state, this study identified issues to be solved regarding policy, system and procedure for investors. For each issue, there are no or less actions currently undertaken by GoRJ. In order to improve environment of investors, these issues are expected to be solved.

Table 2.25 Identified issues of policy, system, and procedure for investors

Category	Issues to be solved	Voice from companies	Current situation and/or Fact
Investment application process	1. Business process re-engineering for each department shall be taken.	40% of companies answered "Procedures take time/deadlines are not observed. Even if we use portal site, we need to go to the counter for each department anyway.	SWCS provides approvals for 87 services from 15 departments.
	2. To build system and assign "relationship manager" who attend investor to apply and submit documentation and conduct their issues fully.	In order to facilitate investor or supporting companies who is willing to locate in Rajasthan, GoRJ shall assign "escort officer" who provide one stop and customer friendly service to support getting all approvals.	JETRO supports potential investor to conduct application process in Japanese language, however these services are delivered by Japanese organization and there are not another function in GoRJ.
Industrial Promotion Policy	3. To attract investments in thrust areas of industrial promotion policy.	50% of companies answered No policy of industrial promotion from state, especially policies to promote supporting industries for worldwide need to be set up	All industrial areas being developed by RIICO, 30% plots would be reserved for MSMEs, but it is only for domestic MSMEs not for foreign companies
	4. To establish strong incentive system for "supporting industries" that has high quality skill and advanced technology of manufacturing. To shorten period to get approval of getting refund of incentive scheme	Almost 50% of companies answered No financial incentives, especially for supporting industries. Lack of supporting industry decrease global competitiveness of manufacturing industry in Rajasthan.	Rajasthan Investment Promotion Scheme 2014 provides Investment subsidy, Employment Generation Subsidy, Exemption from Electricity Duty and so on. But it was not attractive comparing other state.

Source:NRI

2.11.2. Infrastructure projects that companies expect to build

Regarding result of interviewing and questionnaire, these potential sub-projects below are listed up. Many companies think improvement of water is the most priority in Rajasthan. For instance, Water is supplied by water tank car regularly and few company has permission to get it by underground in Neemrana industrial park. However, regulation of underground become hard rather than previous year, so it is more important to supply water for industries. It is expected to build additional reservoirs only for industries.

Comparing with serious situation of water, road and power is not heavy issue. However, in order to promote high advanced supporting industries, quality of power and road shall be increased. And it is necessary to support to build security system in the industrial zone in order to improve women workers in industrial area.

Table 2.26 Infrastructure projects that companies expect to build

	Sector	Road	Power
	No.	1	2
1	Name of the project / policy initiative	Development of **road between NH8 and Ghiloth** industrial area (incl. progressing of construction of bridges not advanced)	Construction of **substation** dedicated to Neemrana and Ghiloth industrial park (to separate from home electric power)
2	Company needs	The project is essential for attracting companies to Ghiloth because it is very inconvenient if this road is not completed.	If electricity can be used preferentially in the industrial park, it is very beneficial for the companies.
3	Administrative Department	Industries Department	Industries Department
4	Implementing Agency	RIICO	RIICO
5	Project cost (Crore. INR)	26	140
6	Project readiness rating	Under implementation	Conceptualization
7	Mode of PPP, in case of PPP	None	N.A.
8	Funding sources	Internal accruals/debt	Internal accruals/debt
9	Identified and share of funding proposed from each source	N.A.	N.A.

10	Expected timeline for the project	From 2018 to 2010	From 2018 to 2010
11	Description		

	Sector	Water	Water
	No.	3	4
1	Name of the project / policy initiative	Development of **two additional dedicated water reservoirs** for the Neemrana and Ghiloth industrial area for firefighting and water usage by industries	Rajiv Gandhi Lift Canal Project Phase III
2	Company needs	Water problem is most critical for manufacturing companies in Rajasthan. The project is essential but planning is first required.	The project aims to provide industrial water to industrial areas to meet demand of the manufacturing companies
3	Administrative Department	Industries Department	Public Health Engineering Department
4	Implementing Agency	RIICO	Public Health Engineering Department
5	Project cost (Crore. INR)	7	1454
6	Project readiness rating	Conceptualization	DPR prepared
7	Mode of PPP, in case of PPP	N.A.	PPP
8	Funding sources	Internal accruals/debt	Internal accruals / debt / equity
9	Identified and share of funding proposed from each source	N.A.	
10	Expected timeline for the project	From 2018 to 2010	From 2020 TO 2024
11	Description		This project plans to construct 204 kms long canal to transport 200 cusecs of water per day. This project will cover 5 towns and 1429 villages across Jodhpur district to provide drinking water. This project will also supply industrial water to industrial zones nearby

	Sector	Water	Others
	No.	5	6
1	Name of the project / policy initiative	**Alwar Bhiwadi Water Supply Project**	Strengthening of **firefighting function near the Neemrana and Ghiloth industrial area** through layout of underground water pipelines connected to dedicated water reservoir
2	Company needs	The project aims to provide industrial water to industrial areas to meet demand of the manufacturing companies	The current provision to handle large-scale fire breakout is limited to water capacity of fire tenders in action. Direct connectivity with water reservoir is necessary for longer and continuous flow of water for extinguishing such fires.
3	Administrative Department	Public Health Engineering Department	Industries Department
4	Implementing Agency	Public Health Engineering Department	RIICO
5	Project cost (Crore. INR)	N.A.	17
6	Project readiness rating	DPR under preparation	Feasibility analysis under progress
7	Mode of PPP, in case of PPP	EPC	Association of company located in Neemrana
8	Funding sources	Internal accruals/debt	Internal accruals/debt
9	Identified and share of funding proposed from each source	N.A.	N.A.
10	Expected timeline for the project	N.A.	From 2018 to 2010
11	Description	This project will mainly focus upon drinking water supply to Bhiwadi area of Alwar district, but will also supply industrial water to industrial zones nearby.	

Source:Interviews with Govt. departments, NRI

2.11.3. Issues of human resource development that industries are facing

Based on the voice of companies, this study identified issues to be solved regarding human resource development for investors. For each issue, there are no or less actions currently undertaken by GoRJ. In order to improve environment of investors, these issues are expected to be solved.

Table 2.27 Identified issues of human resource development for investor

Category	Issues to be solved	Voice from companies	Current situation and/or Fact
human resource development	Focus of human resource development should be aligned with the focus of industrial promotion policy.	In the questionnaire survey to companies in Rajasthan, more than 50% of respondents pointed that "Establish the industry promotion vision by state" is their request to the state government.	Thrust areas of human resource development (service sectors including tourism & hospitality, nursing, security, financing and IT) are not aligned with thrust areas of industrial promotion policy (such as automotive, electronics, textile, garments etc.) of the state.
	The number of skilled workers for manufacturing is still insufficient.	In the questionnaire survey to companies in Rajasthan, the most common issue is "Not enough schools for learning skills" (more than 50% of respondents pointed out this issue). In the same survey, "Development of new foreign style manufacturing schools" is the major request to the state government by companies within the state (approximately 50% of respondents pointed out).	The total number of technical colleges have decreased from 477 in 2014-15 to 384 in 2017-18. The intake capacity (number of seats) has also decreased from 132,825 to 100,481 during the same period.
	Trainers need to refresh their knowledge and experience to catch up with the latest situation of industry.	In the questionnaire survey to companies in Rajasthan, 40% or more respondents pointed that they request state government to "Provide technical training programs" and "Improve technical education programs".	
	For the quality of training, machinery and facility used in training institutions are obsolete and thus the training is not practical.		
	Though industries want to promote hiring of women employees, insufficient security hinders the same. Therefore, it is important to secure women workers' safety in commuting to work place in Industrial area.	Commuting transportation methods (especially ensuring safety for returning home at night) and the regional environment to attract attractiveness as a residential area are bottlenecks of female employment.	The participation of female labour in Rajasthan has declined over the last decade. The Female Labour Participation Rate of females in Rajasthan is lower than that of India (whole country).

Source:NRI

2.12. Summary and our proposal

In order to improve environment of industrial promotion and be more attractive to promote future industries, we set 5 pillars of policy and 12 challenges described in below matrix under the industrial promotion program of Rajasthan (RIPP).

1. Investor Facilitation
2. Upgrading Industrial Promotion Policy
3. Improving industrial human resource development
4. Planning to improve industrial Infrastructure
5. Improvement of business environment to attract in further investment

These policy pillars and challenges are executed by the proper department of government and agencies. Responsible agencies are as follows,

1. BIP: Bureau of Investment Promotion / Industrial dept.
2. BIP: Bureau of Investment Promotion / Industrial dept.
3. Department of Industries and Commerce
4. Skill dept., BIP and Industrial dept.
5. RIICO supported by Energy Dept., Water Resources Dept., and Public Health Engineering Dept.

Detailed challenges and action for 3 years are proposed in the draft of Policy Matrix that are referred in the next page.

Table 2.28 Draft Policy Matrix proposed by NRI

No.	Current Challenges	Goals achieved through Program	Evaluation Indicator		Policy Action		
			Indicator Name	Mar 2021	FY2019-20(Prior Action)	FY2020-2021	FY2021-2022
	1. Investment facilitation				Responsible Dept. Name: **BIP under Industrial dept.**		
1-1	• Single Window Clearance System (SWCS) was established and came into effect since 2011.However the usage of single window needs to be expanded to all departments providing Government to Business clearance to investors. Besides, the adequate professional manpower including district level and sector experts to manage the system monitoring is required.	• To upgrade technology levels and adoption of advanced technologies of SWCS for increased facilitation support to investors • To facilitate business clearance from Small and Medium size investors on SWCS smoothly	Usage of Single Window System Approved SWCS improvement plan	Number of applications of SMEs investors on SWCS ●cases	・To identify the needs of industry on business clearance ・To draft improvement plan of SWCS	・To Implement improvement plan of SWCS by best use of technology solution to strengthen the system ・To train officers at districts level for managing business needs of Small and Medium size investors	• To continuously Implement improvement plan of SWCS by best use of technology solution to strengthen the system • To continuously train officers at districts level for managing business needs of Small and Medium size investors
1-2	• There are no Investment Promotion Officer who can covers all issue of investor's application process assigned for the investor. Besides there are no investment facilitation support provided in suitable languages other than English.	• To improve existing "Investment Promotion Officer(IPO)" system and assign IPO who attend investor to facilitate apply and submit documentation and conduct their issues fully during business operation	Indicator of Investor's Satisfaction (full score)	Indicator of Investor's Satisfaction ● / 5 (full score)	• To investigate satisfaction of investor in the field of investment procedure. • To update role and functions of Investment Promotion Officer based on the result of the survey • To draft and approve activity plan of Investment Promotion Officer	• To newly recruit Investment Promotion Officer upon the request from investors • To start works of Investment Promotion Officer based on the activity plan	• To continuously implement activity plan of Investment Promotion Officer • To conduct training for Investment Promotion Manager in order to update their knowledge for better services • To review satisfaction of investor in the field of investment procedure and examine countermeasure to improve service level.
	2. Upgrading Industrial Promotion Policy				Responsible Dept. Name: **BIP and CI under Industrial dept.,Skill dept., IT & Communication dept.**		
2-1	• Global competitiveness of manufacturing industry is low due to lack of prominent supporting industry. For companies in supporting industry (Ancillaries), it is difficult for them to find business chances in Rajasthan state. • Besides, there is no special incentive package for foreign supporting industry, which have advanced technology and enable to transfer skill-sets to local SMEs.	• To attract further investment in thrust areas of industrial promotion policy such as manufacturing	Number of new investment in supporting industry for manufacturing	●companies	• To conduct survey of status of supporting industry for manufacturing and identify issues.	• To draft subsequent scheme of RIPS2014 which the pillar for promoting supporting industry (Ancillaries) for manufacturing are in-cooperated. • To hold a reverse exhibition to show the business chances to	• To approve the subsequent scheme and implement the scheme • To hold a reverse exhibition to show the business chances to potential investors.

						potential investors.	
2-2		• To establish strong incentive scheme for supporting industry in manufacturing that has advanced skill and technology in Neemrana and Ghiloth area in order to creating industrial clusters in Rajasthan. • To shorten period of procedure of application and getting benefits of incentive schemes including RISP2014.	Number of application approved by the incentive scheme Days for approval and getting benefits of incentive scheme	●companies ●days	• To investigate demand on incentive scheme for Neemrana and Ghiloth area • To draft incentive scheme and inquire funding to financial dep • To draft efficient procedure to get refund	• To launch new incentive scheme and promote new scheme for inventors • To build special organization/unit and appoint dedicated officer	• To continue action for promoting the scheme and review investor's voice and examine current scheme • To monitor and review the procedure of incentive scheme
2-3		• To upgrade technology level of industry in order to meet the market demands by utilizing institute of technology located in RJ state such as Central Institute of Plastic Engineering and Technology (CIPET)	Number of technical and technological support which was provided to local industry	● cases	• To identify the needs of industry in manufacturing	• To draft a mid to long term plan for technical and technology support for industry in manufacturing	• To approve and implement the plan for technical and technology support for industry in manufacturing
	3. Improving industrial human resource development				Responsible Dept. Name: **Skill dept., Labor dept., RIICO**		
3-1	• Potential Instructor and less experienced instructor under ITIs need to refresh their knowledge as well as brush up their training techniques for maximum effectiveness of training. However those facility as well as implementation mechanism have not existed in RJ state • Although the needs of industries to fine addition of soft-skills has been expanding, such courses are not provided in government ITIs and most of the students are not able to demonstrate adequate soft skills.	• To train staff & instructor of ITIs through staff & instructor training institutions (SITI) in order to catch up with the latest needs of industries. • To introduce curriculum of soft skill including the "5S" methodology, Sorting, Setting-in-Order, Shining, Standardizing and Sustaining the Discipline to training institute	Number of staff & instructor of ITIs re-trained through SITI Number of ITIs and Centers of Excellences newly introduced soft-skill training including 5S methodology	● re-trained staff & instructor of ITIs through SITI ● ITIs and● Centers of Excellences	• To conduct the needs assessment of industries and prioritize the group of training trade and list up the contents which should be included in the curriculum • To prepare detail project report (DPR) of SITI based on the actual needs from industries • To make action plan to introduce soft-skill training including 5S methodology • To identify the ITIs or Centers of Excellences which will be pilot case for this initiative	• To commence tendering process of SITI and complete the all preparation work including preparation of curriculum and recruitment of lecturer for prioritized group of training trade • To issue EOI for hiring external agency to provide soft-skill training to instructors under pilot ITIs or Centers of Excellences	• To conduct training for staff & instructor through SITI at least for prioritized group of training trade • To facilitate to conduct training to instructors under pilot ITIs or Centers of Excellences
3-2	• It is critical issues that there are gap between quality of the graduates from government ITIs and actual requirement	• To set up project management consultation(PMC) team thorough appointment of a consulting firm			• To conduct Baseline survey of current enrollment, graduation	• To implement action plan for year 1 to improve placements of	• To implement action plan for year 2 to further improve

	from industries. In order to tackle this issue, the government need to set up special purpose agency, which play a management role for promoting better matching between both sides.	that can liaise with industries for better job linkage of ITIs graduates	Action Plan for PMC operation which was approved by state government Number of Placement	●% increase in candidate enrollment ●% increase in graduation ●% increase in placement	and placement • To make an action plan for PMC operations for short-, medium- and long-term • To conduct the tendering process and appoint PMC agency which implement the action plan.	graduates	placements of graduates
3-3	• Despite the high demand on skilled electrician from industry, Government ITI have not fully opened electrician courses in RJ state	• To increase the number of skilled electrician in Government ITIs • To upgrade the level of skills of workers to international level by holding "the vocational training competition"	Number of ITIs newly opening or extending electrician course at Government ITIs Number of skilled workers participated in vocational training competition	●ITIs ● students	• To conduct the needs assessment of demand side (industries) and revise the curriculum base on the result • To draft the implementation schedule of opening electrician courses in government ITIs • To make plan of "the vocational training competition"	• To newly commence or additionally open electrician course at least 15 Government ITIs in FY 2020 • To prepare the 1st "vocational training competition	• To newly commence or additionally open electrician course at least 15 Government ITIs in FY 2021 • To hold the 1st "vocational training competition".
3-4	• Though industries want to promote hiring of women employees, insufficient security hinders the same. Therefore, it is important to secure sound working environment for female workers in Industrial area.	• To clarify bottlenecks for employment of women in factories and implement mitigation measure, thus employment of women is promoted	Number of dialogs held during the program period Number of women hired by industries in Neemrana area	● times ● (number of person)	• To establish joint working unit, which consist of RIICO, Labor dept. • To clarify TORs for each department	• To conduct the dialogs with industries which facilitated by the joint working unit • To prepare an improvement plan for promoting better working environment for female workers and approve	• To implement the improvement plan for promoting better working environment for female workers
	4. Improvement of business environment to attract further investment				Responsible Dept Name: **RIICO supported by Energy Dept., and Public Health Engineering Dept.、Water Resources Dept.**		

4-1	• Acceleration of Infrastructure Development, comprehensive funding and implementation scheme is required for small infrastructure projects benefitting for improvement of investment climate • Water supply for industries depends on underground water. However, restriction to get underground water would be strict, huge damage will occur to industries who use water. Advanced action to create another water resource is desirable • -Power supply in industrial area is not stable that causes defect to products. This problem is critical especially for advanced high technology sectors. • -Firefighting activities in industrial zones are mainly rely on independency of individual company and comprehensive countermeasure by partnership with government and industries are absent. It would have negative effects on the reputation or trust of industrial zones in the State.	• Small infrastructure Project Empowered Committee will select the priority projects and allocate budget properly. The administrative departments and implementing agencies will appropriately monitor and facilitate the priority projects		●●(figure) small infrastructure projects are prioritized and facilitated during the program period	• Potential small infrastructure projects are selected.	• Pool fund for implementing the priority small infrastructure projects as budgeted • Small infrastructure Project Empowered Committee will select priority small infrastructure projects • Establish a Project Monitoring Matrix for the selected priority small infrastructure projects • Facilitate implementation of the priority small infrastructure projects in accordance with the established Project Monitoring Matrix	• Continuously facilitate Implementation of priority small infrastructure projects in accordance with the established Project Monitoring Matrix
4-2		• To make and implement development plan for industries. in order to create alternative resource of water, long term action such as to make ponds, canal or build recycle water plant through the close coordination among Water Resources dept., Public Health Engineering dept., as well as RIICO will be necessary	Number of Stakeholder meeting Number of project which has commenced based on the approved development plan	● times ●projects	• To start investigation of water supply system and examine alternatives to keep water resource for industrial area	• To draft and approve development plan how to keep water resource for industries • To list up prioritized projects and request budget to financial dep.	• To commence prioritized projects in accordance with development plan which was approved
4-3		• To make and implement development plan for replace old transmission line, substation and distribution line for realizing the stable power supply near industrial area, such as Neemrana and Ghiloth.	Number of project which has commenced based on the approved development plan	●projects	• To start investigation of power supply system near industrial area	• To draft and approve development plan how to improve power supply for industrial area • To list up prioritized projects and request budget to financial dep.	• To commence prioritized projects in accordance with development plan which was approved
4-4		• To prepare and implement firefighting action plan for industries through the collaboration with private sector in Neemrana and Ghiloth and deceminate	Actions which has been taken in accordance with the established action plan	●actions	• To investigate necessary actions to be taken on this issue and draft firefighting action plan through the collaboration with private sector	• To commence at least 1 prioritized actions in accordance with firefighting action plan.	• To commence at least 1 prioritized actions in accordance with firefighting action plan.

Table 2.29 Draft Sub Project List

Sl. No.	Administrative Department	Implementing agency	Name of the project/ policy initiative	Tentative Project cost (in INR crore)	Project readiness rating (Please √ stage of the project)					Proposed mode of development (EPC/ PPP)	Funding sources identified and share of funding proposed from each source	Expected timeline for the project		Project rationale
					1	2	3	4	5					
					Conceptualization	*Feasibility analysis under progress*	*DPR completed*	*Under procurement*	*Under implementation*	**In case of a PPP project please mention the mode of PPP (Eg. –Annuity, Hybrid annuity etc.)*		Start date	End date	
1	Industries Department	RIICO	Development of **road between NH8 and Ghiloth** industrial area (incl. progressing of construction of bridges not advanced)	26.3	√	√	√	√	√	EPC	Internal accruals/debt	2019	2021	The project is essential for attracting companies to Ghiloth because it is very inconvenient if this road is not completed.
2	Industries Department	RIICO/ Energy Dept.	Construction of **substation** dedicated to Neemrana and Ghiloth industrial park (to separate from home electric power)	140.0	Being conceptualized					EPC	Internal accruals/debt	2019	2021	If electricity can be used preferentially in the industrial park, it is very beneficial for the companies.
3	Water Resource Department Public Hygine Engineering Department Industries Department	RIICO	Development of **water supply** for Industrial areas, by joining ●●water supply projects implemented by WRD or PHED	●	√	√	√			EPC	Internal accruals/debt	2019	2021	Water issue is critical in many areas in Rajasthan. RIICO is trying to find a new water resource and need to join the project which are initiated by either WRD or PHED.
4	Public Health Engineering Department	Public Health Engineering Department	Rajiv Gandhi Lift Canal Project Phase III	1454	√	√	√			PPP	Internal accruals/debt / equity	2020	2024	This project plans to construct 204 kms long canal to transport 200 cusecs of water per day. This project will cover 5 towns and 1429 villages across Jodhpur district to provide drinking water. This project will also supply industrial water to industrial zones nearby.

5	Public Health Engineering Department	Public Health Engineering Department	Alwar Bhiwadi Water Supply Project	●	√	√	DPR under preparation			EPC	Internal accruals/debt	TBD	TBD	This project will mainly focus upon drinking water supply to Bhiwadi area of Alwar district, but will also supply industrial water to industrial zones nearby.
6	Industries Department	RIICO	Development of **three-tubewells in Neemrana Industrial Area** to increase the water supply capacity by approx. 10%	0.2	Being conceptualized					EPC	Internal accruals/debt	2019	2021	Water problem is most critical for manufacturing companies in Rajasthan. The project is essential but planning is first required.
7	Industries Department	RIICO	Setting up of a **fire-station facility (overground reservoir + underground reservoir + fire station + fire tenders)** near the Japanese Industrial Zone within Neemrana to handle emergency situations such as fire breakout	1.3	Being conceptualized	√	√			EPC	Internal accruals/debt	2019	2021	The current provision to handle large-scale fire breakout is limited to water capacity of fire tenders in action. Direct connectivity with water reservoir is necessary for longer and continous flow of water for extinguishing such fires.
8	Energy Department	Rajasthan Rajya Vidyut Prasaran Nigam Ltd. under Energy Dept.	220/132 kV Substation (Rawatsar, Hanumangarh district)	57.4	√	√	√			EPC	Internal accruals/debt	2018	2020	Rajasthan Rajya Vidyut Prasaran Nigam Ltd. under Energy Dept. requested this project to include in the Priority Infrastructure Projects. This project dedicate for providing stable power supply to one of RIICO's industrial area.
9	Department of Skill, Employment and Entrepreneurship	Directorate of Technial Education (DTE)	Civil construction for starting electrician course in Govt. ITI's as per local demand [No: of govt. ITI's not sanctioned - 10;no: of govt ITI's (other) - 41) [#1]	27.0			√			EPC	Internal accruals/debt	TBD	TBD	DTE requested this project be included as a part of introducing electrician course within their existing ITI's. DTE has observed that the demand for electrician course far outstrips supply by govt ITI's. Additionally, private ITI electrician courses are cost-prohibitive in nature.

10	Department of Skill, Employment and Entrepreneurship	Directorate of Technial Education (DTE)	Construction of Staff & Training Institute to organize training of technical and non-technical staff of ITI's, as well as customised training programs for industries [#2]	56.0			√			EPC	Internal accruals/debt	TBD	TBD	DTE requested that the project be added, as the trainers need access to refresher programs and additional trainings - to improve their skills and learn new skills that will enable them to impart contemporary training to the trainees/ candidates
11	Department of Skill, Employment and Entrepreneurship	Directorate of Technial Education (DTE)	Establishment of remote monitoring system n 300 ITI's covering CCTV, and Aadhar enabled biometric attentance system [#3]	38.0			√			EPC	Internal accruals/debt	TBD	TBD	DTE requested that the project be added, as one of the main reasons for low quality of ITI trained candidates is the low-attendance level. In order to track and improve attendance of candidates, DTE has requested that state-of-the-art monitoring systems be implemented across all ITI's
12	Department of Skill, Employment and Entrepreneurship	Directorate of Technial Education (DTE)	Procurement of new machinery/ tools (incl. replacement of existing outdated machinery/ tools) acros 260 ITI's [#4,#5]	550.0			√			EPC	Internal accruals/debt	TBD	TBD	DTE requested that the project be added - in close to 100/ 260 ITI's the machinery, equipment and tools had been outdated and needed investment for procurement of new machinery, in keeping with the revised training requirements
13	Department of Skill, Employment and Entrepreneurship	Directorate of Technial Education (DTE)	Renovation of govt ITI buildings to ensure safety of staff, students. Addn, construction of new buildings for ITI's [#6]	661.0			√			EPC	Internal accruals/debt	TBD	TBD	DTE requested that the project be added as nearly half of the govt ITI's (133/260) are in a dilapidated condition, and require renovation. Addn, finance support is requiredfor construction of new buildings and extension of facilities
14	Department of Skill, Employment and Entrepreneurship	Directorate of Technial Education (DTE)	Construction of residential facility (hostel) for candidates registered and undergoing training at Centre of Excellence for Tourism Training in Udaipur [#10]	2.0			√			EPC	Internal accruals/debt	TBD	TBD	DTE requested that the project be added as the overall capacity utilization of CoETT is low. Providing a residential campus will boost enrolment for out of district students

15	Energy Department	Rajasthan Rajya Vidyut Prasaran Nigam Ltd. under Energy Dept.	LILO of 132kV Kishangarh Bas-Alwar Line at Bahadurpur	14.7	√	√	√			EPC	Internal accruals/debt	2018	2019	This project is dedicated to Alwar area where Japanese Industrial Zone are located. This project need to be commenced within FY2018.
16	Energy Department	Rajasthan Rajya Vidyut Prasaran Nigam Ltd. under Energy Dept.	LILO of 132kV Alwar-Bansur Line at Telco Circle	14.7	√	√	√			EPC	Internal accruals/debt	2018	2019	This project is dedicated to Alwar area where Japanese Industrial Zone are located. This project need to be commenced within FY2018.
17	Energy Department	Rajasthan Rajya Vidyut Prasaran Nigam Ltd. under Energy Dept.	LILO of 132kV Kishangarh Bas-Mandawar Line at Khairthal	14.4	√	√	√			EPC	Internal accruals/debt	2018	2019	This project is dedicated to Alwar area where Japanese Industrial Zone are located. This project need to be commenced within FY2018.
			Total cost	**3,057**										

Cost assumptions

Length of approach road between NH-8 and Ghiloth Industrial Area : 7.5 kms (source: RIICO)
Roads (four lane) : INR 3.5 cr / km (source: RIICO)
Roads (two lane) : INR 1 cr / km (source: RIICO)
Substation (230 KV) : INR 70 cr per industrial area (source: JICA TNIPP-2)
Overhead water reservoir (capacity 1.2 million litres) : INR 1.75 cr / reservoir (source: RIICO)
Underground water pipes (material : HDPE - high density polyethylene, diameter : 6 inches) : INR 1,500,000 / km (source: RIICO)
Length of Internal Roads (Neemrana Japanese Zone) : 35 kms / (Entire Neemrana Industrial Zone) : 70 kms (source: RIICO)
Length of Internal Roads (Giloth Japanese Zone) : 10 kms / (Entire Giloth Industrial Zone) : 40 kms (source: RIICO)

3. Maharashtra

3.1. An Overview

Maharashtra is located in western part of India with second largest population in overall country. The state was formed on 1st May, 1960 with 'Bombay' as the capital, which later on change to 'Mumbai' in 1995. Maharashtra shares borders with Gujarat to the north west, Madhya Pradesh to the north, Chhattisgarh to the east, Telangana to the south east, Karnataka to the south and Goa to the south west. Maharashtra's geographical area is 307,713 sq. km, which covers 9.36% of India's total geographical area and having total population of the state is 112.4 million, that is 9.28% of India's total population. The population density of the state is 370 persons per sq. km with a sex ratio of 929 females per 1,000 males. Maharashtra is divided into six administrative divisions and has 36 district (Figure 3.1) constituted by 534 towns and 43,665 villages.

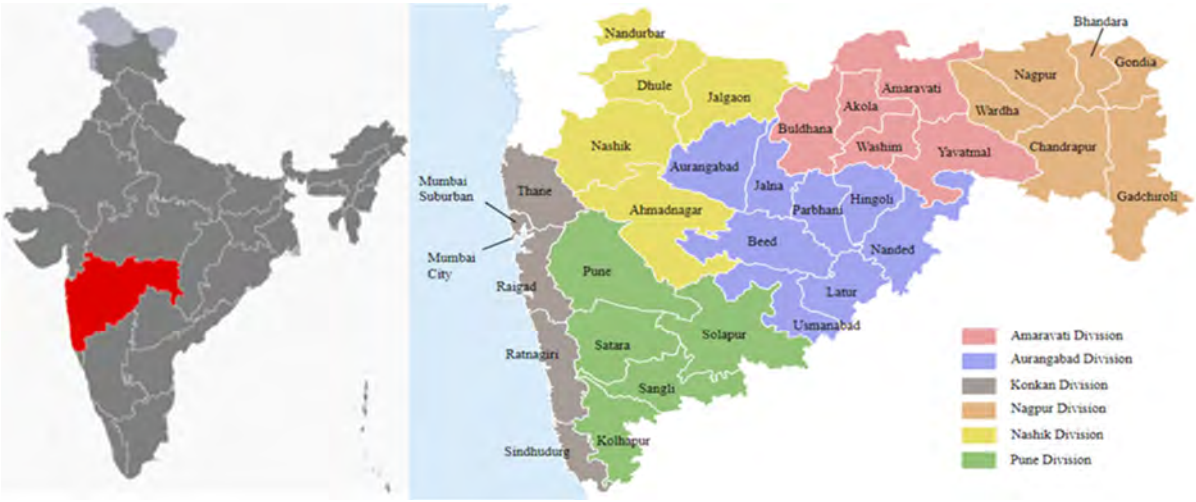

Figure 3.1 Geographic location of Maharashtra and its district-wise map

Maharashtra has registered an average economic growth rate of 12% in the last five years and according to Finance Minister of Maharashtra, gross state domestic product (GSDP) is expected to growth at double digit growth rate in the coming years. In 2016-17, GSDP of Maharashtra accounted INR 22.6 trillion (Chart 3.2), at current prices and state's per capita income was INR 188,000, at current price. However, as per economic survey of Maharashtra 2017-18, state growth rate is estimated to decline from 10% in 2016-17 to 7.3% in 2017-18 due to insufficient monsoon rain which effected agriculture, industrial and manufacturing growth in the state.

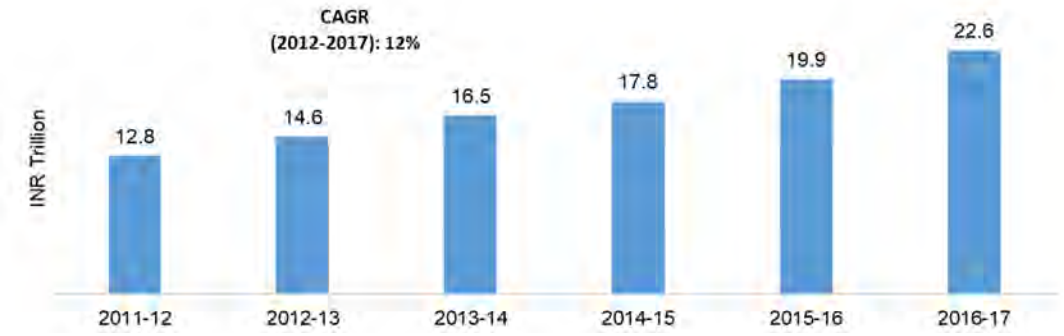

Chart 3.1 Gross State Domestic Product (GSDP) of Maharashtra at Current Prices (2011-17)
Source: Central Statistics Office, "Advanced Estimates" provided by Directorate of Economics and Statistics of Maharashtra

Chart 3.2 shows the comparison of growth rate of India's GDP with Maharashtra's growth rate GSDP during the year 2012-17. Economic of Maharashtra registered higher growth rate of 9.4% in comparison to India which grew at 7.1% in during 2016-17. Maharashtra has strong base of industrialization and is leader in industrial sector in the country, contributing highest share of 22.3% in India's export, followed by Gujarat, Karnataka and others. There are more than 300,000 small, medium and large manufacturing units.

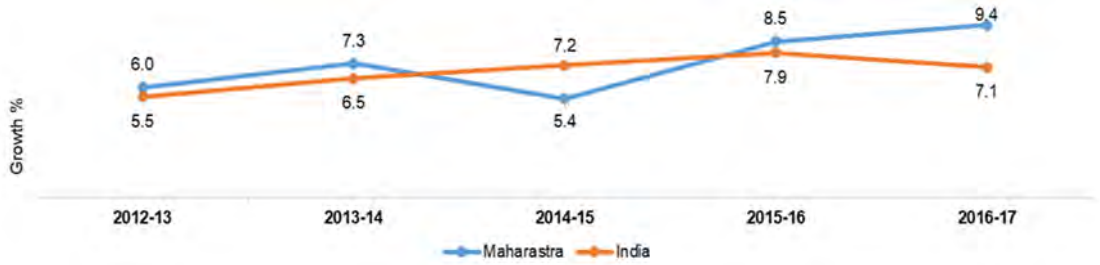

Chart 3.2 Comparison of India GDP with Maharashtra GSDP (at Constant Prices 2011-12)
Source: Govt. of Maharashtra Vision 2030 Report (2017)

Table 3.1 shows the comparison of Gross District Value Added (Current Price) of six division of Maharashtra in the year 2011-17. During the period of 2012-17, the Amravati Division has seen the highest CAGR of 10.5% in its GVA, followed by Nagpur and Konkan Division with 10.0% and 9.7%. Sectors such as Minerals, Forest, Food and Agriculture are leading in Amravati division and Banking, IT, Plastics, Rubber, Steel, Pharmaceuticals, Engineering and Fertilizer are key sectors in Konkan division.

Mumbai district has captured a very large share in overall state's GVA by generating INR 3,850 billion in 2016-17 owing to strong base of Industrial and Services sector. Mumbai is also known as the financial hub of India with INR 279,965 per capita GVA in 2016-17. Pune has become largest auto hub of India with over 4,000 manufacturing units.

Table 3.1 Maharashtra Gross District Value Added at Current Price (2011-17)

Maharashtra Division	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Konkan Division	4,362	4,962	5,598	6,223	6,833	7,612
Nashik Division	1,447	1,640	1,909	2,022	2,183	2,434
Pune Division	2,631	2,944	3,315	3,653	4,010	4,453
Aurangabad Division	1,282	1,413	1,658	1,640	1,763	2,139
Amravati Division	668	780	871	884	998	1,219
Nagpur Division	1,054	1,210	1,340	1,464	1,633	1,866

In INR billion
Source: Maharashtra Economic Survey 2017-18

Chart 3.3 Comparison of India and Maharashtra Net Per Capita Income (at Current Prices)
Source: Economic Survey of Maharashtra 2017-18

The Tertiary Sector (Services Sector) had the highest contribution of 54.9% to the Gross State Value Added (GSVA) of Maharashtra during the year 2016-17. It was followed by the Secondary Sector (Industrial Sector) with 30.1% contribution and then the Primary Sector (Agriculture and Allied Industry) with 15% contribution (Chart 3.4). The Tertiary Sector had a CAGR of 8.7% during the period 2012-17, whereas, the Secondary Sector had the worst CAGR of 6.6% during the same period. Lastly, agriculture grew by 3.2% during 2012-17 which depicts that the primary sector has scope for improvement. However, the State Government is aiming to make Maharashtra a $1 trillion economy by 2025, for which government is focussing on increasing the share of Services Sector to 67% by 2025. According to the Chief Minister of Maharashtra, agriculture employs 50% of people in Maharashtra and will not able to absorb more in the coming years, therefore, focus on service and industry sectors should be increase to generate employment.

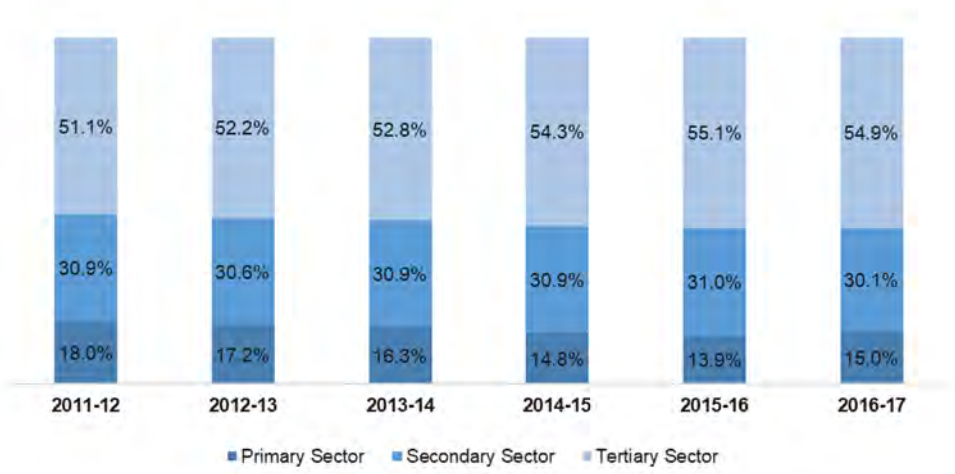

Chart 3.4 Sectoral distribution of Gross State Value Added (GSVA) of Maharashtra (at Constant Prices 2011-12)

Source: Economic Survey of Maharashtra 2017-18

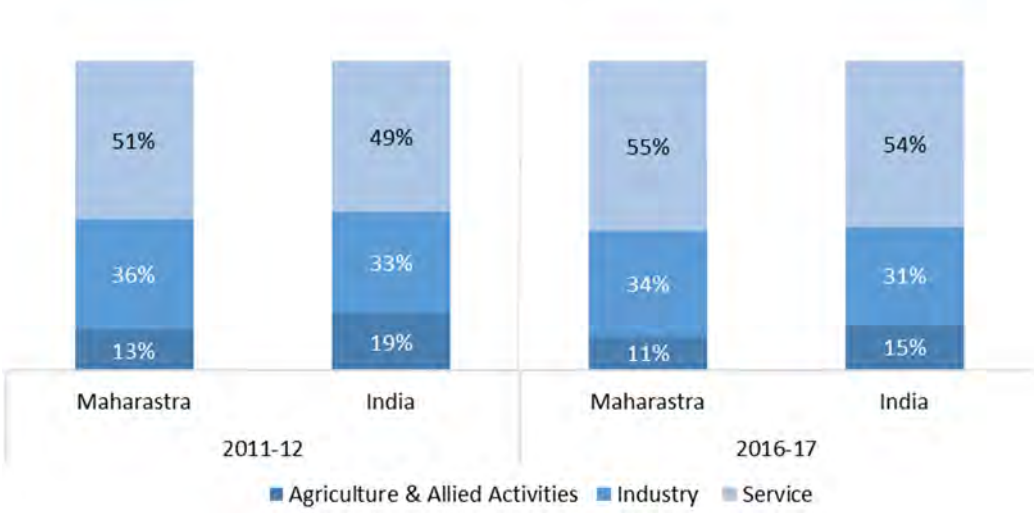

Chart 3.5 Change in sectoral composition of Maharashtra's GSDP and India's GDP

Source: Economic Survey of Maharashtra 2017-18

Table 3.2 Maharashtra at a Glance

Item (unit)	Year	Maharashtra Status	All India Status
Geographical Area			
Area (in sq. km)	2018	307,713	32,87,469
Administrative Setup			
(a) Divisions (number)	2018	6	-
(b) Districts (number)	2018	36	-
(c) Sub-Divisions (number)	2018	109	-
(d)Tehsils (number)	2018	358	-
(e)Towns (number)	2011	534	-

(f)Villages (including inhabited) (number)	2011	43,665	-
Population			
(a) Total (in millions)	2011	112.4	1,211
(b) Male (in millions)	2011	58.24	623.12
(c) Female (in millions)	2011	54.13	587.45
(d) Rural (in millions)	2011	61.57	833.46
Percentage of Rural Population		54.78	68.85
(e) Urban (in millions)	2011	50.83	377.11
Percentage of Urban Population		45.22	31.15
(f) Density of Population (in sq. km)	2011	573	382
(g) Sex Ratio (females per thousand males)	2011	925	943
(h) Literacy Rate (%)			
Male	2011	88.38%	80.90%
Female	2011	75.87%	64.60%
Total	2011	82.34%	74.00%
Power			
(a) Total Installed Capacity (in MW)	2016-17	41,410	302,087
(b) Total Consumption (in million units)	2016-17	108,455	-
(c) Annual per Capita Consumption (in kWh)	2015-16	965	684
State Income (at current prices)			
(a) Gross State Domestic Product (GSDP) (in billion INR)	2016-17	2,395	152,537
(b) Gross State Value Added (GSVA) (in billion INR)	2016-17	19,722	1,38,416
(c) Agriculture and Allied Sector GSVA (in billion INR)	2016-17	2,409	24,840
(d) Industry Sector GSVA (in billion INR)	2016-17	6,262	40,541
(e) Services Sector GSVA (in billion INR)	2016-17	11,051	73,035
(f) Per Capita Income (in INR)	2016-17	188,000	103,870

Source: Economic Survey of Maharashtra; Various departmental websites of State Govt. of Maharashtra

3.2. Current State of Economic and Social Infrastructure

3.2.1. Economic Infrastructure

3.2.1.1. Power

Maharashtra is the largest power generating state in India with largest installed capacity among the states. As per Central Electricity Authority, consumption by the Industrial Sector was 40,231 million units in 2015-16, that is, 34.5% of the total electricity consumption of the state during that year. The consumption of electricity by the industrial sector is going down (Chart 3.6) and the reasons for this include higher industrial electricity tariff in the state, lack of natural growth in demand, and an actual drop in consumption. The current base tariff for Maharashtra high tension and low tension industrial consumers is very high (INR 8.23 and INR 9.31 per unit respectively) as compared to the tariffs in other neighbouring states (Table3.3). The state distributing companies (discoms) include MSEDCL (Maharashtra State Electricity Distribution Company Limited) and other private players like Tata, Reliance, etc. These discoms have been unable to provide power to the industrial consumers at a competitive rate and hence a portion of the industrial consumers turn to procuring power from other states through the open system of electricity procuring. Other large consumers switch to captive power plants. Thus, the overall share of electricity consumption by the industrial sector had decreased by more than 25% over the period of 2010-11 to 2014-15. In order to improve the situation, during 2016 the state govt. came up with a plan of subsidising the industrial customers which were present in the industrially backward areas (D, D+, etc.). However, this scheme didn't have the desired effect as most of the industries were present in the industrially developed areas (A and B) which did not get any respite from the high electricity tariffs

Chart 3.6 Power Consumed by the Industrial Sector of Maharashtra (2011-12 to 2016-17)

Source: Central Electricity Authority

Table 3.3 State-wise comparison of Industrial Electricity Tariff Rate (January, 2016)

State	Industrial Tariff Rate (INR per unit)
Maharashtra	8.23 to 9.31
Karnataka	6.80
Gujarat	5.8 to 6.0
Andhra Pradesh	6.80
Madhya Pradesh	6.70
Chhattisgarh	5.50
Goa	4.80

Source: Various News Articles

Chart 3.7 shows the comparison of power generation and power consumption in Maharashtra, from 2011-12 to 2015-16, power generation has been increased in comparison to power consumption owing to entrance of private companies in Maharashtra power sector. Private companies such as Tata Power, Adani Power and Reliance Infrastructure and others have installed power plants ranging 300MW capacity to 3300 MW capacity.

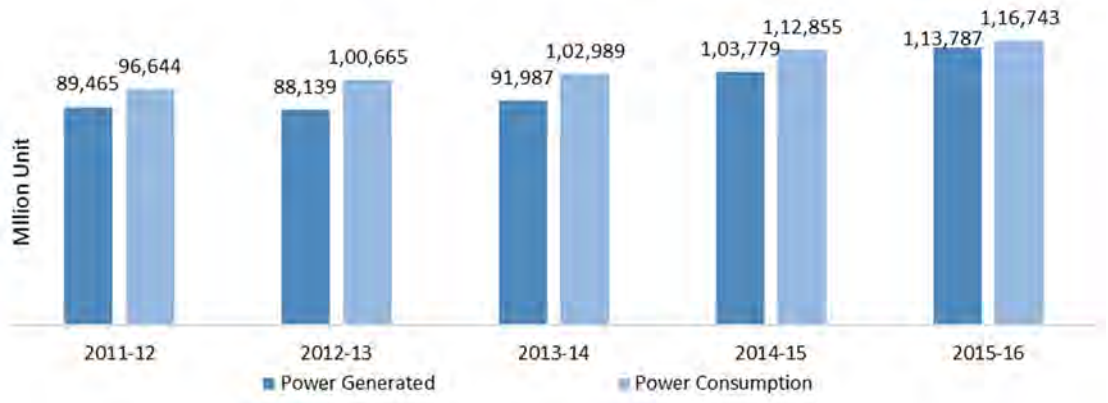

Chart 3.7 Comparison of Power Generated and Power Consumption in Maharashtra (2011-12 to 2015-16)

Source: Directorate of Economics and Statistics of Maharashtra

Power generation of the state is majorly done through thermal generation with 83% in 2016-17 (Chart3.8), followed by renewable sources such as wind, small hydro, biomass, urban and industrial wastage generation with 9.1% and natural gas with 8.2%. MAHAGENCO (Maharashtra State Power Generation Company Limited) has the highest overall generation capacity and the highest thermal installed capacity amongst all the state power generation utilities in India.

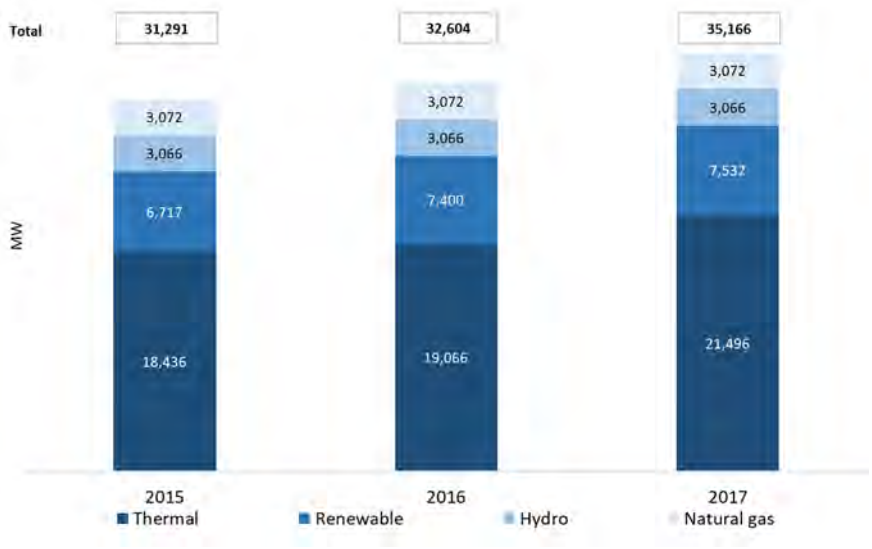

Chart 3.8 Sourcewise installed capacityin Maharasthra (As on 31st March)
Source: Economic Survey of Maharashtra 2017-18

Total consumption in the state during 2016-17 was 108,455 Million Units (MU) with the Industrial sector being the largest consumer with 31.2% share (33,833 MU) (Chart 3.9), followed by the Agriculture Sector with 26.1% (28,272 MU) and Domestic Sector with 24.8% (26,874 MU). Being an industrial state, Maharashtra has observed a lower power shortage in comparison to other states of India. As per 2015 statistics, by the Ministry of Power, actual energy shortage in Maharashtra was 0.3% of peak demand, lower than the estimated energy surplus of 3.5% in 2015-16.

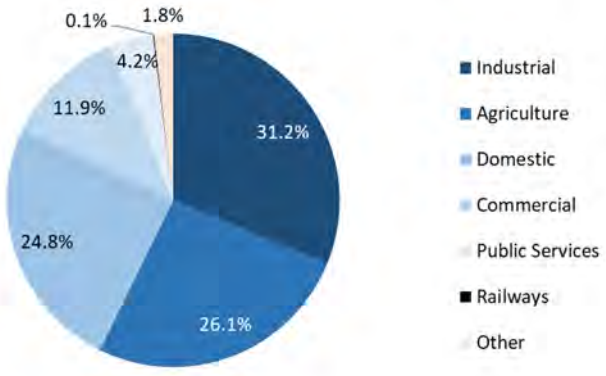

Chart 3.9 Consumption of electricity by consumer's sector (2016-17)
Source: Economic Survey of Maharashtra 2017-18

In terms of Transmission, the total Extra High Voltage (EHV) Transmission network of the State as on 2010-11 was 38,068 Ckt.km with 536 number of sub-stations which has increased to 43,700 Ckt.km and 633 sub-stations in 2015-16. During 2015-16, capacity of 5,752.5 MVA was added through the length of 2,108.9 Ckt.km and 6,105.5 MVA was added through line of 356.6

Ckt.km during 2016-17 up to January. However, Maharashtra witnessed transmission losses of MAHATRANSCO were 4.08%, 3.89%, and 3.92% for 2013-14, 2014-15, and 2015-16 respectively and 3.58% during 2016-17 up to December.

Table 3.4 Supply & Shortfall Of Electricity at Average Peak Demand in Maharashtra (2012-17)

Supply & Shortfall Of Electricity At Average Peak Demand In Maharashtra			
			(in MW)
Year	**Average peak demand**	**Supply**	**Shortfall**
2012-13	14,032	13,309	723
2013-14	14,406	13,830	576
2014-15	15,812	15,392	420
2015-16	15,948	15,850	98
2016-17+	16,304	16,304	0

Source: Economic Survey of Maharashtra 2017-18, MAHADISCOM

Note: + up to December 2016

Table 2.2 shows supply and shortfall of electricity at average peak demand in Maharashtra, depicting continuous decline in the electricity shortfall. However, tariff of electricity in Maharashtra is higher in comparison to other states of India, particularly for industrial areas. Other issues such as temporary energy shortage due to technical reasons resulting into load shedding, regular planned maintenance of power plants causing power shortage and leading to increased demand and reduced supplies. As a result, Maharashtra is still lagging behind the competition in terms of providing cost effective electricity supply service to the industrial sector.

As per System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI) data, Maharashtra seems to be providing better quality and reliable power supply to the consumers in comparison to other industrial states such as Andhra Pradesh and Haryana, but slightly lower than Gujarat. However, as per discussion with the industries, Pune and Chakan face a high number of blackouts. For instance, one company mentioned that there are around 30 blackouts per month in the MIDC industrial areas of Pune and Chakan.

Below Table 3.5. shows the average number and hours of interruption in power supply during 2016.

Table 3.5 Consumer Average Interruption Duration Index (2016)

State	Discom	SAIDI (Hrs)	SAIFI
Andhra Pradesh	APEPDCL	69:02:40	63.85
	APSPDCL	55:42:40	119.27
Haryana	DHBVNL	1122:12:00	191.12
	UHBVNL	1423:24:00	789.96
Gujarat	DGVCL	31:53:20	128.23
	MGVCL	16:04:00	18.12
	PGVCL	53:30:40	43.84
	UGVCL	35:01:20	24.41
Maharashtra	MSEDCL	66:34:40	37.75

Source: Report on the Benchmarking of performance (Electricity Distribution in India) parameters

Note:

SAIDI: System Average Interruption Duration Index

SAIFI: System Average Interruption Frequency Index

MSEDCL: Maharashtra State Electricity Distribution Company Limited

3.2.1.2. Water

Maharashtra is one of the states facing major water availability issues especially in the agricultural regions. The state faces acute shortage of water due to drought, over-exploitation of ground water (particularly by urban areas and industrial areas), poor water management, lack of water sources in some regions and insufficient rainfall which stores up to 50-60% of total capacity, depending on different locations of Maharashtra. As per our industrial survey, the industrial areas of Mumbai, Pune and Chakan, receive adequate water supply.

On an average, Maharashtra witnesses rainfall ranging from 400 mm to 6,000 mm which occurs in a four-month period between June – September. Marathwada and Vidarbha regions (eastern parts) of Maharashtra witnessed 32% rainfall deficit in 2017.

Maharashtra covers geographical area of 30.8 million Ha and cultivable area is 22.5 million Ha. Out of this, 40% of the area is drought prone and 7% of the area is flood prone. Currently, there are 3,264 dams in Maharashtra with a total storage capacity of 1,720.09 TMC (thousand million cubic feet). Water supply from dam reserve is broadly divided into agriculture which captured 75% of total reserve water, industry with 10% and 15% for drinking purpose. As per a Central Ground Water Board (CGWB) report released in 2017, Maharashtra witnessed water depletion in 887 locations across the state. The groundwater level has fallen in around 150,000 square km out of total Maharashtra's geographic area of 3,07,713 square kilometres.

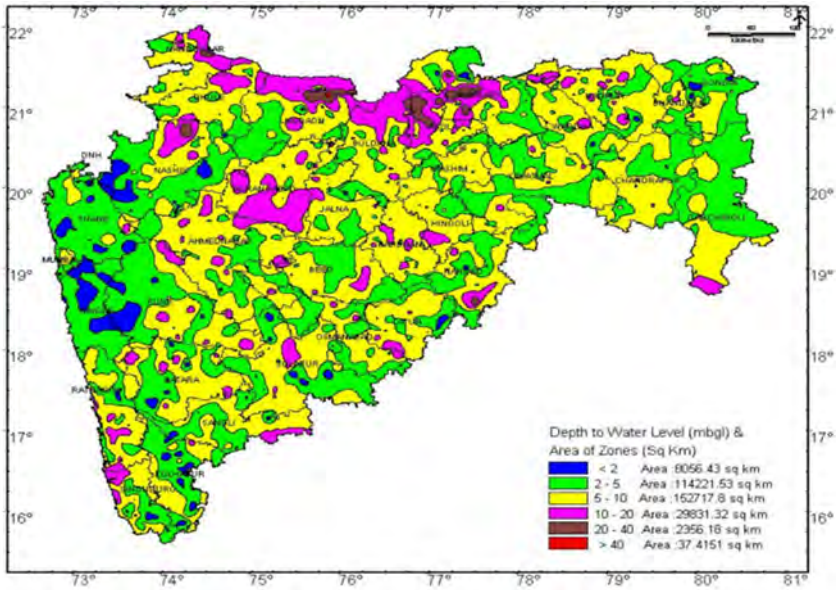

Figure 3.2 Depth of Ground Water Level across Districts (January, 2017)

Source: Groundwater Year Book of Maharashtra State (2016-17)

At present, Maharashtra Industrial Development Corporation (MIDC) supply 37% (Chart 3.10) of water to industrial sector. Out of 37%, thermal power plant uses 30% of water and that of agro-based industries and sugar factories' share is 5% each, others include by distilleries, beverages, mineral water together account 0.03% of the total water use and 1.37% of industrial use.

Table 3.6 Maharashtra Water Sector Status (as on 31/03/2017)

Details of MIDC Water Supply Scheme	
Total Installed Capacity	2,461 MLD
Current Utilization	1,412 MLD
Consumer Base	
Total No.of Industrial Consumers = 44,021	Consumption = 635 MLD
Total No. of Domestic Consumers = 4,805	Consumption = 777 MLD

Source: Website of MIDC

As per news reports, industries such as food products & beverages, textiles, paper & paper products, ice production and cold storage are usually affected by the shortage of water in Maharashtra. In 2015, 15,500 industrial units of various sizes were under MIDC spread around Mumbai areas with water requirement of 600 million litres per day, however, MIIDC could only provide half of that. During the 15 years' period of 2002-17, water supply per day in MIDC industrial areas has increased to 2,461 MLD from 1940 MLD, hence, there is an improvement in industrial water supply which is evident from our industrial survey as well. As per some of the

companies located in the MIDC industrial area of Mumbai, Pune and Chakan, they do not face any major issue regarding the water supply.

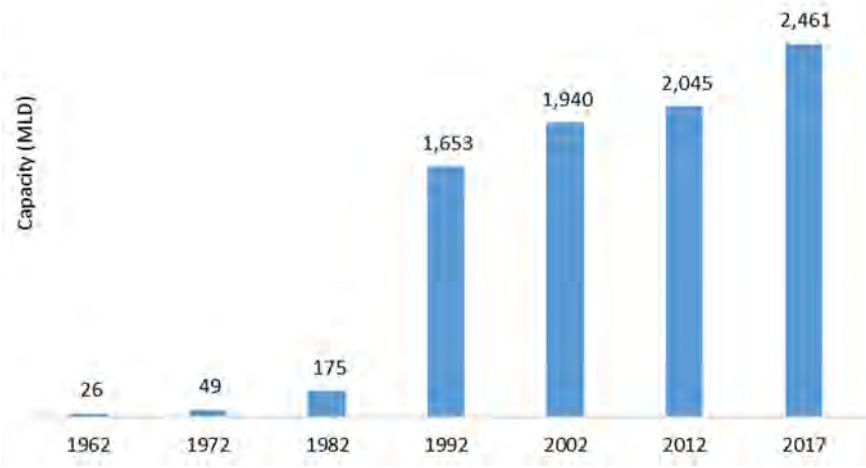

Chart 3.10 MIDC Industrial Water Supply Capacity in Maharashtra (MLD)

Source: Website of MIDC

Maharashtra Industrial Development Corporation (MIDC) is planning to supply treated sewage water, before releasing into sea, to thermal power plants and industrial area. Currently, 21 cities in the state have such facilities and treat a total of 4,738 million litres a day (MLD) of sewage water, and more treatment plants are expected to set up across 50 cities of Maharashtra with additional capacity of 2,150 MLD of sewage water. In addition, government of Maharashtra, is planning to set desalination plant as Mumbai Metropolitan Region's (MMR) first creek water desalination pilot project in Thane which would be able to convert 20 million litres of brackish creek water into potable drinking water on per day basis. However, industry consumer is facing major challenge in term of water tariff. Government of Maharashtra is continuously increasing the tariff rates, particularly, for the industrial sector. For instance, bulk water tariff for domestic and agriculture consumption increased by 17% and industries by 50% in 2018. Maharashtra Water Resources Regulatory Authority increased bulk water tariff to INR 4.80 per cubic metre from INR 3.60 per cubic metre (1,000 litres) whereas for beer, mineral water and cold drinks industry, it pegged to INR 120 per cubic metre.

3.2.1.3. Road

Maharashtra's road network consists of different class of roads such as National Highways, State Highways, District Roads, Village Roads, etc. As per Maharashtra economic survey 2017-18, total road length of Maharashtra was 303,359 km, out of which, the National Highways were 12,275 km long (Chart 3.11). The road density of Maharashtra is 79 km per 100 sq. km as per 2010-2011 economy survey which is low when compared with the India's road density of 166.5 km per 100 sq. km. The road density of Maharashtra is low 2.15 km per million population when

compared with All India's road density of 43.64 km per million people. At present, Maharashtra is implementing Road development plan 2001-21 which targets 337 thousand km roads.

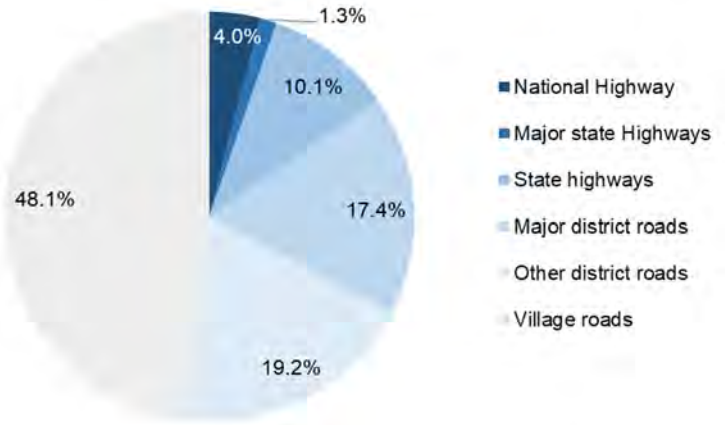

Chart 3.11 Road Length By Type of Roads Share in Maharashtra State (%)
Source: Maharashtra Economic Survey 2017-18

Road infrastructure of Maharashtra is managed by various bodies such as National Highway Authority of India, Government of India, State Public Works Department, Municipal Corporation / Council, Zila Parishad, Maharashtra State Road Development Corporation (MSRDC) and Cantonment Board.

Table 3.7 Classification of Division-Wise Road Length According to Breadth (2015-16)

Achievement in Length 2015-16					
Breadth (meters)	**7**	**5.5**	**3.75**	**Others**	**Total**
Konkan Division	2,346	2,572	21,306	6,597	32,821
Nashik Division	3,306	5,062	37,237	20,590	66,195
Pune Division	4,602	5,052	47,292	12,933	69,879
Aurangabad Division	3,006	4,926	44,619	13,134	65,685
Amravati Division	2,399	3,736	11,320	11,098	28,553
Nagpur Division	1,925	3,095	15,750	16,886	37,656

Source: Public Works Department (Govt. of Maharashtra); Maharashtra Economic Survey (2017-18)

Government of Maharashtra is planning to upgrade around 10,000 km roads of Maharashtra affected by severe traffic jams and heavy vehicles. The issues of traffic congestion and poor road condition in and around Mumbai, Pune, etc. were resonated by the companies during our industrial survey as well. About INR 300 billion amount would be required for the road upgradation project, however, the project would be managed under HAM (hybrid annuity model) or public-private partnership contract; 40% would be funded by government and 60% by private companies. Companies such as Blackstone Group, Carlyle Group, KKR and Co Ltd, Brookfield

Asset Management, Infrastructure Development Finance Company (IDFC) are expected to contribute in the project.

Maharashtra has well-developed road connectivity in comparison to other states of India. Almost, all the industrial areas are having multiple lane-asphalted roads connected with highway; major roads in these areas are of 15-30 m land width and internal roads ranges between 5.5 m to 25 m land width. For instance, Taloja Industrial area (TIA) in Raigad district is connected with Sion Panvel Highway and with main road with width of 15 meter. and width of the internal roads is 7.5 and 5.5 meter. Satara industrial area in Kolhapur is located on Mumbai-Bangalore national highway no.4 which connects with other highways such as Kolhapur-Panjim, Ratnagiri-Nagpur, and many other state highways. However, according to few companies, there is a lack of flyovers and bypass roads around the industrial areas of Mumbai, Pune, etc. leading to the issue of traffic congestion. In addition, a better monitoring system for overloaded trucks could go a long way in improving the life of the roads.

3.2.1.4. Ports

According to Ministry of Shipping (Govt. of India), around 95% of India's trading by volume and 70% by value is done by maritime transport. Jawaharlal Nehru Port is the largest container port in India which is situated in Maharashtra. At present, Maharashtra owned two major ports - Mumbai Port Trust (MbPT) and Jawaharlal Nehru Port Trust (JNPT) and 53 minor ports. During 2016-17, MbPT and JNPT handled 63 million MT and 62 million MT cargo traffic. Export goods such as textiles, carpets, boneless meat and import goods such as machinery, vegetable oils and chemicals are managed by Jawaharlal Nehru Port. Mumbai port handles bulk cargo traffic that includes Liquid chemicals, Crude and petroleum products and international container traffic of Mumbai port is transfer to JNPT.

Table 3.8 Operational Statistics of Major Ports in Maharashtra

Operational Statistics of Major Ports						
Item	MbPT			JNPT		
	2015-16	2016-17	% change	2015-16	2016-17	% change
Total cargo capacity (million MT)	50.25	50.25	0	79.37	89.37	12.6
Employees (no.)	10,166	9,445	(-)7.1	1,638	1,615	(-)1.4
Cargo traffic handled (million MT)	61.1	63.0	3	64.0	62.2	(-)2.9
a) Import	413	427	4	351	348	(-)0.9
b) Export	198.16	203.23	2.6	289.52	273.95	(-)5.4
Passenger traffic handled ('000)	3.18	17.44	448.4	NA	NA	NA

Vessels handled (no.)	5,169	5,427	5	2,780	2,720	(-)2.2
Operating income (billion)	14.78	14.78	0	16.65	17.01	2.2
Operating expenditure (billion)	10.76	11.12	3.3	6.93	8.05	16.1
Operating surplus/profit (billion)	4.02	3.66	(-)9.0	9.72	8.96	(-)7.8

Source: MbPT & JNPT, Maharashtra Economy Survey 2017-18
Note: NA Not Applicable

Government of India has introduced Sagarmala programme to promote port-led development which would help to reduce logistic cost for EXIM and domestic trade with minimum infrastructure cost. Under this programme, several development projects are under construction as well as in proposed stage at various ports such as Mandwa, Gorai, Vasai, Bhayender, Narangi, Kharwadeshwari, Manori and Ghodbunder. Further, Jawaharlal Nehru Port Trust has developed two dry ports at Wardha and Jalna, which are expected to start functioning by June 2019. The Jalna port will be having capacity of 20,000 twenty-foot equivalent units (TEUs) and Wardha with another 20,000 TEU annual capacity.

Table 3.9 Operational Statistics of Major Ports in Maharashtra

Operational Statistics of Non-Major Ports			
Particulars	**2015-16**	**2016-17**	**2017-18+**
Cargo traffic handled (million MT)	28.85	34.89	22.79
a) Import	244.74	290.09	194.33
b) Export	43.75	58.85	33.59
Passenger traffic handled (million)	18.07	18.28	11.84
a) By mechanised vessels	169.8	173.18	114.6
b) By non- mechanised vessels	10.92	9.64	3.77

Source: Maharashtra Maritime Board, Maharashtra Economy Survey 2017-18
Note: + up to November

Maharashtra ports are well connected with roads and other physical infrastructure which reduces the logistic cost of the industries. Therefore, companies prefer to set up their offices and warehouses in industrial areas located near ports. Mumbai Port (MbPT) is connected through an extensive road network of 126km and has its own railway system connected to the Central and Western Railway of Maharashtra. JNPT, being a largest port in India, national and international companies are majorly investing in SEZ and nearby industrial locations of JNPT. For instance,

Foxconn, world's largest contract manufacturer of electronic devices (such as iPhone) is looking to invest INR 60 billion to set up a factory in SEZ of Jawaharlal Nehru Port Trust.

3.2.1.5. Sewage and Wastewater Treatment

As per the Maharashtra Control Board, the estimated sewage generation from the urban local bodies of Maharashtra is 6,265 million litres per day while the total capacity of sewage treatment is 3,897 MLD. Thus, less than 39% of the total sewage water generated is disposed-of untreated. In 2016, total number of Sewage Treatment Plants (STPs) present in the state were 73 out of which 60 were operational, 6 were under construction (Table 3.10).

Table 3.10 Total capacity of STPs in Maharashtra and India (2016)

Region	Item (unit)	Total	Operational	Non-Operational	Under Construction	Proposed
Maharashtra	STP (Number)	73	60	10	6	-
	Capacity (MLD)	5,160	4,683	344	132	-
India	STP (Number)	816	522	79	145	70
	Capacity (MLD)	23,277	18,883	1,237	2,528	629

Source: Website of MPCB

Maharashtra has 49 highly polluted rivers large amount of untreated sewage which are discharged in state's water bodies on daily basis. Rivers such as Mithi in Mumbai, Mula in Pune and Kundalika in Roha, Raigad district found to be nine times higher than the limit in 2017.

According to Maharashtra Pollution Control Board's (MPCB), Mumbai generates 2,500 million litres per day (MLD) sewage including industrial waste, of which 600 to 700 MLD drained into Mithi without treatment. Government of Maharashtra has sent notice to the industries of Roha in Maharashtra and about 36 industries were shut by government for not compliance with guidelines.

Currently, there are 25 CETP (Common Effluent Treatment Plants) in Maharashtra established by the Union Environment Ministry for industrial sector. These CETPs are present in industrial areas such as Taloja, Dombivli, Thane-Belapur, Navi Mumbai, Ambernath, Tarapur.

Government of Maharashtra is planning to expand sewage treatment plants in Maharashtra and at present, six sewage treatments project are under proposed stage by the name of 'Mumbai Sewage Disposal Project-II (MSDP-II)'. Another key CTEP expansion & improvement project Valued INR 1 billion is under proposed stage is 'Dombivli MIDC'. The development plan was pending for last five years. However, it is estimated to start and planning to complete by 2019. Phase 1 and phase 2 of the project together can treat effluents of 375 factories on daily basis, out of which 120 are chemical units, 70 are fabric production units. The CETP in phase 1 has a capacity

of treating 16 MLD of effluents and the one in phase 2 can treat 1.5 MLD of effluents. For industrial sewage and wastewater treatment, government of Maharashtra seems to be inattentive, therefore, strict regulation & its implementation are highly demanded. Currently, government of Maharashtra has plan to expand 92.50 MLD through 7 CETPs which are under construction and additional 63.50 MLD through planned 16 CETPs.

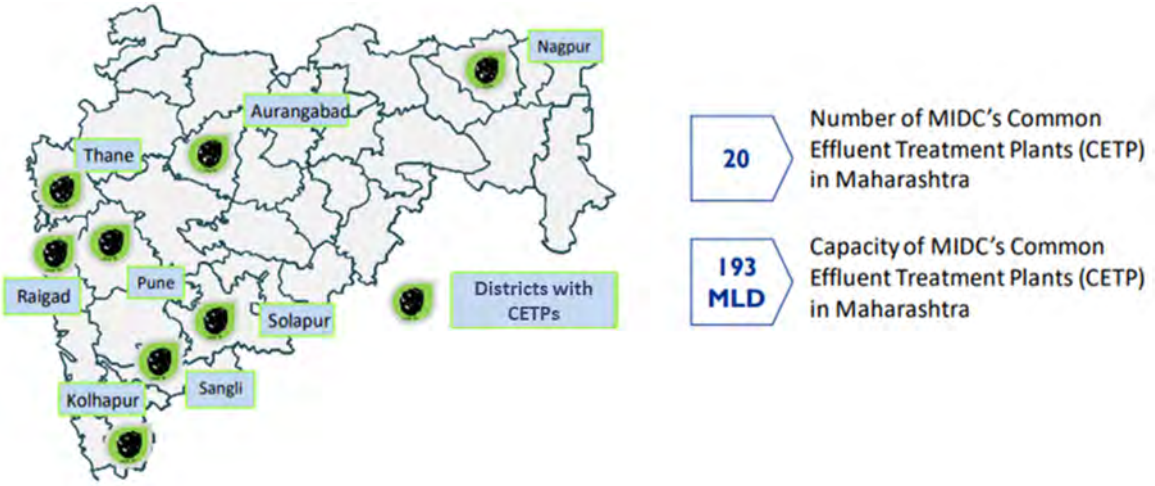

Figure 3.3 CETP scenario in Maharashtra and India (2017)

Source: Website of MIDC

3.2.1.5.1. Government Policy/ Initiative

To save and utilize water more efficiently for drinking and irrigation purposes, government have implemented several new policies in the state.

- As a part of Swachh Maharashtra Abiyan, government of Maharashtra sanctioned a policy in 2017, in order to reuse and manage the waste water of the state for industrial purpose. The municipal bodies of Maharashtra in 71 areas will have three years to set up wastewater management plants. By 2020, the state government aims to reuse at least 6,800 litres of wastewater daily from all urban cities and towns of the state.
- Under the policy, thermal power plants and industries in the Maharashtra Industrial Development Corporation (MIDC) areas are mandatory to use treated sewage water supplied by urban local bodies (ULBs). For the same, urban local bodies (ULBs) municipal corporations and municipal councils were given order to install tertiary treatment plants to treat sewage water.
- The installation of the plants are being funded under Centre's Atal Mission for Rejuvenation and Urban Transformation (AMRUT) scheme within which central, state government and ULB would be contributing particular amount of share depending on the population of the city. The funding pattern is given in Table 3.11. At present, three treatment plants are under-construction stage and by 2020, at least five plant are expected to fully functional across Maharashtra.

Table 3.11 Funding Pattern for installing treatment plants in Maharashtra

S. No	Population of the Mission City	GoI Share	GoM Share	ULB Share
1	Less than 1 million	50%	25%	25%
2	More than 1 million	33.33%	16.67%	50%

Source: amrut.gov.in

- Maharashtra Pollution control board, makes it mandatory for ULBs to treat sewage water with secondary level treatment before releasing it in to the sea under the Water (Prevention and Control of Pollution) Act, 1974. At present, 21 cities in the state have these facilities which treat a total of 4,738 million litres a day (MLD) of sewage water, however, another 50 cities are under pipeline for setting up treatment plants that will treat an additional 2,150 MLD of sewage water.

3.2.2. Social Infrastructure

3.2.2.1. Hospitals

As per Economic Survey 2017-18, there are 1,402 hospitals, 3,087 Dispensaries with 10.8 beds per million of total population. Chart 3.12 shows Presence of Govt. Medical Institutions in Maharashtra depicting that no improvement has been observed since 2013-14 in term of number of hospitals, dispensaries and others. Further, government of Maharashtra continuously reducing the health budget share out of overall state's budget allocations. For instance, health budget has reduced from 4.3% (2017-18) to 3.6% (2018-19) in state's total budget; also, budget for National Health Mission (NHM) reduced by INR 8.4 billion for 2018-19 and budget for medicines declined by INR 1.04 billion in 2018-19, from INR 4.7 billion in 2017-18.

According to the Health Index Report released by the NITI Ayog (Govt. of India), Maharashtra ranked fifth with score of 60.09 (2014-15) in terms of incremental progress among the 21 states considered for the index. Despite, being one of the largest states with highest growth rate (GSDP) in India, Maharashtra failed to progress in heath sector; per capita health expenditure is very low in comparison to India per capita health expenditure. Per capita health expenditure was INR 831 in 2015-16 which slightly increased to INR 996 in 2017-18 whereas India per capita health expenditure is INR 1,538 and neighbouring states such as Chhattisgarh spend INR 1,671 and Telangana spend INR 1,801.

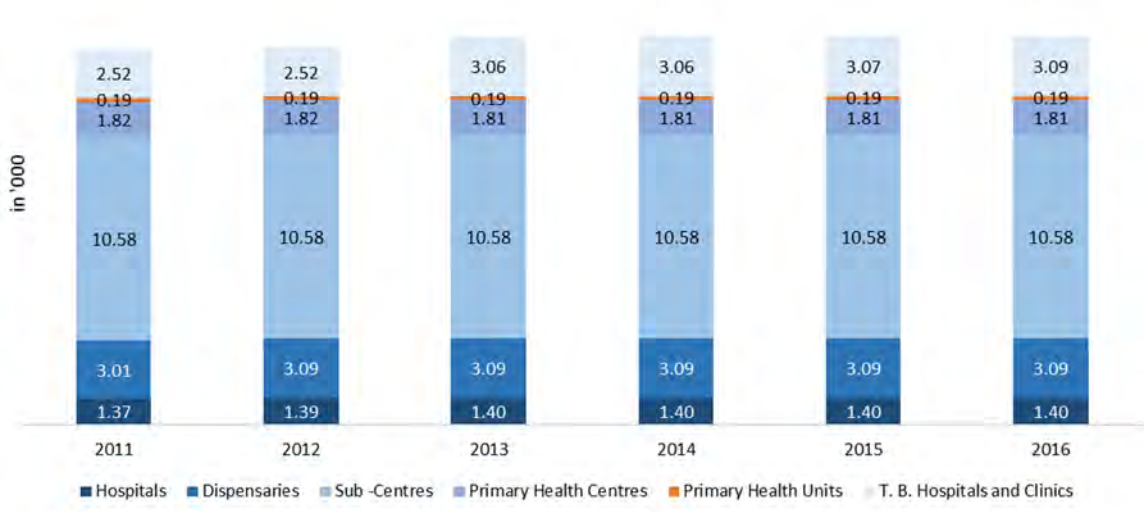

Chart 3.12 Presence of Govt. Medical Institutions in Maharashtra

Source: Maharashtra Economic Survey 2017-18

In terms of government health institute, Nashik circle is having highest hospitals with 2,096, followed by Nagpur circle and Akola circle with 1,643 and 1,379 respectively. Whereas, Thane circle is having least health institutes with only 780 in total. Mumbai district has good public-health infrastructure with four Medical College-Hospitals, one Dental College-Hospital, 16 municipal general Hospitals, six specialty Hospitals, 29 maternity homes, 175 municipal dispensaries and 183 health posts which are managed by Municipal Corporation of Greater Mumbai (MCGM). This data shows that there is a need for improvement in the state's public healthcare sector

However, the industrial areas in the more developed districts of Konkan and Pune divisions have presence of some of the best private hospitals. For example, Mumbai has well established private hospitals such as Lilavati, Apollo, Tata Memorial, Fortis, Breach Candy, etc. and Pune has Aditya Birla Memorial, Columbia Asia, etc. These big name private hospitals are good for expats and middle & higher management employees working in industries. For the workers and lower level employees, there are Govt. hospitals. The situation of govt. hospitals is good in developed districts but in case of the remaining districts, there have been various reports in newspapers about the lack of good quality healthcare in Govt. hospitals. The main reasons are lack of latest instruments and lack of medical staff in those hospitals. Some of the large industrial areas have the provisions of hospitals inside the premises, for example, there is a provision of hospital in the Supa Japanese Industrial Zone being developed in Ahmednagar districts.

To expand the healthcare sector, government of Maharashtra is planning to invest on PPP (public-private partnerships) in district level, however, the plan is under feasibility test, under this proposal, private medical colleges with graduates and post-graduates would be working at

the attached district hospital for at least a year which would result into increase in number of specialists at district level. In addition, 300 beds are estimated to establish under PPP.

3.2.2.2. Schools

Literacy rate of Maharashtra (82.9%) is higher than India overall literacy rate (73%), within which Mumbai has highest literacy rate (90%) in comparison to other districts in Maharashtra. As per census 2011, male literacy rate of the state stands at 88.4%, while female literacy is at 75.9%. Maharashtra's female literacy rate and its gender gap in Literacy rate (12.5).

Education, particularly, in rural areas has become major challenge in Maharashtra due to privatisation in education sector. It is estimated that out of 10,000 schools in Maharashtra is captured by private sector which is expected to increase in the coming years. As a result, many schools are on the verge of closing, Education Department announced closer of over 1,300 Zila Parishad schools with students less than ten. Further, due to poor quality of teaching and lack of basic amenities in government schools forced parents to enrol into private schools, resulting in more than 50% dip in enrolment.

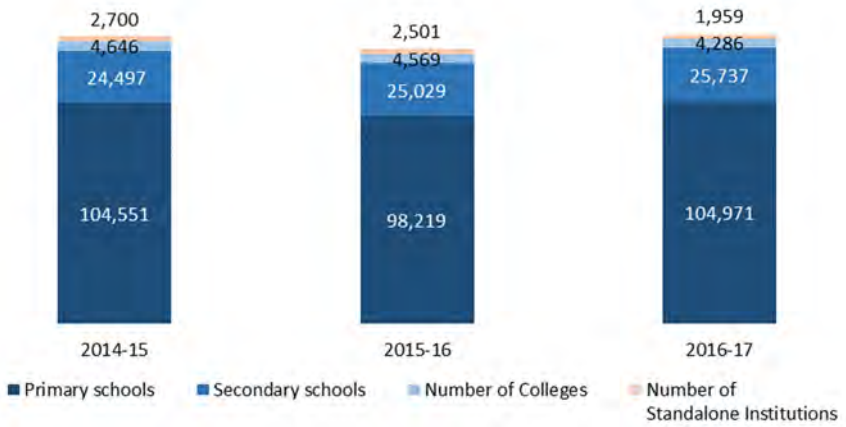

Chart 3.13 Number of Recognised Education Institute in Maharashtra

Source: Maharashtra Economic Survey 2017-18

There are some excellent private schools in Mumbai and Pune such as Dhirubhai Ambani International School, Don Bosco, Bombay Scottish School, Lexicon International School, The Orchid School, St. Mary's School, Symbiosis International School, etc. The private schools of the districts are pretty good for children of employees and expats. The situation of govt. schools is not very pretty as there is a lack of amenities and the level of education is also not up to the mark. This is where most of the workers send their children to. Hence, there is a requirement of good quality, affordable school education in Maharashtra.

3.3. Current State of Industrial Development

3.3.1. Industrial Structure and Location

Maharashtra is known to be the most industrialised state in India contributed 18.5% of India's gross domestic product (GDP) in 2017-18. The GSDP reached INR 22.6 trillion in 2016-17, grew at CAGR of 12.01% during 2011-12 to 2016-17. More than 40% revenues contributed by industrial sector in Maharashtra's GSDP. Maharashtra is industry friendly state with favourable industry policies and facilities, for instance, government of Maharashtra has fixed minimum wages for each minimum industrial areas, single-window clearance facilities and comparatively better infrastructure in comparison to other states of India such as large number of ports which save logistic cost for exporting. In addition, availability of skilled and semi-skilled human resource and large consumer base with highest per capita income makes Maharashtra a successful commercial hub in India. Cities such as Mumbai, Nashik, Pune, Nagpur and Aurangabad are key industrial locations in Maharashtra. Major industries of the state include textile, automotive, engineering, IT & ITeS, cement and pharmaceuticals. Currently, there are 28 active SEZs in the state, majorly captured by IT/ITeS, engineering and electronics segment. Further, government of Maharashtra is encouraging Special Economic Zones (SEZs) developments across Maharashtra for other sectors such as pharmaceuticals, biotechnology, textile, automotive & auto components, gems & jewellery and food processing.

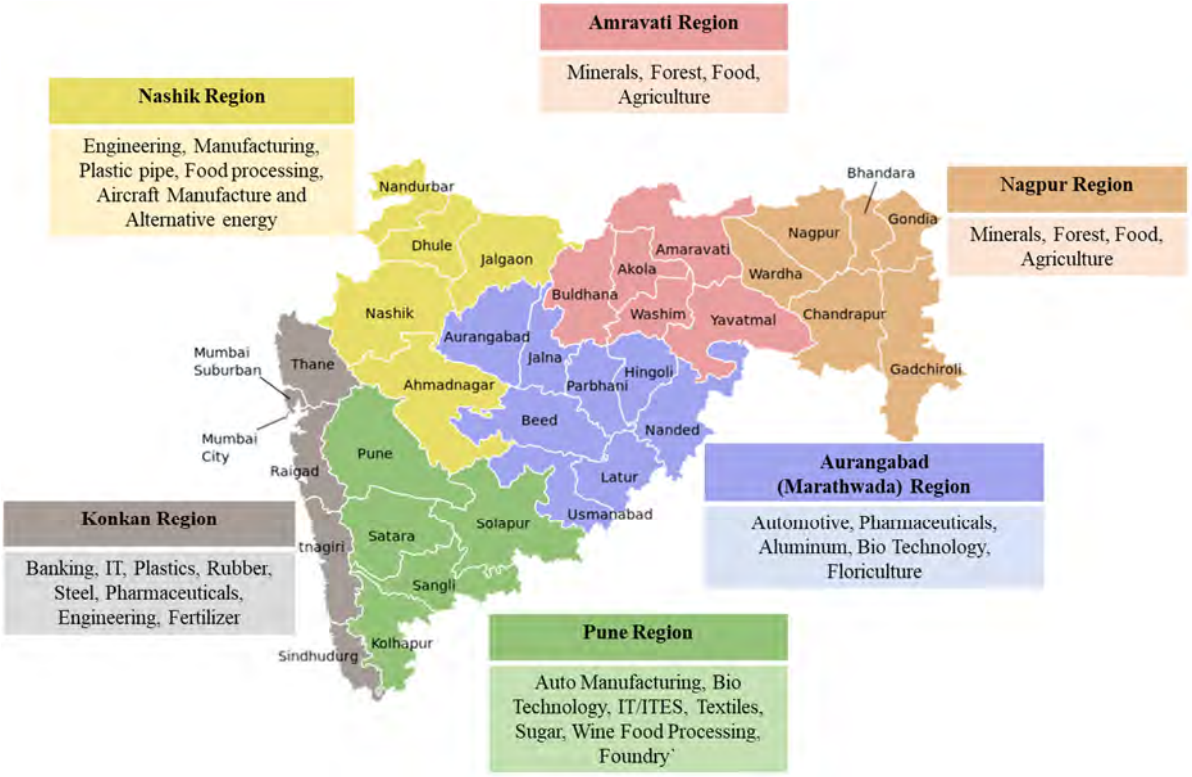

Figure 3.4 Region-wise Industrial Scenario of Maharashtra

Source: Website of MIDC

Districts of Mumbai and Pune are the most industrialized locations in Maharashtra having the presence of companies from various industrial sectors such as Electronics Sector, Biotechnology Sector, Textile Sector, Pharmaceutical Sector, Chemical Sector, Defence Sector, IT/ITES Sector, Automobiles Sector, Gems and Jewellery Sector, Food Processing Sector, Petro-chemical Sector, Engineering and iron & steel. Pune is divided into five districts including Pune, Satara, Kolhapur, Sangli and Solapur having highest number of mega projects (141) with investment of INR 893 billion. In Pune region, Pune district is the most developed industrial area specialized in IT and automotive sector whereas other district such as Satara, Kolhapur, Sangli, Solapur moderately developed. Nashik region is consisting of five districts including Nashik, Ahmednagar, Dhule, Nandurbar, Jalgaon, collectively, having about 6,747 industries such as engineering, automotive and its part, machine tools, pharmaceutical and others. As per Maharashtra Directorate of Industries statistics, about 57 mega projects with investment of INR 180 billion are under construction in Nashik region. Geographical area of Konkan region (30746 sq. km) is quite low in comparison to other regions of Maharashtra, however, it attracted high end mega projects with investment of INR 1.47 trillion. Greater Mumbai, Thane and Raigad are the most industrialized location in Konkan region other districts such as Ratnagiri and Sindhudurg, comparatively less developed. Amravati region is having least number of projects with lowest investment in comparison to other regions of Maharashtra. The region is consisting of five districts Amravati, Akola, Buldhana, Washim and Yavatmal with low capital industries such as minerals, agriculture, food and forest. According to Maharashtra Directorate of Industries statistics, Amravati is having 23 mega projects with investment of INR 131 billion. Nagpur region is divided into six districts including Nagpur, Bhandara, Gondia, Wardha, Chandrapur and Gadchiroli with 2,687 industries related to Minerals, Forest, Food, Agriculture sectors. Nagpur is having second highest number of mega projects (96), however, the overall value of the project (INR 661 billion) comparatively lower than Pune region. Lastly, Aurangabad region, consist of six districts including Aurangabad, Parbhani which are moderately less developed industrial area where as Jalna, Beed, Osmanabad having negligible industries and Hingoli is not counted as industrial location. Aurangabad region is having key industries such as engineering, auto, pharma and chemical with presence of some renowned companies – Johnson & Johnson, BKT, Kenstar and more.

Pune is hub of IT and automobile industry in overall India having large number of international companies such as Volkswagen, Mercedes Benz, Hyundai, Fiat, General Motors, TCS, Wipro, Cognizant, IBM and Indian company such as TATA Motors, Bajaj Auto and Mahindra & Mahindra. Availability of power supply, skilled labour pool and exceptional infrastructure with good connectivity with other regions have resultant into most favourable location for manufacturing. Chankan-Talegaon belt located in Pune consist of 750 large and small industries dominated by automotive sector. Manufacturing unit of Volkswagen in Chakan has capacity of producing 200,000 vehicles per year and Mahindra & Mahindra plant can produce 300,000 vehicles per year. Ahmednagar in Nashik, is dominated by food processing, engineering and

winery industries with companies such as Dabur, GSK, Bosch, Coca Cola and others. Wine industry is one of the emerging industries in India and Maharashtra plays a crucial role in contributing large share of revenue. As per AIWPA (All India Wine Producers Association) statistics, Nashik captured 80% of volume share in overall India wine market with volume of 14 million litres of wine in 2015-16. Mumbai-Thane region are famous for IT sector, gems & jewellery, logistics and pharma & chemical and have presence of companies such as HCL, TATA, Blue star, Asian paints, Cipla and many more.

Figure 3.5 Region-wise presence of major companies in Maharashtra

Source: Web research and NRI analysis

Figure 3.6 shows the potential and focus industrial sectors of Maharashtra, targeted by state government for development. For instance, Mumbai district has high potential for catering/hotel, tourism, bakery product, preservation of fruits & vegetables, imitation jewellery industries, while Thane has high potential in fabrication, Textile auxiliaries, Manufacturing of rubber products, Computer Hardware. In Nashik region, Nashik has great potential in Grape processing, Repairing of Agriculture equipment and Textile. In Pune region, Sangli district has high market potential in Organic Pesticides, Organics Fertilizers, Inverters/UPS for domestic uses and Fruit Processing of Grapes, tomatoes, pomegranates, Papaya, Mango. Further, government of Maharashtra is also focusing on defence sector of India, as per MIDC statistics, Maharashtra contributed 30.5% of industrial output in India's Machinery and Equipment manufacturing sector and 16.4% in Basic

Metal and Fabricated Metal product in 2012-13. Nasik, Aurangabad, Nagpur, Mumbai, Pune are defence hub in Maharashtra with presence of companies such as Centum, L&T, Kirloskar, SAAB, Mahindra, Precision Electronic, etc. Gems and Jewellery sector is also developing in Maharashtra having India's most important diamond cutting and polishing centre in Mumbai. SEEPZ SEZ (Santacruz Electronics Export Processing Zone is a Special Economic Zone) have been establish by government of Maharashtra to promote gems and jewellery sector; the zone is spread across 111 acres in center of city, having 7 standard design factories and 3 Gems and Jewellery factories and other gem & jewellery hub includes (Hupri) Kolhapur, Aurangabad and Nanded.

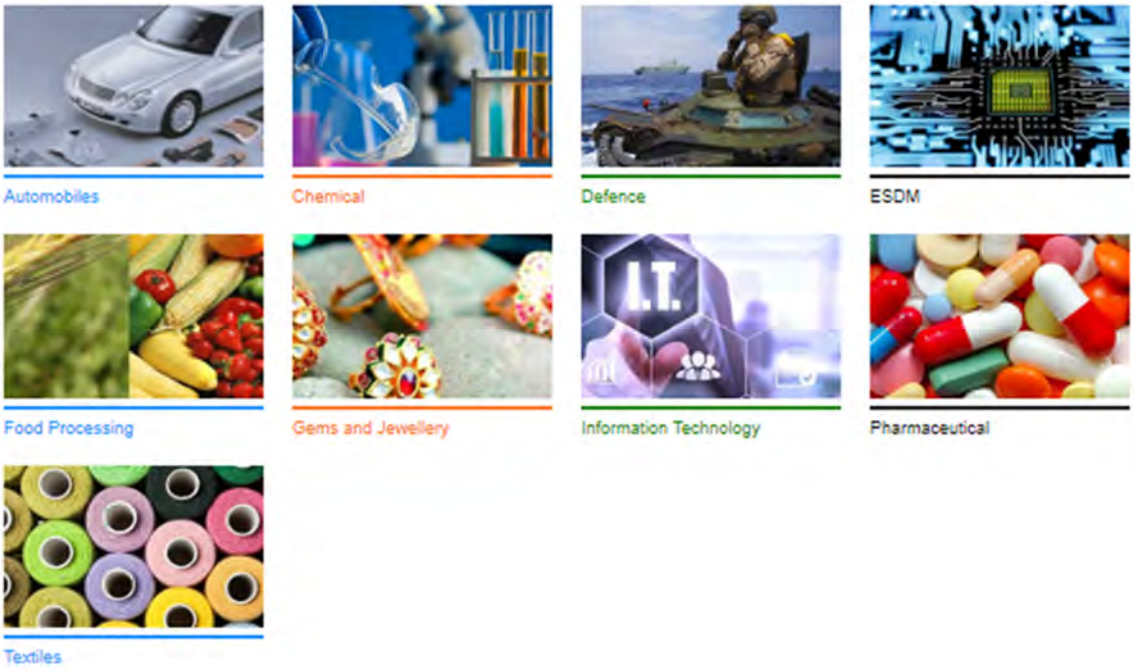

Figure 3.6 Focus Sectors of Maharashtra Govt.

Source: Website of MIDC

Total number of registered factories in the state has increased from 20,838 in the year 2008-09 to 28,601 in the year 2014-15 (Chart 3.14). The CAGR over this period of six years (2008-09 to 2014-15) has been a moderate growth of 5.4%. More factories are likely to establish in the coming years such as refinery in Ratnagiri district, a railway coach factory at Latur in Marathwada, a Mahindra & Mahindra Ltd electric vehicle manufacturing facility, Hyosung Corp.'s manufacturing unit, and an agriculture export hub at the Jawaharlal Nehru Port Trust

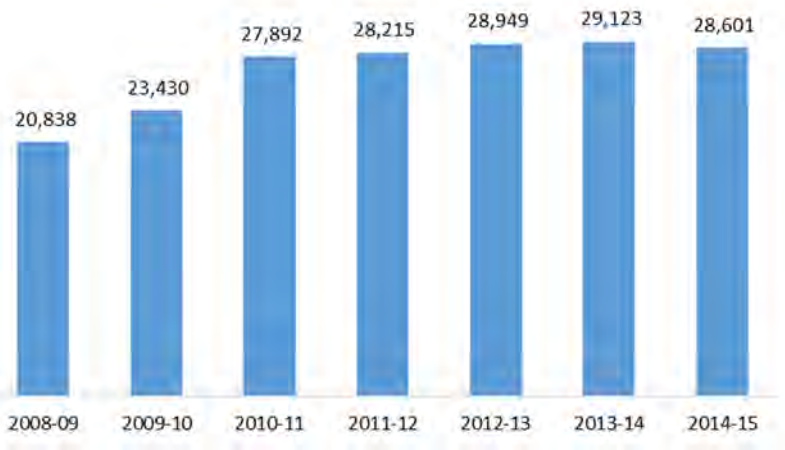

Chart 3.14 Total number of Registered Factories in Maharashtra (2008-09 to 2014-15)

Source: Website of MIDC

3.3.2. Status of MSMEs

The MSMEs (Micro, Small, and Medium Enterprises) sector has been recognised as the engine of growth all over the world. In India, the definitions of Micro, Small, & Medium Enterprises are in accordance with the provision of Micro, Small & Medium Enterprises Development (MSMED) Act, 2006. The classification of MSMEs is shared in Table 3.12.

Table 3.12 Classification of Micro, Small, & Medium Enterprises in India

Item	Manufacturing Enterprises	Service Enterprises
Basis of Classification	Investment in plant & machinery	Investment in equipment
Micro Enterprises	Does not exceed INR 2.5 million	Does not exceed INR 1 million
Small Enterprises	More than INR 2.5 million but does not exceed INR 50 million	More than INR 1 million but does not exceed INR 20 million
Medium Enterprises	More than INR 50 million but does not exceed INR 10 million	More than INR 20 million but does not exceed INR 50 million

Source: Ministry of Micro, Small & Medium Enterprises, India (Website)

Total number of new MSMEs registered in the state was 86,635 up to 2006-07 (Chart 3.15) and during the next seven years (2007-08 to 2014-15) it was 136,866. Hence, it can be said that there has been an increase in the number of new MSME registrations during the last few years due to pro-industrial policies of the state govt. In 2013, Maharashtra Industrial Policy was released by the state govt. which had various incentives for MSMEs and had provisions for sick units as well. From 2006-07 to 2014, 2,753,521 are being employed in MSME with investment of INR 524.61 billion in the same period. In term of investment in 2014-15, Konkan region registered highest investment with INR 24.40 billion, followed by Pune region with INR 20.04 billion and

Aurangabad region with INR 5.20 billion. Chart 3.15 shows the trend of MSMEs registration in the state.

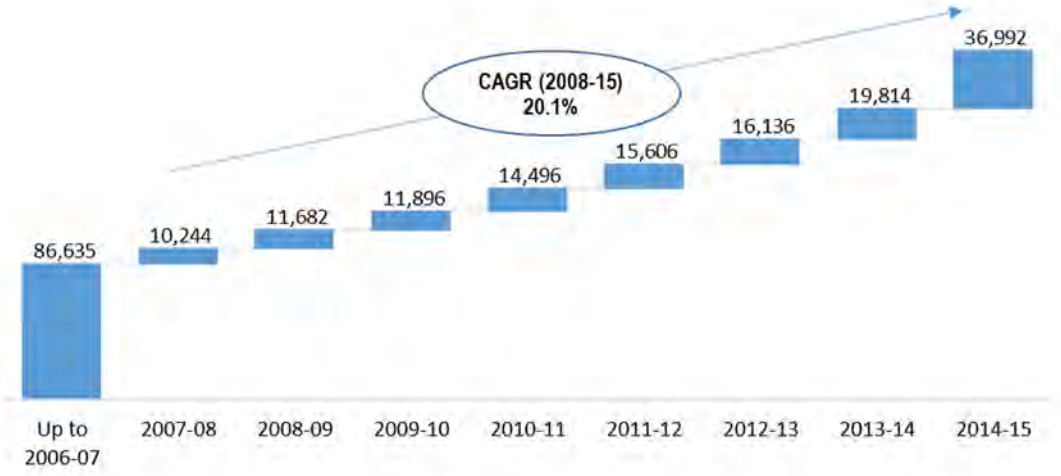

Chart 3.15 Year-wise new MSMEs registered in Maharashtra

Source: Website of MIDC

The top 3 districts in terms of the presence of MSMEs are: Thane, Nagpur, and Mumbai. These three districts collectively account for 32.4% of the total MSMEs present in the state (Figure 3.7). In MSME chart, Pune ranked fourth with 3,268 enterprises. Whereas, the least number of MSMEs are located in Dhule, Nandurbar, and Hingoli, which accounted for a 0.9% share in 2014-15.

Though the number of MSMEs has been consistently increasing in the state, still, the quality of output from these MSMEs is not upto the expectation of the manufacturing industry. The state's MSMEs lag behind in terms of quality and efficiency when compared to foreign counterparts, as mentioned by few foreign manufacturing companies during the industrial survey. For eg: companies have to hire foreign specialists for metal casting process as accuracy and durability of states' MSMEs are not up to the mark. Moreover, Indian manufactured machine & tools, are of low quality, leading to import of such machines from Japan and Thailand. Furthermore, the foreign companies feel that there is less emphasis on practical training during polytechnic/engineering due to lack of latest equipment for training.

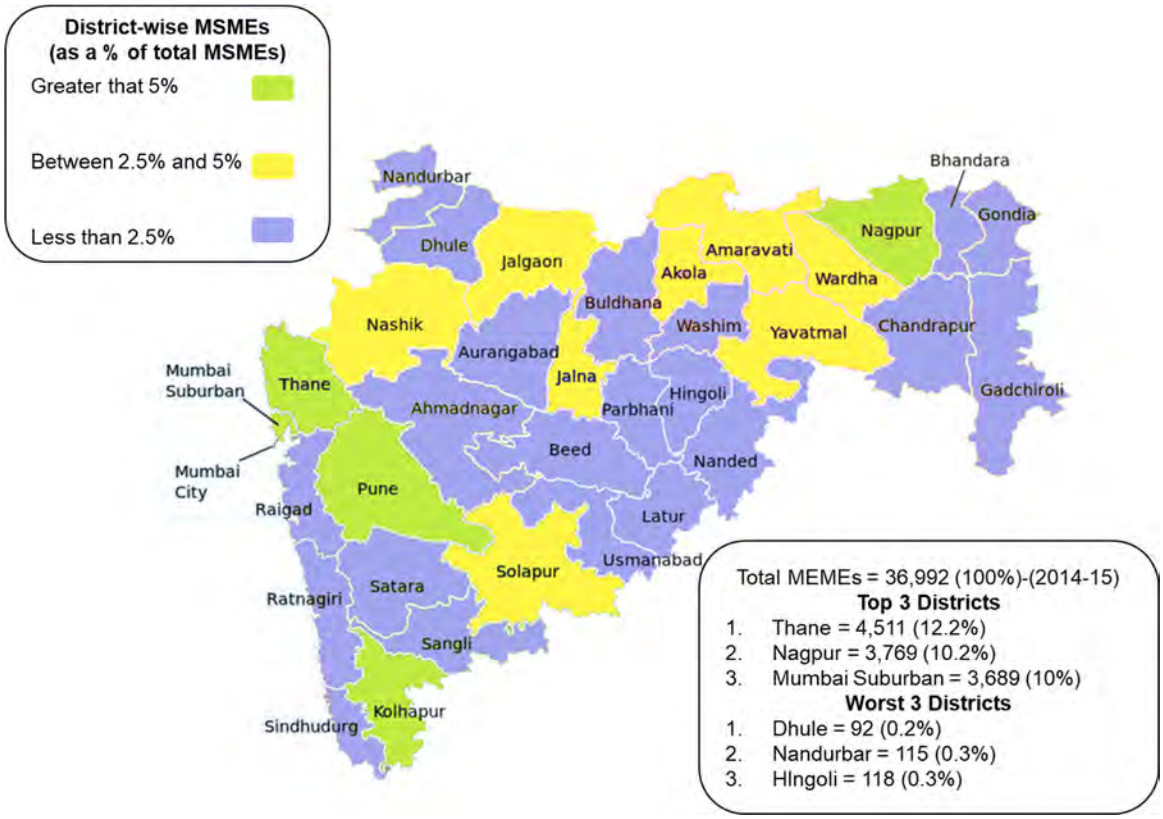

Figure 3.7 District-wise status of MSMEs in Maharashtra (2014-15)

Source: Website of MIDC

Further, to encourage MSME sector of Maharashtra, the state govt. is looking to increase the industrialisation in the state and have started various initiatives for the same, for example, pro-industrial policies, increasing the investments through global investors summit – Magnetic Maharashtra, etc. Thus, the number of factories are expected to further increase in the coming years in various industrial sectors such as aerospace, defence, infrastructure, and gems & jewellery sectors. For instance, Defence companies would build their factories in Nagpur, Ahmednagar, Pune, Nashik and Aurangabad locations.

3.4. Investment Policies, Procedures, and Implementation Systems

3.4.1. Maharashtra Government Organisational Structure

The State Government of Maharashtra comprises various departments/ministries which take care of policy making and implementation of the respective department. Each department/ministry is headed by a cabinet/state minister. The bureaucratic structure of the departments includes the presence of Commissioner, Chief Secretary, Principal Secretary, Joint Secretaries, Directors, etc. The ministries/departments of the government are helped by the presence of various Boards and Corporations which serve specific purposes related to that department. Figure 3.8 shows some of the major ministries/departments and boards & corporations associated to them.

Maharashtra State Government		
Categories	**Ministries/Departments**	**Boards and Corporations**
Finance	• Finance • Goods and Services Tax • Planning • Revenue	• Maharashtra State Financial Corporation (MSFC) • Directorate of Accounts & Treasuries • Directorate of Insurance • Directorate of Economics and Statistics
Industry	• Industries • Cooperatives • Food and Drug Administration	• Maharashtra Industry, Trade and Investment Facilitation Cell (MAITRI) • Maharashtra Industrial Development Corporation (MIDC) • Directorate of Industrial Safety and Health • Directorate of Steam Boilers • Directorate of Industries
Social	• Food, Civil Supplies and Consumer Protection • Women & Child • Development • Public Health • Rural Development	• Mahila Arthik Vikas Mahamandal (MAVIM) • State Social Welfare Advisory Board • State Commission for Women • State Commission for Protection of Child Rights
Energy, Power, and Utilities	• Energy • New and Renewable Energy • Water Supply and Sanitation	• Maharashtra Energy Development Agency (MEDA) • Maharashtra Electricity Regulatory Commission (MERC) • Maharashtra State Electricity Generation Co. Ltd. (Mahagenco) • Maharashtra Jeevan Pradhikaran • Maharashtra State Electricity Transmission Co. Ltd. (Mahatransco / MSETCL) • Maharashtra State Electricity Distribution Co. Ltd. (Mahavitaran) • Groundwater Surveys & Development Agency (GSDA)
Human Resource	• School Education and Sports Department • Higher & Technical Education • Medical Education • Skill Development and Entrepreneurship (SD&E) • Labour	• Maharashtra Labour Welfare Board • Maharashtra State Board for Technical Education (MSBTE) • Directorate of Skill Development, Employment and Entrepreneurship • Directorate of Higher Education • Directorate of Technical Education • Maharashtra State Board of Vocational Education Examination (MSBVEE) • Maharashtra Knowledge Corporation Limited (MKCL) • Directorate of Vocational Education & Training (DVET) • Maharashtra State Skill Development Society (MSSDS)
Infrastructure	• Urban Development • Housing • Transport • Motor Vehicles • Ports • Public Works Department (PWD)	• Maharashtra State Road Transport Corporation (MSRTC) • Maharashtra State Road Development Corporation • Maharashtra Housing & Area Development Authority (MHADA) • Maharashtra Real Estate Regulatory Authority (MahaRERA) • City & Industrial Development Corporation of Maharashtra Limited (CIDCO) • Maharashtra Maritime Board • Maharashtra State Warehousing Corporation • Directorate of Town Planning and Pricing
Agriculture and Allied	• Agriculture • Animal Husbandry • Sericulture • Fisheries • Forest • Water Conservation Department • Water Resources	• Maharashtra State Agricultural Marketing Board (MSAMB) • Maharashtra Water Resources Regulatory Authority (MWRRA) • Maharashtra State Cooperative Marketing Federation (MSCMF) • Maharashtra Fisheries Development Corporation (MFDC) • Maharashtra State Co-operative Consumer's Federation Ltd. • Maharashtra Agro Industries Development Corporation Ltd (MAIDC)
Others	• Environmental Department • Textiles • Tourism and Cultural Affairs • Cooperation, Marketing and Textiles	• Maharashtra Pollution Control Board (MPCB) • State Environment Impact Assessment Authority (SEIAA) • Maharashtra Tourism Development Corporation (MTDC) • Maharashtra State Powerlooms Corporation Limited (MSPC) • Maharashtra State Handlooms Corporation Ltd. (MSHC)

Figure 3.8 Major Ministries and related Boards under Government of Maharashtra

Source: Website of Government of Maharashtra; NRI Analysis

While investing into a state, there are some agencies (boards and corporations) which play a major role in promoting the investments, issuing necessary permits, providing necessary infrastructure, monitoring the industrial activity, etc. Figure 3.9 provides the names of such important agencies which are related to industrial investment along with a brief description of their roles and responsibilities.

Agency	Description
MAITRI - Maharashtra Industry, Trade and Investment Facilitation Cell	• MAITRI is an online Government-to-Business (G2B) portal which facilitates existing and prospective investors to get consolidated information about the investment process • It facilitates domestic as well as international (cross-border) Investors to submit regulatory documents at a single location • It primarily caters to the projects with investments worth INR 100 million and above, designated as Large, Mega, and Ultra Mega projects under Industrial Policy of Maharashtra 2013
MIDCO - Maharashtra Industrial Development Corporation	• MIDCO is the premier industrial infrastructure development agency of Government of Maharashtra • Its main objective is to set up industrial areas for planned and systematic industrial development and it also acts as a special planning authority in development of industrial areas • It has one of the largest industrial land banks amongst all the Industrial development corporations in India and has built 289 Industrial Areas with more than 163,766 acres of land
MSFC - Maharashtra State Financial Corporation	• MSFC mainly provides term loan assistance to small and medium scale industries for acquiring fixed assets like land, building, plant & machinery • Loans are also provided for expansion, diversification, technology development, enlarging product mix / product range, quality improvement including ISO 9000 series certifications, and also for Take-Over of Term Loan accounts from Banks
MPCB - Maharashtra Pollution Control Board	• MPCB implements various environmental legislations in the state of Maharashtra, mainly including Water (Prevention and Control of Pollution) Act, 1974; Air (Prevention and Control of Pollution) Act, 1981; Water (Cess) Act, 1977; and some of the provisions under Environmental (Protection) Act, 1986 • It inspects sewage or trade effluent treatment and disposal facilities, and air pollution control systems and reviews plans, specification or any other data relating to the treatment plants, disposal systems and air pollution control systems in connection with the consent granted

Figure 3.9 Major State-level agencies related to Industries

Source: Websites of MAITRI, MIDC, MSFC, and MPCB

3.4.2. Difference between Centre Government and State Government Policies

Central level policies are applicable to all the Indian states whereas State level policies are applicable and followed in the respective states in proposed fields. There are some differences which exist for policies adopted Centrally and at State level. Table 3.13 shows some of the major differences between the Centre and State Policies.

Table 3.13 Centre Government vs State Government Policies

Subject	Central Government Policies	State Government Policies
Level of ownership	• Strategic level initiatives to promote industrial development e.g. Make in India, National Manufacturing Policy etc. • Set direction for state governments to create suitable policy environment	• Operational level initiatives to promote industrial development e.g. Ease of Doing Business etc. • Implementation based on policy directions from central government initiatives
Coverage	• Applicable on entire country but sometimes focus on specific regions which require promotion	• Generally applicable for all districts within a state. • Special incentives/schemes for underdeveloped areas can be provided
Incentives	• Provides sector-wise incentives such as corporate tax concessions, import duty exemption, capital subsidy etc.	• Provides incentives such as low power tariff rates, refund of stamp duty on land transactions, VAT (now GST) etc.

Source: NRI Analysis

3.4.3. Overall Investment Promotion Policy

In order to keep Maharashtra among the leading industrialised states of India, and to improve the industrialisation of less developed regions, the State Government of Maharashtra issued The Maharashtra Industrial Policy 2013. The industrial policy was issued for a period of five years from 1st April 2013 to 31st March 2018. However, during February 2018, the State Govt.

announced that the period of the industrial policy was increased till 30th September 2018, after which the State Govt. would reveal the New Industrial Policy-2018. Also, it was announced that the State Govt. is still in the process of changing the tax incentives provided under the Industrial Policy 2013 as per the new tax structure of GST. The Goods and Services Tax (GST) was implemented countrywide on July 1, 2017.

3.4.3.1. Objectives of the Industrial Policy 2013

- To retain Maharashtra's leadership position in industrial investment within the country
- To further accelerate investment flow to industrially underdeveloped regions of the state
- To create more employment opportunities

3.4.3.2. Targets of the Industrial Policy 2013

- To achieve manufacturing sector growth rate of 12-13% per annum
- To achieve manufacturing sector share of 28% of state GDP
- To create new jobs for 2 million persons
- To attract investments of INR 5 lakh crore (INR 5 trillion)

3.4.3.3. Roadmap for achieving the targets of the Industrial Policy 2013

- Increased focus on less developed regions of the state to bring them at par with mainstream industrial development
- Initiatives to develop employment-intensive industries
- Holistic approach to develop MSMEs
- Customised package for Ultra Mega and Mega Industrial Development
- Strengthening of the industrial infrastructure
- Optimal utilisation of land for industrial development
- Initiatives for investor facilitation and improving ease of doing business
- Assistance to unviable sick units for easy exit and to viable sick units for revival

Table 3.14 Major focus points of the Maharashtra Industrial Policy 2013

Focus Point	Sub-parts	Description
Infrastructure: The Growth Engine	Leveraging Industrial Corridors	• Delhi Mumbai Industrial Corridor (DMIC) is a mega infrastructure project which will have 17% of its projected area in Maharashtra covering 10 districts • A band of 150 km on either sides of the freight corridor has been identified as the influential region for industrial development • Under DMIC, the state govt. has taken the following initiatives: Mega Industrial Park at Shendra – Bidkin (Aurangabad), Exhibition cum Convention Centre at Additional Shendra (Aurangabad), Dighi Industrial Area (Raigarh), mega Industrial Park at Sinnar (Nashik), Multi-Modal Logistics Park at Talegaon

		(Pune), Mega Industrial Park at Dhiule (Pune), two 1,000 MW gas based power plants at Vile Bhagad (Raigarh) and Indapur (Pune)
	Secondary Growth Corridors	• Secondary growth corridors are being developed along national and major state highways in order to bring the industrially underdeveloped areas of Vidarbha, Marathwada and Konkan regions functionally closer to the growth centres like Mumbai and Pune • Three such growth corridors are: Mumbai-Nashik, Aurangabad-Amravati-Nagpur; Mumbai-Pune-Satara-Sangli-Solapur; Mumbai-Ratnagiri-Sindhudurg • Additional emphasis is on developing Food and Agro Processing, Engineering and Electronics, and support industries such as Logistics and Warehousing
	Committee on Industrial Infrastructure Development for Maharashtra (CIID)	• In order to synchronise the efforts of plan and create necessary industrial infrastructure, the Committee on Industrial Infrastructure Development for Maharashtra (CIID) was set up • The committee will be headed by the Chief Secretary of the state and it will the sanctioning authority for the trunk infrastructure development projects
	Special Economic Zones (SEZs)	• The state had maximum number of approved SEZs and in order to keep it the same way, the state govt. provided various fiscal incentives such as Time-bound refunds of taxes, exemption from payments of royalty on excavation of minor minerals within the SE, Stamp Duty exemption for land acquisition, etc.
	Exhibition-cum-Convention Centres	• Various state govt. authorities have developed Exhibition-cum-Convention Centres like the International Exhibition and Convention Centre at Moshi; Exhibition-cum-Convention Centre at Shendra Industrial Area (Aurangabad); Commercial Complex near Ambazari Garden (Nagpur)
Land for Industrial Use	Maharashtra industrial Development Corporation (MIDC)	• MIDC will continue to play a key role in providing land and related industrial infrastructure for setting up of manufacturing facilities in the state • MIDC would use innovative models for land acquisition to adequately meet the growing demand for land
	Increased Floor Space Index (FSI)	• Additional FSI is permitted in MIDS areas and new co-operative industrial estates to the extent of 0.5 times over and above the basic FSI by charging premium rates decided by MIDC with state government's approval
	Leverage land under de-notified or withdrawn SEZs	• The Industrial Policy 2013 allowed use of lands in de-notified and withdrawn SEZs for development of Integrated Industrial Estates
	Flatted Structures	• Flatted structures are being / have been constructed in order to provide space to MSMEs for industrial usage
	Reservation of MIDC plots	• 10% area of the new MIDC industrial estates have been saved for MSMEs, out of which, 5% area will be allotted to women entrepreneurs and other socially backward entrepreneurs on priority basis • Efforts to be made to acquire additional land in the industrial areas where 75% of the plots have been allotted

Investor Facilitation and Investment Promotion	Investor Promotion and Facilitation Cell	• Maharashtra Industry, Trade and Investment Facilitation Cell (MAITRI) was setup to facilitate business partnerships and to promote investments in the state • It functions as a clearing house for all investment related information and assists the state/investors on various investment opportunities • It primarily caters to the projects with investments worth INR 100 million and above, designated as Large, Mega and Ultra Mega projects
	Single Window Clearance System	• In 2013, Maha eBiz Portal was developed as an investor portal which would provide investors a one-stop solution for information, services, and consents electronically. However, during 2016, a new Single Window Policy was released by the state govt. and it mentioned MAITRI as the single window clearance portal • MAITRI functions as one stop cell for providing all clearances at one place to all investor; for giving online and time bound approvals; and to work as a grievance redressal mechanism for industries
	Build Brand Maharashtra: 'Magnetic Maharashtra'	• To promote branding of Maharashtra through its industrial development strategies, ensuring that all type of industries, from MSME to mega scale are developed in a holistic manner, employment is generated on a large scale, and balanced growth of the state is achieved
Simplification of Administrative Procedures	Labour NOC	• The procedure of obtaining No Objection Certificate (NOC) from Labour Department for transfer of land in MIDC areas, Labour cess, and other Labour related issues have been simplified through various reforms
	Computerisation	• The state has made the whole procedures of reimbursement of the entire Package Scheme of Incentives. Eligible projects can apply online for various incentives under the schemes launched by the state govt.
Supporting the MSME Sector	Cluster Promotion – New Plan Scheme	• State Govt. offers fiscal assistance of up to 70% on the total cost of plant and machinery in Common Facilities Centres (CFCs) which have been approved. For clusters consisting 100% of micro enterprises or a minimum of 50% women-promoted enterprises, the grant will be enhanced to 80%.
	Competitive Enhancement	• Marketing Assistance Scheme: State Govt. provides assistance for up-gradation in packaging techniques and technologies as well as for participation in state/district level fairs. • Skill Development Scheme: State Govt. supports the design and implementation need-based skill development programmes. • Assistance for Lean Manufacturing Scheme: This is offered to MSMEs with a view to reducing waste, increasing productivity, introducing new practices, and reinforcing good management systems. • Design Assistance Scheme: Developed with a view to promote the application of design and innovation among MSMEs.

Source: Document of Maharashtra Industrial Policy 2013 (website of MIDC)

Apart from the major focus points of the Industrial Policy 2013 (Table 3.15), there are various tax incentives (Industrial Promotion Subsidy) and other rebates such as regarding electricity and water duty, stamp duty, etc. which are provided to various industries in the state. Such incentives are a part of the Package Schemes of Incentives 2013 (PSI).

Maharashtra's Talukas have been classified on the basis of industrial development. Currently, there are five grade groups including A /B/ C/ D/ D +, No Industry District, and Naxalism Affected Area. For instance, Group A represents highly industrial areas, Group B represents that some industrial development has taken place but less developed areas than Group A, Group C denotes less developed than Group B and so on. Some examples of the classifications are: Greater Mumbai, Alibag (Raigad), Pune city (Pune) come under Group A, Dahanu (Thane), Haveli (Pune), Nasik (Nashik), etc. fall under Group B, Niphad (Nashik), Ratnagiri (Ratnagiri) under Group C, and Aurangabad (Aurangabad), Khed (Ratnagiri), Jalgoan (Jalgoan) are under Group D.

Table 3.15 Classification of Industrial Projects under Maharashtra Industrial Policy 2013

Area Classification		Type of Industrial Project			
Area	Minimum requirements	Ultra Mega Industrial Units	Mega Industrial Units	Large Industrial Units	MSME Industrial Units
A	Fixed Capital Investment (INR billion)	15	7.5	More than 0.1 but less than Mega Projects	Less than 0.1 (for manufacturing) Less than .05 (for services)
	Direct Employment (no. of persons)	3,000	1,500	No requirement	No requirement
B	Fixed Capital Investment (INR billion)	15	7.5	More than 0.1 but less than Mega Projects	Less than 0.1 (for manufacturing) Less than .05 (for services)
	Direct Employment (no. of persons)	3,000	1,500	No requirement	No requirement
C	Fixed Capital Investment (INR billion)	15	5	More than 0.1 but less than Mega Projects	Less than 0.1 (for manufacturing) Less than .05 (for services)
	Direct Employment (no. of persons)	3,000	1,000	No requirement	No requirement
D	Fixed Capital Investment (INR billion)	15	2.5	More than 0.1 but less than Mega Projects	Less than 0.1 (for manufacturing) Less than .05 (for services)
	Direct Employment (no. of persons)	3,000	500	No requirement	No requirement
D+	Fixed Capital Investment (INR billion)	15	2.5	More than 0.1 but less than Mega Projects	Less than 0.1 (for manufacturing) Less than .05 (for services)
	Direct Employment (no. of persons)	3,000	500	No requirement	No requirement
No industry districts	Fixed Capital Investment (INR billion)	15	1	More than 0.1 but less than Mega Projects	Less than 0.1 (for manufacturing) Less than .05 (for services)
	Direct Employment (no. of persons)	3,000	250	No requirement	No requirement

Naxalism affected area	Fixed Capital Investment (INR billion)	15	1	More than 0.1 but less than Mega Projects	Less than 0.1 (for manufacturing) Less than .05 (for services)
	Direct Employment (no. of persons)	3,000	250	No requirement	No requirement

Source: Website of MIDC

The industrial projects of the state are classified into Ultra Mega, Mega, Large, and MSME projects based on the fixed capital invested and/or direct employment provided (Table 3.16). The Package Scheme of Incentives provides benefits to different kinds of projects based on the industrial location (such as A, B, C, D, D+, etc.) and the type of project. In the case of Ultra Mega and Mega Projects, the Principal Secretary (Industries) decides the quantum of incentives within the approved limit on a case to case basis. The Cabinet Sub-Committee under the chairmanship of the Chief Minister of Maharashtra is having the power to sanction customized package of incentives and offer special / extra incentives for the prestigious Mega Projects / Ultra Mega Project on a case to case basis.

During industrial survey, a few companies shared their concerns regarding the gradual decline in the incentives provided by government to the companies located in the industrial areas of Mumbai, Pune, and Chakan. According to those companies, good amount of incentives is necessary in order to promote future investment, especially for foreign companies. For example, foreign companies investing in Indonesia and Thailand gets good incentives such as income tax exemption and duty-free import of machinery & raw material, etc.

Table 3.16 Benefits for MSMEs and Large Scale Industries (LSIs) under Package Scheme of Incentives (PSI) of the Industrial Policy of Maharashtra 2013

Area Classification	Type of Benefit	Large Scale Industries (LSI)	MSMEs
A	Industrial Promotion Subsidy (IPS)	-	-
	Incentives for Expansion/Diversification units	-	-
	Interest Subsidy	-	-
	Exemption from Electricity Duty	100% Export Oriented Units (EOUs), Information Technology (IT) and Bio-Technology (BT) units are exempted for a period of 7 years	100% Export Oriented Units (EOUs), Information Technology (IT) and Bio-Technology (BT) units are exempted for a period of 7 years
	Waiver of Stamp Duty	Exemption for only BT & IT manufacturing units in Public Parks , BT & IT manufacturing units in private parks	Exemption for only BT & IT manufacturing units in Public Parks , BT & IT manufacturing units in private parks
	Power Tariff Subsidy	-	-

	Water and Energy Conservation related	75% of cost of water audit and energy audit limited to INR 100 thousand and 200 thousand respectively	75% of cost of water audit and energy audit limited to INR 100 thousand and 200 thousand respectively
B	Industrial Promotion Subsidy (IPS)	-	VAT on local sales minus Input Tax Credit (ITC) or zero whichever is more + CST payable + 20% of ITC
	Incentives for Expansion/Diversification units	-	Equivalent to 75% of the incentives admissible for New Units
	Interest Subsidy	-	Amount of interest subsidy is effective rate of interest (after deducting interest subsidy receivable any institution / under any Govt. of India Scheme or 5% p.a. whichever is less)
	Exemption from Electricity Duty	100% Export Oriented Units (EOUs), Information Technology (IT) and Bio-Technology (BT) units are exempted for a period of 7 years	100% Export Oriented Units (EOUs), Information Technology (IT) and Bio-Technology (BT) units are exempted for a period of 7 years
	Waiver of Stamp Duty	Exemption for only BT & IT manufacturing units in Public Parks , BT & IT manufacturing units in private parks	Exemption for only BT & IT manufacturing units in Public Parks , BT & IT manufacturing units in private parks
	Power Tariff Subsidy	From INR 0.5 to 1 per unit	From INR 0.5 to 1 per unit
	Water and Energy Conservation related	75% of cost of water audit and energy audit limited to INR 100 thousand and 200 thousand respectively	75% of cost of water audit and energy audit limited to INR 100 thousand and 200 thousand respectively
C	Industrial Promotion Subsidy (IPS)	60% VAT on local sales minus Input Tax Credit (ITC) or zero whichever is more + CST payable	VAT on local sales minus ITC or zero whichever is more + CST payable + 30% of ITC
	Incentives for Expansion/Diversification units	Equivalent to 75% of the incentives admissible for New Units	Equivalent to 75% of the incentives admissible for New Units
	Interest Subsidy	-	Amount of interest subsidy is effective rate of interest (after deducting interest subsidy receivable any institution / under any Govt. of India Scheme or 5% p.a. whichever is less)
	Exemption from Electricity Duty	Exempted for a period not exceeding 15 years	Exempted for a period not exceeding 15 years
	Waiver of Stamp Duty	All units exempted from payment of stamp duty	All units exempted from payment of stamp duty
	Power Tariff Subsidy	From INR 0.5 to 1 per unit	From INR 0.5 to 1 per unit
	Water and Energy Conservation related	75% of cost of water audit and energy audit limited to INR 100	75% of cost of water audit and energy audit limited to INR 100

		thousand and 200 thousand respectively	thousand and 200 thousand respectively
D	Industrial Promotion Subsidy (IPS)	70% VAT on local sales minus ITC or zero whichever is more + CST payable	VAT on local sales minus ITC or zero whichever is more + CST payable + 40% of ITC
	Incentives for Expansion/Diversification units	Equivalent to 75% of the incentives admissible for New Units	Equivalent to 75% of the incentives admissible for New Units
	Interest Subsidy	--	Amount of interest subsidy is effective rate of interest (after deducting interest subsidy receivable any institution / under any Govt. of India Scheme or 5% p.a. whichever is less)
	Exemption from Electricity Duty	Exempted for a period not exceeding 15 years	Exempted for a period not exceeding 15 years
	Waiver of Stamp Duty	All units exempted from payment of stamp duty	All units exempted from payment of stamp duty
	Power Tariff Subsidy	From INR 0.5 to 1 per unit	From INR 0.5 to 1 per unit
	Water and Energy Conservation related	75% of cost of water audit and energy audit limited to INR 100 thousand and 200 thousand respectively	75% of cost of water audit and energy audit limited to INR 100 thousand and 200 thousand respectively
D +	Industrial Promotion Subsidy (IPS)	80% VAT on local sales minus ITC or zero whichever is more + CST payable	VAT on local sales minus ITC or zero whichever is more + CST payable + 50% of ITC
	Incentives for Expansion/Diversification units	Equivalent to 75% of the incentives admissible for New Units	Equivalent to 75% of the incentives admissible for New Units
	Interest Subsidy	-	Amount of interest subsidy is effective rate of interest (after deducting interest subsidy receivable any institution / under any Govt. of India Scheme or 5% p.a. whichever is less)
	Exemption from Electricity Duty	Exempted for a period not exceeding 15 years	Exempted for a period not exceeding 15 years
	Waiver of Stamp Duty	All units exempted from payment of stamp duty	All units exempted from payment of stamp duty
	Power Tariff Subsidy	From INR 0.5 to 1 per unit	From INR 0.5 to 1 per unit
	Water and Energy Conservation related	75% of cost of water audit and energy audit limited to INR 100 thousand and 200 thousand respectively	75% of cost of water audit and energy audit limited to INR 100 thousand and 200 thousand respectively
No Industry District	Industrial Promotion Subsidy (IPS)	90% VAT on local sales minus ITC or zero whichever is more + CST payable	VAT on local sales minus ITC or zero whichever is more + CST payable + 75% of ITC
	Incentives for Expansion/Diversification units	Equivalent to 75% of the incentives admissible for New Units	Equivalent to 75% of the incentives admissible for New Units

	Interest Subsidy	-	Amount of interest subsidy is effective rate of interest (after deducting interest subsidy receivable any institution / under any Govt. of India Scheme or 5% p.a. whichever is less)
	Exemption from Electricity Duty	Exempted for a period not exceeding 15 years	Exempted for a period not exceeding 15 years
	Waiver of Stamp Duty	All units exempted from payment of stamp duty	All units exempted from payment of stamp duty
	Power Tariff Subsidy	From INR 0.5 to 1 per unit	From INR 0.5 to 1 per unit
	Water and Energy Conservation related	75% of cost of water audit and energy audit limited to INR 100 thousand and 200 thousand respectively	75% of cost of water audit and energy audit limited to INR 100 thousand and 200 thousand respectively
Naxalism Affected Area	Industrial Promotion Subsidy (IPS)	100% VAT on local sales minus input Tax Credit (ITC) or zero whichever is more + CST payable	VAT on local sales minus (ITC) or zero whichever is more + CST payable + 100% of ITC
	Incentives for Expansion/Diversification units	Equivalent to 75% of the incentives admissible for New Units	Equivalent to 75% of the incentives admissible for New Units
	Interest Subsidy	-	Amount of interest subsidy is effective rate of interest (after deducting interest subsidy receivable any institution / under any Govt. of India Scheme or 5% p.a. whichever is less)
	Exemption from Electricity Duty	Exempted for a period not exceeding 15 years	Exempted for a period not exceeding 15 years
	Waiver of Stamp Duty	All units exempted from payment of stamp duty	All units exempted from payment of stamp duty
	Power Tariff Subsidy	From INR 0.5 to 1 per unit	From INR 0.5 to 1 per unit
	Water and Energy Conservation related	75% of cost of water audit and energy audit limited to INR 100 thousand and 200 thousand respectively	75% of cost of water audit and energy audit limited to INR 100 thousand and 200 thousand respectively

Source: Website of Directorate of Industries (Govt. of Maharashtra)

Total quantum of incentives which is provided under the industrial policy for Large Scale Industries ranges from 30% to 80% of Fixed Capital Investment in that unit in areas from C category to Naxalism Affected Area respectively. The total eligibility period for the above mentioned incentives is 7 years. Similarly, for MSMEs, total quantum of incentives offered ranges from 20% to 100% of Fixed Capital Investment in that unit in areas from B to Naxalism Affected Area respectively. Also, the eligibility period for the above mentioned incentives is 7 years (for B & C areas) and 10 years for the rest of the areas.

In order to provide push to the food processing sector, the total quantum of incentives for the food/agro processing units is 10% over and above the limits mentioned above and such units will get one more year of eligibility to avail of the incentives.

Incentives are provided to MSMEs in the state, however, there is no MSME specific policy. As per the industrial survey conducted, the foreign manufacturers based in the state responded that the situation of support industry is not very good in terms of quality of their output. This results in manufacturing industry to look for good quality raw material and expertise from outside the state/country. In order to improve the situation, the state government should put more focus on the support industries/MSMEs.

3.4.4. Single Window Clearance System

Maharashtra's Single Window Clearance System (SWCS) which is known as MAITRI (Maharashtra Industry, Trade and Investor Facilitation Cell) is a single point of contact to obtain all clearances and approvals of layouts/applications for the proposed investment submitted by the investors. This online platform provides time-bound clearances and approvals. MAITRI also works as a grievance redressal mechanism for industries. This system was envisaged to be setup under the Maharashtra Industrial Policy 2013 and came into effect once the Single Window Policy was released in 2016. Under the Single Window Policy 2016, all the services, functions, and timelines were provided for obtaining various approvals/licences. Currently, MAITRI provides approvals from more than 16 departments which are mentioned in Table 3.17.

As per our discussion with the industries, there are some issues regarding MAITRI which create difficulties for companies to establish in the state. For instance, some of the companies responded that they were required to visit various government departments individually in order to get the necessary clearances and approvals. Apart from that, the whole process was difficult to understand and follow for some companies (particularly foreign companies). Therefore, country specific investment desks could be helpful which can assist the foreign companies from a specific country by handholding through the entire investment process. For example, a Japan Desk could assist the Japanese businesses who are interested in investing in the state. This would also help in removing the language barriers for some countries as well.

Table 3.17 Key approvals provided through Single Window Clearance System (MAITRI) for establishing an Industrial Project in Maharashtra

S. No.	Department	Approval Type	Timeline (in days)
		Pre-Establishment Approvals	
1.	Maharashtra Industrial Development Corporation (MIDC) or Urban Development Department	1) Building Plan Approval (includes Plan Approval, Provisional Fire NOC, Temporary water connection, Drainage Plan Approval) 2) Building Completion & Occupancy Certificate 3) NOC from Fire Department (Final)	15 to 60
2.	Forest Department	1) Permission for Tree felling 2) Forest Clearance / Forest Land Diversion	60 days or depends on case to case basis
3.	Maharashtra Pollution Control Board	1) Consent to establish (under Water Act & Air Act) 2) Consent to operate (under Water Act & Air Act)	120
4.	Directorate of Industries	1) Stamp Duty Exemption Certificate	7
5.	Revenue Department	1) Permission for excavation during site development	15
6.	Energy Department – MSEDCL (Maharashtra State Electricity Distribution Company Limited)	1) New Electricity Connection	15
7.	Irrigation Department	1) Sanctioning of quota for water for industries	15
8.	Directorate of Industrial Safety and Health	1) Factory layout plan approval, 1948	45
9.	Directorate of Boilers	1) Registration under Boiler Act	23
10.	Law & Judiciary	1) Registration of Firms under Partnership Act , 1952	120
11.	Sales Tax Department	1) Professional Tax Registration	1
12.	Dept. of Registration and Stamps (IGR)	1) Document Registration	1
13.	Food & Drug Administration	1) Retail / Bulk Drug License (Pharmacy)	30
14.	Labour Department	1) Registration under Building & other Construction Workers (BOCW) Act, 1996 2) Registration of establishments under the Interstate migrant workmen Act, 1979	7 to 15

15.	Energy Department - Chief Electrical Inspectorate	1) Line charging permission for Industries 2) Layout Approvals for DG sets 3) Registration of Diesel Generator Sets 4) Permission for charging Diesel Generator Sets for more than 250 KVA	30 to 45
16.	Home Department	1) Permission for storage of fuel oil and chemicals	45
Pre-Operational Approvals			
1.	Maharashtra Industrial Development Corporation (MIDC) or Urban Development Department	1) Land Allotment 2) New Water Connection	15 to 90
2.	Maharashtra Pollution Control Board	1) Authorization under Hazardous Waste Rule 2) Renewal of Consent to operate (under Water Act & Air Act)	60
3.	Labour Department	1) Registration & license under Contract Labour Act 1970 2) Registration of Principal employers' establishment under the Contract labour Act, 1979 3) Registration under Motor Transport Workers Act, 1961 4) Registration under Payment of Gratuity Act, 1972 5) Renewal of Contract Labour Permission 6) Registration under Private Security Guards Act 1981 7) Renewal under Shops and Establishments Act 8) Registration under Beedi & Cigar Workers Act, 1966	7 to 15
4.	Directorate of Industrial Safety and Health	1) License under factories act, 1948	7
5.	Directorate of Boilers	1) Boiler Erection certificate	23
6.	Forest Department	1) Tree Transit Permission	30
7.	Home Department	1) NOC for controlled Blasting for Excavation	60
8.	Food & Drug Administration	1) Drug Manufacturing License	30
9.	Legal Metrology Department/ FCS	1) Registration under Weight & Measures Act	45
Post-Operational Approvals			
1.	Labour Department	1) Renewal of Principal employers under Contract Labour Act 2) Registration under Mathadi Act, 1969 3) Registration under Shops and Establishments Act, 1948	7 to 15

2.	Directorate of Industrial Safety and Health	1) Renewal under License under Factories Act	7
3.	Directorate of Boilers	1) Renewal under Registration under Boiler Act	23
4.	Public Works Department (PWD)	1) Permission for Highway Crossing, access road through highway, right of way etc. under Section 278 of the Highways Act 1980	7

Source: Websites of MAITRI (Govt. of Maharashtra)

3.4.5. Sector Specific Policies

The state government of Maharashtra has implemented various sectoral policies or have passed various acts during the past few years in order to carry on the strong industrial performance of the state.

Table 3.18 Major Sectoral Policies of the State

Policy	Year	Objectives
Aerospace & Defence Manufacturing Policy	2018	• To attract investment worth USD 2 billion in the next five years (2018-23) in the Aerospace & Defence Sector • To create 100,000 employment opportunities over the next five years • To develop world class skilled manpower in collaboration with the industry stakeholders • To promote the building of indigenous advanced Aerospace & Defence technology • To promote Defence MSMEs to compete at global level
Electric Vehicle Policy	2018	• To develop Maharashtra as the leader in EV manufacturing and use of EV • To increase number of EV registered in Maharashtra to 500,000 • To generate an investment of INR 250 billion in EV, EV manufacturing and component manufacturing, battery manufacturing/assembly enterprises and charging infrastructure equipment manufacturing in the state • To create jobs for 100,000 persons
Logistics Parks Policy	2018	• Make Maharashtra a part of the global supply chain • Upgrade from traditional warehousing to provider of fully integrated value added logistic services • Develop Logistics Clusters in the state & develop at least 25 integrated multi-modal logistic parks across the State • Promote a minimum of 100 logistic parks
Policy for Industrial Parks comprising of flatted galas for Readymade Garment manufacturing, Gems & Jewellery, Micro Electronics and Engineering units	2018	• To make Maharashtra globally most favoured place for production of readymade garments and popular brands. Also, simplification for micro, small and medium enterprises which forms a large portion of this sector to increase and develop them • Creation of healthy atmosphere for the entire labour sector by considering their major aspects related to availability of land • Maharashtra is an important centre for gems & jewellery production and creation. Through this policy, simplification to be done for achieving maximum level of growth and employment generation capacity in this sector • To encourage micro electronics and engineering units by making available flatted galas
State Textile Policy	2018	• Encourage setting up of Fibre to Fashion value chain • Generate 1 million new employments in the textile sector • Special focus on development of the textile industry in cotton growing areas

		• Special focus on processing, knitting, hosiery and garmenting sectors to create an internationally competitive textile industry in the State • Set up pollution free / eco-friendly dyeing and processing industry • Increase Mulberry and Tussar cultivation, increase Silk yarn production and create a silk tourism corridor • Encourage traditional silk weaving businesses such as the Paithani Saree. Also create, promote and market "Adhyatmik Reshim" brand • Special focus on non-conventional yarn (bamboo, banana, ambadi, ghaypat, maize, coir, etc.) and its usage with a view to doubling farmers' income • Focus on reviving the entire wool industry from shearing to garmenting to marketing • Special focus on the emerging sector of technical textiles • Provide the textile industries with the latest technical expertise created by institutes such as IITs, SASMIRA and WRA which are actively engaged in research & development in the textile industry
IT Policy	2015	• To attract an investment of INR 500 billion by the private IT parks and the IT / ITES / AVGC units in the State • To create new jobs for 1 million persons • To raise annual exports from IT / ITES / AVGC sector from the State up to INR 1 trillion
Retail Trade Policy	2016	• To uphold Maharashtra's leadership position in the Retail Trade within the country • To further accelerate investment flow to underdeveloped regions of the state • To create more employment opportunities, to educate the youth of all sections of the society across the region, especially in rural areas to take part in Retail Trade • Leverage Retail Trade as a tool for socio-economic development of the State • To strengthen existing unorganized small retailers to face globalization
Maharashtra Maritime Development Policy (MMDP)	2016	• Providing infrastructure support and services to marine-related activities • Increasing revenues to sustain and increase the ambit of its activities • Enhancing skillsets of people employed in the maritime sector • Fast-tracking clearances • Developing greenfield/brownfield ports through public-private partnerships (PPPs) • Developing shipyards and jetties • Enhancing overall port connectivity through expansion of rail/ road/ inland waterways/ coastal shipping services • Developing port-based special economic zones/ industrial estates and corridors • Creating a conducive policy environment for maritime industries • Creating synergies between tourism and maritime activities

Source: Website of MAITRI (Govt. of Maharashtra)

3.5. Overview of Special Economic Zones (SEZs) and Industrial Estates (IEs)

3.5.1. Maharashtra Industrial Development Corporation

MIDC is the apex organization for industrial infrastructure development in Maharashtra. MIDC was established in 1962 under the M.I.D. Act 1961. Main objectives of MIDC include setting-up of industrial areas for planned and systematic industrial development and functioning as a special planning authority in development of industrial areas. So far, MIDC has developed 289 Industrial Areas with 66,273.82 hectares (163,766 acres) of land. MIDC takes care of the physical infrastructure development inside the industrial areas including roads, power, street light, water supply, drainage etc. along with provisions for basic social infrastructure. MIDC has one of the largest industrial land banks amongst all the Industrial development corporations in India and it manages it through its 16 regional offices present throughout the state.

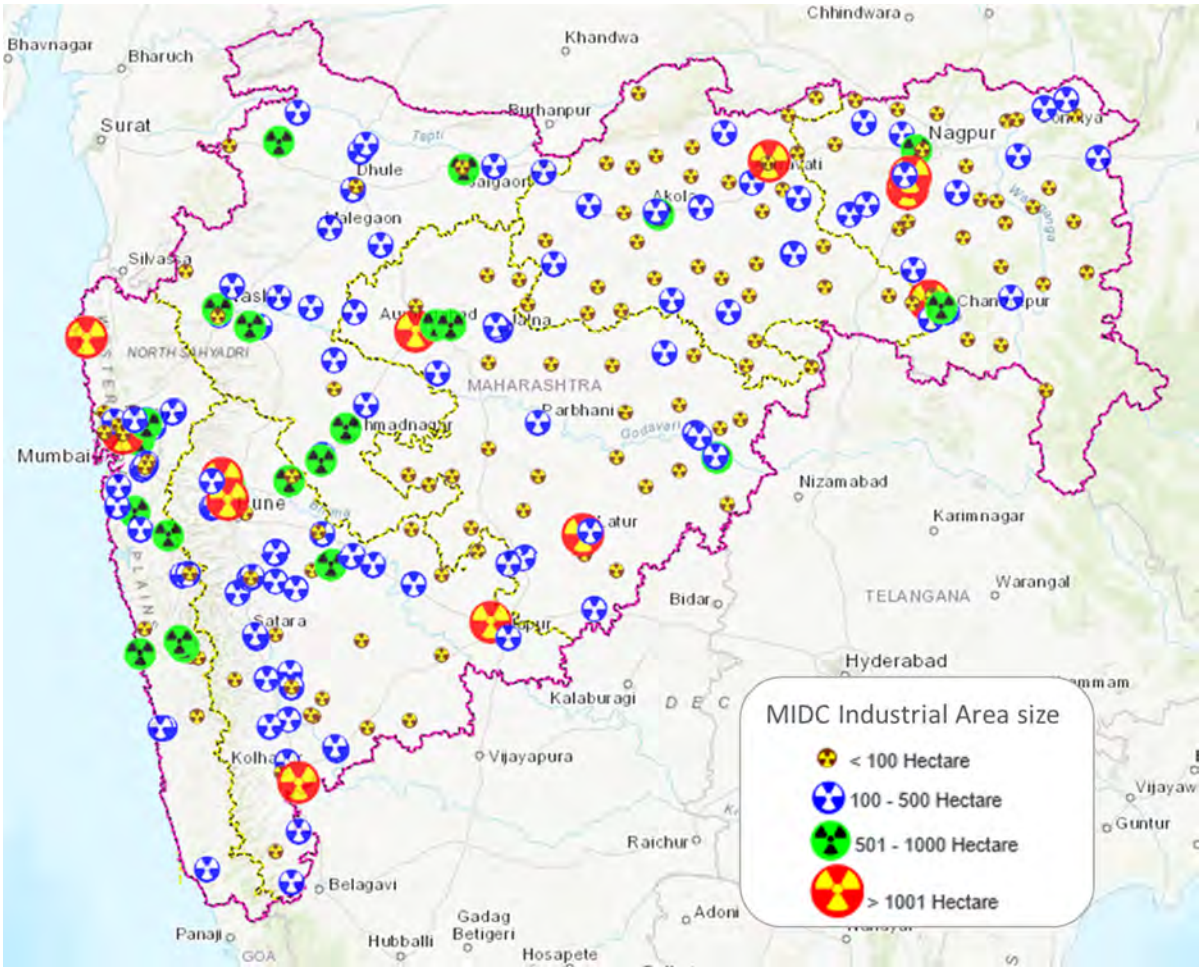

Figure 3.10 Industrial Areas of Maharashtra

Source: Website of Maharashtra Remote Sensing Application Centre (MRSAC), Govt. of Maharashtra

Note: 1 hectare = 2.47 acres

MIDC has developed 6 key industrial clusters in the state of Maharashtra. These are shown in Figure 3.11.

Figure 3.11 Key industrial clusters of MIDC

Source: Website of MIDC

3.5.2. Types of Industrial Areas

MIDC has developed various kinds of industrial infrastructure based on the requirements of the industry and the guidelines provided by the centre and the state governments. These include 8 specialised Food Parks, 30 IT parks and a Software Technology Park, 10 exclusive Textile Parks (14 private textile parks are also there), 3 Wine Parks, 3 Floriculture Parks, and 1 specialized Silver Zone at Hupri in Kolhapur.

Table 3.19 List of various special Industrial Parks situated in Maharashtra

S. No.	Name	Location
	Food Parks	
1.	Paithan Mega Food Park	Paithan, Aurangabad
2.	Food Park-Aurangabad	Shendra, Aurangabad
3.	Food Park-Nagpur	Bhandara Road, Dist. Nagpur
4.	Food Park-Nagpur	Kamtee, Nagur
5.	Food Park-Nagpur	Butibori, Nagpur
6.	Food Park-Sangli	Palus, Sangli
7.	Satara Mega Food Park	Degaon Village, Satara
8.	Food Park-Satara	Satara, Pune
9.	Mega Food Park	Wardha
	Floriculture Parks	
1.	Talegaon Floriculture Park	Talegaon, Pune
2.	Mudkhed Floriculture Park	Mudkhed, Nanded
3.	Osmanabad Floriculture Park	Osmanabad
	Wine Parks	
1.	Godavari Wine Park	Vinchur , near Nashik

2.	Vinchur Wine Park	Addn Vinchur near Nashik
3.	Palus Wine Pak	Near Sangli
	Silver Zone	
1.	Specialized Silver Zone	Kolhapur
	Textile Parks	
1.	Asiatic Cooperative Powerloom Textile Park	Solapur
2.	Asmeeta Infratech Pvt Ltd	Bhiwandi
3.	Baramati Hi Tech Tectilie Park Limited	Barmati
4.	Birla Integrated Textile park	Amaravati
5.	Deesan Infrastructure Pvt. Ltd	Dhule
6.	Islampur Intergrated Textile Park Pvt. Ltd	Islampur
7.	Kagal Industrial Textile Park	Kagal
8.	Amravati Textile Park	Nandgaon Peth, Amravati
9.	Kallappana Awade Textiles Park	Ichalkaranji
10.	Khed Textile Park	Pune
11.	Latur Integrated Textile Park	Latur
12.	Metro Hi-tech Cooperative Park Ltd	Ichalkaranji
13.	Price India cooperative Textile Park Ltd	Ichalkaranji
14.	Purna Global Textile Park Ltd	Hingoli
15.	Shri Dhairyashi Mane Textile Park Co-op Society Ltd	Ichalkaranji
16.	Vaigai Hi-Tech Weaving Park	Madurai
17.	Hinganghat Integrated Textile Park	Wardha

Source: Website of MIDC; Web Research

3.5.3. Special Economic Zones (SEZs)

SEZs, in India, are certain localities which offer tax and other incentives to their resident businesses. The SEZs of the country are governed by the SEZ Act 2005 and is supported by SEZ Rules. Maharashtra has its own policy to regulate the SEZs in the state known as Maharashtra Special Economic Zones Policy, 2004. As on Dec. 1, 2017, India has a total of 222 operating SEZs out of which 28 are in Maharashtra. The operational SEZs of the state comprise of 14 IT/ITeS, 2 Pharmaceuticals, 1 Pharmaceuticals & Biotechnology, 2 engineering, & electronics, 1 FTWZ (Free Trade & warehousing Zone), 2 Electronic Hardware & Software including ITES, 2 multi product, 1 power sector, and 1 Electronics and Gems & Jewellery SEZ. Also, there are 423 formally approved SEZs in India out of which 57 are located in Maharashtra.

3.5.3.1. Incentives offered by SEZs

The SEZ Act 2005 has mentioned some incentives and facilities which are offered to the units in SEZs and the SEZ developers, for attracting investments into the SEZs, including foreign

investments. Table 3.20 lists down such incentives and facilities available to the units and the developers.

Table 3.20 List of Incentives and Facilities Offered to the Units in SEZs and the SEZ Developers

S. No.	For the Units in SEZs	For SEZ developers
1.	Duty free import/domestic procurement of goods for development, operation, and maintenance of SEZ units	Exemption from customs/excise duties for development of SEZs for authorized operations approved by the BOA (Board of Approval)
2.	100% Income Tax exemption on export income for SEZ units under Section 10AA of the Income Tax Act for first 5 years, 50% for next 5 years thereafter and 50% of the ploughed back export profit for next 5 years. *(Sunset Clause for Units will become effective from 01.04.2020 wherein no Income Tax exemption would be given to SEZ units which will be setup after 01.04.2020)*	Income Tax exemption on income derived from the business of development of the SEZ in a block of 10 years in 15 years under Section 80-IAB of the Income Tax Act. *(Sunset Clause for Developers has become effective from 01.04.2017)*
3.	Exemption from Central Sales Tax, Exemption from Service Tax and Exemption from State sales tax. These have now subsumed into GST and supplies to SEZs are zero rated under IGST Act, 2017.	SEZ developers are also entitled for GST (CGST, SGST, and IGST) exemption.
4.	Single window clearance for Central and State level approvals.	SEZ Developers are deemed licensees for setting up of an electricity production or distribution unit within the SEZ. They do not require a separate distribution license for electricity distribution.

Source: Website of Special Economic Zones in India

3.5.4. Major Industrial Estates

Some of the most attractive industrial estates present in the state include Supa-Parner Japanese Investment Zone, Aurangabad Industrial City (AURIC), Shendra– Bidkin Mega Industrial Park, etc.

3.5.4.1. Supa Japanese Industrial Zone, Parnel (Ahmednagar)

MIDC had signed an MoU with JETRO to develop the Supa Japanese Industrial Zone. Supa is a village in Parner Taluka in Ahmednagar District. It is 70 km from Pune and 225 km from Mumbai. Supa Industrial Park is located at the centre of the state and has very good connectivity with all the major industrial cities. The ports are also in close proximity of the Japanese Zone. Jawahar Lal Nehru Port is 223 km, Mumbai Port is 240 km, and Dighi Port is 263 km away from Supa. There is an inland container depot at Talegaon which is 90 km away.

The Japanese Zone is being developed on 233 hectares (576 acres) of area out of which, MIDC has already acquired 213 hectares (526 acres) and have started to develop the industrial estate. MIDC has expected to attract an investment of INR 20 billion from the Japanese Investment

Zone. Apart from the Japanese Zone, there would be additional industrial area of 927 hectares at Supa which will house various Indian and foreign industries. The Supa Japanese Zone would have amenities like hospital, Japanese Garden, Japanese School, Japanese Restaurant, water treatment plant, CETP, truck terminus, solid waste management, power substation, exhibition place, etc.

As per the industrial survey, one foreign company responded that the location of SUPA was not preferable for establishing their factory due to its two hours' distance from Pune and low availability of trained labour in the district. Also, they shared that SUPA in Parner is not a comfortable location for living for expats, as of now.

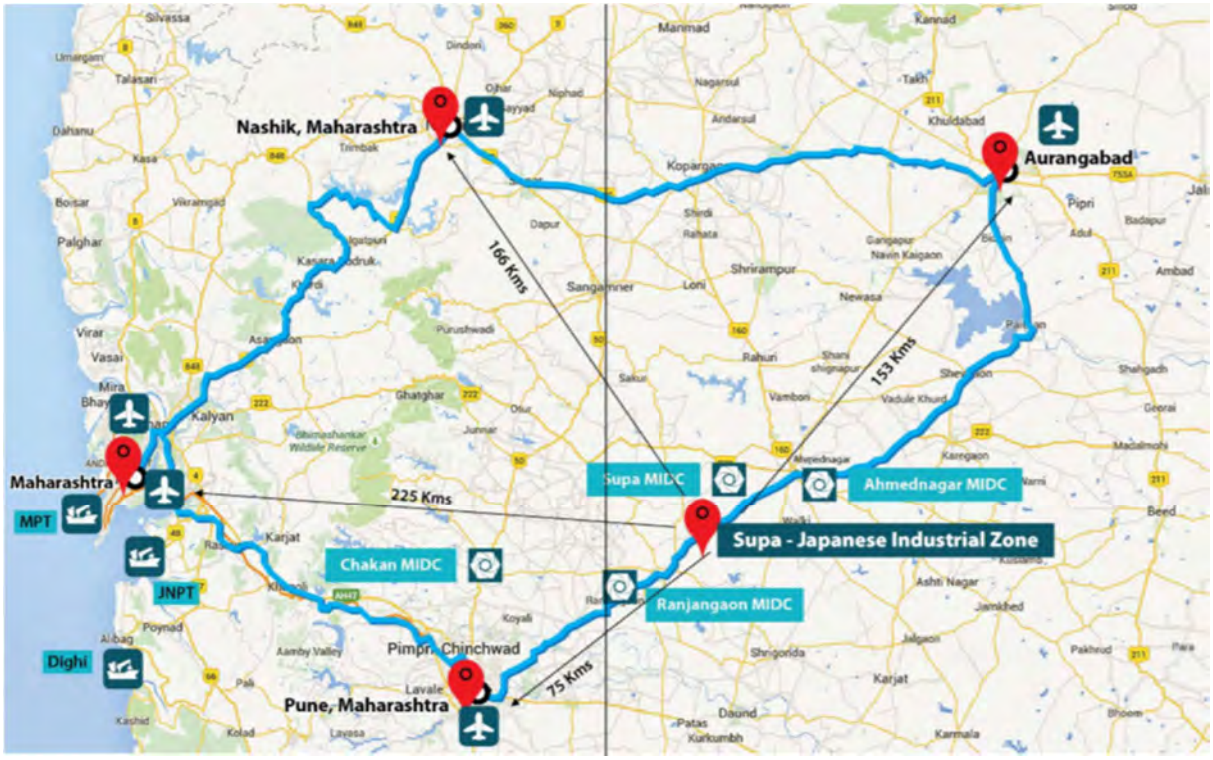

Figure 3.12 Location of Supa Japanese Industrial Zone

Source: MIDC-Supa advertisement document (http://cms.midcindia.org/Lists/Advertisement/Attachments/191/MIDC_SUPA.pdf)

Industries established in the Japanese investment zone would be eligible for incentives provided under the Industrial Policy 2013 of Maharashtra. The quantum of incentives would depend upon the type of industrial project, that is, Ultra Mega, Mega, Large, or MSME.

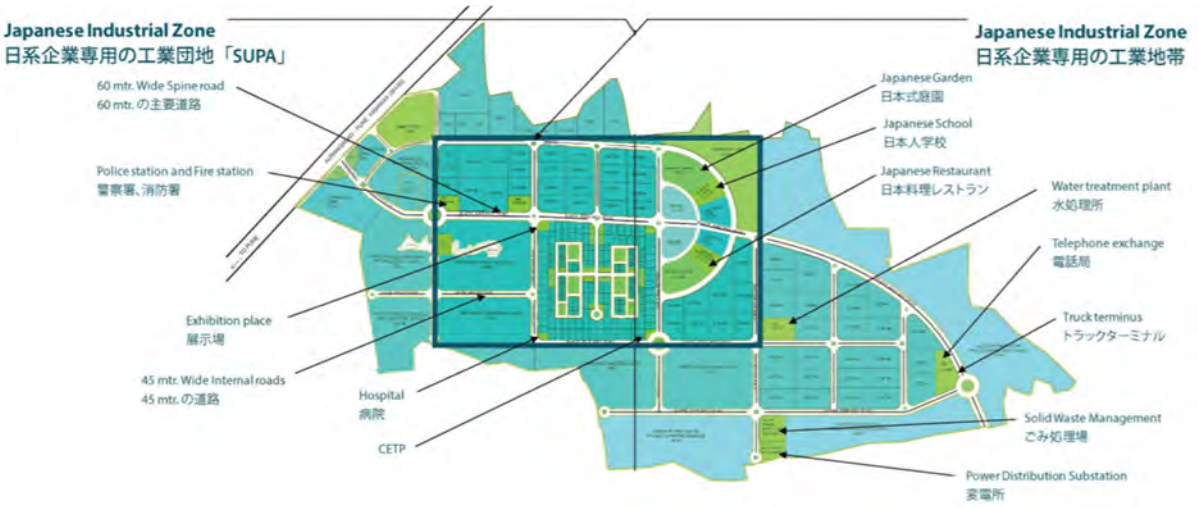

Figure 3.13 Site Map of Supa Japanese Industrial Zone

Source: MIDC-Supa advertisement document
(http://cms.midcindia.org/Lists/Advertisement/Attachments/191/MIDC_SUPA.pdf)

3.5.4.2. Aurangabad Industrial City (AURIC)

AURIC is a well-planned, Greenfield & smart industrial city which is being developed over an area of 10,000 acres in Maharashtra as a part of the Delhi Mumbai Industrial Corridor (DMIC). AURIC is located in the Shendra-Bidkin Industrial Area which is being developed in the first phase of DMIC. The new integrated township would include office spaces, residences, hotels, large and small format retail, hospitals, schools, parks, entertainment hubs, etc. 60% of the total land is being utilised for industrial purposes and the remaining 40% is for residential, commercial, institutions, open spaces, etc.

Figure 3.14 Location of Aurangabad Industrial City (AURIC)

Source: Website of AURIC

There would be two industrial areas as a part of AURIC: Shendra and Bidkin. Master plans for both of them are shared in Figure 3.15 and 3.16 AURIC Shendra would be developed in 8.51 sq. km and AURIC Bidkin would be developed on 31.79 sq. km of area.

Figure 3.15 Masterplan of Shendra Industrial Area

Source: Website of AURIC

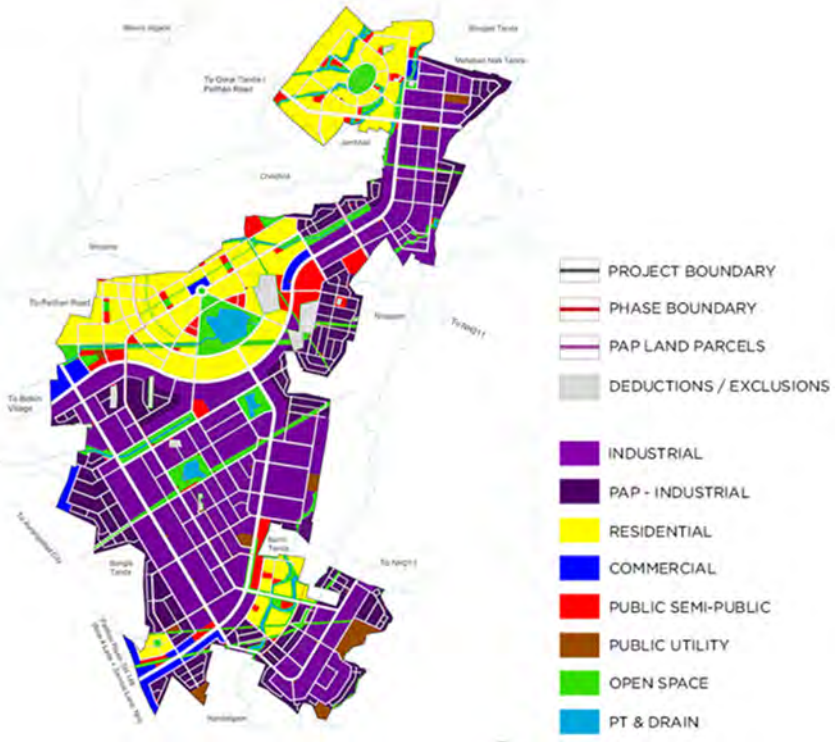

Figure 3.16 Masterplan of Bidkin Industrial Area

Source: Website of AURIC

3.5.4.3. *Multi-modal International Hub Airport at Nagpur (MIHAN)*

MIHAN is a project of Government of Maharashtra with the co-operation of Ministry of Civil Aviation under which a Multi Modal International Passenger and Hub Airport, and Multi Product SEZ adjacent to the Airport have been developed in Nagpur district. The MIHAN project is spread over on above 4300 Ha. of land of which Airport is on about 1360 Ha., SEZ is on about 2000 Ha. and area outside SEZ comprising of R&R, PAP, Residential, Commercial and others SEZ related facility on about 1000 Ha. Maharashtra Airport Development Company Ltd.(MADC) is the Nodal Agency to developed this project and it also acts as a Special Planning Authority for the project. MADC developed all necessary facilities like 3,4, and 6 lane roads, dual water supply system, sewage system, Electric transmission and Distribution Network, Telecom Network, Street Light, Water treatment and Sewage treatment plants, etc.

Figure 3.17 Location of MIHAN Project
Source: Website of Maharashtra Airport Development Company Ltd. (MADC)

MIHAN SEZ is a platform for export oriented companies, is a multi-product SEZ and has already become operational. It is spread over an area of more than 1382 Ha. A number of leading IT Companies Like Infosys, TCS, WIPRO, Tech Mahindra and HCL have taken land for their centres, while IT parks are being developed by large corporate like DLF, Shapoorji Pallonji and L&T. Companies like Hexaware BPS, TAL and Lupin Pharma (Trial Drug Formulation) have already started exports from MIHAN SEZ whereas TCS and Air India-Boeing are going to start their operations very soon.

MIHAN is only Multi-product SEZ in India that comes attached with an Airport. It has the presence of Manufacturing & Other Value Added Units which consists of Textile and Garment Zone, Gem & Jewellery Zone, Food Processing Zone and other sectors like Pharmaceuticals, Financial & Insurance Services and Bio Medical Sector.

There are a lot of opportunities for new investment in Maharashtra as the state govt. is looking to develop the underdeveloped areas and keep on progressing with the already developed areas. The industrial infrastructure has been provided strategically to make the use of proximity to raw material, ancillary units' presence, good logistics facilities. There is no major problem such as water, land, or power.

3.6. Investment by Japanese and Other Foreign Businesses

3.6.1. Foreign Direct Investments (FDI)

Maharashtra has always remained the favoured investment destination for foreign investors and has been leading at first position in terms of FDI inflows as per RBI statistics. Chart 3.16 shows the year-wise FDI inflows received by Maharashtra during Jan. 2000 to Dec. 2017. During these 17 years, the state received a total of INR 7,281 billion in FDI equity inflows. Maharashtra FDI inflow increased to INR 872 billion in 2017 from INR 295 billion in 2013 grew at a CAGR of 31% during 2013-17. The state has been receiving largest amount of investment in overall India from the last five years. Further, in 2016, Maharashtra witnessed a hike in term of investment value owing to implementation of single window biz permissions 'MAITRI' concept which resultant into increase in number of enterprises establishment.

Chart 3.16 Maharashtra's year-wise received FDI Equity Inflow from Jan., 2000 to Dec., 2017

Source: Website of Dept. of Industrial Policy & Promotion (Govt. of India)

Maharashtra, Dadra & Nagar Haveli, Daman & Diu together have attracted highest value of investment in India FDI flow, contributing 30.5% of share in cumulative year (January, 2000 to March, 2018), followed by Delhi with 20.3% and Karnataka with 8.6%(Chart 3.17). Mauritius is the largest source of FDI for Indian market contributed about 21.8% in 2016-17 and Maharashtra received 40% of investment from Mauritius during Jan 2000 to Dec 2016, followed by Singapore and UK with 12% and 8% respectively (Chart 3.18). One of the major reasons of Mauritius being the largest source country for FDI in India is that it is a tax-haven country. Same is the case with the source country at second place, that is, Singapore.

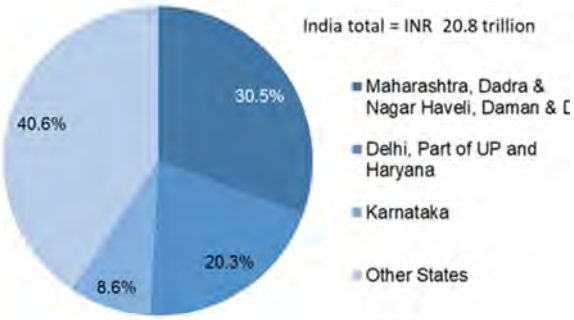

Chart 3.17 Cumulative FDI Inflow from all countries From Jan. 2000 to March 2018

Source: Website of Dept. of Industrial Policy & Promotion (Govt. of India)

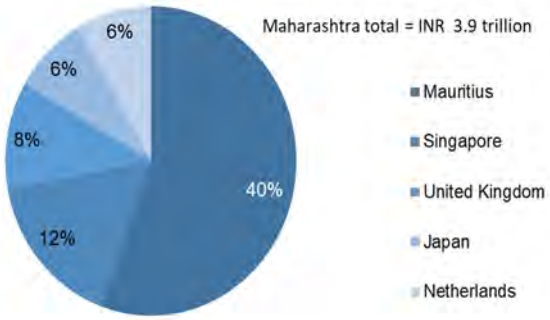

Chart 3.18 Share of Top 3 Countries contributing to the Cumulative FDI inflows in Maharashtra (Jan 2000-Dec 2016)

Source: Website of Dept. of Industrial Policy & Promotion (Govt. of India)

In February 2018, during the Magnetic Maharashtra Summit, Maharashtra signed 4,108 proposals with investment of INR 12.1 trillion which would be invested across various industrial sectors such as IT, Electrical & Electronics, Processed Food and others. Service cumulatively received largest amount of investment from Jan 2000-Dec 2016 with share of 25% (Chart 3.19), followed by telecommunications and construction. Further, government of Maharashtra expecting to attract more investment by focussing on other sectors such as Textiles, Food Processing, Defence & Aerospace, Gems & Jewellery, Financial Services etc. as well as upcoming sectors like Renewable Energy, Data Analytics, Electric Vehicles, Artificial Intelligence and Genomics.

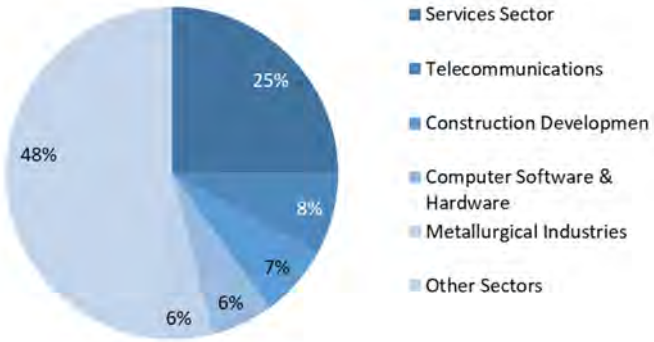

Chart 3.19 Share of Top 5 Sectors contributing to the Cumulative FDI inflows in Maharashtra (Jan 2000-Dec 2016)

Source: Website of Dept. of Industrial Policy & Promotion (Govt. of India)

3.6.2. Recent Investments (Domestic and Foreign)

Maharashtra industry always remained top in term of investment, from August, 1991 to December, 2017 in all 19,826 industrial proposals with an investment of INR 11.8 trillion were approved. Of this, 8,974 projects (45.3%) with an investment of INR 2.9 trillion (24.6%) were

commissioned. IT sector has been attracting largest share since 1991. The sector cumulatively constituted 33.2% share during August,1991 to December, 2017 with 525 approved proposals, followed by fuel industry & metallurgical industry with an investment of INR 1.4 trillion (12%) and INR 1.02 trillion (8.6%) respectively.

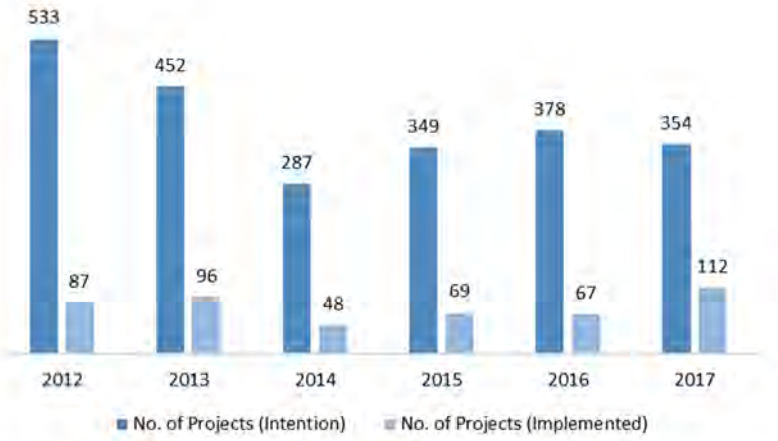

Chart 3.20 Status of Industrial Memorandum Intention & Implementation of Projects (2012-2017)

Source: Website of Dept. of Industrial Policy & Promotion (Govt. of India): SIA Statistics

There is huge gap between number of proposed and implementation (Chart 3.20) of projects in Maharashtra due to lack of structured policies for doing business such as starting a business, enforcing contracts, and dealing with construction permits. In 2018, rank of India in term of ease of doing business has improved to 130th position from 131th position out of 190 countries. Further, Central government has updated the business policies and reduce the time needed to register a new business to 30 days now, from 127 days 15 years ago. State government of Maharashtra has also implemented Single Window Policy to attract for business

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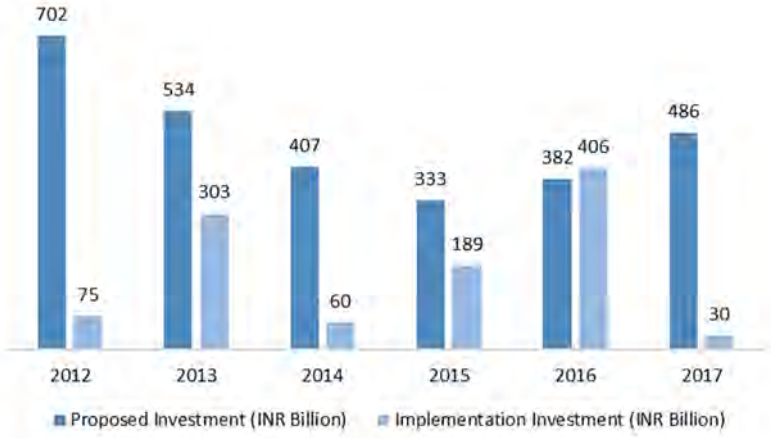

Chart 3.21 Status of Industrial Memorandum Intention & Implementation of Investment (2012-2017)

Source: Website of Dept. of Industrial Policy & Promotion (Govt. of India): SIA Statistics

Large number of projects (1,426) in Chemical & Fertilizers industry with investment amount of INR 254 billion were commissioned in Maharashtra during August, 1991 to December, 2017, followed by textiles industry with 974 projects valued INR 190 billion. Further, in Magnetic Maharashtra: Convergence 2018, Domestic and Foreign companies are investment on various key projects in Maharashtra (Table3.21).

Table 3.21 List of Upcoming Projects in Maharashtra (2018)

Project	Investment Value (INR)
Reliance Industries LTD projects	600 billion
Virgin Hyperloop One	400 billion
Thrust Aircraft Cluster	350 billion
Lloyds Metal and Energy PVT LTD (Gadchiroli)	-
Genus Paper and Boards LTD (Nandurbar)	7 billion
Coir cluster (Sindhudurg)	75.6 million
Mega Leather Cluster Park (Raigad)	5 billion

Source: News Articles and Publishers

3.6.3. Presence of Japanese Companies

As per Embassy of Japan statistics, Maharashtra registered 220 companies in 2017. The state has been second top preferred destination for the Japanese companies after Haryana as shown in (Chart 3.22). Currently, Japanese companies such as, Mitsui O.S.K. Lines (India) Ltd., Mitsubishi Corporation India Pvt. Ltd., Sanyo Chemical Industry Ltd., Toyota Lakozy Auto Pvt. Ltd, Hitachi India Trading Pvt. Ltd., Bridgestone India Pvt. Ltd., Sharp India Ltd. (electric appliance), TATA Yutaka Autocomp Ltd. and many more have their offices and factories in Maharashtra spread across Mumbai, Pune, Aurangabad, Nagpur and Nashik districts.

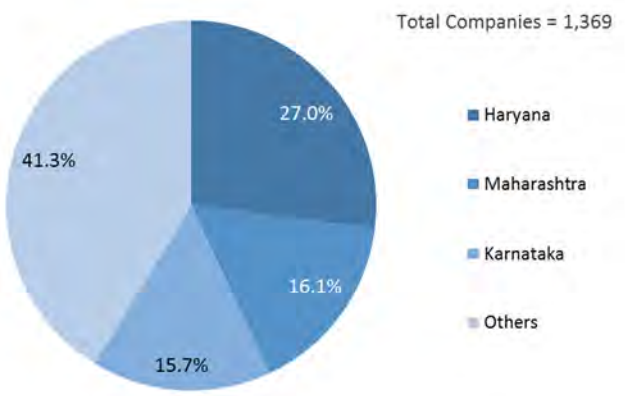

Chart 3.22 Top 3 States of India with highest number of Japanese Companies (as of October 2017)

Source: Website of the Embassy of Japan in India

In terms of growth of Japanese Business Establishments in India, Maharashtra registered CAGR of 17.78% during 2008-17. Japanese establishment increased from 174 in 2008 to 759 in 2017. Japanese Business Establishment include Liaison Office/ Branch Office etc. of a Japanese company in India, Indian Subsidiary of a Japanese company and Business Enterprise founded in India by Japanese nation.

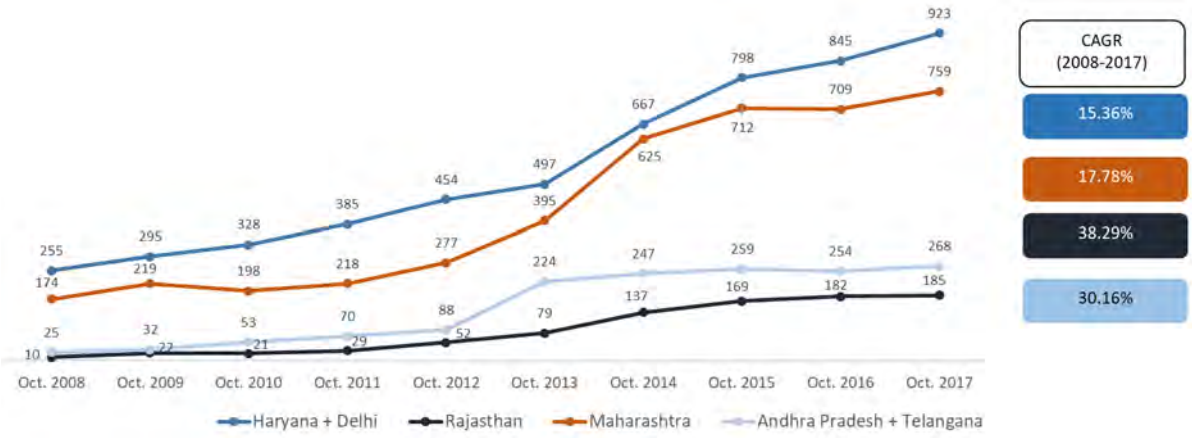

Chart 3.23 Year-wise number of Japanese Business Establishments in Maharashtra, Haryana, Maharashtra, and Andhra Pradesh (2008-2017)

Source: Website of the Embassy of Japan in India

For increasing the number of Japanese companies in the state, Japan Industrial Townships is being built in Ahmednagar, Maharashtra by the name of Supa Industrial Park. Japan Industrial Township project is one of the key projects for India to attract Japanese companies; under this project 12 township will be built in locations such as Tumkur (Karnataka), Ghilot (Rajasthan), Mandal (Gujarat) and others.

Further, in the coming years, large number of projects are planned and under pipeline which are invested by Japanese companies. For instance, major investment will be in food processing industry, Oriental Yeast build factory to produce yeast for making bread, Kagome has already invested in agriculture for growing tomatoes in Nashik. Subsidiary of NTT Communications-Net-Magic Solutions, is going to construct a data centre.

3.7. Labour Information and Working Environment

3.7.1. Key Labour Statistics

As per estimates of Labour Bureau of India, in 2015, Maharashtra had over 90 million persons which were of the working age (aged 15 years or more). This is 9.8% of the 926 million persons, of age 15 years or more, residing in the whole country. Maharashtra had 46 million males and 44 million females of the working age (15 years or more). 47.3% of the total working age population lives in urban area which is much higher in comparison to India statistics (34.7%). According to fifth 'Employment & Unemployment Survey' conducted during 2015-16 for persons of age 15 years & above labour force participation rate was 52.7 per cent, worker population ratio was 51.6 per cent and unemployment rate was 2.1 per cent in the State according to usual principal status approach.

Labour Force Participation Rate (LFPR) is defined as the number of persons in the labour force per 100 persons of working age (15 years & above). Overall LFPR of Maharashtra is 52 which is higher than that of the whole country 50.3 (Table 3.22). Further, LFPR of females in Maharashtra is 33 which is also higher than the national LFPR of 23.7 for women. The urban women of Maharashtra have even less participation in the state's economic activities as comparatively to rural participation. The LFPR of urban female 12.8 and rural female is 46.3. The reason for high employment of female in rural location is due to agriculture sector, about 50% of employee are engaged in agricultural activities.

Table 3.22 Labour Force Participation Rate (%) for persons aged 15 years & above in Maharashtra / India (2015-16)

Description	Men	Women	All
Maharashtra			
Rural	76.3	46.3	61.6
Urban	64.4	12.8	39.7
Rural + Urban	71.4	33.0	52.7
India			
Rural	77.3	26.7	53.0
Urban	69.1	16.2	43.5
Rural + Urban	75.0	23.7	50.3

Source: Fifth Annual Employment - Unemployment Survey (2015-16) Labour Bureau, Govt. of India

The main effects of having a low female participation in the Workforce include that it does not allow the economic growth of the region to be at an optimum level. Secondly, the unemployment rate of the region goes up. Maharashtra is facing both of these effects. The Unemployment Rate (UR) of any region can be defined as the number of persons unemployed per 100 persons in the labour force (employed + unemployed persons). The UR of women in the state is 2.2 which is lower than the national UR of women, that is, 8.7 (Table 3.23). The urban unemployment rate of

the state is 2.3 which is low in comparison to national urban unemployment rate of 4.9. Whereas, the state is in better position in term of rural areas. Maharashtra's rural UR is 2.0, owing to high employment in agriculture sector.

Table 3.23 Unemployment Rate (per 100) for persons aged 15 years & above in Maharashtra / India (2015-16)

Description	Men	Women	All
Maharashtra			
Rural	2.2	1.6	2.0
Urban	1.7	5.5	2.3
Rural + Urban	2.0	2.2	2.1
India			
Rural	4.2	7.8	5.1
Urban	3.3	12.1	4.9
Rural + Urban	4.0	8.7	5.0

Source: Fifth Annual Employment - Unemployment Survey (2015-16) Labour Bureau, Govt. of India

As per the Fifth Annual Employment – Unemployment Survey (2015-16) carried out by the Labour Bureau (Govt. of India), the Manufacturing sub-sector employed 10.6% of the total workforce of Maharashtra which is similar to the national workforce working in the manufacturing sector that is 10.6% (Chart3.24).

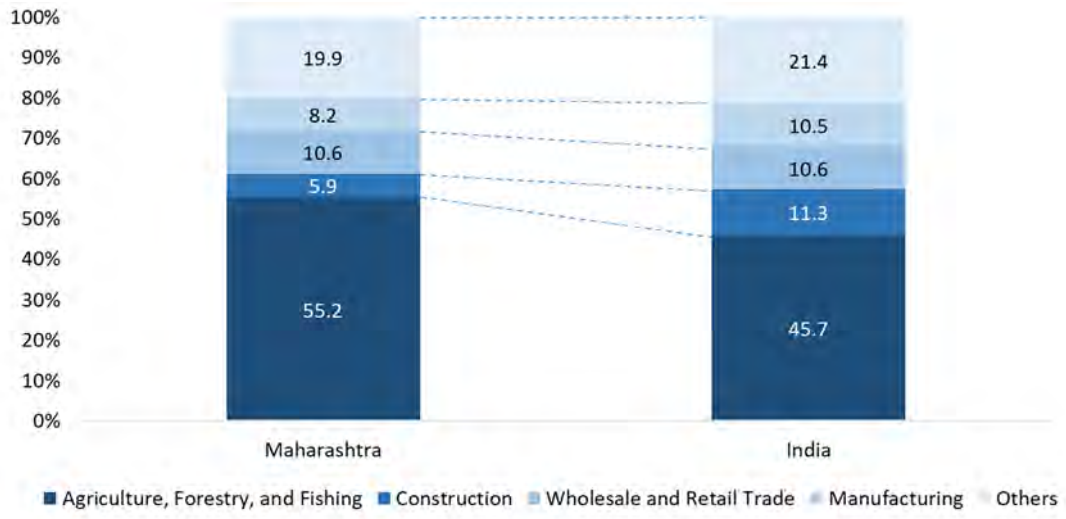

Chart 3.24 Distribution of Workers (aged 15 years & above) by Industry in Maharashtra / India (2015-16)

Source: Fifth Annual Employment - Unemployment Survey (2015-16) Labour Bureau, Govt. of India

Since 2011-12, the distribution of workforce in the Agriculture, Forestry, and Fishing sector has decreased for Maharashtra whereas it has increased for Wholesale and retail trade indicating, people are moving from Agriculture sector to service industry (Chart 3.25). Manufacturing sector remains in the range between 8-9.5%.

Chart 3.25 Distribution of Workers (aged 15 years & above) by Industry in Maharashtra (2011-12 to 2015-16)

Source: Fifth Annual Employment - Unemployment Survey (2015-16) Labour Bureau, Govt. of India

Maharashtra revise wages on half yearly basis based on the Consumer Price Index. Minimum wages provided to the workers in Maharashtra consist of two parts -basic pay and special allowance (Table 3.24) As per latest statistics (Jan-Jul, 2018), Minimum wage for unskilled worker range starts from 4,232 to 12,876 per month, wages depending on occupation. Minimum wage for skilled worker range start from 5,070-13,376 per month. Wages are given as per normal working hours which is 9 hours for an adult.

Table 3.24 Minimum Wage Rates in Maharashtra from January, 2016 to July,2018

S. No.	Category	Sub Category	Six Month Minimum Wages (in INR)				
			Jan-Jun (2016)	Jul-Dec (2016)	Jan-Jun (2017)	Jul-Dec (2017)	Jan-Jul (2018)
			Monthly Wage	Monthly Wage	Monthly Wage	Monthly Wage	Monthly Wage
1	Unskilled – Basic Pay	Per Month	1,204-8,900	1,204-8,900	1,204-8,900	1,204-8,900	1,204-8,900
2	Semi-Skilled – Basic Pay		1,282-9,400	1,282-9,400	1,282-9,400	1,282-9,400	1,282-9,400
3	Skilled – Basic Pay		1,360-10,100	1,360-10,100	1,360-10,100	1,360-10,100	1,360-10,100
4	Highly Skilled Basic Pay		1,620-5,000	1,620-5,000	1,620-5,000	1,620-5,000	1,620-5,000

5	**Special Allowance (to be added to Basic Pay)**	Per Month	1,056-3,904	1,152-4,013	1,344-4,226	1,046-4,226	1,046-4,226
6	**Minimum Wage Unskilled**	Per Month	3,656-12,024	3,656-12,024	3,944-12,450	3,944-12,450	4,232-12,876
		Per Day	140-462	140-462	151-478	151-478	162-445
7	**Minimum Wage Semi-skilled**	Per Month	3,856-12,524	3,952-12,666	4,144-12,950	4,144-12,950	4432-12,084
		Per Day	148-481	152-487	179-498	179-498	170-428
8	**Minimum Wage Skilled**	Per Month	4,056-13,224	4152-13,366	4,344-13650	4,344-13650	5,070-13376
		Per Day	156-462	159-467	167-525	167-525	178-541
9	**Minimum Wage Highly Skilled**	Per Month	5580-8339	5580-8339	5580-8339	5580-8339	5580-8339
		Per Day	218-320	218-320	218-320	218-320	218-320

Source: Website of the Labour Department Maharashtra(mahakamgar.maharashtra.gov.in)

3.7.2. Amendments in Labour Laws

Maharashtra government is focussing on creating employment opportunities increase number of commercial establishments. Therefore, amendments implement by central government has been adopted by Maharashtra government regarding labour laws. Recent amendments focus on relaxation on paid working leaves, overtime working hours and others.

Table 3.25 Recent amendments in Labour Laws in Maharashtra

Original Act	Amendment Act Name / Notification	Amendment / Notification Year	Amendment(s) / Exemptions Provided	Implications
Contract Labour (Regulation and Abolition) Act, 1970	Contract Labour (Regulation and Abolition) Maharashtra	2017	Applicability of the Contract Labour (Regulation and Abolition) Act, 1970 for establishments and contractors has been increased from twenty contract workers to fifty contract workers	This amendment has made it easier for some of the small and medium sized companies which have less than 50 contract workers. They do not have to fulfil the condition of registration and getting a license for employing less than 50 contract workers. Earlier, all the establishments which had 20 or more contract workers had to get themselves registered and get a license for the contract workers.
Section 79(1) (Annual leave with wages)			Eligibility for leaves with wages of worker required 240 days or more during a calendar year has now been reduced to 90 days as amendment	Now workers are eligible for leaves with wages in the subsequent year if they work for 90 or more days in a calendar year

Section 105 (1) (Cognizance of offences)			Court are abide to take cognizance of any offence upon complaint by or written sanction of an Inspector has changed to Chief Inspector	The process of investigation into any offence under the Principal Act and subsequent prosecution for the same can start only upon complaint made/sanction given by Chief Inspector of Factories
Section 65(3)(iv) (Power to make exempting orders)			The exemption granted under Section 65(2) is subject to certain conditions set out in Section 65(3). One of the conditions is that no worker shall work overtime for more than 7 days at a stretch and the total overtime hours shall not exceed 75 hours in any quarter. However, it has been increased to 115 hours per quarter.	Now, factories are not allowed to exceed 115 hours of overtime work per quarter
Bombay Shops and Establishments Act, 1948	70-year-old labour law for shops and establishments changed to Maharashtra Shops and Establishments (Regulation of Employment and Conditions of Service) Act, 2017 ("MSEA 2017")	2017	• Work hours to not exceed 9 hours a day and 48 hours in a week. It has amended with condition that work hours can be extended in case of work of urgent nature, working hours or weekly holiday may be relaxed with prior permission of Facilitator. • Rest interval has been reduced from one hour to 30 minutes for every 5 hours of work performed • Overtime hours not to exceed 6 hours in a week exceed to 125 hours in a period of 3 months	Working conditioner in service has improved with the implementation of the law.

Source: Various Government Directory and news articles

3.7.3. Female Labour

The female workforce in Maharashtra is 44 million out of the total workforce of 90 million 2015. This means that there are about 48.7% females in the total workforce of the state. According to the World Bank Report, the participation of female labour in Maharashtra has declined over the last decade (Chart 3.26). The Female Labour Participation Rate of females in Maharashtra is lower than the national LFPR of India.

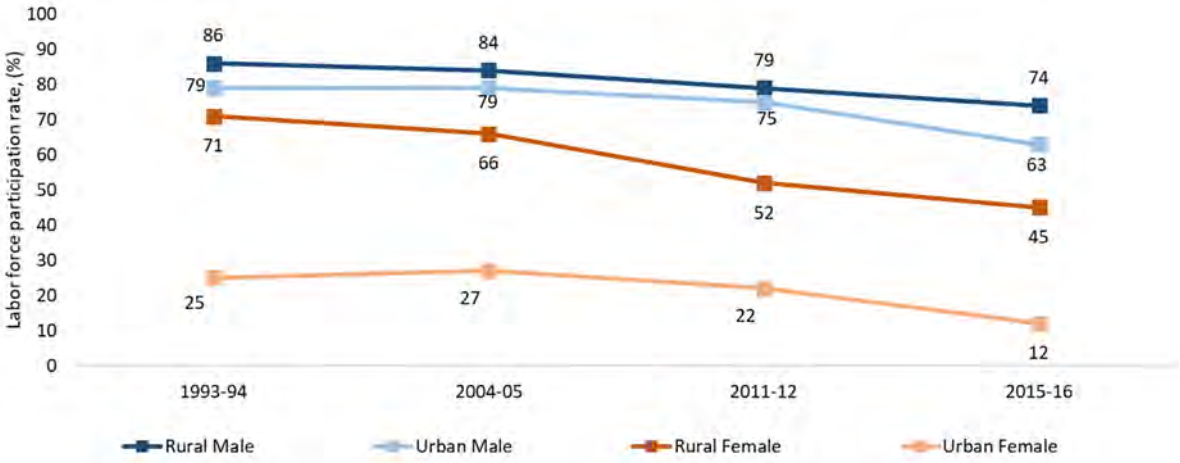

Chart 3.26 Decline in Female Labour Force Participation Rate in Maharashtra (1994-2016)

Source: World Bank document on Maharashtra

As per World Bank Maharashtra statistics 2012, 89% of rural female working population were involved in farm and related activities whereas only 9% working urban women are engaged in farming sector. However, in term of non-farm salaried, urban women captured larger share with 55% and only 3% women from rural area. To encourage the women employment, government of Maharashtra amended the female labour laws by allowing night shift working hours for women. Now, woman can work in factories at night shifts from 7 pm to 6 am. With increasing women literacy rate (75.9% -2011 Census), government is aiming to create more opportunities for them.

Table 3.26 Recent amendments in Labour Laws related to Female Labour

Original Act	Amendment Act Name / Notification	Amendment / Notification Year	Amendment(s) / Exemptions Provided	Implications
Section 66(1)(b) proviso (Further restrictions on employment of women)	Provided vide Maharashtra Government's notification dated August 17, 2017	2016	The State Government of Maharashtra allowed the employment of women workers in the factories during night shifts i.e. from 07.00 P.M. to 06.00 A.M.	This amendment would encourage the manufacturing establishments to employ a diverse workforce. It is in line with the Government of Maharashtra's focus on developing the state as one of the major manufacturing hubs of the country. It would help in bringing gender equality and encouraging more women employees to take up manufacturing sector jobs.
Bombay Shops and Establishments Act, 1948	Maharashtra Shops and Establishments (Regulation of Employment and Conditions of Service) Act, 2017 ("MSEA 2017")	2017	Earlier women were not allowed to work beyond 9.30 p.m. Now, government has permitted to work between 9:30 pm and 7:00 am with conditions such as Consent of the woman worker is required, Adequate protection of dignity, honour and safety should be provided, Employer should provide adequate protection from instances of sexual harassment at workplace Transportation facility must be provided to the women workers from the establishment to the doorstep of their residence	With the implementation of the law, working condition for women will improve particularly in service sector.

Source: Various news articles

3.7.4. Labour Relations

As per the Maharashtra Economic Survey 2017-18, total number of industrial disputes (strikes and lockouts), number of workers affected, and the number of man-days lost, all of them have been gradually decreasing since 2015. The year 2015 witnessed 215 number of industrial disputes in the state, with highest number of workers (119,600) affected resulting in a loss of over 300,000 man-days. Whereas, during the year 2017, there were 118 strikes and lock-outs which affected 66,000 workers and resulted in a loss of 170,000 man-days. Chart 3.27 shows the number of industrial disputes, number of workers involved in strikes, and the number of man-days lost from the year 2001 to 2017. Key causes for industrial disputes include wages and

allowances, bonus, reinstatement of terminated / suspended workers, leave and hours of work, retrenchment, and others. However, no major disputes have been witnessed since 2015.

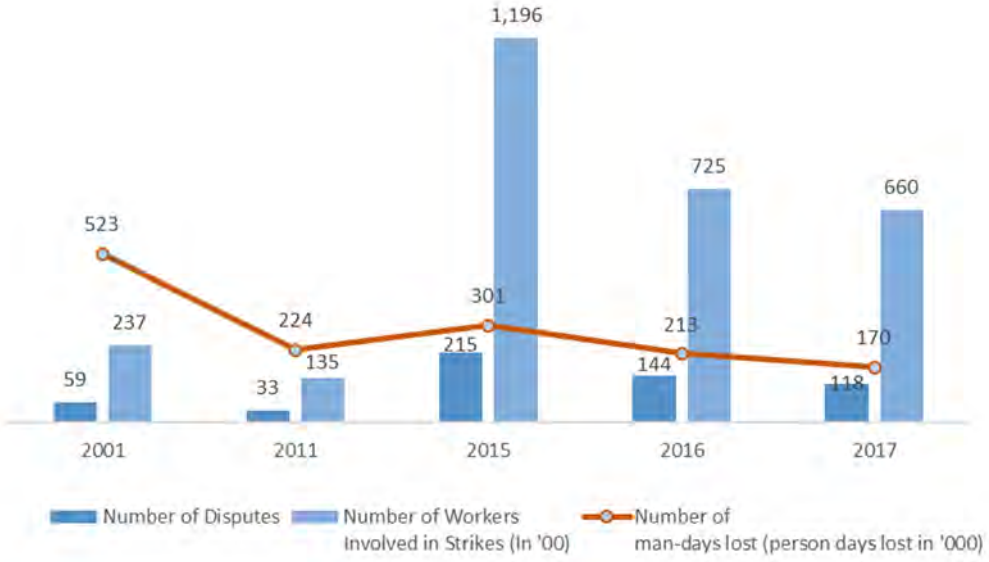

Chart 3.27 Number of Industrial Disputes in Maharashtra from 2001 to 2017

Source: Maharashtra Economic Survey 2017-18

3.8. Development of Human Resource

3.8.1. Status of Higher and Technical

In Maharashtra, Directorate of Higher and Technical Education is responsible for the development and growth of technical Education. In 2017, Maharashtra has 20 State University and 21 Deemed University (Figure 3.18) offering courses from various streams. As per Maharashtra Economic Survey 2016-17, the state had a total of 1,064 engineering colleges (56 govt. and 40 govt. aided and 968 private), 91 architecture colleges (3 govt. aided and 88 privates), 416 MBA colleges (3 govt., 13 govt. aided and 400 private). The trend of the number of institutions for the last four years has been shown in Chart 3.28. In term of enrolment, 1,056 thousand enrolled in general education per year, 321 thousand enrolled in engineering per year and 126 thousand in industrial training institutes.

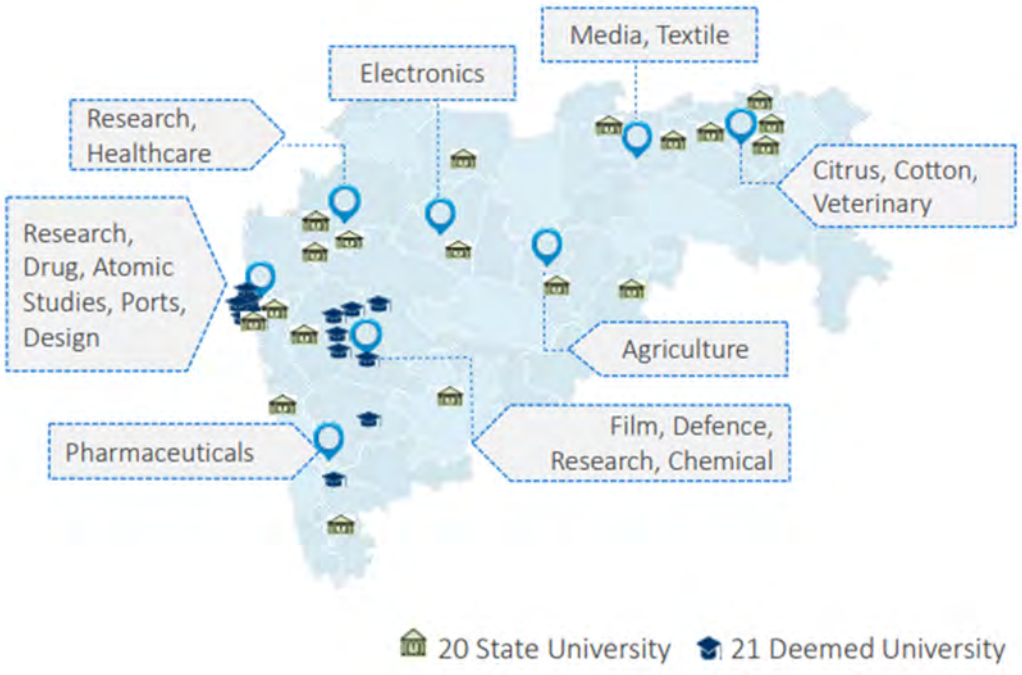

Figure 3.18 Status of Universities in Maharashtra

Source: Magnetic Maharashtra

Chart 3.28 Number of Technical Education Institutions (Govt. + Private) in Maharashtra (2013-14 to 2017-18*)

Source: Maharashtra Economic Survey (2017-18)

Note: *Provisional

The Directorate of Technical Education is the responsible department for imparting requisite technical skills in the field of Engineering and Technology, Architecture and Urban Planning, Management, and Computer Application. There are 18 engineering courses offered by Maharashtra education Ministry (Automobile, Biomedical, Bio Technology, Chemical, Civil Engineering, Computer, Marine, Mechanical, Production, etc.)

Table 3.27 Technical Education Institutions (Govt. + Private) and their Intake Capacity

Type of Institution	2014-15		2015-16		2016-17		2017-18*	
	Institutions	Intake Capacity	Institutions	Intake Capacity	Institutions	Intake Capacity	Institutions	Intake Capacity
Engineering	1,090	3,57,245	1,093	3,46,515	1,064	3,21,814	1,025	297,504
Architecture	82	4,857	74	3,763	91	5,307	97	5,675
Management Sciences	478	53,518	488	49,380	416	46,566	330	34,923
Hotel Management & Catering Technology	24	1,358	15	794	13	668	13	707
Pharmacy	741	28,412	486	29,371	525	30,078	576	33,966
Master in Computer Application	133	12,522	129	11,390	115	96,50	99	7,340

Industrial Training Institutes	828	1,23,618	824	1,34,767	846	1,26,598	881	136,386
General Education	2,945	10,39,397	3,158	10,37,527	3,209	11,56,389	3,496	120,831,9

Source: Maharashtra Economic Survey 2017-18

Note: *Provisional, General Education (Arts, Science, Commerce & Law, B.Ed./M.Ed., Other Non-Agricultural Courses (Non-AICTE)

Budget for the development of education sector for 2017-18 was INR 488.5 billion. This budget spends on opening of new colleges, maintenance & upgradation of existing colleges, scholarships, machinery and equipment, teacher's salaries and other schemes. For instance, about 69% of school budget spend on teacher salaries. In 2017-18 education budget, some of the programs were approved by the state government for the development of education sector. Government has allotted INR 124.8 million for the training of teachers including ICT, IEDSS, RMSA, etc., for in-service training of English teachers, government approved INR 6 million that include 4,062 teachers of govt. and govt. aided and each teacher will receive INR 1,500.

Apart from the state level technical institutions, there are some National level educational institutions present in the state. These include Indian Institute of Technology (IIT) Bombay, Mumbai; Indian Institute of Management (IIM), Nagpur; National Institute of Fashion Technology (NIFT), Mumbai; National Law University, Mumbai; Central Institute for Cotton Research, Nagpur; Central Institute of Fisheries Education, Mumbai.

3.8.2. Status of Industrial Training Institutes (ITIs)

Industrial Training is part of Craftsman Training Scheme, was introduced by government of India, however, the responsibilities under the scheme were transferred to concerned State Government that is Directorate of Technical Education. Further, with the increasing number of ITIs, Technical High Schools & +2Level and Junior Colleges, an independent body was formed to promote vocational education and training activities across the state. The Directorate of Vocational Education & Training, Mumbai (DVET) was established in 1984 and was committed to provide quality administration and vocational education and training services in Maharashtra State through recognised educational institutes, Industrial training institutes and NGOs. Other key responsibilities of Directorate of Vocational Education & Training include

- Deciding the standards and norms for various courses and trades in consultation with the DGET, Industries etc.
- To implement the CTS (Craftsmen Training Scheme), ATS (Apprenticeship Training Scheme), AVTS (Advanced Vocational Training Scheme), +2 Vocational Education and Training in the state

- Ensuring and maintaining the quality of vocational education and training in the state
- Attracting youth towards vocational education in order to make them suitable for employment or self-employment

As per DVET, Maharashtra State recorded 417 Government and 466 Private Industrial Training Institutes with Intake Capacity 93,481 & 42,705 respectively. Training in ITIs is offered in the form of 79 different trades. Duration & eligibility criteria for these trades mentioned in Table 3.28.

Table 3.28 Duration & eligibility criteria for ITI Trades

Eligibility	One Year Duration Courses		Two Year Duration Courses		Total
	Engineering Trades	Non-Engineering Trades	Engineering Trades	Non-Engineering Trades	
SSC Pass	19	20	29	1	69
SSC Pass / Fail	5	2	2	0	9
HSC Pass	0	1	0	0	1
Total	24	23	31	1	79

Source: Website of Directorate of Vocational Education & Training, Maharashtra State

Ministry of Skill Development & Entrepreneurship, Government of India, New Delhi outlined the syllabus of the training. And, internationally recognized Vocational Training(NCVT) Certificate is provided by the Directorate General of Training, New Delhi to trainers on completion of the nominated courses.

Further, the training in ITIs is based on 70% Practical & 30% Theory oriented. After completing the training, the candidates seeking higher education along with employment & self-employment are given direct admission in the second year diploma course. In Table 3.29, ITIs are categorized as per Maharashtra government.

Table 3.29 Present Status of the No. of Institutes & Available Seats (August 2017)

Type Of Institute	No. of Institutes		Available Seats	
	Government	Private	Government	Private
General	307	427	75,751	38,658
Tribal	61	-	11,980	-
Women	15	4	3,739	251
Tribal Ashram ITI	28	-	1,331	-
SCP ITI	4	-	293	-
Minority	2	34	387	3,787
Defence	-	1	-	209
Total	417	466	93,481	42,905
Grand Total	883		136,386	

Source: Website of Directorate of Vocational Education & Training, Maharashtra State

The Industrial training institutes are spread across all the regions of Maharashtra including Amaravati, Aurangabad, Mumbai, Nagpur Nasik and Pune. Training is provided in 3 shifts in ITIs which are in Corporation area. In 234 & 142 Government ITIs, training is given in 2 shifts & 1 shift respectively.

3.8.3. Skill Development Initiatives

Currently, there are 13,280 skill development institutes in overall Maharashtra such as Common Service Centre, Industrial Training Institutes, Polytechnic Colleges and others with intake capacity of 448,000 candidates under schemes such as Craftsman Training Scheme (CTS), Apprenticeship Training Scheme (ATS), etc. According to Maharashtra Vision 2030 stated in 2017, government of Maharashtra has outlined some key skill development programmes which are targeted to achieve in the coming 3-15 years. For instance, accreditation and up-gradation of all ITIs in the coming 3 years, sanctioning and establishment of Basic Training Centres at various industries in the coming 3 years, starting of new ITI and Vocational Training Centres in Naxalite area in the coming 7 years. As per Maharashtra State Skill Development Society, during 2018-22 Maharashtra requires additional 90,28,144 in various sectors such as 1,569,722 workers for building, construction industry and real estate; 745,846 workers for IT &ITES and 216,061 workers for Auto and Auto Components and 86,273 workers for Food Processing, etc.

Major Schemes and Initiatives for Skill Development, Implemented by Maharashtra State Skill Development Society

Table 3.30 Skill Development Scheme in Maharashtra

S. No.	Scheme Name	Total Budget (INR Million)	Training Target (no. of candidates) (FY 2018-19)
1	Pramod Mahajan Kaushalya ya Udyojkta Vikas Abhiyan (PMKUVA)	600	30,000
2	Skill Development Training of Minority Youths	16.2	810
3	Pandit Deen dayal Upadhyay Antyodaya Yojna	1700	85,000
4	Pradhan Mantri Kaushal Vikas Yojna (PMKVY)	1,286	83,500
5	Skill Development Training Program in Construction Sector	2,924	1,16,666
6	Kiman Kaushalya Vikaas Kaarayakram' under District Planning Committee Scheme	1,482.7	50,210

Source: Maharashtra State Skill Development Society (MSSDS)

3.8.3.1. Pramod Mahajan Kaushalya va Udyojakta Vikas Abhiyan (PMKUVA)

The scheme was launched by state government in September 2015. Target group for the scheme to provide skill and employment is age group of 15 to 45 years. This is an umbrella program for skill training for all the sectors including Auto and Auto component, BFSI, Food Processing, Electronics and IT hardware and many more. The programme offers both short term and long-term courses with minimum 180 hours to maximum 1200 hours. Under the scheme, 100,891 candidates have been trained, 36,689 are undergoing training and 20,114 candidate got job in 2017.

3.8.3.2. Industry Linked Skill Development Programme

This scheme aims to provide industry demand driven training and facilitating employment opportunities for the marginalized citizens. The programme would encourage private sector and industrial sector participation in skill development initiatives. Till 2017, 65 MoUs have been signed. Some of the renowned industries which have been partnered with includes Rustomjee, Godrej & Boyce, UNDP, Tata Trusts, Ambuja Cements, Times Centre for Learning Ltd., Jawed Habib, ICICI Skills Academy and Health Careers Institute Pvt. Ltd & Health Knowledge Corporations etc. Table 3.31 present the achievement of the schemes till March 2018.

3.8.3.3. Kiman Kaushalya Vikaas Kaarayakram under District Planning Committee Scheme

The scheme aims to provide district specific courses and helps to provide employment within district itself to reduce unwanted migration of the candidates. The funds allocated to the scheme are utilized for the course fees as well as for other supportive expenses such as lodging & boarding, travelling, professional services, publicity placements, took kits, skill gap study etc. All the 36 districts of Maharashtra have submitted the proposal to the DPC totalling of INR 850 million fund for implementing the scheme.

3.8.3.4. TAGMA Centre of Excellence and Training (TCET)

Tool and Gauge Manufacturers Association of India [TAGMA-INDIA] is a Non-Profit Organisation, actively promoting the tooling industry. In 2016, TAGMA established TCET at Chakan (Pune) in order to meet the demand of skilled manpower in the tooling industry. It is funded by the Department of Heavy Industry (DHI) and TAGMA (INR 262.7 million by DHI and INR 256.5 million by TAGMA) under the scheme of 'Enhancement of Competitiveness in the Indian Capital Goods Sector'. TCET caters to the needs of MSME tool rooms in and around Pune for the supply of sheet metal dies, plastic moulds, die casting dies, jigs and fixtures as well as manufacturers of automotive components, electrical equipment, home appliances, consumer electronics, communication equipment and office equipment. These tool rooms are able to use hi-tech manufacturing and try out facilities for the tools to be manufactured by them. The cost of

machinery being used at TCET is paid by DHI and industries (80% can be paid by DHI and remaining INR 1 million by the industry). This is a problem as most of the business using TCET are MSMEs and they cannot afford to pay this much of amount.

Table 3.31 Maharashtra State Skill Development Society Achievements till 31st March 2018

Scheme	Pramod Mahajan Kaushalya va Udyojakta Vikas Abhiyan (PMKUVA)	National Livelihood Mission (promoted by Central Govt. for state)	District Planning Committee Scheme
Total Candidates registered	138,532	100,739	3,700
No. of Candidates under training	28,876	51,435	3,567
No. of Candidates under assessment	23,432	17.629	133
Assessment Completed	86,224	31,675	0
Wage/Self Employment	31,248	9,396	4

3.8.4. Training of Trainers Scheme/Programme

In terms of training of trainers, Maharashtra government do not have specific scheme for training of trainers, however, central government (Directorate General of Training (DGT)) has offered two schemes: 'Crafts Instructor Training Scheme (CITS)'and 'Craftsmen Training Scheme'.

- Under, Crafts Instructor Training Scheme (CITS), in Maharashtra there is only one National Skill Training Institute (Mumbai) with capacity of 750 candidates per year. The institute is affiliated with National Council on Vocational Training (NCVT) under Ministry of Skill Development and Entrepreneurship and Directorate General of Training. Further, the institute offers one year course for which candidates have to clear an online entrance exam, followed by counselling and trade selection process.
- Under 'Craftsmen Training Scheme', central government offers training to the trainers through PPP mode for Maharashtra state. Further, for training, Memorandum of Agreement (MoA) would be signed among Central Government, the State Government and Industry Partner. According to Director General of Training (DGET), the demand of training of trainer is minimum 15,000/year compared to current availability of 1,600/year trainers for skill training under the Craftsmen Training Scheme (CTS), working with approximately 14,000/ ITI spread across India. To increase the number of trainers, a Memorandum of Understanding (MOU) was signed between Government of Maharashtra and JSW Group under national vision of a "Make-in-India", for setting up JSW Institute of Skill

Development & Training for Trainers in Maharashtra. The JSW training institutes will be affiliated to NCVT, DGET, and Government of India, and will offer International recognised certification.

As per the industrial survey, large manufacturing companies (foreign & domestic) shared their viewpoint regarding the lack of quality consciousness and eye for detail among the engineers and polytechnic diploma holders. The industry feels that there is less emphasis on practical knowledge and skill development in engineering & polytechnic colleges and ITIs of the state.

In order to further improve the industrial situation of Maharashtra, a lot of emphasis has to be laid on the development of the human resource by providing better training, latest machinery and expert trainers.

3.9. Emerging Opportunity: Food Processing Industry

In India, the food sector has emerged as a high growth and high-profit sector due to its immense potential for value addition, particularly within the food processing industry. The Ministry of Food Processing Industries (Government of India) has listed Maharashtra among the top states with potential to derive maximum benefits from policy reforms in food processing. Food processing in India covers fruits and vegetables plantations, grain processing, spices, milk and dairy products, meat and poultry, fisheries, non-alcoholic and alcoholic beverages, as well as other consumer product groups such as confectionery, chocolates, cocoa products, soya-based products, mineral water and high protein foods.

3.9.1. Raw material for Food Processing Industry

Agriculture and Allied Activities continue to carry a major share of burden of the population as well as work-force and therefore, continue to play an important role in socio-economic development of the state. As per the Economic Survey of Maharashtra 2017-18, the share of agriculture & allied activities sector in the total Gross State Value Added (GSVA) was about 12.2% during 2016-17 as against 15.3% during 2001-02 which shows declining trend over the period, whereas major portion of the population is still dependent on this sector. Reduction in average size of agricultural holdings, increasing number of marginal & small farmers, dependency on monsoon & weather, low productivity, etc. are the major concerns of the agriculture sector in the State. Though, the share of the allied activities in the Agriculture & allied activities sector is comparatively less, its contribution with reference to livelihood is of immense importance. The increasing consumption of fruits & vegetables, milk & milk products, poultry, meat, fish and flowers due to changing lifestyle indicates substantial growth potential.

Table 3.32 Details of Agri production in Maharasthra

Category	Items	Total Production (in million MT)	Top Two Districts
Agricultural Crops*	Cereals (includes barley, bajra, maize, rice, wheat, jowar, ragi, and small millets)	9.2	Jalgaon: 612 thousand MT Ahmednagar: 514 thousand MT (production in the year 2014-15)
	Pulses (includes gram, tur, and other pulses)	2.3	Hingoli: 239 thousand MT Amravati: 140 thousand MT (production in the year 2014-15)
	Oilseeds (includes castor seed, groundnut, linseed, rapeseed and mustard, nigerseed, safflower, sunflower, sesamum, and soybean)	4.0	Latur: 524.9 thousand MT Buldana: 370.6 thousand MT (average production of three years ending 2015-16)

	Sugarcane	78.3	Pune: 14.9 million MT Kolhapur: 14.1 million MT (average production of three years ending 2015-16)
Horticulture Crops**	Fruits (includes gooseberry, almond, apple, banana, bael, ber, grape, jackfruit, kiwi, litchi, muskmelon, custard apple, guava, kinnow/mandarin orange, limes & lemon, mango, and other citrus)	9.8	Jalgaon: 2.6 million MT Nashik: 1.9 million MT (average production of three years ending 2015-16)
	Vegetables (includes bitter gourd, beans, bottle gourd, brinjal, cabbage, cabbage, capsicum, carrot, cauliflower, cucumber, elephant foot yam, green chilli, mushroom, ladies finger/okra, onion, green peas, pointed gourd, and potato)	9.5	Nashik: 2.5 million MT Ahmednagar: 1.3 million MT (average production of three years ending 2015-16)
	Spices (includes black pepper, cardamom, carom, celery/poppy, chillies, cinnamon, clove, coriander seed, cumin, fenugreek, fennel, garlic, ginger, nutmeg, tamarind, and tamarind)	0.4	Aurangabad: 162 thousand MT Satara: 50 thousand MT (average production of three years ending 2015-16)
Egg, Meat, and Milk***	Egg	5.0 billion eggs	Pune: 1.1 billion eggs Sangli: 0.7 billion eggs (production in the year 2015-16)
	Meat	669 million kg	Nashik: 145.5 million kg Pune: 140.5 million kg (production in the year 2015-16)
	Milk	9584 million kg	Ahmednagar: 1704.8 million kg Pune: 1118.9 million kg (production in the year 2015-16)

Source: Food Processing Resource Maps (indiafoodprocessingmap.nic.in) by the Ministry of Food Processing Industries, Govt. of India

*Total Production data is the average production of five years ending 2014-15

**Total Production data is the average production of five years ending 2014-15

***Total Production data is the production in the year 2015-16

The state has nine agro-climatic zones, favouring cultivation of a multitude of crops, fruits and vegetables round the year. Principal crops of Maharashtra include rice, jowar (sorghum), bajra (pearl millet), pulses, and sugarcane and oil seeds such as groundnut, sunflower and soybean. The state has huge areas under fruit and vegetable cultivation with large production of fruits such as mangoes, bananas, grapes, pomegranates, oranges, and vegetables such as onion and tomatoes.

Some of the major production clusters have been mentioned in Figure 3.19. Among, these clusters, the district of Nashik is known as the Grape capital of India.

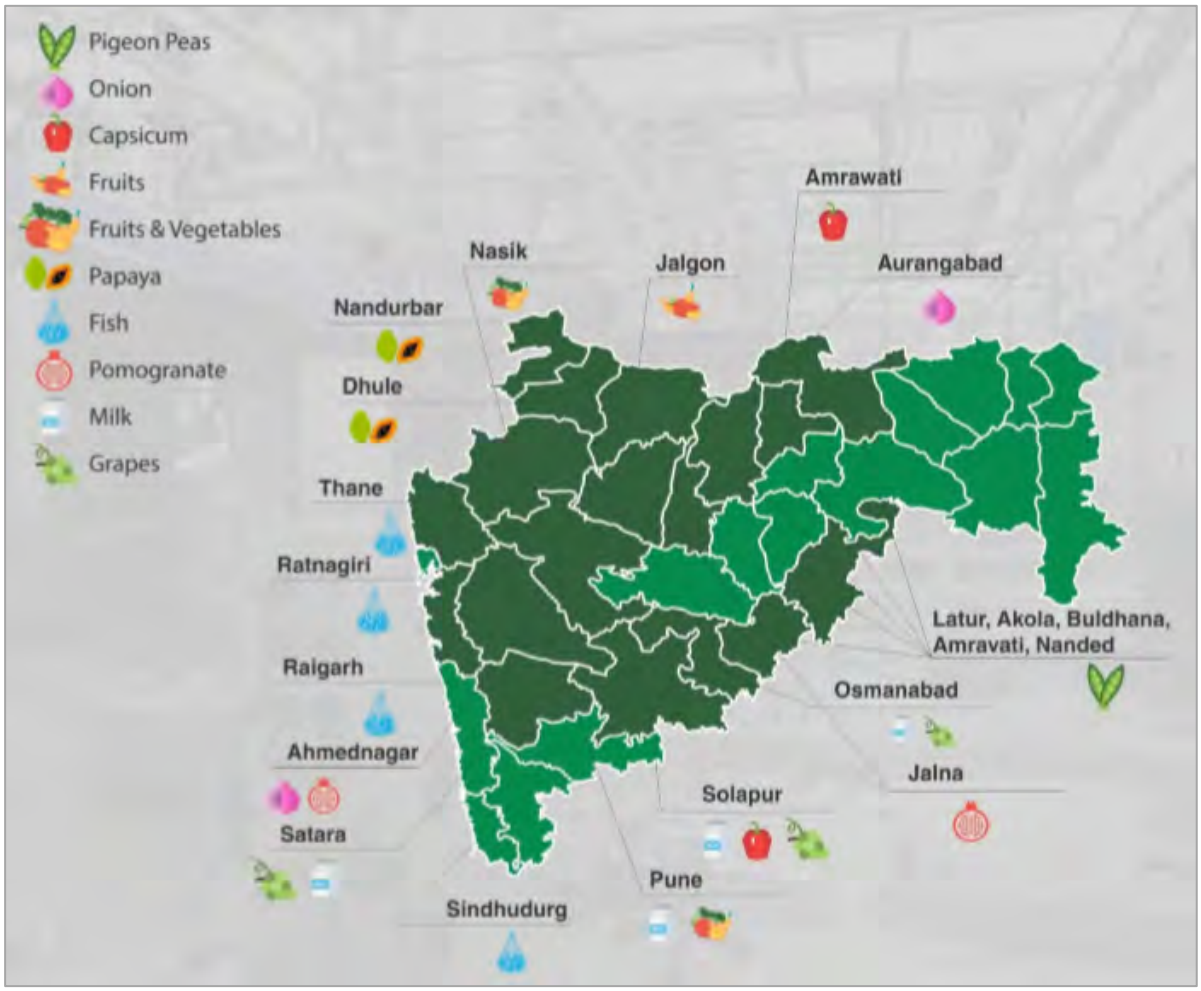

Figure 3.19 Major Production Clusters of Maharashtra
Source: Ministry of Food Processing Industries, Govt. of India

Maharashtra has the presence of eight Agri Export Zones (AEZ) which is the highest number of AEZs in an Indian state. These AEZs come under the Agricultural and Processed Food Products Export Development Authority (APEDA), Government of India.

Agri Export Zone (AEZ) was launched by government of India in 2001 under EXIM Policy 2001. Agricultural & Processed Food Products Export Development Authority (APEDA) was

appointed as the Nodal Agency on behalf of Central Govt. The prime objective of state government is to identify the product with export potential, which have comparative advantage in local production. AEZ is a specific geographical region in a country recognised as agriculture based processing industries for export purpose only. In 2006, 60 Agri Export Zones were set up across 230 districts in 20 states of India with investment of INR 17 billion, however, no additional zones have been set up post that. In term of fiscal incentives, AEZ can avail the benefits of Export Promotion Capital Goods Scheme which was earlier limited to direct exporters only. Another incentive includes duty free fuel for power generation for the food processing companies which have power cost more than 10% of their total cost of production

Table 3.33 Agri Export Zones (AEZs) of Maharashtra

S. No.	AEZ Project	Area / Districts
1.	Grape & Grapevine	Nasik, Sangli, Sholapur, Satara, Ahmednagar
2.	Mangoes	Rantagiri, Sindhudurg, Raigarh and Thane
3.	Kesar mango	Aurangabad, Beed, Jalna, Ahmednagar and Latur
4.	Flowers	Pune, Nasik, Kolhapur and Sangli
5.	Onion	Nasik, Ahmednagar, Pune, Satara, Jalgaon, Solapur
6.	Pomegranate	Districts of Solapur, Sangli, Ahmednagar, Pune, Nasik, Osmanabad & Latur
7.	Banana	Jalgaon, Dhule, Nandurbar, Buldhana, Parbhani, Hindoli, Nanded and Wardha
8.	Oranges	Nagpur and Amraoti

Source: Website of The Agricultural and Processed Food Products Export Development Authority (APEDA)

3.9.2. Presence of Food Processing Industry

According to the Magnetic Maharashtra document by the MIDC, the food processing sector in Maharashtra has as many as 16,512 small and medium and 322 large scale food processing units. This includes a good number of multinational companies having their production facilities in the state. Figure 3.20 shows the key processing clusters in the food processing sector of the state.

Figure 3.20 Key food processing clusters of Maharashtra

Source: Ministry of Food Processing Industries, Govt. of India

Some of the key Indian and Foreign companies of the Food Processing industry are present in the state. These include some major dairy companies, bakery product manufacturing companies, beverages companies, confectionery manufacturing companies, etc. which have been mentioned in Table 3.34.

Table 3.34 Key Food Processing Sector companies (Indian) in Maharashtra

Name	Headquarter	Location(s) of factory in Maharashtra	Products manufactured in Maharashtra	Revenue (in INR Billion)- 2017	Major Presence
Parle Agro Pvt. Ltd.	Mumbai	Khalapur, Raigad	Packaged drinking water, Juice based drink / sweetened / carbonated beverages	16.1	Across India
Sula Vineyards Pvt. Ltd.	Mumbai	Nashik	Winery and Vineyards	3.69	Across India
Marico Ltd.	Mumbai	Jalgaon	Edible oil	51.1	Across India

ITC	Kolkata	Ranjangaon, Pune; Ambarnath, Thane (under construction Integrated Consumer Goods Manufacturing Facility)	Wheat flour, instant noodles, snacks, chocolate cake, chocolate pastry, bakery and confectionery, etc.	574.35	Across India
B G CHITALE DAIRIES PVT LTD	Pune and Sangli	Bhilawadi, Sangli; Pune	Dairy products, ready-to-cook instant mixes, fruit juices, purees, fruit concentrates, fruit pulp, etc.	0.0172	Majorly Maharashtra
PBS Gourmet Foods	Mumbai	Mumbai	Bakery products, pastries, etc.	-	Majorly Maharashtra
Stayfit Enterprize Pvt Ltd. (Start-up)	Pune	Pune	Energy bars and heath snacks	0.00193	Majorly Maharashtra
Sevenseas International	Mumbai	Airoli, Mumbai	Export of Basmati & non-basmati rice, spices, etc.	-	Across India

Source: Investment Environment & Opportunities in Food Processing, Maharashtra by Ministry of Food Processing Industries (Govt. of India); web research

Table 3.35 Key Food Processing Sector companies (Foreign) in Maharashtra

Name	Headquarter	Location(s) of factory in Maharashtra	Products manufactured in Maharashtra	Revenue (in INR Billion)-2017	Original location	Year of Establishment in India	Factory Set-Up Year (in MH)
Schreiber Dynamix Dairies Pvt. Ltd.	Mumbai	Baramati, Pune	Dairy products such as processed cheese, natural cheese, ghee (butter), dairy whitener, packaged milk, milk powder, yoghurt, etc.	12.88	United States	1992	1994
Ferrero India Pvt. Ltd.	Hadapsar, Pune	Baramati, Pune	Chocolate and confectionary products	17.26	Italy	2004	2011
Cargill India Pvt. Ltd.	Gurgaon	Kurkumbh, Pune	Edible oil, vegetable oil	73.7	United States	1996	
Barry Callebaut India Ltd.	Mumbai	Ranjangaon, Pune	Chocolate and cocoa products	-	Switzerland	2007	2015
Hindustan Unilever Ltd.	Mumbai	Nashik Mumbai	Tomato paste, tomato ketchup, jams, squashes, ice-creams, etc.	324	Mumbai	1933	- 1933

PepsiCo India Holdings Pvt. Ltd.	Gurgaon	Ranjangaon, Pune; Paithan, Aurangabad	Potato chips, beverages bottling plant	66.6	United States	1989	2000 -

Source: Investment Environment & Opportunities in Food Processing, Maharashtra by Ministry of Food Processing Industries (Govt. of India); web research

Apart from the above, there are a few Japanese companies as well which are making their presence felt in the Food Processing Industry like Oriental Yeast, which is setting up its factory to produce yeast for bread making. Another Japanese food company, Kagome, is growing tomatoes in Nashik region. The food processing sector in Maharashtra has attracted USD 159.8 million worth FDI through 173 projects over the period of 1991-2012.

3.9.3. Policies related to Food Processing Industry

Maharashtra has implemented both central and state level policies for development of the food processing industry. The state govt. laid emphasis on the growth of Food and Agro Processing Sector in its State Industrial Policy 2013. The state govt. policies have been mentioned in Table 3.36.

Table 3.36 Food Processing Sector related policies by Maharashtra State Govt.

Policy/Scheme	Incentives offered
Maharashtra Industrial Policy 2013	Food & Agro Processing Sector identified as one of the emphasis sectors In areas other than A & B, that is industrially less developed areas (such as C, D, D+, etc.)*, eligible industrial units from the Food Processing Sector are granted additional 10% incentives and additional 1 year of eligibility period as compared to the eligible industrial units from other sector
Chief Minister Agro and Food Processing Scheme, 2017	Financial assistance of 30% of the expenditure or INR 5 million for upgrading plant and machinery in the existing food processing units and setting up of new units Similar subsidy on setting up of cold chains in the state For human resource development in the sector, under the Agro and Food Processing Scheme, 50% of the actual amount is to be paid by the candidate and 50% is to be paid by government that includes tuition fees, admission fees, etc. Some of the institutes availing the scheme like Central Food Technological Research Institute (CFTRI), National Institute of Food Technology Entrepreneurship and Management(NIFTEM), State Agriculture Universities (SAU)

Source: Website of Maharashtra Government

Note: * Group A /B/ C/ D/ D + are being classified on the basis of their level of industrial development. Details are given on Ch-4.

Apart from the state policies, the central government's focus on the agriculture and food processing sector have helped the sector in gaining momentum. Maharashtra Agro Industries Development Corporation Ltd (MAIDC) has been designated as the State Nodal Agency by Ministry of Food Processing Industries, Govt. of India for implementing the central schemes. In its role as State Nodal Agency, MAIDC scrutinizes & forwards various proposals of entrepreneurs under different schemes of assistance from Govt. of India. It also helps entrepreneurs in preparing projects, selecting the area, etc. MAIDC has also developed a Food Park at Butibori near Nagpur with concept to provide common infrastructure facilities for small and medium food processing units. MAIDC is also in the process of setting up a Flower Auction Centre at Mumbai. Some of the central policies and schemes which have been successfully implemented by the state are as follows: -

3.9.3.1. Pradhan Mantri Kisan Sampada Yojana (PMKSY)

The Ministry of Food Processing Industries, Govt. of India re-launched this policy in 2017 which is aimed at creation of modern infrastructure for food processing, creation of effective backward and forward linkages - linking farmers, processors and markets, and creation of robust supply chain infrastructure for perishables. Following schemes are being implemented under PMKSY: -

3.9.3.1.1. Mega Food Parks Scheme

Objectives of this scheme are to provide modern infrastructure for food processing units; to ensure value addition of agricultural produce including dairy, fisheries, etc.; to establish a sustainable raw material supply chain for each cluster; to provide an institutional mechanism for producers, processors, and retailers to work together to build the supply chain. The scheme envisages capital grant of 50% of the project cost (excluding land cost) subject to a maximum of INR 500 million to the companies opening mega food parks in general areas. Three Mega Food Parks have been approved in Maharashtra till 03-05-2018: Paithan Mega Food Park Ltd., Aurangabad (under implementation); Satara Mega Food Park Pvt. Ltd., Satara (operational); and Wardha Mega Food Park Pvt. Ltd, Wardha (under implementation). The Mega Food Parks would have a Hub & Spoke Model which is shown in Figure 3.21.

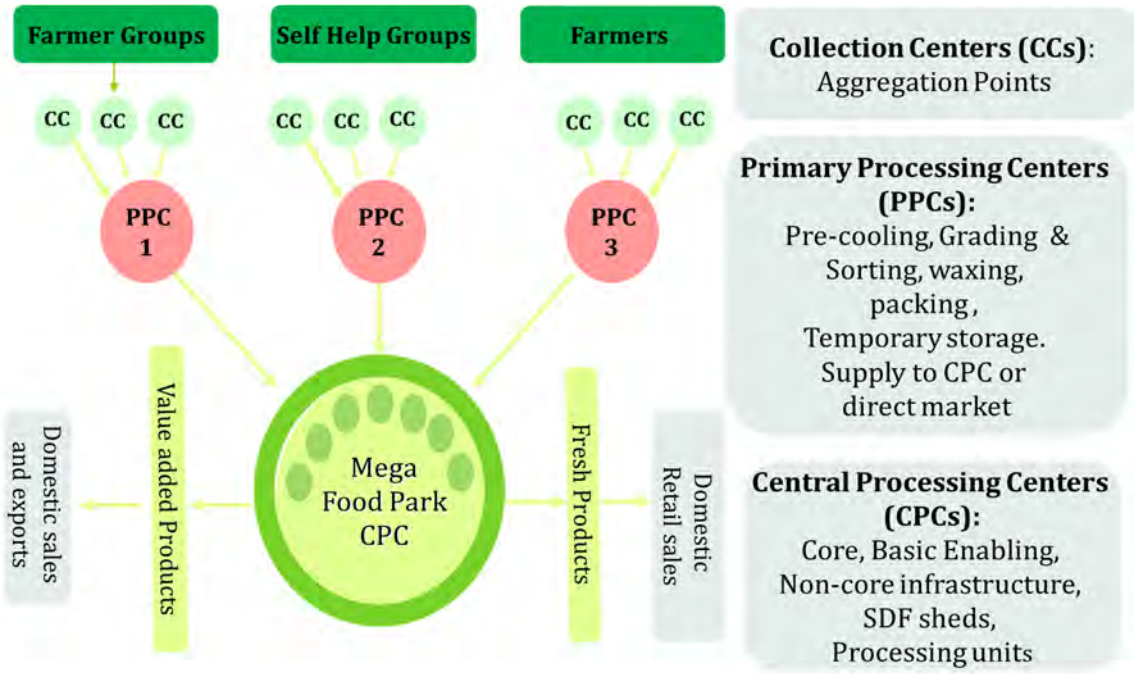

Figure 3.21 Hub & Spoke Model of Mega Food Parks

Source: PMKSY document by MOFPI (Govt. of India)

3.9.3.1.2. Scheme for Integrated Cold Chain and Value Addition Infrastructure

Objective of this scheme is to arrest post-harvest losses of horticulture and non-horticulture produce by providing financial assistance in setting up integrated cold chain, preservation and value addition infrastructure facilities without any break from the farm gate to consumer. Under this scheme, financial assistance in the form of grant-in-aid up to INR 100 million per project is provided for setting up the cold chain infrastructure in the country. There are 49 cold chains in Maharashtra so far which have been approved under this scheme.

3.9.3.1.3. Scheme for Creation / Expansion of Food Processing & Preservation Capacities

Objectives of this scheme include creation/expansion and/or modernization of processing/preservation capacities which will help in increasing the level of processing, value addition and thereby reduction of wastage. Setting up of new units and modernization / expansion of existing unit will be covered under the scheme. This scheme is implemented through organizations such as Central & State PSUs/ Joint Ventures/ Farmer Producers Organization (FPOs)/ NGOs/ Cooperatives/ SHG's/ Pvt. Ltd companies/ individuals proprietorship firms engaged in establishment/ upgradation/ modernization of food processing units. Financial assistance in the form of grants-in-aid @35% of eligible project cost in general areas subject to maximum of INR 50 million per project is provided.

3.9.3.1.4. Scheme of Agro-processing Clusters

This scheme aims at development of modern infrastructure and common facilities to encourage group of entrepreneurs to set up food processing units based on cluster approach by linking groups of producers/ farmers to the processors and markets through well-equipped supply chain with modern infrastructure. Each agro processing clusters under the scheme have two basic components i.e. Basic Enabling Infrastructure (roads, water supply, power supply, drainage, ETP etc.), Core Infrastructure/ Common facilities (ware houses, cold storages, IQF, tetra pack, sorting, grading etc.) and at least 5 food processing units with a minimum investment of INR 250 million. The units are set up simultaneous along with creation of common infrastructure. At least 10 acres of land is required to be arranged either by purchase or on lease for at least 50 years for setting up of Agro Processing Cluster. Maharashtra has been given a ceiling limit of opening up to six out of 100 agro processing clusters to be opened in the whole country. The Scheme envisages grants-in-aid @ 35% of eligible project cost in general areas subject to maximum of INR 100 million per project.

3.9.3.1.5. Scheme for Creation of Backward and Forward Linkages

Objective of this scheme is to provide effective and seamless backward and forward integration for processed food industry by plugging the gaps in supply chain in terms of availability of raw material and linkages with the market. Under the scheme, financial assistance is provided for setting up of primary processing centres/ collection centres at farm gate and modern retail outlets at the front end along with connectivity through insulated/ refrigerated transport. Maximum grant provided per project is INR 50 million @ 35% of the eligible project cost for general areas. The grant is provided only in respect of technical civil work and eligible plant & machinery.

3.9.3.1.6. Scheme for Food Safety and Quality Assurance Infrastructure

Under this scheme, Central/ State Government and their organizations/ Government universities (including deemed universities) and all other implementing agencies/private sector organizations/universities (including deemed universities) are eligible to receive financial assistance for setting up of food testing laboratories. Private sector organizations eligible for grant-in-aid of 50% of cost of laboratory equipment and 25% of the cost of technical civil work in general areas. Two food testing labs have been setup in Maharashtra till 31-12-2017: Anacon Laboratories Pvt. Ltd., Butibori (Nagpur) and RCA Laboratories, Sewri (Mumbai).

Under this scheme Quality Council of India has launched two Certification schemes namely “IndiaGHP” and “IndiaHACCP” based on globally accepted Codex Standards for adoption by food manufacturers and supply chain operators. These certifications help Indian food chain related industry to demonstrate compliance to global standards without having to go for costly and time consuming foreign certifications as many countries have mandated these certifications

for high risk sectors like meat, fish, dairy etc. and most developed countries have also mandated Good Hygienic Practices(GHP) across all food sectors.

3.9.3.1.7. Schemes for Human Resources and Institutions

Under the scheme, the Ministry of Food Processing Industries (Govt. of India) provides financial assistance to undertake demand driven R&D work for the benefit food processing industry. For Private organizations, grant-in-aid is given to the tune of 50% of equipment cost only in general areas.

There is a Skill Development scheme under this policy which has an objective of contributing towards achieving the projected skilled human resources requirement in food processing sector, that is, 17.8 million persons by the year 2022 (as per National Skill Development Corporation). The Ministry of Food Processing Industries is working for development of Course Curriculum / Training Module in English, Hindi and translation of the same in recognized regional languages based on the Qualification Packs (QPs) validated by NSDC as National Occupational Standards. This is being done in collaboration with the National Institute of Food Technology Entrepreneurship and Management (NIFTEM) to provide sector specific skilled workforce from floor level workers, operators, packaging and assembly line workers to quality control supervisor etc. in the various segments of food processing industries.

3.9.3.2. Public Private Partnership for Integrated Agriculture Development (PPP-IAD)

This is a centre govt.'s scheme under the centre govt.'s policy Rashtriya Krishi Vikas Yojana - Remunerative Approaches for Agriculture and Allied Sector Rejuvenation (RKVY-RAFTAAR). Objective of RKVY is to make farming remunerative economic activity by strengthening farmer's efforts by large scale integrated projects to provide private additional income to farmers and integrating the agricultural supply chain with financial assistance through RKVY-RAFTAAR under the direct supervision of State Governments, supported by National Level Agencies. Maharashtra has been one of the frontrunners in implementing this scheme.

Under this scheme, corporates are required to propose integrated agricultural development projects (covering all aspects from production to marketing) across the spectrum of agriculture and allied sectors. Each project has to target at least 500 number of farmers, spread over the project life which can span 2-3 years. Average investment per farmer during project must be quantified, though an average of INR 100 thousand per farmer will be a desirable benchmark. Government support is restricted to 50% of the overall per farmer investment proposed, with a ceiling of INR 50 thousand per farmer through the project cycle. The remaining investment will be arranged by the corporate through institutional financing and its own and farmer contributions. Corporates are required to submit their detailed project reports (DPR) to the Agriculture Dept. for review.

There have been various successful examples of PPPIAD implementations in the state with the help of private players such as PPPIAD Project on White Onions implemented by Jain Irrigation System Limited (JISL) in year 2012-13; Ruchi Soya Industries Limited signed two MOUs with the state govt. in 2015 with a commitment of INR 5 billion to build entire value chains for soya, tomato and other cultivators in the state and helping them in pre and post-harvest stages.

3.9.4. Infrastructure for Food Processing Industry

In order for any industry or any sector to prosper, presence of a robust infrastructure is one of the prerequisites. The state of Maharashtra has three Mega Food Parks in Aurangabad, Satara and Wardha. Apart from this, the apex industrial infrastructure development agency, MIDC, of Maharashtra has setup three Wine Parks and three Floriculture Parks in the state.

- Eight Specialized Food Parks with facilities like cold storage, warehousing, advanced packaging, tetra packaging & food testing laboratory. They are located at: Butibori (Nagpur), Shandra (Aurangabad), Nevasa (Ahmednagar), Latur, Osmanabad, Nanded, Chiplun (Ratnagiri)
- MIDC has set up three Wine parks at: Vinchur, near Nashik, Addn Vinchur near Nashik, Palus near Sangli
- Three Floriculture Parks developed as world class facility for production of flowers of different types and varieties. MIDC provides nursery, post-harvest, infrastructure and logistic facilities. The parks are located in Talegaon (Pune), Mudkhed (Nanded) and Osmanabad
- In 2017, there were 49 cold storages in the state out of which 26 were completed and 23 were under-construction. These are being developed under the Scheme of Cold Chain, Value Addition and Preservation Infrastructure which is a centre govt. scheme.

There are no restrictions regarding the opening of new food processing units only in the food parks. New companies are allowed to open their processing plants in any suitable industrial areas.

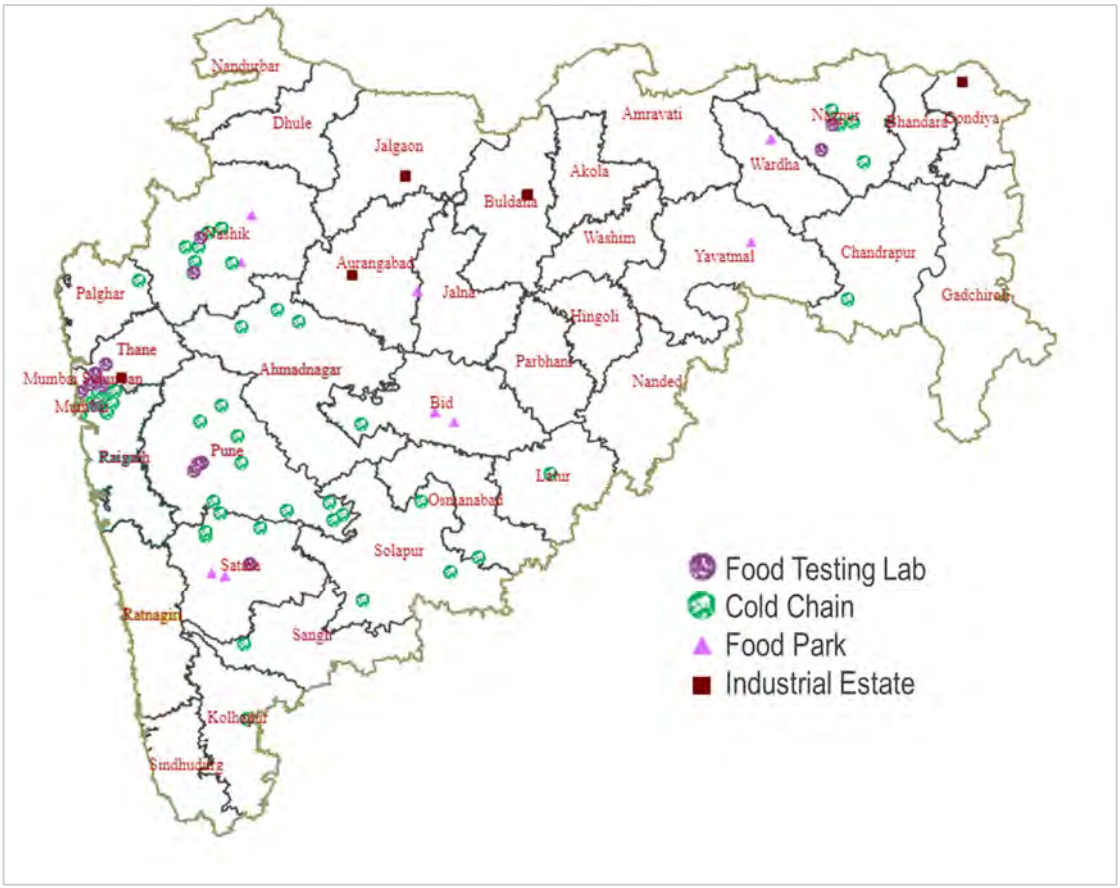

Figure 3.22 Location of infrastructure for Food Processing Industry in Maharashtra

Source: Ministry of Food Processing Industries, Govt. of India

3.9.5. Future outlook of the sector

As per a study conducted by NABARD (National Bank for Agriculture and Rural Development) and submitted to Government of Maharashtra, the food processing sector has a huge potential in the state as it is the leading state in agriculture and horticulture. However, there are some issues due to which this sector has not achieved its full potential. According to the same report, less than 1.2% of the total fruits and vegetables are processed. Out of the total yield, 60% vegetables and 70% fruits are consumed fresh. The report further stated that despite being the leading state in the Agro Industry, Maharashtra, with 100 thousand MT processing capacity, falls well below the required capacity by International Standards. The report stated that the primary reason for failure of the sector is lack of investment in infrastructure. This has resulted in a waste of 30 to 35% fruits and almost 40% vegetables.

The state government also feels the same about the sector and has put more focus on developing it. The centre government's focus on agro-based industries has also paved the way for promoting the food processing sector. The state government has initiated the agro-industrial reforms to create one food processing infrastructure unit in every district. The focus is on developing integrated infrastructure in PPP mode in collaboration with the private sector.

The state govt. is putting in a lot of efforts in order to develop the Food Processing Sector, however, there is a need of developing the infrastructure in order to achieve its full potential. As per the industrial survey, companies felt that the state government needs to provide good quality seeds to the farmers at subsidised rates, as the cost of good quality seeds is higher in comparison to regular seeds. Some of the foreign companies, in food processing industry, mentioned that they have to contract a large number of farmers for their requirement as majority of the farmers hold small pieces of land. The whole process is very complex, especially for the foreign companies Further, they also mentioned that most of the farmers are uneducated which create language barrier in conducting their business.

3.10. Results of questionnaire survey in Maharashtra State

A survey was conducted to corporations which have already established the operation in Maharashtra state. The major topics were current issues and the request to local government, based on the investment environment in Maharashtra.

The survey was conducted through various means, including the mail survey using the survey slip, online survey by e-mail and questionnaire by phone interview. 57 samples are collected, of which 30% consist of Japanese MNCs.

The overview of survey is listed as follows. The respondent's industrial pie chart indicates that the dataset consists of wide variety of industries, although the consumer goods and automobile industry have slightly high proportion. The respondents' operation indicates that the establishment mainly appears as the production center, intended to target the Indian market.

Table 3.37 Outline of the survey conducted in Maharashtra

Respondents' industry	Automobile and components Consumer goods Chemicals Pharmaceuticals Electrical, electronic & ITC equipment Non-electric machineries Rubber products Metal products Steel Transportation service Finance& insurance Service Others	N. of questions	27
		Means of data collection	Phone interview, e-mail, letter
		Time period	July 2018
		N. of samples	57 Of which 17 Japanese and 40 Non-Japanese corporations

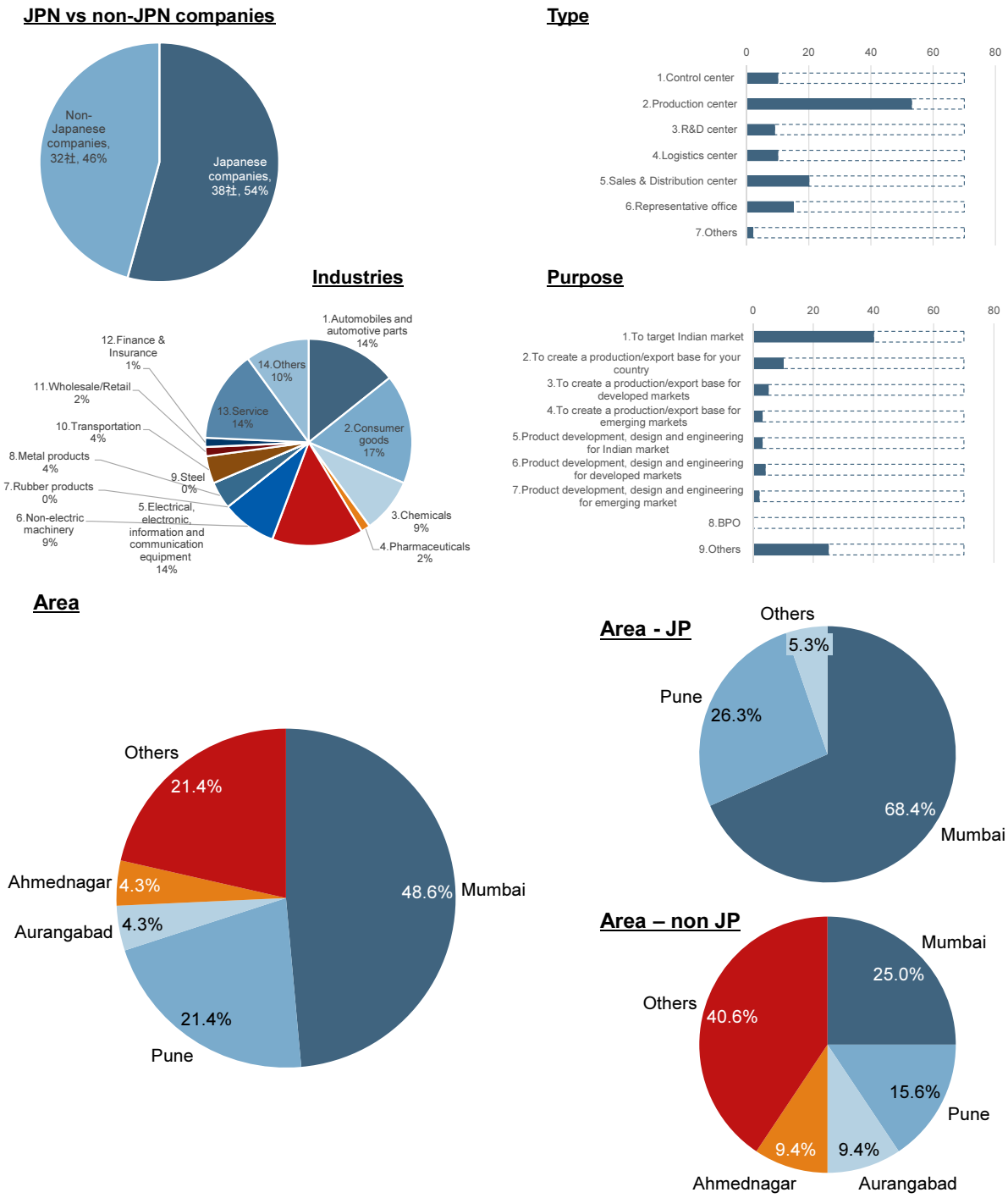

Chart 3.29 The respondent's data collected by survey in Maharashtra

Firstly, we examined the satisfaction with investment environment of companies operating in Maharashtra. If you look at the whole, you can see that there is a tendency that overall "Satisfied" is extremely high compared to other states, and "Dissatisfied" is relatively high regarding roads. While there were a lot of satisfactory responses overall, about half of them showed satisfaction, especially to the investment reception desk, procedures and sewage conditions. On the other hand, only about the roads, about half of the respondents complained, and severe traffic congestion and delays in road maintenance have been noticeable.

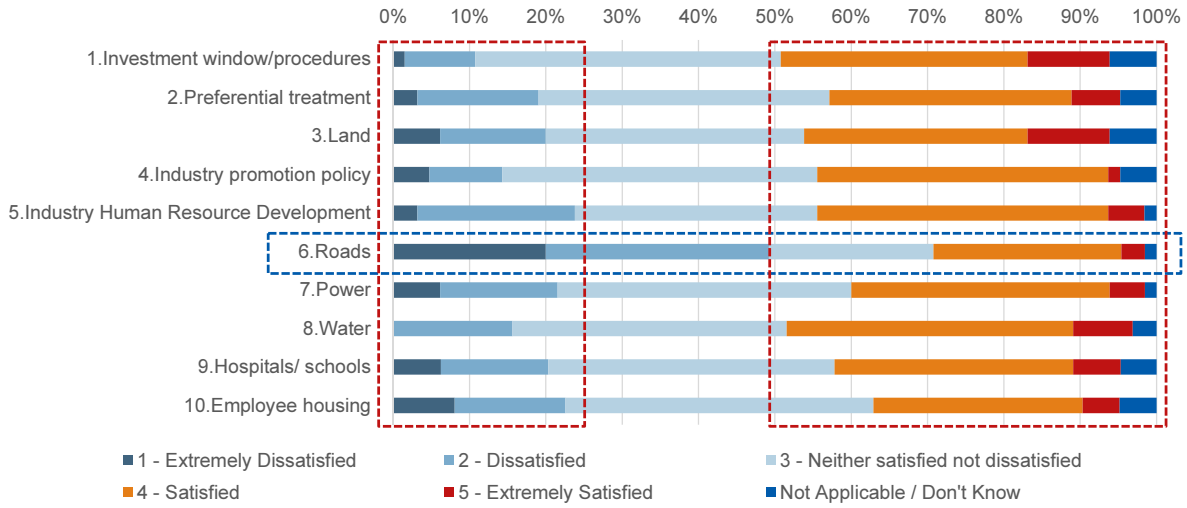

Chart 3.30 How much satsified with the investment environment in Maharashtra each company is

The following describes the current problems and requests to the state government by item.

Complaints of operating companies are relatively small regarding the investment reception window and procedure. Although there are relatively many responses such as "1. No single authorization window" and "8. Too many permits/approvals", all the responses were around 10%. On the other hand, the voice of dissatisfaction is relatively small, such as "11. I do not feel a problem in particular", accounting for about half. As the request to the state government, the responses such as "1. Set up one-stop windows" and "5. Create system for checking progress of procedures".

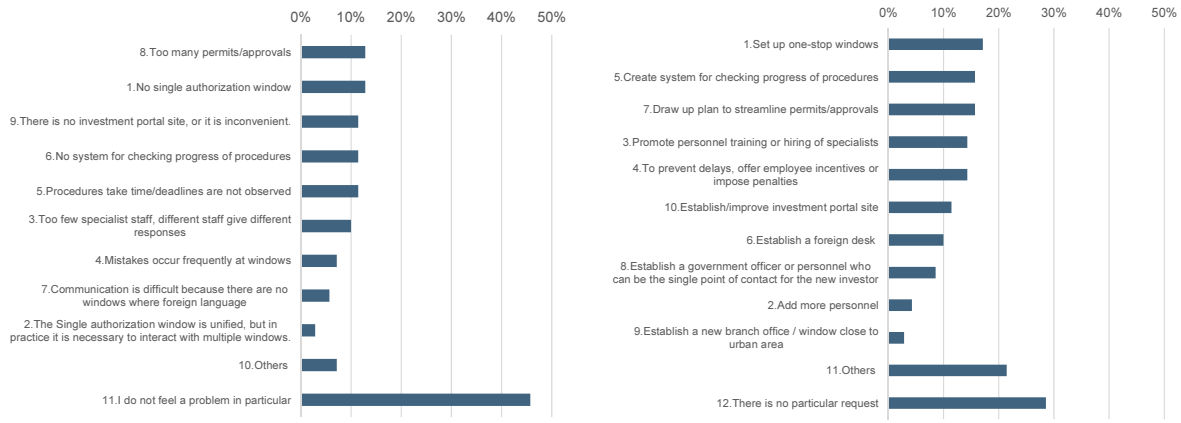

Chart 3.31 Problems of investment recipient counter and procedure in Maharashtra （left） & demands for the state's government （right）

With regard to incentive, the most frequently cited answer is "1. No financial incentives" and the problem is that the existing incentive system has not penetrated or is not attractive. There is a point. As for requests to the state government, the demand for "1. Subsidies for investment costs" is the largest at about 30%, and "3. Reduce electricity costs, etc. " continues at about 20%. The individual mentions the speed of incentives, the loan repayment period, and the need for a clear plan and policy.

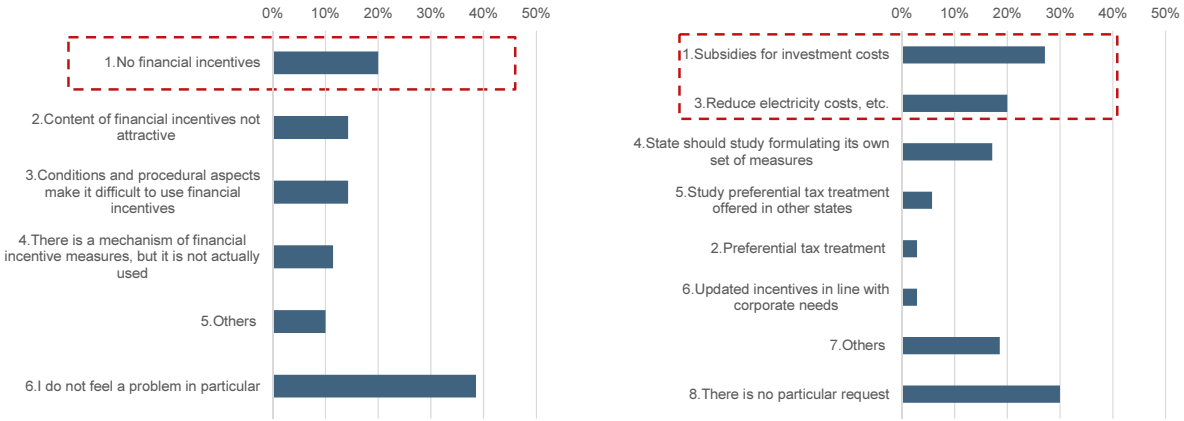

Chart 3.32 Problems of incentives in Maharashtra （left） & demands for the state's government （right）

Regarding land acquisition, there are many companies that do not feel a problem, but "6. Inadequate infrastructure improvements around industrial estates", "1. There is no convenient land, or it has not been developed", "2. Land prices are high, which limits investment". were chosen a lot. In addition, there are relatively many expectations and requests for "2. Government should make more industrial estates available to promote competition" as requests to the

provincial government, and it is considered that the supply of better land and the development of surrounding infrastructure are issues.

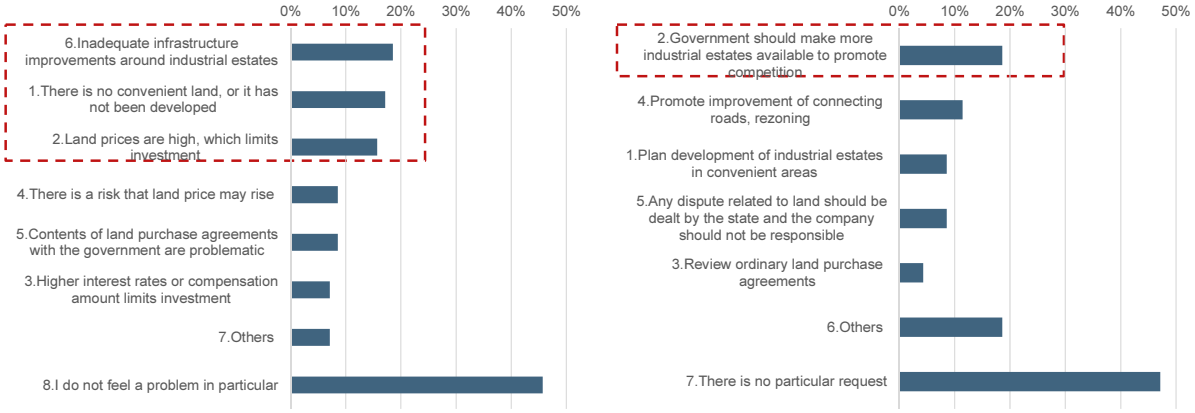

Chart 3.33 Problems of land seizure in Maharashtra （left） & demands for the state's government（right）

In terms of industrial policy, the fact that workers' wages are high is regarded as a distinctive feature of Maharashtra unlike other states. About 30% of respondents said that "4. Workers' wages are high" and about 20% answered "5. No policy of industrial promotion from state". On the other hand, as a request to the state government, "5. Establish the Industry Promotion Vision by State" was nearly 30%. Specific voices include requests for support for specific industries such as the motorcycle industry and food (sugar).

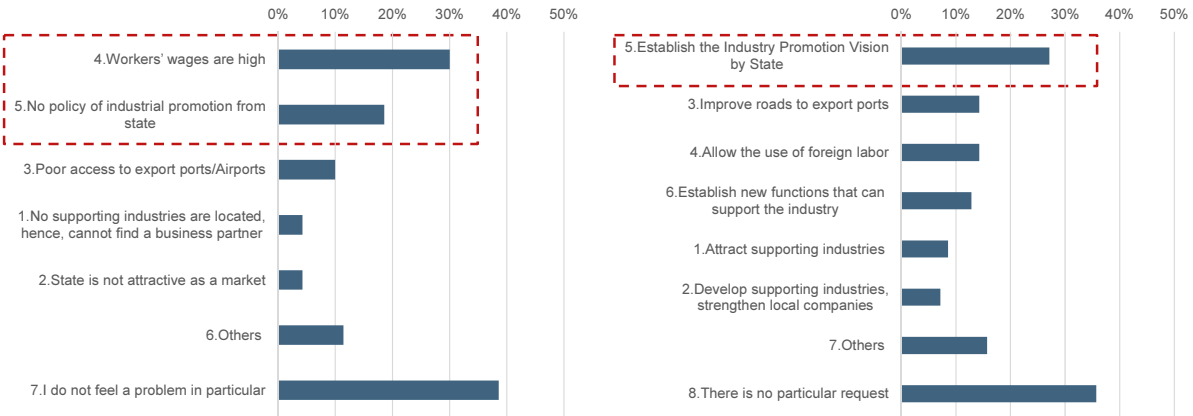

Chart 3.34 Problems of industrial policies in Maharashtra （left） & demand for state's government （right）

Regarding industrial human resource development, there are many answers such as "2. Worker shortage (University graduation) ", "5. Not enough skilled workers ", and "7. Not enough schools for learning skills ", You can see the lack of human resources with a certain level of

knowledge and technology. On the other hand, looking at requests to the state government, "3. Improve technical education programs" and "1. Formulate a state human resources development plan" are listed at the top. Involvement as a state government is expected.

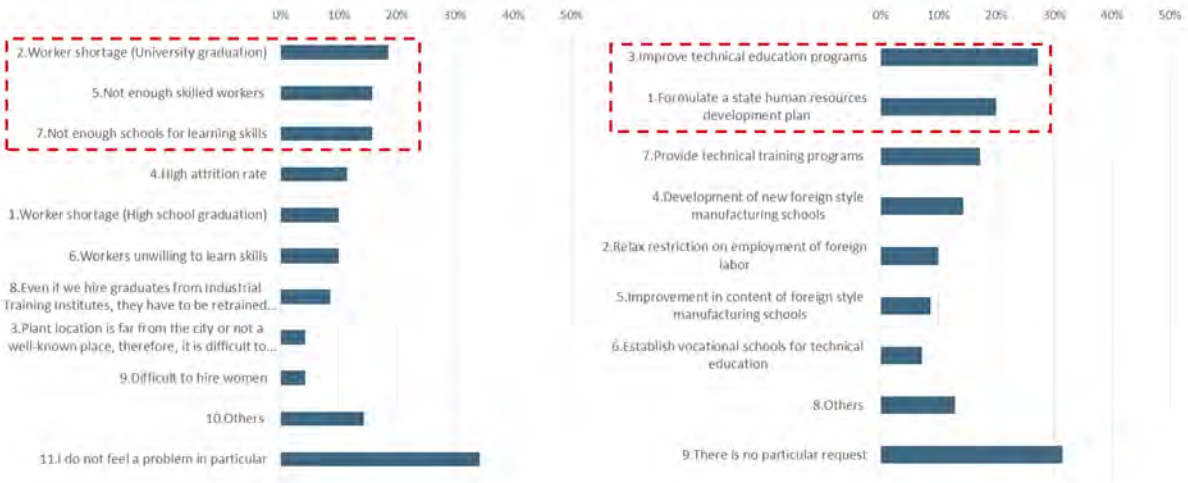

Chart 3.35 Problems of raising industrial talents in Maharashtra （left） & demands for the state's government（right）

Road problems and requests are significantly more than other items, especially road maintenance (widening, sidewalk maintenance, laying of traffic lights and street lights, etc.). Problems include: "4. Cargo and passenger traffic are not separated", "1. Main roads or connecting roads", "5. Lack of street lights, not enough paved roads, poor safety", "3 Roads in and around cities are congested" are listed at over 20% each. As requests to the state government, "1. Widen roads, build flyovers " "5. Build sidewalks, install pedestrian traffic lights and street lights " "4. Set up truck-only roads or truck priority times, relocate logistics facilities " is listed around 30% each. If you look at individual answers, not only mainland maintenance such as Western Express Highway, but there are traffic problems and demands not only in Mumbai with heavy traffic but also in each area such as Pune and Aurangabad.

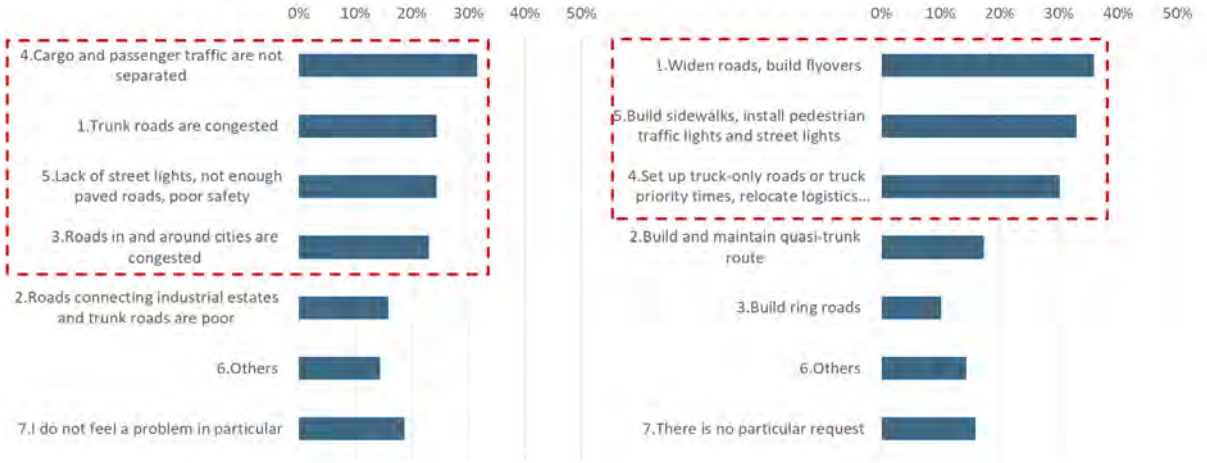

Chart 3.36 Problems of roads in Maharashtra （left） & demands for the state's government （right）

With regard to power, many companies do not feel any particular problems, but the answer "2. Power supply is not stable, flash power outages" also accounts for a little less than 30%. Regional differences are also considered large. As for requests to the state government, although there are many answers that "6. there is no particular request" basically, there are about 25% of companies that mention "3. Build distribution network", which is listed as a problem. You can see the expectations and requests for the solution of the temporary power outage.

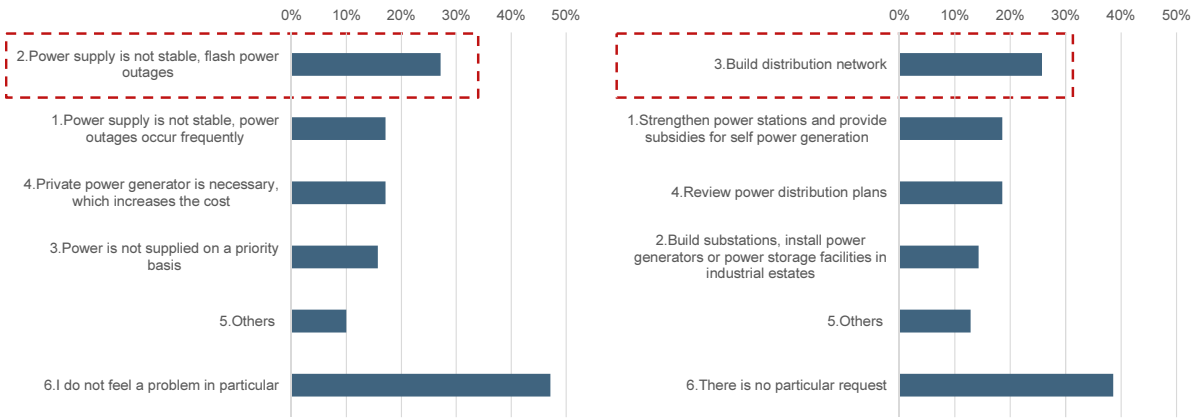

Chart 3.37 Problems of electricity in Maharashtra （left） & demand for the state's government （right）

The awareness of water shortages in Maharashtra is not so large. As a problem, an answer of about 20% that "1. Insufficient water supply ", and it is thought that there is regional difference as well as electricity, but partially supply of water is insufficient Situation is considered. As for

requests to the state government, although there are many responses that basically "7. there is no particular request", the request for "4. Develop industrials estate close to water /sewage treatment facilities " is also present 20% more Expectations and requests for solutions to the shortage of water supply and sanitation listed as points can be seen.

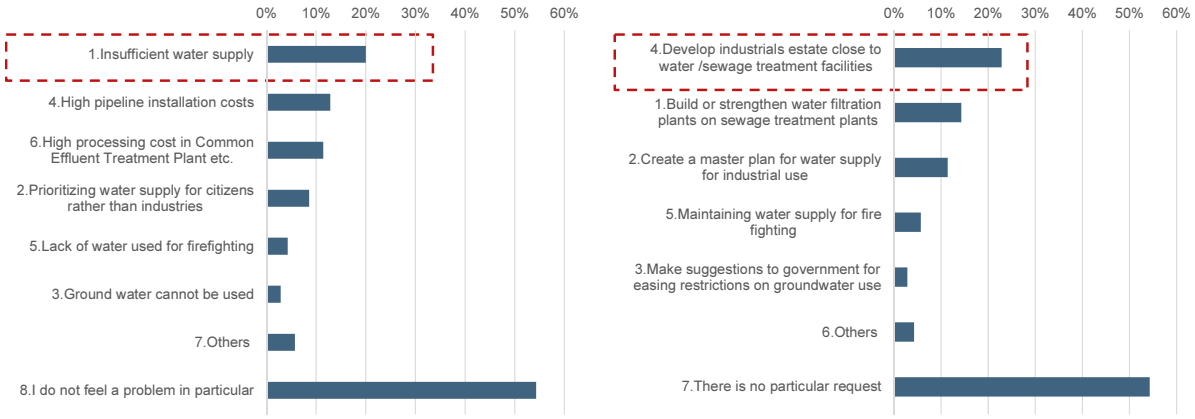

Chart 3.38 Problems of Watersupply/sewage in Maharashtra （left） & demand for the state's government （right）

As for social infrastructure such as hospitals and schools, the location of high-quality facilities for foreigners near work areas is expected. The problem is that while there are many respondents who are not particularly aware, "5. Far from office / plant" is answered about 25%, which is considered to be a problem in the location of high quality services. As the request to the state government, "1. Set up schools and hospitals for expats" is the biggest, and improvement is expected.

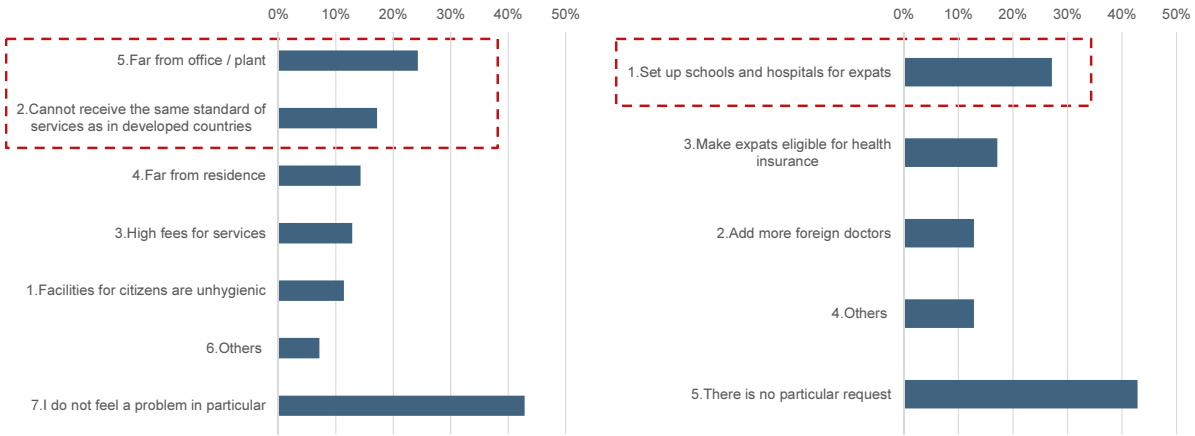

Chart 3.39 Problems of hospitals and schools in Maharashtra （left） & demand for the state's government（right）

With regard to the housing of employees, there is a sense of lack of assistance as a state for the acquisition of rented homes and homes, and it is thought that this is a sense of problems coming from high rent and land prices. There is a relatively large awareness of the problem that "3. No system to encourage home ownership ", and 35% of requests from the state government for "1. Creation of a rent subsidy system" have been raised.

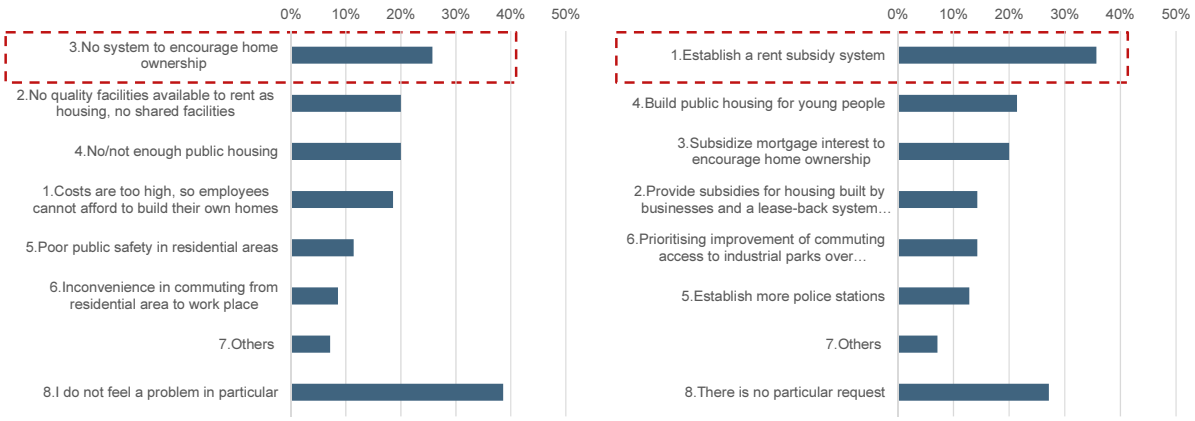

Chart 3.40 Problems of housing for employees in Maharashtra （left） & demands for the state's demand （right）

In addition, the voices that do not fall under the above items but are specifically mentioned as current problems or requests to the state government, "For foreign-funded companies that are considering investment in the state strictly by the local tax bureau, Is a big problem, 'Drainage system should be improved,' 'There is no problem with living in Pune, but traffic should be controlled', 'Need to supply power for specific days of power cut' "The state government should look to clean up and drain the Mumbai area." "Too much traffic, we need to clear up the traffic jams." "We built a factory in the Chakan factory area of Pune, but there is no public transportation as a commuting means. Large companies can use commuter buses, but small and medium-sized companies have difficulties, as their budget is limited.

In next chapter, interview result discussing details mainly about same topics in this chapter will be covered. While summarizing the result, setting up the prioritization towards problems in the state and detailed demands depending upon industry and area are reported.

3.11. Interviews with companies / association in Maharashtra state

We conducted interview surveys with companies and industry groups, etc., in order to understand in more detail the opinions and requests of companies concerning the same problems as the questionnaire and the current issues regarding investment environment in Maharashtra State and requests to the government. . The Japanese companies we visited are mainly located in Mumbai Balance or Chakan Industrial Park in Pune.

About the survey results, the table which arranged the voice of the specific company was arranged from the next page. Also, the minutes of each interview are attached as the last reference material of this report.

This interview focuses on the investment environment in Mumbai and Pune, where there is a large concentration of Japanese companies in Maharashtra. As a result of the interviews, all companies have listed the road problems and issues first. In addition to that, there are a wide range of current problems such as investment reception windows and procedures, preferential measures, industrial promotion policies, industrial human resource development, electricity, etc., as well as requests to the government.

Many Japanese companies have stated that the biggest problem in Maharashtra is the occurrence of serious traffic congestion and the lack of road facilities in the related areas. Problems have been raised in terms of maintenance and traffic congestion in any of the Mumbai city, suburbs, main roads, and roads connecting the city and the suburbs. With regard to traffic congestion, the area around Mumbai Airport is particularly serious, traffic volume is high, and there is a strong demand for road maintenance and maintenance of the metro, which is a public transportation facility. In addition, it is expected to be dispersed to Navi Mumbai, where a new airport is planned. Similarly, the distribution side is also inconvenient, and there is also a problem in that there is a travel time limit of the truck at the center and that there is no detour road. In addition, traffic congestion is severe not only in Mumbai but also in Pune, and it is also pointed out that roads are damaged by overloaded vehicles, and roads that are originally scheduled to be developed are not progressing slowly. There is.

As for the investment reception window and procedure, although a one-stop window has been established, it is actually necessary to visit each window, and it is difficult to understand the procedure, and it is essential for Japanese companies as expected, there is no true one-stop window that completes all the procedures in one place.

As for preferential treatment, there are cases where there are no incentives for investment other than moving to an industrial estate, or where supply and demand conditions are severe. At present, it is a state where foreign investment is progressing in India, but the merits of continuing operations for existing companies are also decreasing, and it is considered that it is necessary to carry out some kind of preferential treatment to promote investment in the future. Be

Regarding industrial development policy, it is said that the manufacturing industry has not advanced to a position closer to the center of Mumbai. As for the central area of Mumbai, there was an octoroi (entrance tax in Mumbai) before the introduction of GST, so there is still a problem that there are no warehouses and production bases in the central area of Mumbai. In addition, it is also mentioned that the spa industrial park, which is newly developed, has a bad location. In the spa industrial park, the road from Pune to the spa is good, and the land of the spa is flat and there is no need to create it, but it takes 1-2 hours from Pune and the population of 300,000 people in the nearest Amedanagar It is considered that the security of workers and the poor living environment of Japanese people are problems.

With regard to industrial human resource development, human resource development may not meet the needs of the industry. For example, the mold industry, which is one of the supporting industries, is said to have a low quality level. Regarding this, for example, it is a problem to be solved that the establishment of the TAGMA Center of Excellence and Training (TCET), which is a human resource development facility for molds, is stagnant due to lack of funds.

With regard to power, it is a big problem that as Pune has a power outage day to day defined by the area, a fundamental power supply shortage can be seen and a private power generator is required for new entry Conceivable.

Table 3.38 The summary of interview result targeting Japanese companies in Maharashtra

		Current problems	The voice of the companies
POLICY (Soft infrastructure)	investment counter/procedure (info)	Even though one-stop services are installed, people still need to go to several counters, and the procedure is not easy to understand.	• There are mechanisms of a single window, but in fact, they are not one-stop system. Each individual department must be visited in the specific order, and the order is hard to tell. • Installation of one-stop and single window system are in demand in almost every state, and the state of Maharashtra(MH) is not an exception. However, MH, as well as the other states, is also bureaucratically sectional, so there is technically no real single window system that Japanese companies want.
		There is no inquiry counter both at the Japanese companies and the state governments, which leads to less opportunity for people to give opinions.	• Not like Delhi, Chennai and Bangalore, there is no Japan Society of Commerce and Industry in MH. • There are Japan societies in Mumbai and Pune, but they do not have particular activities such as submitting proposals, so they don't have negotiation function to the government.

	Privilege measures (financial)	There are no incentives to invest except for the right to establish buildings in the industrial area.	• There are no Privilege measure except being able to build factories in the industrial area, there is no particular incentives for companies (Mumbai) • Compared with other countries, the scarcity of privilege measures is a big problem, the installation of privilege measure is a must in order to promote future investment by Japanese companies. (For instance, foreign companies are exempted from income tax for the first seven years in Thailand. And, there is a duty-free measure for machinery and raw materials in Indonesia for 2 years.) • There are privilege measures, but the prerequisite is quite high (the number of employees must be more than 500.) There is no reason for us to keep going in this area with this scale of business. (Pune)There have been changes in some regional privilege measures, and the amount of financial support has been decreasing since 2015 in Chakan.
	real estate (asset)	Some non-expropriated land is traded and There is unsatisfactory understanding of use district.	• There are lots of real estate expropriation problems like other states. (For example, Another landowner appears and charge again. The land for agricultural use being sold as the land for industrial use) • The price of the land is way too high in Mumbai. •It is often that people buy or sell land of unknown ownership. There is no communication between each ministry. • Even Spa industrial estate was half expropriated when it started betting in Japan, and the project temporarily stopped. (it is finished now.)
Industrial Promotion & Human Resource	Industrial development policy (Industrial infrastructure)	The near central area of Mumbai is undeveloped in terms of Manufacturing industry. (Supa industrial estate is not really in a good location)	• It is preferable that industrial estate and logistics park are built in the central area of Mumbai. •Before the installation of GST, There was "Octroi" (The city entry tax of Mumbai), so there are no storage house or production based in the central area of Mumbai. • There are few manufacturers in Mumbai. As MH state, we expect to work on a project to invite HQ or 2nd HQ of manufacturers. • Following installation of GST (Abolition of state crossing tax), some companies may change the location. The effect of MH state privilege measure will be diluted. •We are considering the location of the new factory, but Supa is not preferable. It takes 1~2 hours from Pune. • Supa it has flat ground, but the nearest city Ahmednagar has the population of 300,000, which leads to the difficulty of finding workforce and Japanese find it uncomfortable to live.
		Due to the restriction on foreign manufacturers, big scale retailer, which can attract big investment, is not yet developed.	• We want foreign-invested retailer to start the business. If that happens, it is possible to attract investment mainly from Japanese, international, Indian companies. Under the current restriction on retailers, it is difficult to realize it, but it can be done by creating the special economic area.
		Molding industry does not have strong economic power to invest in machinery.	• In India, metal casting is the key. Even if big money is thrown, the accuracy and durability do not improve, so Japanese engineers are hired reluctantly for this purpose. • Indian made machinery, especially the special machinery is pretty bad. Reluctantly, we use machinery from Japan or Thailand. •Molding manufacturers are mostly small companies, so they do not have enough fund to buy cutting-edge machinery. • When the accuracy of molding decrease, the quality of all the parts will decrease, which leads to the overall problem of the manufacturing industry. In order to make precise parts, we need expensive precision instruments. Small businesses cannot afford them. Furthermore, even polytechnic school do not have high-quality precision instrument.

		The quality standard of support industry (molding industry) is low	• There are many local companies, but only a few of them meet the standard requested by Japanese companies. There are several factors such as the quality of operation is low, the raw material is bad etc... But, one of the biggest reasons is that the mind of managers is not made up to satisfy customer's demand. Occasionally, not every necessary item are written in the manual by Japanese companies. • The quality of basic parts such as Bolt-nut is the problem. Since high quality and cheap parts can stably be imported from Japan, Support industry integration and self-sufficiency on the spot is not developed yet. • Indians think broken parts can be replaced, they do not bother to improve the quality of the detailed part. In addition, manpower is very unstable and skilled technician do not grow and stay. • These efforts on the development of support companies can be originated from the very core of the set of value of Indian culture, so it is hard for companies to change such concept by themselves.
	Training of industrial human resources (people)	Training sector does not meet the expectation of the industry.	• The problem is that training of skilled worker does not meet the expectation of the industry • Molding course of polytechnic schools are the foundation of the labor education, but they are not able to teach the core theory such as material physics, thermodynamics, and fluid dynamics etc.. The rest is covered by OJT. • Concrete and practical training (shop floor training) is the most important. Some skilled such as heat treating can only be learnt at the job • Labors are good overall, but Engineers must learn practical skills and knowledge. There are lots of engineering graduates who cannot write blueprints. They can perform well on exams, and know how to use software, but does not know what is necessary on the job.
		Establishment of TAGMA Center of Excellence and Training(TCET), the training faculty for molding, is delayed due to the lack of budget.	• TAGMA has been preparing to establish TAGMA Center of Excellence and Training (TCET). TCET has cutting-edge machinery and lets small businesses use the instrument• Teaching only diploma holders, they aim to teach highly practical and advanced skills in order to meet the expectation of the industry.• TCET is under construction in Chakan after being given 2 acres of the industrial estate at MIDC. (80% done) • TAGMA is under the control of Department of heavy industry (DHI), and they can receive financial support by DHI paying the part of the building and instrument cost. On the other hand, The fund for machinery is actually matching fund, so 80% is paid by DHI, while the rest (1 million INR) has to be paid by the industrial sector. However, most of the allied member of the industrial sector is small businesses and cannot afford to pay it.
Infrastructure （Industrial, social）	Road	The roads both inside and outside Mumbai have issues regarding maintenance and traffic.	(In this interview, almost every companies mention the road maintenance as the most important problem in MH state/ in the questionnaire, Mumbai and Pune, as well as other states, have the road problem. o) （ •Due to the road situation, logistics cannot be done efficiently. (Mumbai) • All the roads in/outside Mumbai have quite bad problems, especially in the city center and around the airport. • There is a restriction on the time when trucks can drive in the city center (forbidden during the day). Moreover, there is barely any bypass. The road maintenance has to be done as soon as possible. • The quality of roads is quite bad. Inter-state roads are very bumpy and there are lots of floods as there is no drain. • The road in MH state is the worst and local employee told us that Pune is especially bad. Overloaded trucks wrecked the road surface and the traffic jam is getting worse and worse. • The influence on logistics is quite big. It takes 5 days to go to Delhi or Chennai from MH state. Even worse, it takes approximately 2 weeks to

			East India (beyond Kolkata) • We want the government to fix the road in Pune, especially elevated road and loop line. The original plan is delayed so many times. • Besides, We want some restrictions on the amount of load on trucks. The traffic signals are not well organized, either.
Infrastructure （Industrial and social）	Electricity	Massive home generators are needed in order to start businesses around Pune, Chakan MIDC area. Which can be an obstacle for newcomers.	• There are around 30 blackouts per month on average. Recently, there were 36 blackouts in a month (40hrs in total) (Pune, Chakan) •Basically, Pune and Chakan need more electrical power. Especially, the blackout occurs on Thursday very often. It depends on the area. • Companies have generators to prepare for blackout Thursday in Chakan MIDC area. Moreover, There are instantaneous blackouts, so companies have blackout-proof device to protect electric goods.
	Water supply and Sewerage	There is no particular issue.	• I find no problem. Water cost is low. (Mumbai) • Water in MH state has no issue. (Mumbai • I think the water here is clean （Pune/Chakan） • MIDC provides clean water. （Pune/Chakan） • Water is clean and has nice taste. （Pune/Chakan）
	Hospital/School	There is no particular issue.	• I do not feel there is any issue regarding hospital and school. （Mumbai） • The quality of the facility in hospitals is low, and the hospitals are often crowded with sick people. I wish there will be some improvements on it. (Mumbai) • There are few Japanese restaurants, but that is not a big issue. There are international schools (Pune/Chakan) • There is no big issue with hospitals in schools in Pune city. • Hospitals are slightly dirty, but they provide proper services (Mumbai)
	Company house	There is no particular issue.	• Tenant and hotels are very expensive, but there are many apartments for expats these days (Mumbai) • I do not think MH state is dangerous. I think Delhi is more dangerous (Mumbai) • There are many companies considering to move to the city center of Mumbai such as Navi Mumbai, but the tenant cost is the problem. • Lots of employees commute from Pune to Chakan. And it takes an hour in the morning and 2 hours in the evening. However, considering shopping etc., I prefer Pune to Chakan. •There are not so many Japanese restaurants like Delhi and Chennai, which make me hesitate to move in. (Mumbai, Pune)
Others	Food process industry	There is an investment pressure on farmers who cultivate vegetables for processed food.	• The tomato seeds for processed tomatoes are more expensive than fresh tomatoes, so I wonder if the government can financially help farmers by paying the difference between the cost of fresh tomatoes and tomatoes for processed tomatoes, or by supporting farmers to buy agricultural instruments.
		The locations of the government own food processing faculties are bad.	•Performing comprehensive production from agriculture to food processing, the location of processing faculty is the problem. For example, Mega food park (industrial estate for food processing), which was developed by the department of food procession, provides low price utility cost. However, The faculty is built quite far from the farms, so the location is not good.

		Foreign companies cannot do agriculture here, so they need to make the contract with local individuals, which has big costs.	• Foreign companies are restricted to do agricultural business to some extent. (just instruction) Because of it, the companies need to buy ingredients from local farmers, but the area of farms in India is quite small and not well organized, so companies need to make many contracts with farmers. Furthermore, the farmers usually cannot speak English, which means companies need to make extra effort to make contracts using Marathi.

3.12. Issues Pertaining to Attracting Investment to Maharashtra and Policy Matrix Proposals

3.12.1. Policy-, System- and Procedure-related Issues Faced by Businesses in the State

Based on specific requests by businesses in the state and the findings of a desktop study within the state, this study has identified policy-, system- and procedure-related issues for improving the investment environment. At present, the Maharashtra state government has adopted very few measures, or else those measures are limited in scope. However, as far as comments from Japanese businesses, including JETRO, in Maharashtra go, compared to other Indian states there are relatively few problems relating to urban procedures. In particular, in other states the Pollution Control Board and the Fire Department cause problems, but in Maharashtra the Pollution Control Board is cooperative with investment procedures and where the Fire Department is concerned, inside industrial estates MIDC operates its own fire brigade and permits can be obtained from that body. Because of this, Japanese businesses have not mentioned any problems relating to these matters. And as far as investment incentives go, applications can be made online for statutory investment incentives and are handled appropriately. In particular, procedures relating to investing have greatly improved overall in the past three years.

To improve the investment environment, Japanese businesses want introduction of a relationship manager and stronger investment incentives comparable to those of other states. With regard to investment incentives in particular, the state should focus on attracting supporting industries to boost competitiveness in the manufacturing industry rather than giving preferential treatment to less-developed area or large businesses. Further, as far as exports, wide-area logistics and attracting the head offices of major businesses are concerned, businesses should be attracted to industrial estates closer to Mumbai.

Meanwhile, MIDC and the various bureaus continue to negotiate about making investment procedures smoother. In the agriculture sector, there are investment procedures for in the agricultural product processing and food processing sectors, but there is no support for investment procedures for seed production, agricultural production, and sorting, washing and packing operations, etc. from MIDC, so some businesses have said that there are problems in attracting investment in agriculture and the food industry.

Table 3.39 Identifying Policy-, System- and Procedure-related Issues Pertaining to Attracting Investment

Category	Issues	Comments from Businesses	Desktop Study and Interview Findings	Current Conditions
Investment application procedures	1. Need to create an organization-wide system for permits.	A single-window system exists, but it's actually not one-stop service, and businesses need to go to individual departments in turn.	A platform is provided, but need to visit each ministry in turn.	SWCS functions as an independent window, providing approval procedures for over 16 departments for prior to establishing a company,

				prior to starting operation, and after starting operation.
	2. Consider establishing the position of "relationship manager" to provide advice on complicated procedures and to help negotiate with the state government.	Unlike other states, Maharashtra does not have a Japan Chamber of Commerce and Industry, and since no proposal activities are conducted, there is no mechanism for negotiating with the government.	No helpline or dedicated staff for Japanese investors. There is also no system for attracting investment by country.	JETRO provides support for investment application procedures, but there is no support from the state government.
	There is no support for investment procedures for the pre-food industry value chain of agricultural production, harvesting, washing, sorting and packing, etc.	Since amounts invested are small, Maharashtra state shows little interest. Since this is outside the jurisdiction of the Industry Bureau, nothing is being done.	There is no support for investment procedures in the areas concerned (interview) There is only weak awareness that support for the entire agriculture and food industry value chain is necessary	There are activities such as organizing farmers, such as the SMART project, and subsidy schemes for businesses located in mega food parks and for farmers, but there are no subsidies for sorting and processing facilities not located in food parks.
Preferential measures	3. Focus on supporting industries and R&D, etc., with stronger preferential measures than other states.	Maharashtra offers fewer preferential measures than other states and has strict criteria for qualifying. Thus businesses have no reason to continue or expand their operations there. Preferential measures have been reviewed in the past few years and fewer benefits are available now.	There are strong preferential measures for non-industrializing districts and major investment, but few such measures for SMEs from abroad in supporting industries, etc.	Measures for promoting development of the aerospace and other cutting-edge industries and for the state's core industries (foods, textiles) are provided, but there are no promotion measures for supporting industries.
Industry promotion policies	4. Set up industrial estates and logistics parks in areas closer to Mumbai.	Supa is too far, being 1-2 hours away from Pune. Cannot secure workers or a high-class residential environment. Export distance to Mumbai Port is also too far. The concentration of manufacturing industries should be taken advantage of and steps taken to concentrate manufacturer head offices here.	Industries to be attracted to six different clusters in Maharashtra have been decided, and over 30 industrial estates and 22 SEZ have been designated. Many industrial estates are planned for the interior of Maharashtra, but no businesses have located there.	Nashik along the DMIC is closer to Mumbai, the distance being about the same as between Mumbai and Pune.

Source: NRI

3.12.2. Infrastructure Projects which Industry Hopes to See Realized

Based on interviews and findings from questionnaires, the following sub-project candidates were mentioned. Many businesses believe that the priority infrastructure issue for Maharashtra should be to improve trunk roads between industrial estates in the suburbs and Mumbai. Road quality is also very poor, and bumpy road surfaces and poor drainage affect roads through the state. But the local survey determined that trunk roads (national and state highways) from Mumbai to Pune and to the Supa industrial estate are paved properly and are two or more lanes in each direction, so road capacity is sufficient, so road conditions were on a par with those in other states. However, connecting roads from these trunk roads to MIDC industrial estates are under the jurisdiction of PWD, and while paving is kept in good condition, road capacity is insufficient for industrial traffic demand, and 10-km long traffic jams were observed. For local roads other than industrial roads, road conditions are poor: road surfaces are rough and road shoulders have collapsed in some spots. This means that industry-related traffic demand converges on certain roads and also causes traffic jams on access roads.

With regard to areas other than roads, conditions relating to water, electricity and social infrastructure are not as poor as in other states. In this program, the focus should be on road infrastructure projects. In particular, the list should concentrate on relieving traffic congestion on industrial roads around Pune.

MSRDC has already proposed the Turbhe–Karghar Road (① to bypass congestion in Navi Mumbai) and the Pune Ring Road (③, ④ to bypass congestion in Pune).

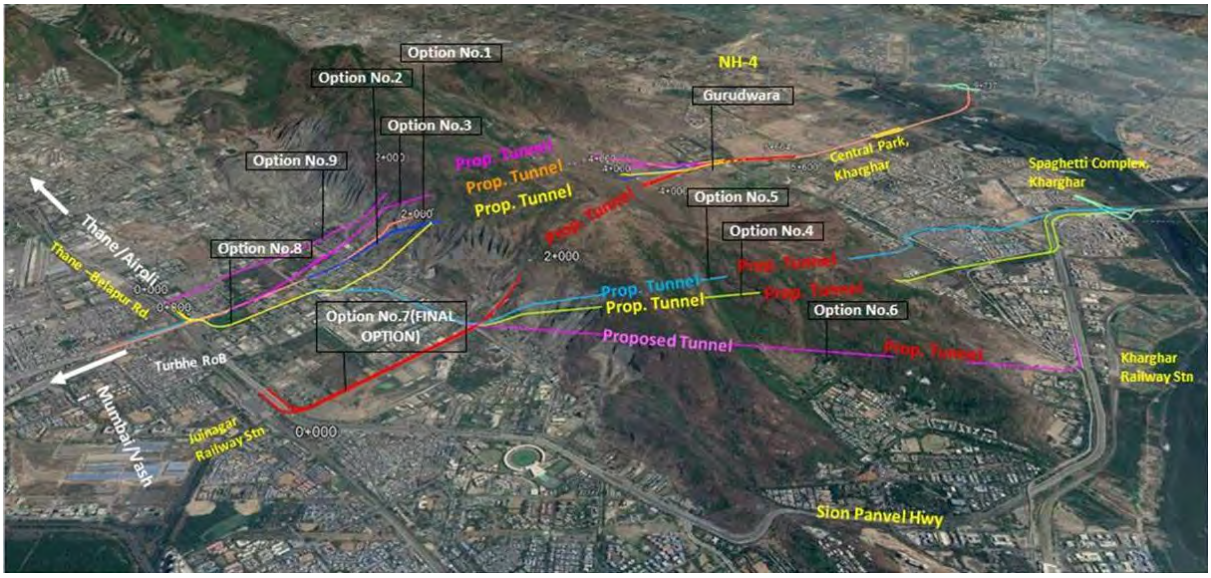

Figure 3.23 Turbhe - Karghar Road

Source: MSRDC

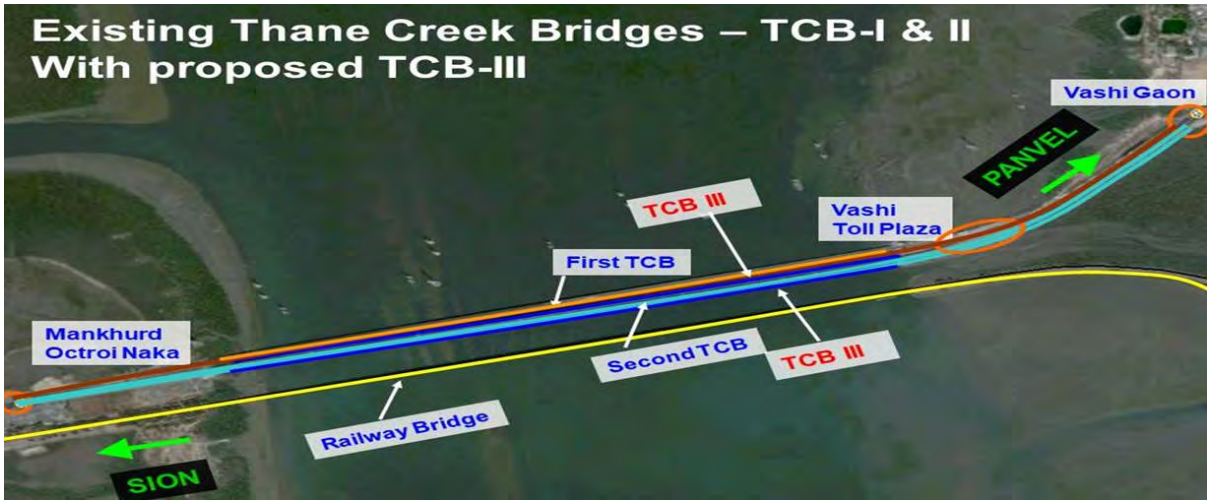

Figure 3.24 Maintenance of another bridge at Thane Creek Bridge

Source: MSRDC

Additionally, a different road route for the section running through mountains on the Mumbai–Pune expressway has been proposed.

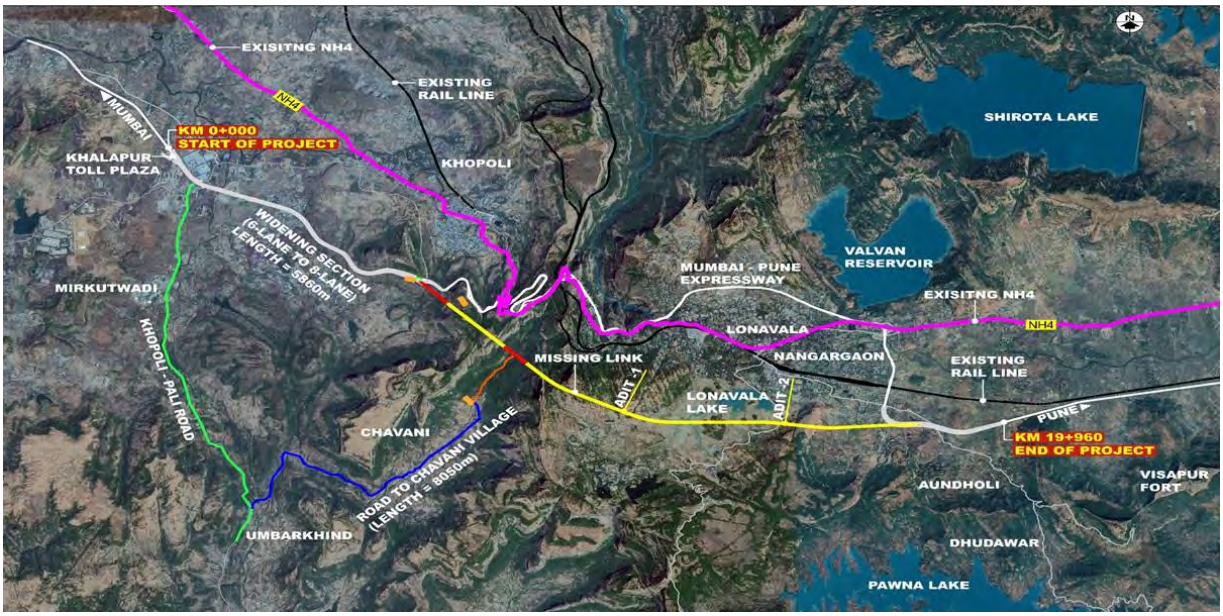

Figure 3.25 Separate linear improvement of mountain section of Mumbai-Pune Expressway

Source: MSRDC

State highway 58, the access road to Chakan industrial estate from the Mumbai–Pune expressway needs to be widened. State highway 58 is the shortest route from Chakan to national highway 68 (the access road to Supa industrial estate), and widening state highway 58 will shorten the distance to Mumbai for Japanese businesses in Karegon and for Japanese businesses that will locate in Supa in the future. This is an important road improvement project in terms of enhancing the attractiveness of Supa as an industrial estate for Japanese businesses.

Since MSRDC is delegated by NHAI to build national highways in Maharashtra, MSRDC is responsible for national highways within Maharashtra state. For local roads, MIDC is in charge of roads inside industrial estates and the Metropolitan Corporation is in charge roads of urban roads; other roads are prepared by the Public Works Department.

Where additional infrastructure projects are concerned, MIDC has been asked to draw up a list, and we are waiting for a reply as of May 31, 2019. Information expected from MSRDC has also not been shared as of May 31, 2019.

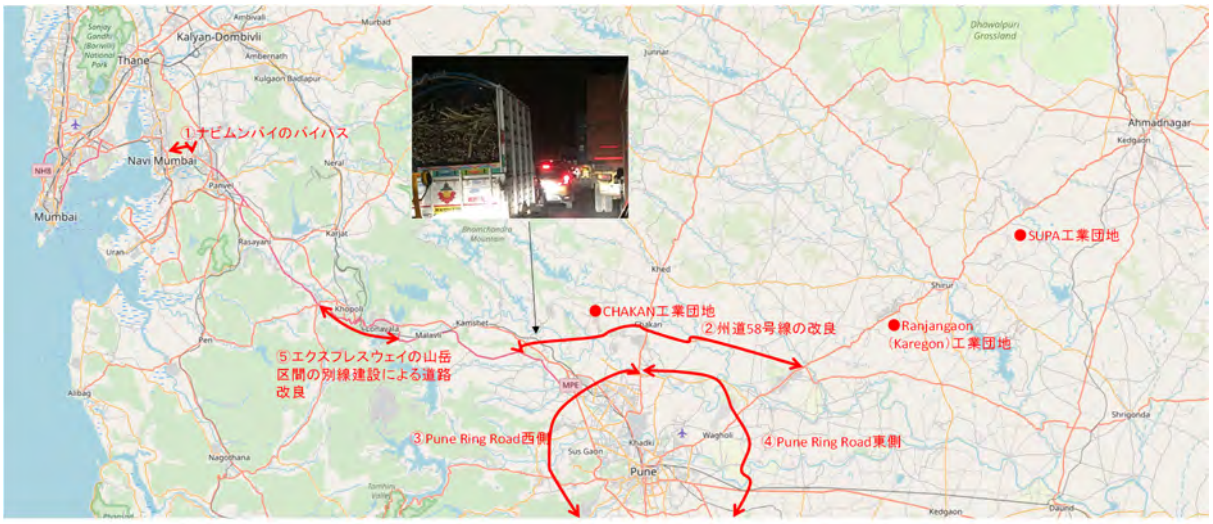

Figure 3.26 Draft Plan for Adding Industrial Roads Around Pune

Source: NRI

Table 3.40 Infrastructure Projects Industry Hopes to See Realized by Attracting Investment

	Sector	Road	Road
	No.	**1**	**2**
1	Project Name	Turbhe - Karghar Road	Improve state highway 58 (around Chakan industrial estate)
2	Industry Requests	Relieve congestion on the road linking Mumbai and Navi Mumbai	Relieve traffic jams around Chakan industrial estate and shorten access time from Supa to Mumbai
3	Administrative Dept.	-	PWD
4	Implementing Body	Maharashtra State Road Development Corporation (MSRDC)	PWD (MIDC involved as an advisor)
5	Cost (INR)	900 crore	N.A.
6	Status of Implementation	Plan currently being implemented (DPR is being formulated and expected to be completed in 2-3 months. Tender is expected in the	N.A.

		next 4 months (before the Maharashtra State election)	
7	Type of PPP	None	N.A.
8	Funding Source	Internal funds, public bonds	N.A.
9	Share by Funding Source	MSRDC is planning 30% equity, with the rest to be funded by debt	N.A.
10	Planned Period	FY 2019	N.A.
11	Additional Details		

	Sector	**Road**	**Road**
	No.	**3**	**4**
1	Project Name	Pune Ring Road (West)	Pune Ring Road (East)
2	Industry Requests		
3	Administrative Dept.	-	
4	Implementing Body	Maharashtra State Road Development Corporation (MSRDC)	
5	Cost (INR)	6540.06 crore	8906.18
6	Status of Implementation	Plan currently being implemented (feasibility study)	Plan currently being implemented (under review by DPR)
7	Type of PPP	BOT/Hybrid Annuity	BOT/Hybrid Annuity
8	Funding Source	Internal funds, public bonds	Internal funds, public bonds
9	Share by Funding Source	NA	NA
10	Planned Period	NA	NA
11	Additional Details		

Source: NRI

	Sector	**Road**	**Road**
	No.	**5**	**6**
1	Project Name	Mumbai–Pune Expressway mountain bypass portion	Mumbai–Nagpur Expressway

	Sector	Road	Road
	No.	**5**	**6**
2	Industry Requests	N.A.	N.A.
3	Administrative Dept.	N.A.	N.A.
4	Implementing Body	N.A.	MSRDC
5	Cost (INR)	N.A.	55335 Crores
6	Status of Implementation	N.A.	Construction already started
7	Type of PPP	N.A.	SPV (only EPC has been outsourced)
8	Funding Source	N.A.	Maharashtra state funds
9	Share by Funding Source	N.A.	Not decided
10	Planned Period	N.A.	August 2021
11	Additional Details	N.A.	N.A.

Source: NRI

3.12.3. Human Resources Development Issues Faced by Industry

This study identified specific issues faced by investors with regard to human resources development, based on specific requests by businesses in the state and a desktop study within the state. At present, Maharashtra has implemented almost no measures regarding the respective issues, or measures are limited in scope. These issues should be addressed, in order to improve the investment environment.

The most important issue relating to industrial human resources development is that the content of vocational education provided by the state government and other bodies is not sufficiently practical. Since the skills learned in educational institutions fail to reach the skill levels needed on the manufacturing floor, businesses need to train their workers from the ground up. Instructor education is also insuffient.

Metal molding is an important supporting industry supplying a broad range of industry sectors, and TAGMA set up human resources training facilities. But even with the adoption of the latest equipment, operating costs are high and local SMEs cannot use the facility. The Maharashtra state government should implement a scheme in support of these activities.

Table 3.41 Human Resource Development Issues Pertaining to Attracting Investment

Category	Issues	Comments from Businesses	Desktop Study Findings	Current Conditions
Industry human resource development	5. Vocational education levels fail to meet industry needs.	For example, polytechnics do not teach adequately about the properties of materials used for making metal molds, thermodynamics, fluid dynamics, etc., necessitating learning through practice on the job at businesses. Many university engineering department graduates cannot draw up blueprints. Even if they can use 3D CAD, they don't know what they need on site. Engineers also need practical training.	There is only one instructor training facility (CITS) in Mumbai. Other that this, there is trainer training by PPP or occupational training by MoA with businesses. A total of 1,600 people a year can use these facilities.	An MOU with JSW for establishing a skills development research center has been signed. Operated jointly with NCVT, DGET and the Indian government, this facility plans to issue internationally recognized completion certificates.
Industry human resource development	6. Develop supporting industry human resources with advanced manufacturing skills (support for adopting the newest equipment, technical guidance, instructor training, etc.)	Few SMEs can meet the standards required by Japanese businesses. The quality of bolts and nuts, especially, is poor, and while TAGMA is in the process of establishing a cutting-edge facility (TCET), it is running out of money. Trainees also need to be taught heat processing and other practical skills on the factory floor.	Maharashtra State has 13,000 skills development institutes reaching 450,000 students. MSSDS is providing a skills development scheme and has a program for creating an additional 210,000 jobs in the auto and auto parts industries.	TAGMA, which is committed to developing the mold-making industry, set up TCET in Pune with the support of the Ministry of Heavy Industries. SMEs manufacturing sheet metal and metal molds are allowed to use the high-tech equipment, but the takeup rate remains low.

Source: NRI

3.12.4. Issues Pertaining to Promotion of Agriculture and the Food value chain Industry

3.12.4.1. Entire issue of Food value chain sector in MH State

Maharashtra is a leading State in agriculture. Principal crops grown in the State are rice, jowar, bajra, wheat, tur, mung, urad, gram and other pulses. The State is famous for a major producer of oilseeds. Groundnut, sunflower, soyabean are the major oil seed crops. The important cash crops are cotton, sugarcane, turmeric and vegetables. State is pioneer in onion production in the country and it is today emerging as an important horticultural State in the country.

However, there are several issues in Maharashtra food sector across the value chain such as predominantly rain-fed agriculture (only 18% of Gross Cropped Area is irrigated); Scattered rainfall across regions with one-third area receiving scanty rainfall – State has 24 per cent of drought-prone area of the country; limited know-how of farmers related to modern techniques;

poor quality seeds/ nurseries leading to low yields; lack of market mechanism for direct interaction between farmers and retailers/consumers, presence of middlemen etc

Figure below shows the major challenges across the food distribution chain:

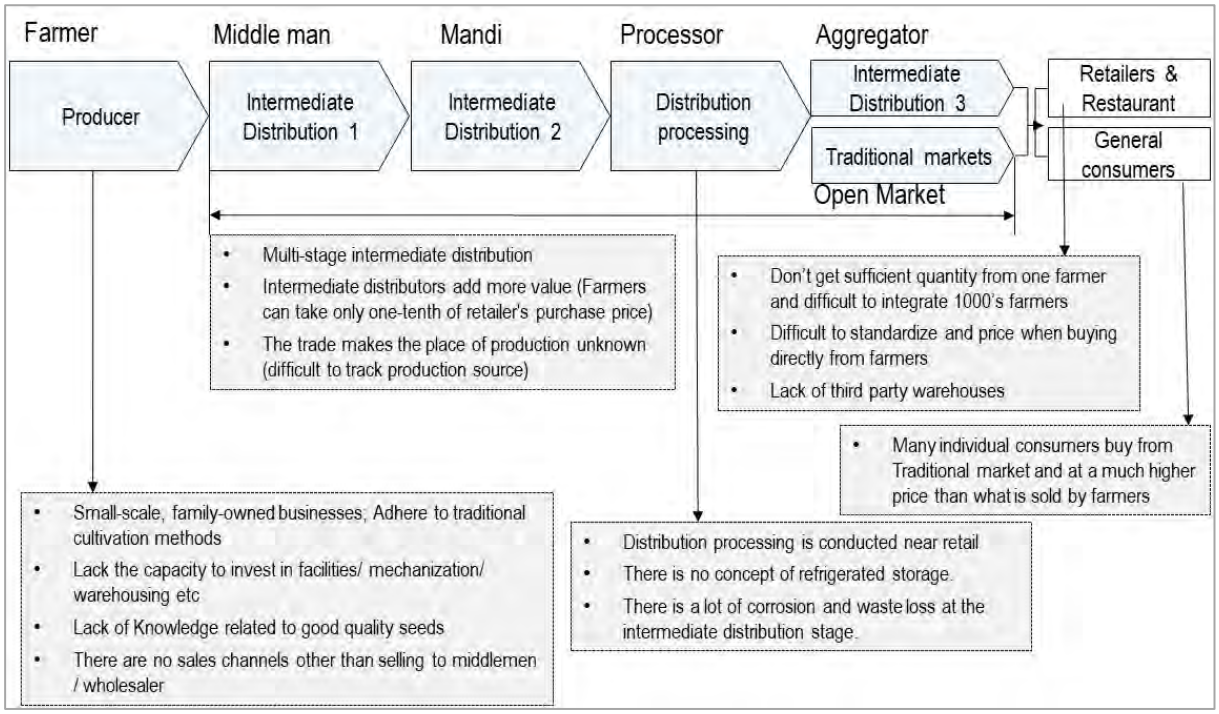

Figure 3.27 Challenges of Agriculture sector across the value chain

3.12.4.2. Issue for each player of Food value chain sector in MH State

- **Producers:** At the Producer/ Farmer level major challenge is related to limited capability of farmers to adopt new technologies and seeds & fertilizers. Generally, the farm sizes are small and using mechanisation may be not be cost effective. Farmers in India also lacks market information related to what kind of crops need to be grown so that it could fetch them maximum price. Further farmers are heavily dependent on wholesalers/ middlemen for selling their produce. To overcome these problems, group of farmers are forming Farmers Producer Company (FPC) where they come together and form a company to cultivate and sell their agriculture produce together. In this way they can achieve economies of scale and can access new technology and market. As per MAHA Farmers Producer Company Limited (MFPC), FPCs don't have secondary and tertiary processing facilities, thus their ability to value add is limited. Further they don't have basic warehousing facilities to store their produce and doesn't have pricing capacity. FPCs also have limited capability to supply to end-customers directly.

- **Intermediary Distribution 1 & 2:** India has multilevel intermediaries/ middlemen between farmers and consumers. Middlemen plays a critical role of aggregating demand and supply. They procure from farmers and sell to it wholesalers, retailers etc. In between they add huge

margins. Sometimes intermediaries try to increase/ decrease the price through stocking the produce and not selling in the market. Thus, the role of intermediaries is very important to balance demand and supply, however there is need to monitor their actions by government as middlemen do not have excess power to control market price.

- **Food Processing:** Processing in India is generally done near to customer. Farmers/ FPCs don't have facilities for secondary and tertiary processing. Thus lot of produce gets wasted till the time it reaches to the processing unit. Lack of cold storage warehouses and cold chain logistics is another issue. Also, for setting up a new food processing unit, a company needs several approvals from Industry departments as well as from agriculture department. Currently there is lack of an integrated approval agency that take cares of Industry and Agriculture department approvals. Due to this cumbersome process, many SMEs are hesitant to invest in food processing.

- **Retailers & Institutional Buyers:** Most of the retailers and institutional buyers (big restaurant chain etc) wants to directly procure from farmers but individual farmer in India is small and it is difficult to buy from 100's of farmers. Also, retailers need to commit to farmers before-hand how much they want to procure from them, in this scenario, it is difficult to modify quantity in future. While buying from middlemen/ distributors, there is flexibility to modify the purchase quantity based on the market conditions, whereas if Retailers buy from farmers, there is less flexibility in changing the quantity. Another issue faced by retailers is there is no standardised products and it is difficult for retailers to assess the quality of produce. Each farmer's produce can be of different quality. In this scenario, pricing of produce appropriately become more difficult. Few retailers such as future group, Amazon, Big Basket, More etc have set-up their collection centres to directly procure from farmers near to the cultivation area, but lack of storage and transportation facility limiting the success of this model.

- **Individual consumer:** Most individual customers either buy from retailers or through traditional channel of mom & pop shops. The price an end-consumer pays and what farmers get, could be very different, due to multiple channel of distribution. Recently buying groceries etc online is increasing and global players such as Amazon and several domestic start-ups such as Big Basket, Grofers, etc are into the business and trying to improve the value chain.

3.12.4.3. Programs of Multi international Agencies and State Government to improve food supply chain

Many of the issues mentioned have been realised by state government as well as global donor agencies such as World Bank. State government and multilateral agencies are working on

strengthening the agriculture sector in Maharashtra. World bank is assisting state government through its several projects to improve the competitiveness of agriculture sector, helping farmers through capacity building etc. Few projects of World Bank related to agriculture sector in Maharashtra are - Maharashtra Agricultural Competitiveness Project (MACP), Maharashtra Project on Climate Resilient Agriculture, State of Maharashtra's Agri-business and Rural Transformation Program (SMART) Project etc. We have explained two project below (MACP and SMART):

3.12.4.3.1 Maharashtra Agricultural Competitiveness Project (MACP)

The Project Development Objective of the Maharashtra Agricultural Competitiveness Project (MACP) is to increase the Productivity, Profitability and Market Access of the farming community in Maharashtra. This would be achieved by providing farmers with technical knowledge, market intelligence and market networks to support diversification and intensification of agriculture production aimed at responding to market demand. Farmers will also be assisted in establishing farmer organizations, developing alternative market channels outside of the regulated markets and in supporting the modernization of promising traditional wholesale markets. The total cost of the project is estimated at INR 7.04 billion. Out of this the World Bank contribution would be around INR 4.61 billion (65.5%), the State Government's contribution INR 0.52 billion (7.3 %), and the beneficiaries contribution INR 1.91 billion (27.1%)

The project has three main components:

a. Intensification and Diversification of Market led Production
b. Improving Farmers Access to Markets
c. Project Management Learning & Adjusting

Key stakeholders involved in the project are:

a. Project Advisory: A High Power Committee has been established at the State level headed by the Chief Minister of Maharashtra. The Ministers of Agriculture, Animal Husbandry and Dairy, Agricultural Marketing and Chief Secretary are members of this Committee.
b. Project Oversight: The project has setup a Project Steering Committee (PSC) to review the progress of MACP at the State level and provide strategic direction, policy advice and resolve conflicts, if any, among participating Departments.
c. Project Coordination: The Project Coordination Unit will be responsible for day-to-day project implementation coordination, project planning and scheduling, procurement management, financial control, and reporting and monitoring.

This program has benefited the agriculture sector in Maharashtra. One of the biggest achievement is the creation of 406 Farmers Producers Organisation (FPOs) with around 156,000

members. These FPOs were provided training and knowledge on forecasting, crop diversification, direct market access, using of primary processing such as sorting, grading, availability of cheap financing etc. As a result of all these activities farmer average realisation and income has increased and yield has also improved.

3.12.4.3.2 State of Maharashtra's Agri-business and Rural Transformation Program (SMART) Project

The goal of the SMART project is to enhance the enterprise formation, increasing access to markets; and promoting climate resilience and resource-use efficiency in the agriculture sector of Maharashtra. The project aims to transform Rural Maharashtra through "SMART" interventions in Agriculture and Livelihood sectors, assisted by World Bank. The total project cost is USD 300 mn, out of which USD 210 mn will be contributed by International Bank for Reconstruction and Development (World Bank), USD 80 mn by government of Maharashtra and USD 10 mn by private sector (mainly through Village Social Transformation Foundation, which collect CSR funds from major companies of India).

Following are the objectives of SMART project:

a. **Build state capacity for evidence-based agribusiness reforms** to inform on how reform issues are debated, decided, implemented and evaluated; and develop institutional mechanisms for coordination with the private sector.
b. **Expand market access:** improve access of producers and entrepreneurs to a range of technical and business development services to enhance competitiveness through food safety and quality; new technologies; and skills training.
c. **Strengthen risk mitigation measures:** build risk mitigation measures to respond to commodity-price fluctuations and agriculture sector crises; developing access to timely information on markets and productions trends; and enhancing access of producers to financing and hedging instruments.

The project targets to provide opportunities to farmers through creating economic eco-system. It also focuses on reducing disparity within several districts of state. The SMART project will focus on 30 primary commodities such as cotton, soyabean, pulses etc. It doesn't focus on crops which require large amount of water.

Smart Project was launched on 5th December 2018, by the Chief Minister of Maharashtra. Initially 49 MoUs for productive partnership is signed between private sector and Community Based Organisations (CBOs, such as FPOs etc). Key private sector companies involved are Amazon, Walmart, Reliance, Mahindra, Pepsico etc.

SMART project will support developing and partially financing Productive Partnerships (PP), between CBOs and markets, and agri-SMEs and leading firms. The aim is to develop a long-

term sustainable partnership that will help CBOs and corporates to improve their competitiveness in terms of price, cost, productivity, quality, and sales volume. This will provide:

a. significant benefits to the value chain participants through market-oriented production
b. Cost-effective supply chain including short food supply chains
c. Growth opportunity for agri SMEs is selling to large buyers

Figure 3.28 Overview of Productive Partnership Model under SMART project

Source: Maharashtra Village Social Transformation Foundation (VSTF) Presentation on SMART Project

3.12.4.4. Potential Policy Areas of Improvement in Maharashtra Food Industrial Sector

There is need to improve entire structure and efficiency of value chain of food industry. So farmers, FPOs, traders, food processers, retailers, consumers etc. each players of the value chain shall take actions below need to be taken:

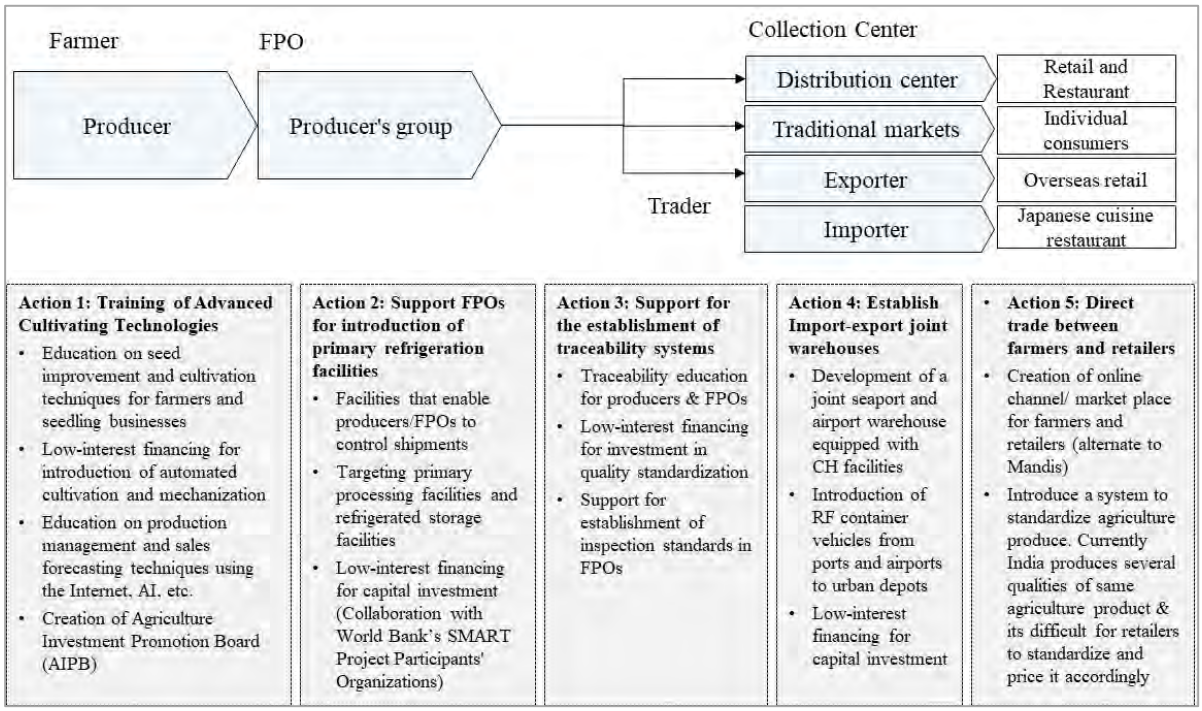

Figure 3.29 Actions required across food industry value chain to strengthen Food Industrial sector

- **Action 1: Provide training to framers on Advanced Cultivation Technologies:** As discussed above, Producers/ Farmers have limited capability to adopt new technologies, seeds & fertilizers.
  - There is need to do capacity building of farmers and provide training on advance cultivation techniques. Further government should invest in Nurseries to modernise and upgrade them so that better quality of seeds and seedlings can be provided to farmers at reasonable price.
  - Farmers generally lack money to procure advanced machinery. Low interest financing for introduction of automated cultivation and mechanisation is needed.
  - Currently farmers keep on producing same commodities and don't consider market conditions, which may not give them the appropriate profit. Thus there is need to provide education to farmers on production management and sales forecasting techniques such as Artificial Intelligence (AI) etc, so that they can grow commodities that can fetch them maximum price.
  - There is no dedicated department for clearing applications for Agriculture and Food Processing industries. These farmers, association and companies need to coordinate with several departments related to Agriculture as well as Industries for their approvals, however it is not easy for small companies and farmers to get many approvals from proper department. It is necessary to build simple system for anyone to apply through the portal system. Having an separate department like Agriculture Investment Promotion Board (AIPB) with cooperation between Industries and Agriculture department, to facilitate investment in

Agriculture and food processing. The AIPB need to have an online single window system and should provide a dedicated officer to companies that are willing to invest in Agriculture related sector in Maharashtra.

- **Action 2: Support FPO's for introduction of primary refrigeration facilities:** FPOs have to sell their product soon after harvesting, as they don't have sufficient cold storage to store their produce. In this condition, middlemen take advantage and doesn't provide sufficient price for their produce. In this situation:
  - Government should create Cold storage at all prominent agriculture belt near to farmers. Further these storage facilities should be available to farmers/ FPOs to be used at reasonable/ subsidised tariffs. This will allow farmers to sell their produce when they get the good price.
  - Further primary processing should be done at farmer and government should provide partial grant as well as loan at subsidised interest rate. This will allow farmers to add more value to their produce

- **Action 3: Support for the establishment of traceability systems:** Multiple structure of food distribution makes impossible to specify production area and farmer. In order to promote export and add value of food product, traceability system is necessary to secure food safety. Thus, there is need to provide education to farmers & FPO on traceability and highlight the importance of it. Further government should introduce traceability system which could be scalable to all FPOs. Government should also provide Low-interest financing for investment in quality standardization and support for establishment of inspection standards in FPOs. This will help in increasing the food safety and quality, thus increasing the value of Indian farm produce among exporters.

- **Action 4: Establish Import-export joint warehouses:** India lacks specialized infrastructure that is required to export-import agriculture and related products. Most of the agriculture products are perishable and requires cold-storage and priority handling. Thus it is important to:
  - Develop cold house storage & warehouse facilities at seaport and airport
  - Introduce Refrigerated container vehicles from ports and airports to urban depots
  - Low-interest financing to logistics players dealing in cold supply chain

- **Action 5: Direct trade between farmers and retailers:** To increase direct trade between farmers and retailers, following things could be done:
  - Create a channel where farmers/FPOs and retailers can come and directly deal with each other. The system should have provision to customize buy-sell volume and further consolidate produce from different sellers, so that retailers can procure as per their requirements.

- Create standardization and rating mechanism for farmers/ FPO produce. In absence of standardized products, price-discovery is a challenge. Thus government should create a agency that rate the farmers produce quality and then negotiation can be done by retailers.

If above steps are implemented that it will solve some of the major issues of Indian agricultural sector across the value chain.

3.13. Conclusions (Consultant Recommendations)

To improve the environment for industry promotion and attract industries in the future, here are the principal elements and policy issues of the Maharashtra Investment Promotion Program (MIPP).

1. Facilitate investment-related procedures at MIDC
2. Improve agriculture-related investment procedures
3. Improve access to industrial estates in Maharashtra

These principal elements and challenges should be implemented by the Maharashtra state government and the appropriate departments of [state?] organizations. The following departments are responsible for the respective principal elements.

1. MIDC
2. Department of Agriculture (Horticulture)
3. Public Works Department

The consultants propose the draft policy matrix on the following page, which describes issues and actions over the next three years in detail.

Table 3.42 Draft Policy Matrix proposed by NRI

	1. Investment facilitation（投資手続きの迅速化・円滑化）				Responsible Dept. Name: **MIDC, Industrial dept., Agricultural dept.**			
No.	Current Challenges	Goals achieved through Program	Evaluation Indicator		Current Status of the Policy Actions	Policy Action		
			Indicator Name	Mar 2021		FY2019-20(Prior Action)	FY2020-2021	FY2021-2022
1-1	• Single Window Clearance System (SWCS) was established and provides procedures of over 16 departments. However investors have to visit each department to consult how to apply it in real. • Especially, fire fighting and labor department is not good for investor's facilitation.	• To build system every department shall give permission in one portal system. • 全ての部署の許認可手続きが一つのオンラインポータルシステム上で完了できる。	• Number of department not to visit real department 訪問する必要のない部署の数	100% 100%	• SWCS provides procedures by online of over 16 departments, but forces investor to visit each department in real • SWCSは16以上の部門に対するオンライン手続きを提供しているが、実際は各部署への訪問が必要になっている。	・To identify the needs of industry on business clearance ビジネス許認可にかかる産業界からの二―ズを特定する。 ・To identify which departments and procedures are need to change and complete it to only online どの部署のどの手続きを変更し、オンラインだけで完了するかを特定する。	・To consult with identified department and draft improvement plan 特定された部署と相談し、改善計画を策定する。	• To continuously Implement improvement plan of SWCS 継続的にSWCSの改善計画を実施する。
1-2	• There are supporting system for potential Japanese investors by JETRO, however no investment facilitation support provided by state government. • The other state promote investor strongly.	• To build system and assign "relationship manager" who attend investor to apply and submit documentation and conduct their issues fully during business operation 制度構築及び書類作成や投資手続きをサポートするリレーションシップマネージャーの任命を行う。	Indicator of Investor's Satisfaction 投資家満足度指数	5 / 5 (full score) 5 / 5	• No policy and action to assign relationship manager 該当する政策は実施されていない。	• To define role and functions of relationship manager リレーションシップマネージャーの役割・定義を確定する。 • To investigate demand of investor 投資家のニーズ調査を実施する。 • To make plan to assign relationship manager リレーションシップマネージャーの雇用計画を策定する。	• To calculate total fund to recruit relationship manager and offer budget for financial dep. 雇用計画実現に必要な予算を算出し、財務局に予算申請する。 • To recruit candidate of relationship manager リレーションシップマネージャーの候補者を採用する。 • To start works of relationship manager リレーションシップマネージャーが活動を開始する。	• To increase number of relationship manager or continuously train the existing relationship manager in order to update their knowledge in accordance with demand from industries リレーションシップマネージャーの雇用人数を増やす、あるいは既存人材にトレーニングを実施し、産業界からの要望に継続的に答える。 • To review customer feedback and examine countermeasure to improve service level 投資家満足度調査を実施し、サービスレベル向上策を検討する。

1-3	• There is no dedicated department for clearing applications for Agriculture and Food Processing industries. • These farmers, association and companies need to coordinate with several departments related to Agriculture as well as Industries for their approvals, however it is not easy for small companies and farmers to get many approvals from proper department. It is necessary to build simple system for anyone to apply on the portal system.	• To build one portal system for small farmers and FPOs to get approval simply and conveniently when they build company or association to get into processing and supply chain business. 小規模な農家やFPOが食品加工や流通ビジネスに参入する際に、単純で簡単に手続きが承認されるよう、農業・生産者向けのポータルサイトを設立する。	Number of approval via portal site ポータルサイトを経由する承認手続きの数	** / ** (every approvals in agriculture)	• No policy and action to assign relationship manager. Agriculture Department and Industry Department works in Isolation. For Industries Dept. MATRI SWCS is there 該当する政策は実施されていない。農業振興と産業振興部門が別々に許認可手続きを進めており、産業部門のMARTI SWCSだけ存在する。	• Creation of Agriculture Investment Promotion Board (AIPB) 農業投資促進委員会を設立する。 • Feasibility of creating AIPB and defining its key functions, characteristics and reporting structure FSを実施し、承認システムの基本機能、性能、構造を検討する。	• Design and make DPR to Create IT system for SWCS for Agriculture 農業部門のシングルウィンドウとして、システム開発の設計とDPRを作成する。	• Release the SWCS for Agriculture and get approval on online. 農業部門のシングルウィンドウシステムをリリースし、オンラインで承認できる状態を作る。
	2. Upgrading Industrial Promotion Policy and incentives to create supporting industries（裾野産業の育成に向けた産業振興政策と優遇措置の改訂）				Responsible Dept. Name: **Industrial dept.**			
2-1	• Global competitiveness of manufacturing industry is low due to lack of prominent supporting industry. For companies in supporting industry, it is difficult for them to find business chances in this state. • Besides, there is no special incentive package and industrial promotion policy for foreign supporting industry, which have advanced technology and enable to transfer skill-sets to local SMEs.	• To attract further investment in thrust areas of industrial promotion policy such as supporting manufacturing 製造業の裾野産業等、有望産業への更なる投資を誘致する。 • To promote business matching with local supporting industry companies and foreign companies invested in the state (for further technology transfer). 現地企業と投資した外資企業とのマッチングを進める（さらなる技術移転のために）	Number of new investment in foreign supporting industry for manufacturing 製造業における裾野産業の新規投資数 Number of business matching events supported by the state government. 州政府が支援したビジネスマッチング数	**** companies	• Current policy does not clearly target supporting industry of manufacturing. 該当する政策は実施されていない。	• To conduct survey of status of supporting industry for manufacturing and identify issues. 製造業の裾野産業の現状を把握する州内調査を実施し、課題を特定する。	• To draft subsequent scheme of PSI 2013 which the pillar for promoting supporting industry for manufacturing are in-cooperated. マハラシュトラのPSI（Package scheme of incentives）2013に裾野産業への優遇策を追加する。 • To create industrial sector policy for supporting industries 海外の裾野産業セクターを特定した産業振興政策を策定する。	• To continue action for promoting the scheme and review investor's voice and examine current scheme 継続的にスキームを促進し、投資家からのフィードバックをもとにレビューする。 • To monitor and review the incentive schemes インセンティブスキームをモニタリング、レビューする。 • To hold business matching events for both local and foreign companies. 現地企業と投資した外資企業とのマッチングイベントの開催
2-2	• Most of Industrial park is located far from Mumbai that makes investors to hesitate to invest for this state. • Especially, Supa is quite far from not only Mumbai but also Pune. Japanese investor is not interesting in investing Supa.	• To change policy location of industrial park and set new industrial and logistic park near by Mumbai 工業団地の立地政策を転換し、よりムンバイに近いエリアに工業団地、物流団地を配置する。	Number of new industrial park located within 2 hours from Mumbai ムンバイから２時間以内の新たな産業団地の数	**** parks	• Current policy does not clearly target supporting industry of manufacturing. 該当する政策は実施されていない。	• To conduct survey of need of investors about location between Mumbai and Pune. ムンバイとプネからの距離に関する立地ニーズ調査を実施する。	• To draft plan of new industrial and logistic park depend on investor needs. 投資家ニーズに基づく新たな工業団地、物流団地の計画を構想する。	• To get approval of new parks and commence to build new parks 新たな段行団地の承認を得て、団地の建設に着手する。
	3. Improving industrial human resource development（産業人材育成）				Responsible Dept. Name: **Skill dept., Labor dept.**			

3-1	• It is critical issues that there are gap between needs of industry and quality of human skills • PPP program under MoU between private companies provides 1600 graduates, however companies did not satisfied quality and number of graduates. • In order to tackle this issue, the government need to create and increase vocational training program to get support by private company.	• To create and increase vocational training program to get support by private company. 民間企業の支援を受けながら、職業訓練プログラムを増やし、作っていく。	Number of vocational training programs that investor is satisfied programs 投資家から満足を得る内容を持つ職業訓練プログラムの数	**** programs	• PPP program under MoU between private companies provides 1600 graduates, however companies did not satisfied quality and number of graduates. 民間企業との間でMoUが結ばれて、1600人の卒業生が供給されているが、企業が求める質と量を満たしていない。	• To conduct the needs assessment of demand side (industries) and revise the curriculum of vocational training. 産業界へのニーズ調査を行い、職業訓練のカリキュラムを改訂する。 • To draft the new vocational training program mainly educated by private sector 民間企業主体の職業訓練プログラム計画を新たに素案する。	• To conduct private company and create new program and courses sponsored by companies 民間企業に相談し、民間企業のスポンサーシップによる新しい職業訓練プログラムとコースを開設する。 • To prepare the 1st "vocational training competition 第1回職業訓練コンペの実施準備を行う。	• To newly commence or additionally open vocational training course at least 15. 少なくとも15の職業訓練トレーニングコースを新設、あるいは増設する。 • To hold the 1st "vocational training competition". 第1回職業訓練コンペを実施する。
3-2	• There are few local supporting industries who meet high quality demand of Japanese manufactures. • Especially, quality of parts such as bottle nut is bad, TAGMA is ready to set TCET but funding source is not enough. • Basic skills to use moulds is lacked so TCET allows SMEs to use machinary ,but few company use it.	• To give a lot of support of funding for TAGMA to set TCET and machinery and operate them TAGMAがTECTを設立し、その設備機器を購入し、運営する資金を追加的に支援すること。	Number of users of TCET TCETを利用した企業の数	**** companies	• TAGMA is under construction of TCET and completed 80% of construction work, but enough funding to complete it TAGMAはTCETの建設中であり80%まで進んでいるが、完成には追加的な資金が必要である。 • Other donor DHI is supporting TCET but their funding can use only for equipment not use for building DHIという他のドナーが資金を支援しているが、設備にしか資金を使うことができず、建物建設資金が不足している。	• To fund TAGMA additional cost for establishing TCET and designate equipment to install additionally TCETを設立する追加資金をTAGMAに資金提供し、追加的に導入する設備を特定する。	• To promote local SMEs to use TCET and moulds machinery to plan events イベントを企画するなどで、地域の中小企業にTCETと金型機械の利用促進策を展開する。	• To draft promotion policy of mould industries to start to grow and expand supporting industries 金型産業の振興計画を起草して、裾野産業を育成、拡大する行動を始める。
	4. Improvement of infrastructure connectivity（インフラの接続性改善）				Responsible Dept Name: **MIDC, Industrial dept., and PWD**			
4-1	• Maharashtra has good industrial road connections between ports/airports and industrial parks, but there are some bottle necks of access road between express way and industrial parks マハラシュトラ州の産業団地と港湾/空港間の道路はよく整備されているが、エクスプレスウェイから	• Improvement of access road connectivity and reduce the trip time to industrial parks totally アクセス道路の接続性を改善することにより全体的な旅行時間を削減する。	Improvement rate from I.C. (crossing) of expressway/national highway to industrial park (per km) （最寄りのインターチェンジ（交差点）	25%	• The access road managed by PWD is lack of capacity for increased traffic by industrial development. The plan of redevelopment of access road is not	• At least, the road improvement plan will be developed for Talegaon I.C. – Chakan Industrial park 少なくとも、チャカン―Talegaon	• At least, DPR development for Talegaon I.C. – Chakan Industrial park road (Urse Talegaon road and Talegaon Chakan road) 少なくともチャカン・タレガオン道路の道路改良DPRができていること • Road improvement plan	• For other access road facing similar challenge, more than one road improvement plans will be developed 類似の状況に直面している他のアクセス道路の改良計画を1つ以上立案すること

	産業団地までのアクセス道路にボトルネックが存在する。		からの改善率（km））		sufficiently developed. 産業団地向けのアクセス道路はPWDの管轄であるが、改善計画が十分に立案されていない。	I.C.間の道路改良計画が立案されていること	between Chakan and Sikrapur will be developed for improvement of road connectivity to Supa Industrial park スパ産業団地への接続性を改善するためにチャカン―シクラプル間の道路改良計画ができていること	
	5. Prompting End to End supply chain of food industries（食品の直接取引型流通の促進）				Responsible Dept Name: **Agricultural dept. and Industrial dept.**			
5-1	• Farmers to get good quality of seeds and Seedlings for planting will increase productivity. • However, small farmers have not enough money, ability and willingness to improve seed and seedlings to meet with high requirement of foreign company. • Advanced technologies to install automation system and use ICT and AI shall deliver large income to farmers.	• To give capacity building of advanced seeding technology to farmers or FPOs and IT system to forecast growing and share price of market 農家やFPOに対する最先端の種苗・栽培技術、及び生産予測や市場の価格情報を共有する情報システムの導入に際する技術教育を行う • To create funding scheme of lower interest for farmers or FPOs to use developed as high level of nursery / seedbed and install automation system or machinery 農家やFPOが、高いスペックで開発された苗床を導入する、或いは自動化や機械化の設備投資に対して低利で資金支援スキームを開発すること。	Number of farmers and FPOs to get knowledge by capacity building programs このキャパシティビルディングの活動で知識を得た農家及びFPOの数 Number of nursery / seedbed to be developed under this scheme このスキーム下で開発された苗床の数	**** farmers / FPOs **** nursery / seedbed	• Currently seed production is not so good in the state, because there are no policy, actions of capacity building and incentive scheme for developing 同州では苗床生産がよくない状況であり、その背景には苗床開発を進める政策と技術教育活動、奨励制度が無いためである。	• To conduct the needs assessment of demand side (farmers and FPOs) and reveal demand of supporting developing nursery / seedbed. 農家やFPOなどへのニーズ調査を行い、苗床開発への支援需要を明らかにする。 • To plan capacity building activities and IT systems 技術教育活動と導入するITシステムを計画する • To draft the new financial scheme of funding. 新しい財政支援スキームを構想する。	• To make program of capacity building and select IT system to promote for farmers 技術教育活動のプログラミングと農家に普及させるITシステムを選定する。 • To get approval of new financial support scheme at least USD XX MM in the year. 新しい財政支援スキームの承認を得て、年間XX百万ドルのVGFを与える。 • To promote it to the farmers and FPOs and release it. 農家やFPOへの普及活動を行い、制度をリリースする。	• To commence capacity building activity and install IT systems 技術教育活動を開始し、ITシステムの導入を進める。 • To monitor granter who get funding from government and supervising status to use this funding. スキームの受益者をモニタリングし、財政資金の利用状況を監督する。
5-2	• Government prepare a lot of scheme to support to build cold chain and distribution of fresh food, however there are no supporting scheme to processing foods firstly after cultivating immediately. • Selecting cultivating foods and washing and packing is farmers land is important to create and add value of farmers and keep freshness of merchandise, however farmers are small so they do not have enough money to install processing machine. • Gap funding scheme between market price and production price is efficient for farmers to reverse	• To create funding scheme for farmers or FPOs to install food processing machine and cold chain storage to manage shipment by themselves. 農家やFPOが自らの出荷調整を可能とするために、一次的な食品加工機械、コールドチェーンを備えた保管設備を購入するための設備投資資金を支援するスキームを開発すること。	Number of farmers or FPOs to get financial support of purchasing processing machine and/or cold chain storage 食品加工機器の購入、及び一時保管施設の整備の財政的支援を受けた農家やFPOの数 Volume of investment by Private players across the value	**** Farmers and FPOs	• Current incentive scheme such as MAIDC that is designated by central government is to give grant for cold chain facilities near retailer but there are no scheme to support farmers except for incentives in form of tax reduction and capital subsidy. However that is dependent on investment level MAIDCのような中央政府が指定する現在の	• To conduct the needs assessment of demand side (farmers and FPOs) and reveal demand of supporting fund for food processing investment. 農家やFPOなどへのニーズ調査を行い、食品加工設備投資支援への需要を明らかにする。 • To draft the new financial scheme of gap funding. Gap Fundingの新しい財政	• To get approval of new financial scheme of gap funding at least USD XX MM in the year. Gap Fundingの新しい財政支援スキームの承認を得て、年間XX百万ドルのVGFを与える。 • To promote it to the farmers and FPOs and release it. 農家やFPOへの普及活動を行い、制度をリリースする。	• To monitor granter who get funding from government and supervising status to use this funding. Gap Fundingの受益者をモニタリングし、財政資金の利用状況を監督する。

	merchandise to advanced one. • Needs of investment is also increased by private players in the agriculture sector by providing financial support.		chain of food industries 食品産業のバリューチェーン全体で民間企業が実施した投資額		支援スキームは、流通側コールドチェーン設備への投資補助であり、税控除や投資補助以外に、農家への支援策は存在しない。投資時点の支援策が求められている。	支援スキームを構想する。		
5-3	• Multiple structure of food distribution makes impossible to specify production area and farmer. • In order to promote export and add value of food product, traceability system is necessary to secure food safety. • However, farmers have no idea to build traceability system and secure quality of food and inspection. FPOs should establish inspection system to secure safety of foods to retailer and exporters	• To give capacity building of traceability system to farmers or FPOs 農家やFPOに対してトレーサビリティシステムの技術教育を行う • To create funding scheme of lower interest for farmers or FPOs to develop inspection system to secure safety and quality of foods to retailer and exporters 農家やFPOが、小売や輸出事業者に食品の安全性と品質を立証できる食品検査体制を構築する際に、低利で資金調達を支援するスキームを開発すること • To launch model case of exporting soybean to Japan and establish supply chain between farmers and overseas consumers 大豆を日本に輸出するモデルケースを実施し、農家から海外の消費者までトレーサビリティが繋がるサプライチェーンを構築する	Number of farmers and FPOs to get knowledge by capacity building programs このキャパシティビルディングの活動で知識を得た農家及びFPOの数 Number of FPOs to develop traceability and inspection system このスキーム下で構築されたトレーサビリティ及び安全認証を行うFPOの数	**** farmers / FPOs	• Traceability system is not installed mostly because of complex distribution system. To promote export of food product, traceability and inspection system is needed for exporters 複雑な流通構造の結果、トレーサビリティシステムはほとんど導入されていない。輸出を強化するためには、トレーサビリティとその検査システムの構築が欠かせない。	• To plan capacity building activities of traceability トレーサビリティに係る技術教育活動を計画する • To draft the new financial scheme of funding. 新しい財政支援スキームを構想する。 • To make program of model case of soybean by stakeholders 大豆をモデルケースとするプログラムを、関係者とともに構築する	• To make program of capacity building and offer candidates to install traceability system 技術教育活動のプログラミングを決定し、導入支援先を募集する。 • To get approval of new financial support scheme at least USD XX MM in the year. 新しい財政支援スキームの承認を得て、年間XX百万ドルのVGFを与える。 • To launch traceability system in model case モデルケースにおいて、トレーサビリティシステムを導入する	• To commence capacity building activity and install traceability systems 技術教育活動を開始し、トレーサビリティシステムの導入を進める。 • To monitor granter who get funding from government and supervising status to use this funding. スキームの受益者をモニタリングし、財政資金の利用状況を監督する。
5-4	• To expand import and export of fresh foods by medium and small sized traders, common facility to maintain cold chain in port and airport.is needed. Only large traders have dedicated cold warehouse, but there are limited facilities for SMSEs and cost becomes high. • In accordance with growing income of citizen, variety of world cuisine will be popular. In order to increase foreign investment for restaurant and hotel industries, common cold chain system is key to ease distribution.	• To build common warehouse with cold chain facilities in Mumbai port for medium and small sized traders to use in export or import fresh foods. 食品を輸入する中小の輸出入事業者が共同で使えるコールドチェーンを備えた倉庫をムンバイ港に建設する • To build common warehouse with cold chain facilities in Mumbai airport for medium and small sized traders to use in export or import fresh foods. 食品を輸入する中小の輸出入事業者が共同で使えるコールドチェーンを備えた倉庫をムンバイ空港に建設する	Number of traders to use common cold facilities in port and airport 港と空港のコールドチェーンの倉庫を利用した事業者の数 Number of distributers to get financial support of reefer container リーファーコンテナの財政的支援を受けた輸送事業者の数	**** Companies **** Companies **** Amount of Value	• Current incentive scheme to give grant for cold chain facilities is limited near retailer but there are no scheme to support import and export activities. There are bottleneck point in port and export where are divided cold chain system コールドチェーンに対する支援スキームは、流通に近い所に限られ、輸出入活動を支援する所には存在しない。	• To conduct the needs assessment of demand side of traders and reveal demand of common cold facilities 輸出入事業者へニーズ調査を行い、コールドチェーン共同施設への支援需要を明らかにする。 • To draft the new financial scheme. 新しい財政支援スキームを構想する。	• To get approval of new financial scheme at least USD XX MM in the year. 年間XX百万ドルの新しい財政支援スキームの承認を得る。 • To complete design of common facilities in port and airport and publish RFP of building 港と空港に共同利用施設を整備する設計を完成させ、建築業務のRFPを公示する。	• To promote financial scheme to users and release it and monitor granter who get funding from government. 財政支援スキームを利用者に宣伝し、事業を開始する。資金獲得者をモニタリングする。 • To launch operation of common facilities in port and airport 港と空港の共同利用施設の運用を開始する。

		• To create funding scheme of lower interest for distributers to install Reefer container on tracks 輸送事業者が、トラックにリーファーコンテナを導入する際に、低利でファイナンスできるスキームを開発する	Volume of export and import of fresh foods 生鮮食品の輸出入金額		港と空港におけるコールドチェーンの分断がボトルネックになっている。			

4. Andhra Pradesh

4.1. Overview

Andhra Pradesh is located in south-eastern part of India, sharing its border with Tamil Nadu in the south, Karnataka in the west, Telangana and Chhattisgarh in the north, Orissa in the north-east and Bay of Bengal Ocean in the east. Andhra Pradesh's geographical area is 1,62,970 sq. km, which covers 4.9% of India's total geographical area and total population of the state is 49 million, that is 4.10% of India's total population. As per Census 2011, the population density of the state is 304 persons per sq. km with a sex ratio of 997 females per 1,000 males. Andhra Pradesh is divided into 13 districts (Figure 4.1) constituted by 195 towns and 17,366 villages.

In 2014, Andhra Pradesh was bifurcated into two states – Andhra Pradesh (New) and Telangana, sharing a common capital that is 'Hyderabad'. However, a new capital has been announced by the Chief Minister of AP named 'Amaravati', a village in Guntur, which is currently under construction. The new capital would be having world-class infrastructure including separate residential, commercial and industrial lands, water bodies, parks and gardens, civic facilities, metro facility, 24X7 power supply, etc.

Figure 4.1 Geographic location of Andhra Pradesh and its district-wise map

Andhra Pradesh repeatedly ranking first in ease-of-doing-business index for states of India (2017 and 2018). According to Department of Industrial Policy and Promotion's (DIPP's), Andhra Pradesh scored 98.4% in 2018, followed by Telangana and Haryana with 98.3% and 98.1%, respectively. The rankings, jointly prepared by the World Bank and DIPP, after evaluating states on a 405-point Business Reform Action Plan. The reforms mainly include 405 recommendations on regulatory processes, policies, practices and procedures spread across 12 reform areas, that is,

labour regulation enablers; contract enforcement; registering property; inspection reform enablers; single window system; land availability and allotment; construction permit enablers and many more.

The economy of Andhra Pradesh is one of the fastest growing economies in India, as it has witnessed a healthy growth in its Gross State Domestic Product (GSDP) during the last few years. At current prices, Andhra Pradesh's Gross State Domestic Product (GSDP) was estimated at INR 8,039 billion in 2017-18AE increased from INR 3,794 billion in 2011-12, grew at CAGR of 13.3% during 2011-12 to 2017-18(AE) (Chart 4.1).

Chart 4.2 shows the comparison of growth rate of India's GDP with Andhra Pradesh's GSDP growth rate during the year 2012-13 to 2017-18. Andhra Pradesh's GDP registered higher growth rate of 11.2% in comparison to India which grew at 6.6% during 2017-18. Andhra Pradesh is majorly dependent on agriculture sector and recognised as one of the leading food grain producing state in India, with total production of 14.37 million tonnes in 2015-16. Leading crops produced in the state include rice, maize, chilly, oilseeds, cotton, pulses and grams. Apart from agriculture sector, AP's economy is also dependent on industries such automobile body building, food processing, textiles, power, pharma and IT & ITES. However, IT & ITES sector has impacted adversely due to bifurcation, under which Hyderabad transferred to Telangana which is one of the major IT hub of India and leading outsourcing destination for IT, ITES, ITO and BPO worldwide.

Chart 4.1 Gross State Domestic Product (GSDP) of Andhra Pradesh at Current Prices (2011-18)

Source: Andhra Pradesh Social Economic Survey 2017-18

Note: FRE: First Revised Estimates; AE: Advanced Estimates

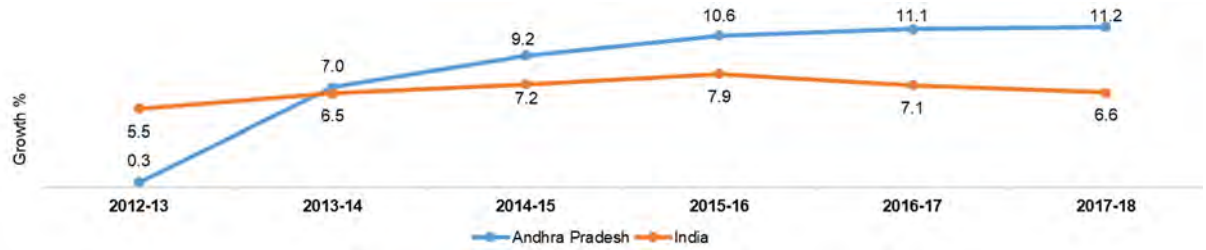

Chart 4.2 Comparison of India GDP with Andhra Pradesh GSDP (at Constant Prices 2011-12)

Source: Andhra Pradesh Social Economic Survey 2017-18

A comparison of AP's Net Per Capita Income (at current prices) with that of India has been shown in Chart 4.3. The Per Capita Income (NSDP) of Andhra Pradesh at current prices increased to INR. 142,054 in 2017-18 from INR. 122,664 in 2016-17 registering a growth of 14.87%. Krishna district topped in the State with the highest per capita income of INR 161,097 in 2016-17 while Srikakulam stood at the bottom with INR 94,118.

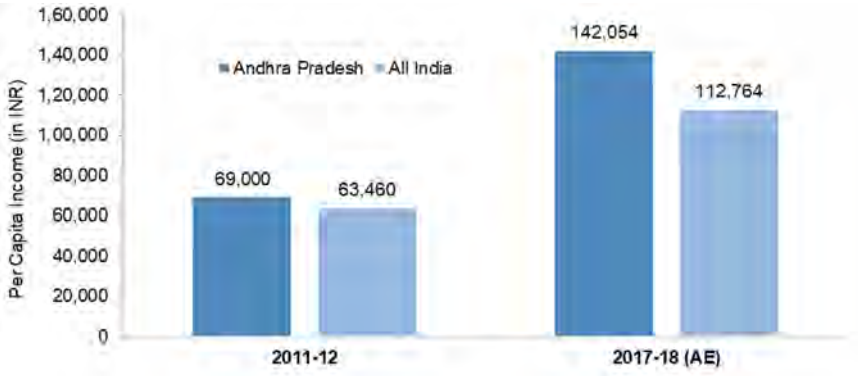

Chart 4.3 Comparison of India and Andhra Pradesh Net Per Capita Income (at Current Prices)
Source: Andhra Pradesh Social Economic Survey 2017-18

In terms of sector contribution in GSDP, services had the highest contribution with 45.9% share followed by Agriculture and Allied Industry (27.9%) and Industries (26.2%) (Chart 4.4). The Service Sector had a CAGR of 9.8% during the period 2012-17, whereas, the Industrial Sector had the lowest CAGR of 3.0% during the same period. To attract investment from both domestic and global investors for the industrial sector, government has introduced Industrial Development policy 2015-2020. Policies such as Power Cost Reimbursement (partial) and Uninterrupted 24X7 quality power, VAT/CST/SGST reimbursement incentives varying by size of project, Single Desk Clearance within 21 working days, Spot Approvals for identified approvals and clearances and many more are expected to create business opportunity in the state.

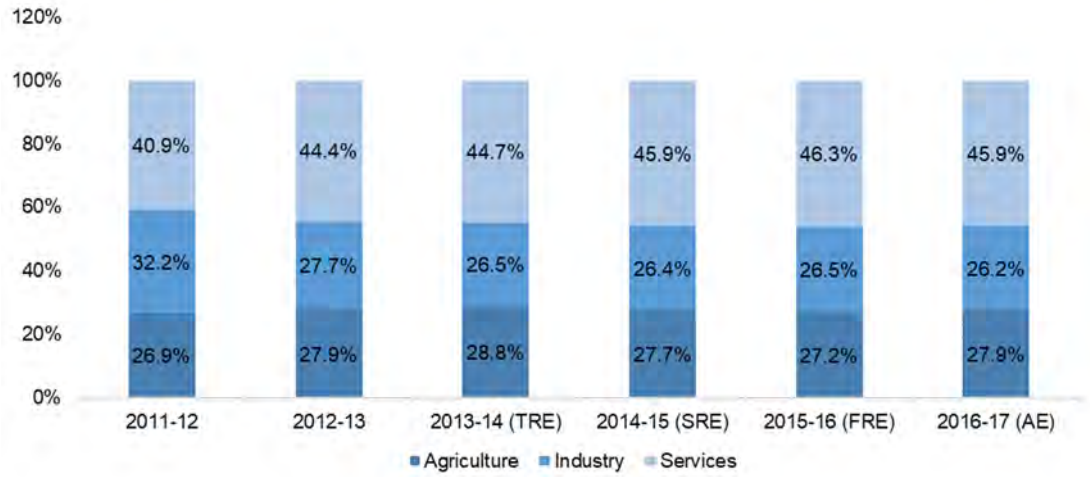

Chart 4.4 Sectoral distribution of Gross State Value Added (GSVA) of Andhra Pradesh (at Constant Prices 2011-12)

Source: Statistical Abstract Andhra Pradesh (2016)

Note: (TRE): Third Revised Estimates, (SRE): Second Revised Estimates, (FRE): First Revised Estimates, (A.E): Advance Estimates

Table 4.1 shows the comparison of Gross District Value Added (Current Price) of 13 districts of Andhra Pradesh in the year 2011-17. During the period of 2012-17, the Krishna district has seen the highest CAGR of 15.3% in its GVA, followed by West Godavari and S.P.S Nellore district with 15.2% and 14.9%.

Table 4.1 Andhra Pradesh Gross District Value Added at Current Price (2011-17)

In INR billion

Andhra Pradesh Districts	2011-12	2012-13	2013-14 (TRE)	2014-15 (SRE)	2015-16 (FRE)	2016-17 (AE)	CAGR (2012-17)
Krishna	384	463	499	578	670	784	15.3%
West Godavari	306	355	367	455	526	620	15.2%
S.P.S Nellore	212	256	271	316	364	425	14.9%
Kurnool	213	260	291	323	372	424	14.8%
Vizianagaram	119	159	153	179	206	236	14.7%
Chittoor	250	306	325	363	417	474	13.6%
Prakasam	230	305	285	317	372	427	13.2%
Ananthapuramu	224	291	272	319	364	414	13.1%
Y.S.R	172	214	213	248	279	316	12.9%
Guntur	361	417	441	504	559	641	12.2%
East Godavari	400	443	480	531	596	683	11.3%
Srikakulam	153	161	173	196	226	259	11.1%
Visakhapatnam	471	567	496	554	622	713	8.6%
Total	**3,495**	**4,197**	**4,266**	**4,883**	**5,573**	**6,416**	**12.9%**

Source: Statistical Abstract Andhra Pradesh (2016)

Note: (TRE): Third Revised Estimates, (SRE): Second Revised Estimates, (FRE): First Revised Estimates, (A.E): Advance Estimates

Table 4.2 Andhra Pradesh at a Glance

Item (unit)	Year	Andhra Pradesh Status	All India Status
Geographical Area			
Area (in sq. km)	2018	162,970	3,287,469
Administrative Setup			
(a) Districts (number)	2018	13	-
(b)Towns (number)	2011	195	-
(c) Villages (including inhabited) (number)	2011	17,366	-
Population			
(a) Total (in millions)	2011	49.58	1,211
l(b) Male (in millions)	2011	24.83	623.12
(c) Female (in millions)	2011	24.747	587.45
(d) Rural (in millions) Percentage of Rural Population	2011	34.967 70.5	833.46 68.85
(e) Urban (in millions) Percentage of Urban Population	2011	14.61 29.5	377.11 31.15
(f) Density of Population (in sq. km)	2011	304	382
(g) Sex Ratio (females per thousand males)	2011	997	943
(h) Literacy Rate (%) ll			
Male	2011	74.77%	80.90%
Female	2011	59.96%	64.60%
Total	2011	67.35%	74.00%
Power			
(a) Total Installed Capacity (in MW)	2015-16	11,372	3,02,087
(b) Total Consumption (in million units)	2015-16	43,895.56	-
(c) Annual per Capita Consumption (in kWh)	2015-16	987	684
State Income (at current prices)			
(a) Gross State Domestic Product (GSDP) (in billion INR)	2017-18	8,039	1,52,537
(b) Gross State Value Added (GSVA) (in billion INR)	2016-17	4,979	1,38,416
(c) Agriculture and Allied Sector GSVA (in billion INR)	2016-17	1,388	24,840
(d) Industry Sector GSVA (in billion INR)	2016-17	1,305	40,541
(e) Services Sector GSVA (in billion INR)	2016-17	2,286	73,035
(f) Per Capita Income (in INR)	2016-17 (A.E.)	95,566	1,03,870

Source: Statistical Abstract Andhra Pradesh (2016)

Economy of Andhra Pradesh adversely damaged every year due to large number of natural disasters such as storm, a cyclone or heavy rains and floods. During the period 1891-2002, Andhra Pradesh faced about 79 cyclones, within which, Nellore district faced 16 cyclones, followed by Krishna district (15 cyclones) and Srikakulam district (14 cyclones). In 2018, Cyclone 'Titli'with storm packing winds of up to 150 kmph hit the eastern coast of India, majorly damaging Srikakulam and Vizinagaram districts of Andhra Pradesh. Around eight people died, damaged homes, power lines and uprooted trees and agriculture land. Further,

agriculture sector of the state affected by the natural disaster as farmers suffered from crop loss. During 2000-2010, around 51,895.6 sq.km cropped area were damaged due to heavy rain, cyclones and flood in the state. Further, in 2018 ,3,000 hectares of paddy, 29 hectares of banana crops and 9,000 hectares of vegetable crops were damaged across two mandals in Srikakulam, Jalumuru, Polaki ,as per Andhra Pradesh State Disaster Management Authority (APSDMA). However, GoAP has taken few initiatives to reduce the risk from the natural disasters such:

1) A pilot Disaster Risk Reduction (DRR) project would be initiated in the cities of Vijayawada and Vishakhapatnam on the basis of Public Private Partnership (PPP). This project is an initiative to protect the growth and prosperity of these cities from risk.
2) "Last mile" of Early Warning Systems (EWS), under which lightening alert system, mass messaging system and EWS dissemination system for hazard–location specific warnings to its citizens would be provided. Further, vulnerable citizens of Andhra Pradesh especially physically challenged, dalits, children and women will be top priority for protection.
3) In term of managing the agriculture sector, government is encouraging shelterbelt plantation in coastal areas to reduce wind velocity, encourage to plant resistant crops by the farmers,

Further, the Japan-World Bank Program for Mainstreaming Disaster Risk Management (DRM) in Developing Countries (the Japan-WB Program) is supporting Indian states in augmenting the DRM capacity as part of “Strengthening India DRM Service Delivery” Project. Under this, a six-day emergency preparedness and response training program will be given to 18 officials from state-level disaster management authorities from Odisha, Andhra Pradesh, Uttarakhand, Tamil Nadu, Puducherry, and Gujarat. The program will provide Trainers of Trainers, improve search and rescue skills of Indian state-level search and rescue professionals and them on the use of advanced equipment

4.2. Current State of Economic and Social Infrastructure

4.2.1. Economic Infrastructure

4.2.1.1. *Power*

The Power sector of Andhra Pradesh is regulated by Andhra Pradesh Electricity Regulatory Commission and further divided among one Generating Company (APGENCO), one Transmission Company (APTRANSCO) and four Distribution Companies (APDISCOMs). Figure 4.2 shows the power structure of Andhra Pradesh.

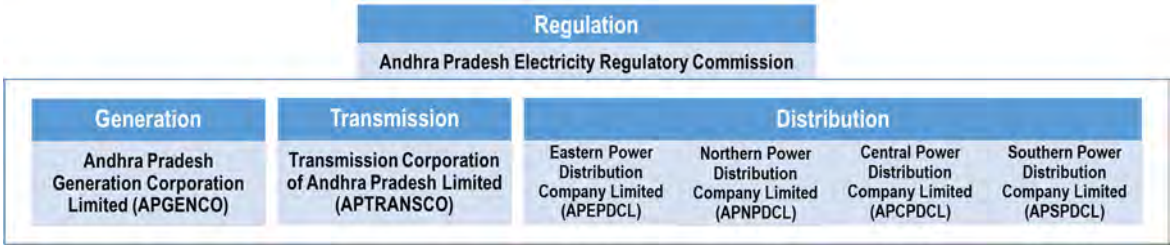

Figure 4.2 Andhra Pradesh Power Structure

Source: Andhra Pradesh Electricity Regulatory Commission

Andhra Pradesh is power surplus state with generation exceeding consumption. In 2017-18, AP generated surplus power of 8,794 million units owing to the Power for All (PFA) programme implemented by GoAP. PFA programme is a Joint Initiative of Government of India (GoI) and State Governments with the objective to provide 24x7 power available to all households, industry, commercial businesses, public needs, any other electricity consuming entity and adequate power to agriculture farm holdings by FY 19. It was started in FY 2014 and Andhra Pradesh was one of the states selected for implementation of this scheme. GoAP committed to providing 9 hours of supply to agricultural consumers apart from 24X7 power for all the other categories of consumers. Objectives of PFA are being achieved by reducing AT&C losses, capacity addition through purchases, augmenting power demand through renewable sources, and up-gradation and strengthening of key Transmission and Distribution corridors.

According to Statistical Abstract of Andhra Pradesh, the state recorded an electricity consumption of 49,989 Million Units (MU) in 2017-18 with per capita consumption of 1,147 units. The industrial sector consumed 33.8% of the total electricity consumption in 2017-18.

Chart 4.5 Comparison of Power Generated and Power Consumption in Andhra Pradesh (2014-15 and 2015-16)

Source: Directorate of Economics and Statistics of Andhra Pradesh

Power generation of the state is majorly done through thermal generation with 14,525 MW (62.3%) in 2017 (Chart 4.6), followed by renewable sources such as wind, small hydro, biomass, urban and industrial wastage generation with 29.6% and hydro with 7.5%.

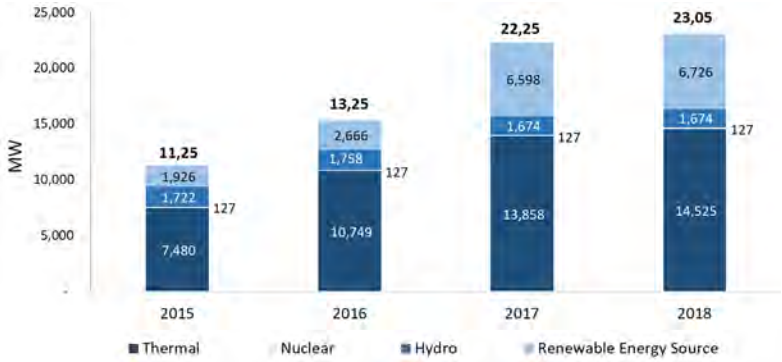

Chart 4.6 Classification of Power Installed Capacity in Andhra Pradesh by sources of generation

Source: CEA Installed Capacity Reports (2014-2018)

In terms of transmission infrastructure, there has been good growth in the state where total transmission and distribution lines have grown by CAGR of more than 5% during 2015-18.

Table 4.3 Growth Of Transmission and Distribution Lines in Andhra Pradesh (2015-16 & 2017-18)

Voltage of Lines	2014-15	2017-18	CAGR (2015-18)
400 K.V.	2,635	4,562	23.9%
220 KV	8,851	11,033	9.5%
132 KV	8,928	10,720	7.6%
33 KV	24,639	25,827	2.4%
11 KV	192,081	226,013	7.0%
Low Tension	296,983	327,044	4.2%
Total	**534,117**	**605,199**	**5.4%**

Source: Andhra Pradesh Statistical Abstract

Table 4.4 Power Transformers at Sub-Stations and Distribution Transformers in Andhra Pradesh (2015-16 & 2017-18)

Voltage Transformer	2014-15		2017-18		CAGR (2015-18)	
	Number	Aggregate Capacity (M.V.A)	Number	Aggregate Capacity (M.V.A)	Number	Aggregate Capacity (M.V.A)
400 KV SS	13	4,095	33	10,335	36.4%	36.2%
220 KV SS	231	15,929	294	21,778	8.4%	11.0%
132 KV SS	349	9,640	426	12,584	6.9%	9.3%
33 KV SS	3,507	18,199	4063	21,692	5.0%	6.0%
Total	**4,100**	**47,863**	**4,816**	**66,388**	**5.5%**	**11.5%**
Distribution Transformers	6,11,902	21,798	8,25,377	28,121.42	10.5%	8.9%

Source: Andhra Pradesh Statistical Abstract

During the last few years, industrial sector of AP has suffered load shedding up to 40% of their demand (3 days a week power holiday) which forced industries to borrow power from Open Access sources. However, APTransco and APGENCO, are collectively working on developing the power sector of the state to provide 24X7 power supply. For instance, the Power Transmission Corporation of AP has brought down T&D losses from 12.6% in 2014-15 to 9.98% in 2016-17 and are aiming to reduce it to 3% in the coming years.

Table 4.5 Consumer Average Interruption Duration Index (2016)

State	Discom	SAIDI (Hrs)	SAIFI
Andhra Pradesh	APEPDCL	69:02:40	63.85
	APSPDCL	55:42:40	119.27
Haryana	DHBVNL	1122:12:00	191.12
	UHBVNL	1423:24:00	789.96
Gujarat	DGVCL	31:53:20	128.23
	MGVCL	16:04:00	18.12
	PGVCL	53:30:40	43.84
	UGVCL	35:01:20	24.41
Maharashtra	MSEDCL	66:34:40	37.75

Source: Report on the Benchmarking of performance (Electricity Distribution in India) parameters

Note:
SAIDI: System Average Interruption Duration Index
SAIFI: System Average Interruption Frequency Index

Table 4.5 shows average number and hours of interruption in power supply during 2016, wherein, AP lags behind Gujarat and Maharashtra, however, it is much better than Haryana.

In 2016, the electricity tariff of AP for industry was similar to other states of India such as AP rate was INR 6.51 per unit and states like Karnataka offered INR 6.80 and Gujarat offered INR 6 per unit. However, in 2016, government planned to constant the electricity tariff rate for long term period (less than INR. 4.0/unit for 20/25 years) in order to attract big industries in the state. In Table 4.6, electricity tariff for FY 2016-17 and proposed by licensees for FY2017-18 has been

shown. During 2018-19, government failed to implement the plan and the tariff for industry (general) increased marginally from INR 6.5/kWh (2016-17) to INR 6.71/kWh (2018-19).

Table 4.6 Electricity Tariff Rates for Andhra Pradesh Industrial & Commercial Sector

Industry Type	Tariff (2016-17)		Proposed Tariff (for 2017-18)	
	Energy Charge	Demand Charge	Energy Charge	Demand Charge
	INR/kWh or /kWh or /kVAh	INR/kW/month	INR/kWh or /kVAh	INR/kW/month
LT II: Non-Domestic/Commercial (LT II Others)				
LT II (A): Upto 50 Units/Month				
0-50	5.4	55.12	4.05	200
LT II (B): Above 50 Units/Month				
0-50-Above 500	6.63-9.78	55.12	6.95-9.1	
LT III: Industry				
Industries (General)	6.51	55.12	5.65	200
Seasonal Industries (off season)	7.23	55.12		

Source: Andhra Pradesh Electricity Regulatory Commission

Even with surplus power generation capacity, AP is facing challenges in power sector such as lack of sufficient power supply, temporary load shedding due to technical reasons, regular planned maintenance of power plants causing power shortage, usage of Open Access in industrial sector. Usage of Open Access source for electricity has become challenge in revenue growth of AP Power sector, as through open access, industrial consumers can avail electricity at cheaper than state rates.

Therefore, APGENCO is planning to increase capacity by 11,670 MW over the next 10 years starting from 2017 through thermal generation capacities, which would be helping DISCOMs to meet additional energy demands to 200 MU per day. Further, to reduce the usage of open access service and increase the industry productivity, government would be providing incentive by cut down tariff rates by INR 1 per unit during off-peak hours (10 p.m. and 6 a.m.).

4.2.1.2. *Water*

Andhra Pradesh covers geographical area of 16 million Ha and cultivated area is 6.35 million Ha. AP has three major rivers – the Godavari, the Krishna and the Pennar and 40 medium and minor rivers, out of which 12 are inter-state. About 6% of the state area is covered with water bodies, availing the water of 56.37 BCM approx., out of which 43.2% was available from Godavari in

2015, followed by Krishna river with 37.27% and Pennar river with 4.9%. Apart from this, AP received annual average rainfall of 845 mm with district mean rainfall ranges from 395 mm (Anantapuramu) to 1158 mm (Vizianagaram) in 2016. Also, there are 86 major and medium reservoirs in AP with gross storage capacity of 27.23 BCM, out of which, 96% is consumed by irrigation, 3% for domestic purpose and 1% by industrial sector. There is demand supply gap of around 12.05 BCM across irrigation, industry and domestic consumption.

Table 4.7 Water Demand Projection in Andhra Pradesh, By Sector

Projections for water demand sector wise (BCM)			
Sector	**2015**	**2022**	**2029**
Domestic	0.9	1.84	2.01
Industry	**0.17**	**0.6**	**1.36**
Irrigation	28.11	33.24	38.89
Total	29.18	35.68	42.68

Source: Andhra Pradesh Vision 2029 (apvision.ap.gov.in)

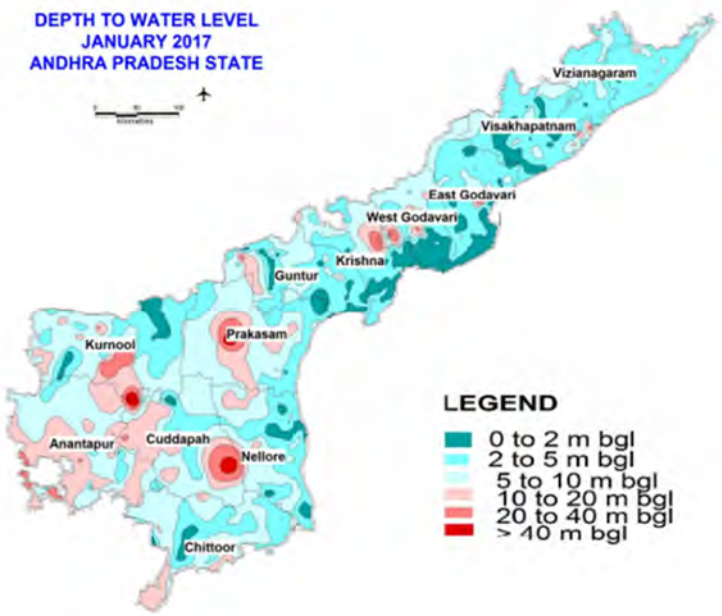

Figure 4.3 Depth to Water Level in AP (Jan 2017)

Source: Central Ground Water Board

The main source of water for the industrial sector is groundwater and surface water. As per AP government's estimations by 2029, water consumption level of industrial sector is expected to increase 10 times. In 2015, AP industrial sector demanded around 0.17 BCM of water (1% of total water consumption) which is estimated to reach 1.78 BCM by 2029. To reduce the demand supply gap of industrial water, government of Andhra Pradesh introduced Industrial Water Allotment Policy in 2014 for speedy and sustainable Industrial Development. As per policy,

- Allocation of water to the industry at district level would be decided by District Collector (DIPC and its successor entities) /State Investment Promotion Committee (SIPC and its successor entities) within 7 days from the date of filing application within the 10% water quota reserved for industrial use.
- Industries of AP are allowed to utilize existing Government reservoirs for storage of surplus water for industrial use; and in the absence of existing reservoirs, Government land would be provided for making water storage reservoirs and industries can construct reservoirs at their own cost.
- Further, Government would be promoting desalination plants in coastal areas of various industrial nodes planned in Vizag Chennai Industrial Corridor (VCIC) and the Chennai Bangalore Industrial Corridor (CBIC)
- Recycling plans of Sewage water for non-potable industrial use would be formed by the Government.

Even after having large number of rivers, the state failed to fulfil the demand of water supply due to lack of proper water management system, inter-state river sharing issues, low coverage of domestic water supply, and over-exploitation of groundwater.

4.2.1.3. *Road*

Andhra Pradesh's road network consists of different class of roads such as National Highways, State Highways, District Roads, Village Roads, etc. As per Andhra Pradesh socio economic survey 2017-18, total road length of Andhra Pradesh was 53,403 Km out of which, there are 32 National Highways with 6402 km long (Chart 4.7). The National Highways in the state are managed by various bodies such as the National Highway Authority of India (NHAI 1897 Km), Project Implementation Unit (PIU -462 km) and State PWD-NH Wing (4,043 km).

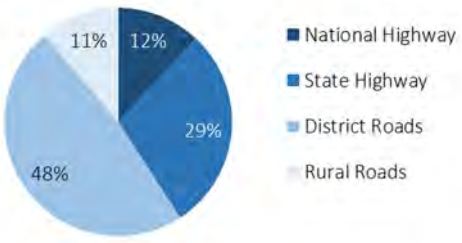

Chart 4.7 Road Length By Type of Roads Share in Andhra Pradesh State (%)
Source: Andhra Pradesh Socio-Economic Survey 2017-18

Since, 2014, 15 projects with the length of 902 kms amounting to INR 53 billion have been completed and 37 projects are under construction having a total length of 1,643 kms with a total project cost of INR 157 billion. Further, 97 projects of the total project cost of INR 275 billion have been awarded in 2017.

Table 4.8 Classification of District-Wise Road Length (In Kms.) (2015-16)

District	Cement Concrete	Black top or Asphalt	Metalled (W.B.M)	Un-Metalled (Murram)	Total length of Roads
Ananthapuramu	298.6	6,278.6	1,000.1	6,549.7	14,126.9
Chittoor	409.5	6,814.9	615.2	4,382.9	12,222.4
East Godavari	492.4	5,771.7	1,498.6	3,439.5	11,202.2
Guntur	581.9	7,602.7	715.9	4,618.9	13,519.5
Krishna	144.0	5,001.2	622.0	2,382.1	8,149.3
Kurnool	391.7	5,335.1	827.7	4,695.6	11,250.0
Prakasam	445.8	5,336.9	834.6	5,114.2	11,731.5
S.P.S Nellore	349.3	4,765.0	707.3	2,878.5	8,700.1
Srikakulam	217.6	3,497.0	874.4	1,631.2	6,220.1
Visakhapatnam	327.9	4,327.6	952.8	3,060.3	8,668.6
Vizianagaram	141.1	3,256.1	578.1	1,822.5	5,797.7
West Godavari	381.4	4,858.8	966.9	2,170.8	8,377.9
Y.S.R	459.7	5,697.9	916.4	4,174.4	11,248.3

Source: Statistical Abstract Andhra Pradesh (2016)

Currently, many roads in AP are of poor quality and also roads are not well connected. Therefore, GoAP is focussing on developing the roads of the state which can be connected to industrial areas of the AP's districts. The prime objective of the GoAP is to attract big industries and encouraging local industries in distant cities and towns of AP. GoAP is aiming to widen the existing roads into four and six-lane highways under Sagaramala and Bharatmala projects (Central Government Scheme).

Projects like upgrading of existing road between Naidupeta in Nellore district and Mulbagal in the neighbouring Karnataka State which eventually reduce the high volume traffic from Bengaluru and Tirupati to NH 16 at Naidupeta town in Nellore district. As a result, areas such as Gudur, Naidupeta, Sullurupeta and Tada in Nellore district are expected to be the industrial hub in AP. Development projects such as thermal projects, edible oil refineries, industrial parks, leather complex and others are expected to increase in the state owing to road construction & upgradation project in the state. However, all the road construction projects are not yet implemented, many of them are under planning stage. Government requires to speed up the construction in order to improve the industrial sector.

4.2.1.4. *Ports*

Andhra Pradesh has 974 Kms long coastline, capturing 12% of the country's total coastline. Currently, AP has one major port at Visakhapatnam under Government of India's control and 14 notified ports under State Government's control, out of which, five are operational, four are captive ports and six ports are under development in Public-private partnership (PPP) mode. Altogether, AP's Port handled 130.6 million metric tons of cargo during 2016-17 and 129.73 million tons during 2015-16. Of which Visakhapatnam accounted for 43.8%, followed by

Gangavaram with 15.4% and Kakinada Deep Water with 11.5% in 2015-16.Krishnapatnam port is one of the large capacity port in AP, privately built and owned, located in Nellore District. The port has potential to attract big industries in the state owing to some of the major projects such as construction of cargo-based industry to increase the cargo handling capacity, industrial smart city, and Krishnapatnam Ultra Mega Power Project, etc

Export goods such as rice, wheat, maize, soya bean meal and retraction, ricebran extraction, bentonite, fibre, fish meal, tobacco, sand cement iron ore, cement clinker, minerals etc. Import goods include murate of potash, rock phosphate, urea, crude palm oil, edible oils, chemicals, gases, wood pulp, machineries, etc.

Table 4.9 Operational Statistics of Major Ports in Andhra Pradesh

Port	Cargo Handled in FY14-15-MMT	Cargo Handled in FY15-16-MMT	Ultimate Capacity (MMTPA)
Gangavaram Port	18.5	19.4	200
Kakinada Anchorage Port	2.1	2.1	4
Kakinada Deep Water Port	15.5	15	200
Krishnapatnam	34	34.9	300
Ravva Port	1.2	1.3	3
Visakhapatnam	58	57.03	98
Total	**129.3**	**129.73**	**805**

Source: Andhra Pradesh Dept. of Port

Government of India has introduced Sagarmala programme to promote port-led development in order to reduce logistics cost for EXIM and domestic trade with minimum infrastructure cost. Under this programme, 104 projects have been identified in the state including rail and road connectivity enhancement projects, Coastal Economic Zones, etc with cost of INR 1.64 trillion. These projects would be implemented by Central Ministries, State Governments, ports and other agencies primarily through the private or PPP mode.

Table 4.10 Details of approved port projects and investments under Sagarmala Scheme in Andhra Pradesh

Project Category	No. of Projects	No. of Approved Projects	Total investments in Projects (INR Billion)
Port Modernization	25	13	210.7
Port Connectivity	57	25	472.5
Port Industrialization	11	6	935.5
Coastal Community Development	11	5	25.4

Source: Minister of State for Shipping, Road Transport and Highways and Chemical & Fertilizers (http://pib.nic.in/PressReleaseIframePage.aspx?PRID=1539653)

Table 4.11 Details of port projects status in Andhra Pradesh under Sagarmal Scheme

Project Status	No. of Projects	Investment in Projects (INR Billion)
Completed	14	18
Under Implementation	31	841
Under Tendering	4	29
DPR Prepared	11	193
DPR under Preparation	20	37
DPR to be Prepared	24	525

Source: Minister of State for Shipping, Road Transport and Highways and Chemical & Fertilizers (http://pib.nic.in/PressReleaseIframePage.aspx?PRID=1539653)

Government of AP has forecasted the target for port sector under Andhra Pradesh Vision 2029 document. This is shown in Table 4.12.

Table 4.12 Vision Targets for Port Sector in Andhra Pradesh

Outcome Indicator	FY 2014	FY 2019	FY 2023	FY 2029
Total traffic to be handled by ports (MTPA)	141	230	308	551
Capacity utilization (Traffic to capacity ratio)	75%	70%	70%	70%
Avg. vessel TRT (Days)	3.5 – 5.8	2	1	1
% age cargo evacuated through inland water transport (IWT) and coastal	0.5-1%	2%	3%	-

Source: Andhra Pradesh Vision 2029 (apvission.ap.gov.in)

Nellore is one of the potential district for industrial hub in AP, having industries include Food and Agro, Textile, Building materials, Engineering, Electronics etc. Therefore, one new port has been proposed at Duggarajapatnam in Nellore district which are connected to nearby industrial towns like Gudur and Vakadu. Further, the state government has declared Kakinada SEZ as a minor port and Meghavaram port in Srikakulam district as minor port for imports of coal, fly ash for the thermal plants. Hence, government of Andhra Pradesh is expecting to attract business in the coming years on account of developmental project in port sector.

In order to attract big industries in the state, GoAP is focusing on establishing Coastal economic zones/ coastal economic regions including industrial Hub or Special Economic Zones (SEZs) or Free Trade Warehousing Zones (FTWZs) and captive industries in port hinterland and coastal cities of Andhra Pradesh. Within Special Economic Zones (SEZs), industries such as multi-product, IT/ITes, building products, footwear, textiles and apparel, alumina, petroleum, oil & gas, pharmaceuticals, writing & printing paper and food processing are expected to increase.

4.2.1.5. *Sewage and Wastewater Treatment*

As per the Andhra Pradesh Pollution Control Board, the estimated sewage generation from the urban local bodies of Andhra Pradesh is 2,871 million litres per day (MLD) while the total capacity of sewage treatment is 247 MLD. In 2016, total number of Sewage Treatment Plants (STPs) present in the state were 12 out of which 9 were operational, 3 were under construction (Table 4.13).

Table 4.13 Total capacity of STPs in Andhra Pradesh and India (2016)

Region	Item (unit)	Total	Operational	Non-Operational	Under Construction	Proposed
Andhra Pradesh	STP (Number)	12	9	-	3	-
	Capacity (MLD)	247	156	-	91	-
India	STP (Number)	816	522	79	145	70
	Capacity (MLD)	23,277	18,883	1,237	2,528	629

Source: Central Pollution Control Board

Vijayawada city has the highest installed STP capacity of 101 MLD, followed by Visakhapatnam with 86 MDL, and Rajamundry with 30 MLD, respectively. AP has less than 10% of STP capacity in Urban area, therefore, government needs to focus on increasing sewage treatment capacity across the State. After 2014, 707 Kilometres of sewer lines with a capacity of 68 MLD were laid at Pulivendula, Tadipatri and Tirupati and in 2016, 197.8 MLD with total sewer lines of 739 km was proposed. Further, as per State Annual Action Plan (SAAP) for AMRUT (Atal Mission for Rejuvenation and Urban Transformation), investment of INR 108.8 billion is required for sewage and septage management in 31 Urban Local Bodies (ULBs). Out of 31 ULBs, Visakhapatnam requires INR 16.56 billion, Vijayawada requires INR 5.5 billion, Guntur requires INR 5.6 billion, Rajahmundry requires INR 8 billion, and Nellore requires INR 5.8 billion for achieving sewage treatment targets. As per Socio-Economic Survey (2017-18), STP of 5 ULB with cost of INR 16.8 billion is under construction in Yemminganur, Kadapa, Nellore, Guntur & Narsaraopeta which will add additional sewage treatment capacity of 285 MLD.

Currently, there are 6 CETPs (Common Effluent Treatment Plants) in the state for industrial sector. These are located in Parawada, Visakhapatnam; Atchutapuram, Visakhapatnam; Machilipatnam, and Krishna District. Three CETPs are under construction in the state including Kondapalli CETP in Krishna District, Textile Park CETP, Nagiri in Chittoor District and IE Autonagar CETP, JRD TATA IE Autonagar, Vijayawada in Krishna District.

4.2.2. Social Infrastructure

4.2.2.1. *Hospitals*

According to State's Socio-Economic Survey 2017-18, there are 7,458 Sub-centers, 1,147 Primary Health Centers, 193 Community Health Centers, 31 Area Hospitals, 8 District Hospitals, 3 Mother and Child Health Centres and 11 Teaching hospitals. Out of which, 73 Urban Family Welfare Centers, 222 Urban Primary Health Centers (UPHCs) and 1,197 Dispensaries fall under the Administrative set-up of Ayurvedic, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH) Ministry. In 2015, there were 280 hospitals (allopathic) with 4,141 doctors in the state.

East Godavari district has the highest number of government medical facilities with 33 hospitals and it is one of the major industrial hub of the state based on agro and metal industries. However, the medical facilities for the industrial areas are very limited as the district is facing acute shortage of doctors availability in hospitals. Guntur district has 26 hospitals and Kurnool has 25 hospitals.

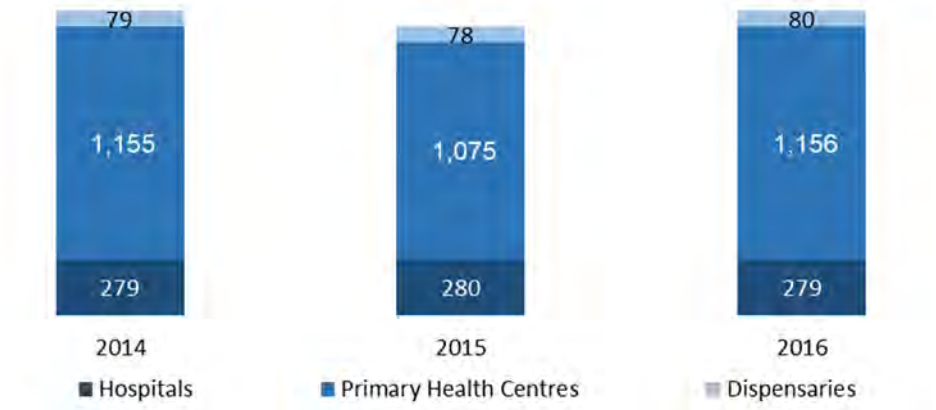

Chart 4.8 Presence of Govt. Medical Institutions(Allopathic) in Andhra Pradesh

Source: Andhra Pradesh Socio- Economic Survey 2017-18

The problem of shortage of doctors and other medical staff is being faced by the government hospital of the state, mainly in rural areas due to low remuneration and inefficient medical facilities. For instance, as per news article published in Dec, 2017, there were only six doctors and 29 staffers in the Mother and Child ward of Rajamahendravaram city's govt. hospital. Therefore, patients preferred Kakinada city (headquarter of East Godavari district) for treatment owing to availability of doctors.

In order to improve the situation, the state govt. has promised to hire more doctors in the state and would be providing better facilities in the coming years. For this, budget for Health, Medical and Family Welfare have increased to INR 84.64 billion in 2018-19 from INR 70.21 billion in 2017-18.

GoAP is also planning to establish Amaravati (capital of Andhra Pradesh) as one of the medical centres of the state by investing on various health sector projects such as All American Institute of Medical Sciences (AAIIMS) project worth INR 6 billion which would be offering 700 beds, Indo-UK (IUIH) Institute of Health with 1000 beds. Guntur district would also have AIIMS services by 2019. The State govt. is looking to provide infrastructure facilities to the investors (Foreign and National medical institute) under PPP mode for establishing medical facilities in the state.

4.2.2.2. *Schools*

Literacy rate of Andhra Pradesh (67.4%) is lower than India overall literacy rate (73%), within which West Godavari district has highest literacy rate (74.4%), followed by Krishna (73.7%) and Chittoor (71.5%). As per census 2011, male literacy rate of the state stands at 74.7%, while female literacy is at 60%. In terms of literacy rate, the state ranked at 32nd out of 36 states and union territories of India.

There are 60,462 schools (Primary, Secondary and Higher Secondary schools, 2,372 junior colleges, 272 degree colleges in the state in 2015-16. Chittoor district has the highest number of schools (6,198), followed by Visakhapatnam with 5311 schools, Ananthapuramu district with 5,114 schools.

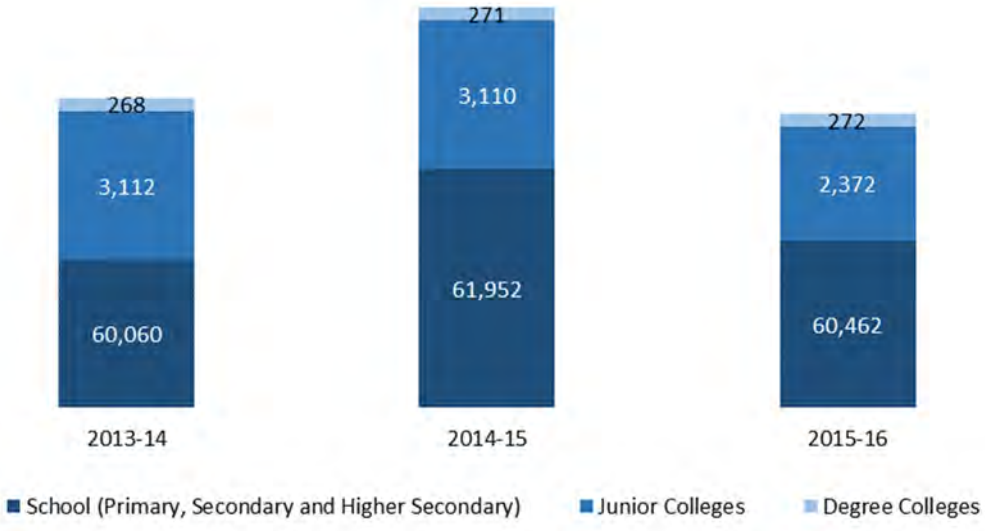

Chart 4.9 Number of Recognised Education Institute in Andhra Pradesh

Source: Andhra Pradesh Socio-Economic Survey 2017-18

The prime challenge in education sector of AP, is poor pupil-teacher ratio at primary school level which is even lower than the National ratio as per National Council of Educational Research and Training (NCERT). In 2016, 32% of schools failed to meet the national pupil teacher ratio in AP. Also, the Gross Enrolment Ratio is very low for the state.

In order to improve the situation, the education scenario of the state, education budget has increased to INR 249.6 billion in 2018-19 from INR 211.1 billion in 2017-18. Also, the state govt. is aiming to increase the Gross Enrolment Ratio to 50% by 2029 with special focus on remote areas. More focus is being laid on digital based primary education and virtual universities to facilitate distance learning programs. In 2015, a pilot project named ‘smart class’ under Rashtriya Seva Samithi (RASS), took place in government school of Chittoor rural area and by 2016, expanded to 2,400 school (private and government), further, 204 is expected to be added by the end 2018. Thus, school education is one of the major point to be improved in the state and the state govt. has started to focus on it. However, still a lot of work is required to improve the situation.

4.3. Current State of Industrial Development

4.3.1. Industrial Structure and Location

Andhra Pradesh is one of the emerging industrialised states in India contributing 4.3% to India's Gross Domestic Product (GDP) in 2015-16. State's GDP reached INR 8,039 billion in 2016-17 (AE), growing at a CAGR of 13.2% during 2012 to 2018. About 26% of SGDP is contributed by the industrial sector. The state government has implemented various policies to encourage industries, such as Industrial Development Policy (IDP), Single Window Policy, Automobile & Automobile Components Policy, Textile & Apparel Policy, MSME Policy, AP Electronics Policy, AP Information Technology Policy and others. Other initiatives taken by government for the development of industrial sector include Phased Manufacturing Programme (PMP) in collaboration with the Indian Cellular Association, 'Electronics desks' for Japan, Ch)ina and Korea, Empowered Mission for Electronics and IT Promotion, etc. and lastly, Andhra Pradesh Industrial Corridor Development project under which six nodes including Visakhapatnam, Kakinada, Krishnapatnam, Hindupur, Srikalahasti-Yerpedu, and Gannavaram-Kankipadu would be transformed into industrial hubs. These nodes would be connected with corridor mega projects (promoted and funded by Central Government) such as Chennai – Bengaluru Industrial Corridor (CBIC) and Vizag Chennai Industrial Corridor to develop the backward districts such as YSR Kadapa, Prakasam and Chittoor.

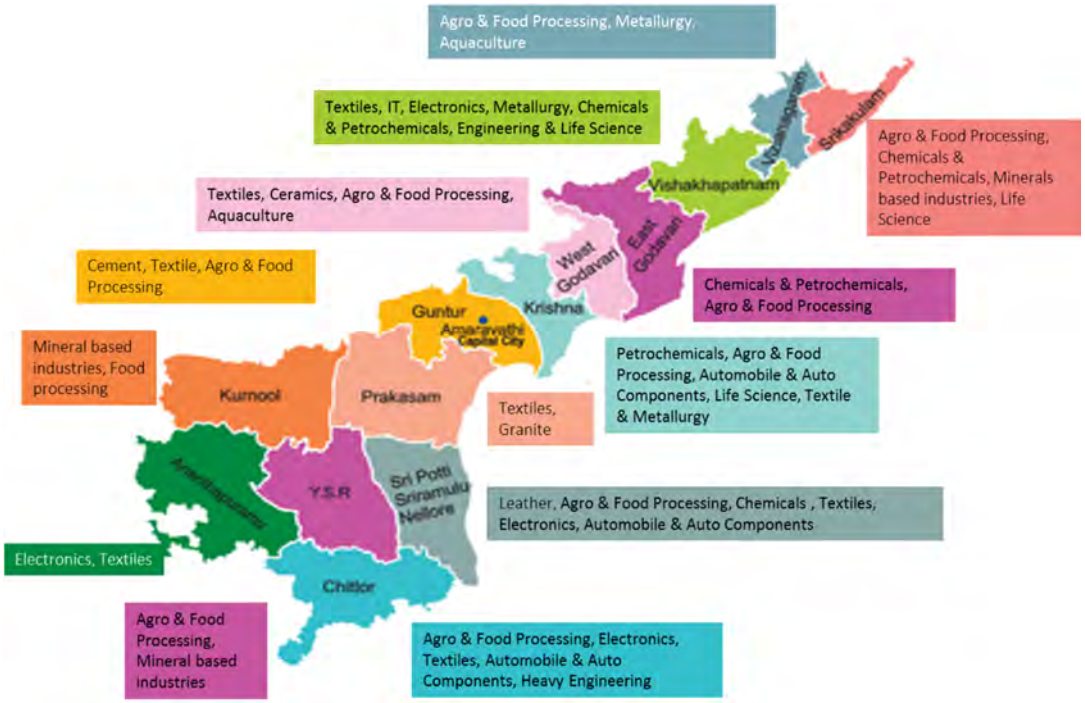

Figure 4.4 District-wise Industrial Scenario of Andhra Pradesh

Source: Website of Department of Industries

Visakhapatnam is the major industrial centre of AP with largest number of public and private sector establishments, catering industries such as textiles, IT, electronics, chemical and

petrochemical, Engineering, pharma and other. The district has presence of big companies such as IBM, Wipro, Essar, BHEL, Aurobindo, etc. Apart from Visakhapatnam, Sri City is emerging as one of the industrial hubs across India. Currently, Sri City is spread in an area of 100 square km area in Chittoor district, comprises of a Special Economic Zone (SEZ), a Domestic Tariff Zone (DTZ), Free Trade Warehousing Zone (FTWZ) and an Electronic Manufacturing Cluster (EMC). Further, Sri City has more than 175 companies, including 45 MNCs from over 27 countries. Companies such as Alstom (trains), Pals Plush(toys), Isuzu (cars), Mondelez (chocolates), PepsiCo (soft drinks), Kellogg's (corn flakes), Lavazza (coffee), Kobelco (cranes), Foxconn (smartphones) and Colgate-Palmolive (tooth brushes) and some more have their presence. Further, Sri City is also popular as 'mini Japan as more than 20 Japanese companies from automobile, engineering and logistics sectors have their offices and manufacturing set ups.

Figure 4.5 District-wise presence of major companies in Andhra Pradesh

Source: Web research and NRI analysis

Figure 4.6 shows the focus industrial sectors of the state with maximum potential for growth. These are targeted by the state govt. for development.

- Food processing industry is one of the potential and focus industry in AP. Currently, there are 4,000 food processing units across the state. And few more food parks are in planning

stage such as Ultra-Mega food park at Kurnool, Egg and Poultry food park at Prakasam, multi-product food park at Chittoor, Spices park at Guntur, Aqua mega food park at Bhimavaram, West Godavari and Nellore.

- Automobile industry is an emerging industry in AP and it is expected to expand in future owing to the entrance of foreign companies such as Kia motors, Isuzu Motors, Apollo Tyres, Hero Group, Ashok Leyland, Bharat Forge and Veera Vahana. The major automotive manufacturing centres are expected in the districts of Chittoor, Anantapur, Krishna, Nellore and Vijayawada.
- Pharmaceutical/Life Science industry of AP is one the largest exporter of pharmaceutical products in the country. Currently, there are more than 200 pharmaceuticals units across AP, and two zones including Andhra Med Tech Zone and JN Pharma City are there at Visakhapatnam.
- Other sectors such as textile industry with having strong presence in Anantapur, Guntur, Chittoor, Kadapa and Kurnool. Further, 12 apparel units with the investment of INR 9.63 billion are expected to set up across the state, for which 12 MoU were signed in CII partnership summit 2017.
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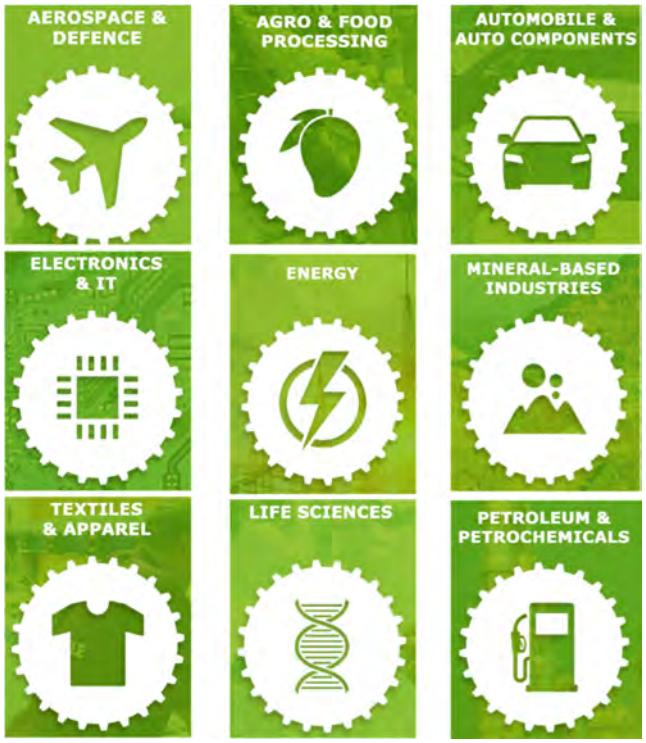

Figure 4.6 Focus Sectors of Andhra Pradesh Govt.

Source: Department of Industries (AP)

Total number of registered factories in the state has increased from 9,742 in the year 2009-10 to 12,658 in the year 2013-14 (Chart 4.10). The CAGR over this period of six years (2008-09 to 2014-15) has been 5.4%. More factories are likely to be established in the coming years such as automotive factory of Kia motors would be set up in Anantapur, Ashok Leyland is planning to

set up bus manufacturing factory in Krishna district, etc. Further, a group of 37 South Korean industries signed Letters of Intent to invest a sum of INR 30 billion in the state. Hence, in the coming years, big industries are expected to have their presence in the state.

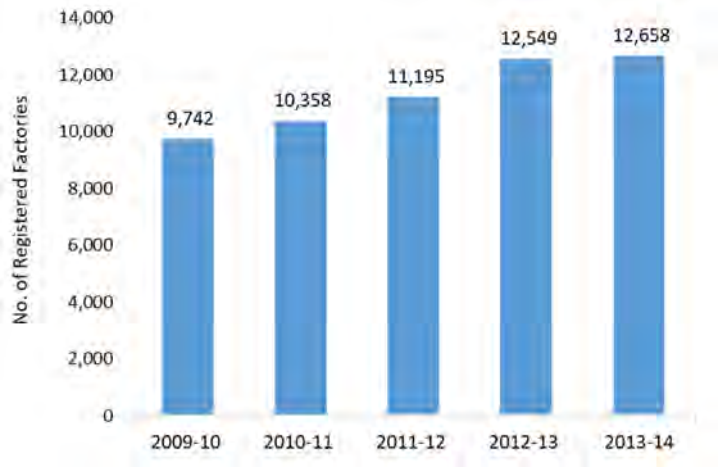

Chart 4.10 Total number of Registered Factories in Andhra Pradesh (2009-10 to 2013-14)
Source: AP Socio-Economic Survey 2017-18

Currently, there are more than a million operational MSMEs across Andhra Pradesh. Total number of registered MSMEs in the state was 106,504 units upto March 2014 (Chart 4.11) and further 5,920 units were added in 2017-18 (up to Dec, 2017). Government of Andhra Pradesh has adopted Micro and Small Enterprises Cluster Development Programme (MSE-CDP) which would focus to develop each districts of Andhra Pradesh. For instance, focus sectors for West Godavari district are Aerospace and defence, Aqua Processing and Ceramic, YSR Kadapa district focusing on Steel plant, Mineral and cement, Prakasam district focussing on Pharma and textiles. In total 1,439,029 people have been employed in MSMEs with an aggregated investment of INR 280.5 billion till Dec, 2017. In term of investment in 2015-16, Visakhapatnam district registered highest investment with INR 10.2 billion, followed by West Godavari district with INR 4.6 billion and East Godavari district with INR 3.9 billion.

4.3.2. Status of MSMEs

The MSME (Micro, Small, and Medium Enterprises) sector has been recognised as the engine of growth all over the world. In India, the definitions of Micro, Small, & Medium Enterprises are in accordance with the provision of Micro, Small & Medium Enterprises Development (MSMED) Act, 2006. The classification of MSMEs is shared in Table 4.14.

Table 4.14 Classification of Micro, Small, & Medium Enterprises in India

Item	Manufacturing Enterprises	Service Enterprises
Basis of Classification	Investment in plant & machinery	Investment in equipment
Micro Enterprises	Does not exceed INR 2.5 million	Does not exceed INR 1 million
Small Enterprises	More than INR 2.5 million but does not exceed INR 50 million	More than INR 1 million but does not exceed INR 20 million
Medium Enterprises	More than INR 50 million but does not exceed INR 10 million	More than INR 20 million but does not exceed INR 50 million

Source: Ministry of Micro, Small & Medium Enterprises, India (Website)

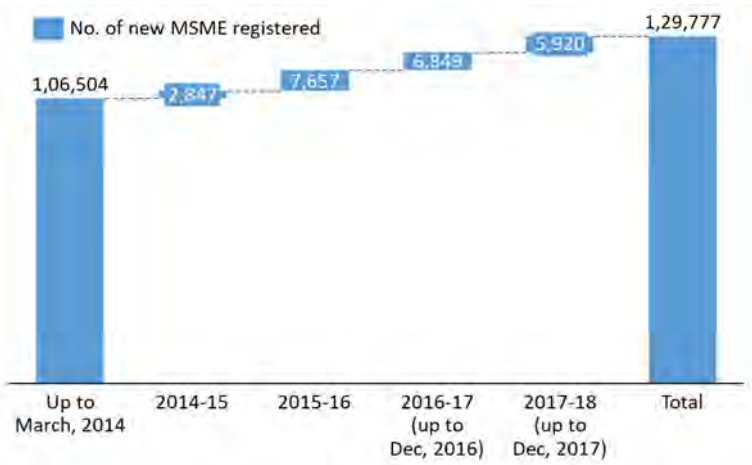

Chart 4.11 Year-wise new MSMEs registered in Andhra Pradesh (in numbers)

Source: AP Socio-Economic Report

Top 3 districts in terms of highest number of MSMEs registered are Visakhapatnam, East Godavari and Guntur, which collectively account for 49.1% of the total MSMEs registered in the state (Figure 4.7).

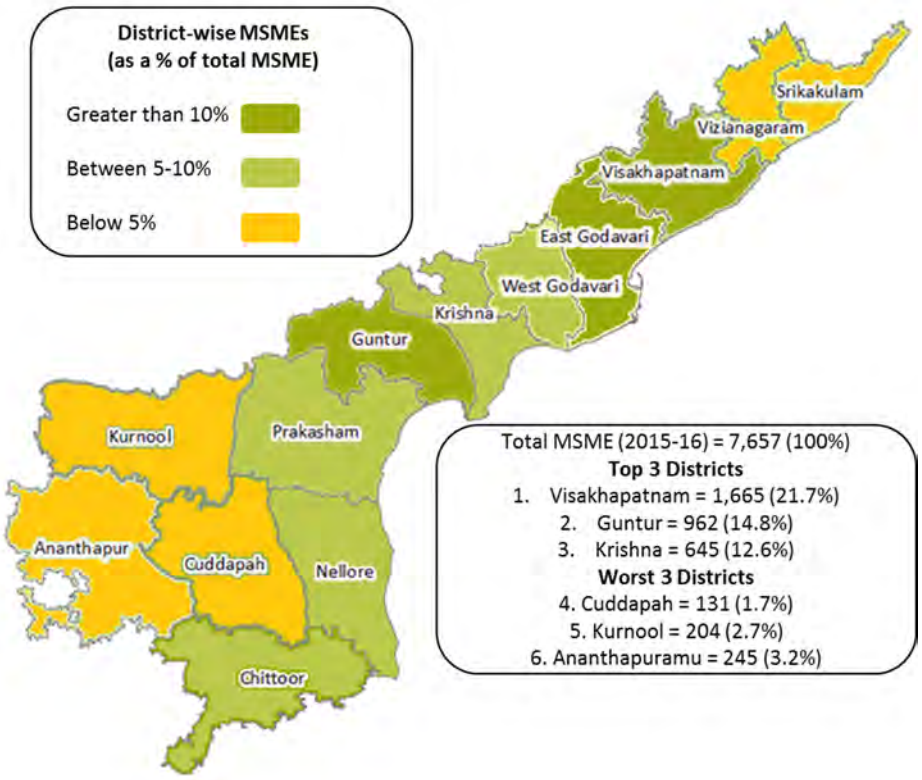

Figure 4.7 District-wise status of MSMEs in Andhra Pradesh (2015-16)

Source: Website of MIDC

As per Socio-Economic Survey 2017-18, MSME sector of the state manufactures a variety of products with a high concentration of Micro and Small units belonging in the Sectors of food, mineral and building materials, drugs and pharmaceuticals, fabricated materials, trading and service sector. Andhra Pradesh has identified development of MSMEs as a catalyst for job creation and balanced regional development.

For further expansion of MSME sector, the state govt. has introduced MSME policy 2015-20, within which various policies and facilities would be provided by the government such as Single Window Clearances system, incentives (power, interest subsidy, investment subsidy, etc.), infrastructure development, technology up-gradation, skill development and marketing support, administrative reforms and rehabilitation of sick industries in the State In addition, GoAP is planning to set up one M-Parks (Micro, Small and Medium Enterprises Parks) in 175 Assembly constituencies of AP with investment of INR 2.3 billion for each assembly. In addition, Government has established Andhra Pradesh MSME Development Corporation with an investment of INR.1 billion, to help the MSME entrepreneurs in marketing, branding, skill development and quality improvement of products.

4.4. Investment Policies, Procedures, and Implementation Systems

4.4.1. Andhra Pradesh Government Organisational Structure

The State Government of Andhra Pradesh comprises various departments/ministries which take care of policy making and implementation of the respective department. Each department/ministry is headed by a cabinet/state minister. The bureaucratic structure of the departments includes the presence of Commissioner, Chief Secretary, Principal Secretary, Joint Secretaries, Directors, etc. The ministries/departments of the government are helped by the presence of various Boards and Corporations which serve specific purposes related to that department. Figure 4.8 shows some of the major ministries/departments and boards & corporations associated to them.

Andhra Pradesh State Government		
Categories	**Ministries/Departments**	**Boards and Corporations**
Finance	• Finance • State Audit • Planning • Budgeting	• Directorate of Accounts & Treasuries • A.P. Industrial Finance Corporation Limited • Directorate of Insurance • A.P. State Financial Corporation
Industry	• Industries • Cooperatives	• A.P. Industrial Infrastructure Corporation Limited (APIIC) • A.P. Industrial Development Corporation Ltd. • A. P. Heavy Machinery and Engineering Limited • A.P. Trade Promotion Corporation • A.P. Technology Services Limited
Social and Consumer Affairs Food Civil Supplies	• Food, Civil Supplies and Consumer Protection • Rural & Tribal Devl. • Disputes Redressal • Women and Child Development	• A.P. State Civil Supplies Corporation Limited • A.P. Social Welfare Residential Education Institution Society • Andhra Pradesh Brahmin Welfare Corporation Limited • A.P. State Consumer Disputes Redressal Commission
Energy, Power and Utilities	• Energy • New and Renewable Energy	• Andhra Pradesh Electricity Regulatory Commission • Andhra Pradesh Power Generation Corporation Limited (APGENCO) • Andhra Pradesh Transmission Company • Andhra Pradesh Distribution Company • A.P. Power Finance Corporation Limited • Northern Power Distribution Limited • Infrastructure Corporation of AP Ltd. (INCAP)
Human Resource	• School Education and Sports Department • Higher & Technical Education • Medical and Technical • Education • Skill Development and Entrepreneurship (SD&E) • Labour Welfare	• Department of Technical Education • A.P. State Board for Technical Education and Training • A.P. State Council of Higher Education • Commissioner of Labour • Director of Factories • A.P. Skills Development Corporation
Infrastructure	• Urban Development • Housing • Transport • Motor Vehicles • Ports • Public Works Department (PWD) • Town and Country Planning	• A.P. Road Transport Corporation (APSRTC) • Director of Port • AP Road Development Corporation • AP State Housing Corporation Limited • Deccan Infrastructure & Land Holding Limited • A.P. Rajiv Swagruha Corpration Limited • A.P. Road Development Corporation • A.P. Capital Region Development Authority (APCRDA)
Agriculture and Allied	• Agriculture • Animal Husbandry • Sericulture • Fisheries • Forest • Water Conservation • Water Resources	• A.P. State Seeds Development Corporation Limited • A.P. State Agro Industries Development Corporation • Commissioner of Sugar and Cane • A.P. Dairy Development Cooperative Federation Ltd. • A.P. Forest Development Corporation • A.P. State Irrigation Development Corporation • Commissioner of Fisheries Department
Others	• Environmental Department • Textiles • Tourism and Cultural • Affairs • Health, Medical & Family Welfare	• A.P. Pollution Control Board (MPCB) • A.P. Handicraft Development Corporation Limited • A.P. Tourism Development Corporation (MTDC) • Directorate of Public Health and Welfare • A.P. Health and Medical Housing Infrastructure Development Corporation

Figure 4.8 Major Ministries and related Boards under Government of Andhra Pradesh

Source: Website of Government of Andhra Pradesh; NRI Analysis

While investing into a state, there are some agencies (boards and corporations) which play a major role in promoting the investments, issuing necessary permits, providing necessary infrastructure, monitoring the industrial activity, etc. Figure 4.9 provides the names of such important agencies which are related to industrial investment along with a brief description of their roles and responsibilities.

Agency	Description
APIIC- Andhra Pradesh Industrial Infrastructure Corporation	• APIIC is a wholly owned Undertaking of Government of Andhra Pradesh, was incorporated on 26th September, 1973 • Objective is to formulate, promote, finance, aid, assist, establish, manage and implement schemes, projects or programmers, to provide and develop infrastructure facilities, including factory sites, hospitals and other medical and health and educational institutions and other services of any description in order to promote establishments • To provide capita, credit, means and resources to the industries set up in the factory sheds constructed or factory sites developed by the Company, whether owned or run by Government, statutory body, co-operatives, company, firm or individual
APIDC - Andhra Pradesh Industrial Develop ment Corporation Limited	• APIDC is a government authorised body, established by Government of Andhra Pradesh in 1960 for the planned development of medium and large scale industries in the State • The key objective of APIDC is to identify and promote entrepreneurial talent for industrial development, to support financially by participating in Equity Capital, providing term loans, providing bill discounting facility, providing guarantees, merchant banking, venture capital fund for IT Industry. Also, provide guidance and comprehensive Escort services through Entrepreneurs Nucleus and Total Investment Requirement Eden (ENTIRE)
Commissionerate of Industries	• The commissionerate of industries of the State Government assists the investor in all the aspects of establishing industrial ventures in Andhra Pradesh. It is the nodal agency for investment promotion in Andhra Pradesh • The commissionerate of Industries is also responsible for providing one stop professional service 'Single Window Desk'. It helps investor to select the best possible location for an operation taking into account the requirements - e.g. - availability of labor, transport and other specific commercial needs
Andhra Pradesh Industrial Finance Corporation (APSFC)	• Provides financial assistance or setting up industrial units in Small & Medium Scale, Service enterprises in the state • Financial support is broadly provided on the basis of Term Loan and Working Capital Term Loans
Andhra Pradesh State Pollution Control Board	• The Board implements environmental policies, laws regulations and developing frameworks to manage both wastes and natural resources more efficiently. It advices entrepreneur in selection of sites for setting of industries from pollution point of view • It coordinate with other agencies of the State Government and local authorities to encourage the Common Effluent Treatment Plants and Treatment Storage and Disposal Facilities. Also, coordinate with Industries Associations, Government organizations, etc. to create environmental awareness and compliance

Figure 4.9 Major State-level agencies related to Industries

Source: Websites of APIIC, APIDC, APSFC, APPCB

4.4.2. Difference between Centre Government and State Government Policies

Central level policies are applicable to all the Indian states whereas State level policies are applicable and followed in the respective states in proposed fields. There are some differences which exist for policies adopted Centrally and at State level. Table 4.15 shows some of the major differences between the Centre and State Policies.

Table 4.15 Centre Government vs State Government Policies

Subject	Central Government Policies	State Government Policies
Level of ownership	• Strategic level initiatives to promote industrial development e.g. Make in India, National Manufacturing Policy etc. • Set direction for state governments to create suitable policy environment	• Operational level initiatives to promote industrial development e.g. Ease of Doing Business etc. • Implementation based on policy directions from central government initiatives
Coverage	• Applicable on entire country but sometimes focus on specific regions which require promotion	• Generally applicable for all districts within a state. • Special incentives/schemes for underdeveloped areas can be provided
Incentives	• Provides sector-wise incentives such as corporate tax concessions, import duty exemption, capital subsidy etc.	• Provides incentives such as low power tariff rates, refund of stamp duty on land transactions, VAT (now GST) etc.

Source: NRI Analysis

4.4.3. Overall Investment Promotion Policy

In order to attract investment in the state for the industrial sector development, GoAP has introduced and implemented 'Industrial Development Policy 2015-20'. The Policy is valid for

five years which aim to provide favourable business climate, excellent infrastructure, good law and order and peaceful industrial relations in the state. The policy targets to create employment opportunities for an additional 1 million people by 2020. The policy is mainly consisting of some key components including land, labour and skill development, Ease of Doing Business, International Desks, Fiscal Incentives for large, medium, small scale industries and others, establishment of Incubation Centre for promoting start-ups, planned industrial development and focusing on growth potential sector.

4.4.3.1. *Objectives of the Industrial Policy, 2015-20*

- To ensure sustainable and inclusive industrial growth
- To be among the top 3 states in term of industrial investment by 2022
- To be the most preferred logistics hub and India's gateway to East Southeast Asia by 2029
- To enhance the quantum and quality of skilled manpower and create significant employment opportunities

Table 4.16 Major focus points of the Andhra Pradesh Industrial Policy 2015-20

Focus Point	Sub-parts	Description
Land	Government land bank	• GoAP has identified one-million-acre consolidated land bank which can be utilized for attracting investments. Government would be acquiring those land through transparent and farmer friendly land pooling/acquisition policy. • Further, all such land would be identified using GIS and all the detailed information regarding the land including soil type, distance from sea-ports, airports, railway stations etc. would be available on online portal
	Land Pooling/Acquisition and Allotment	• Consolidation of Industrial Land would be done by the Industries & Commerce Department following the state's land pooling/acquisition policy and lands would be allotted on 99-year lease. Further, outright sale of the land would be decided by State Investment Promotion Board (SIPB) on the following cases 1) the investment is exceeding Rs.100 Crores 2) the gestation period of the project is more than 5 years 3) financial closure of the project requires a sale 4) the industry is located in backward areas to be notified by the Government, for this purpose 5) projects identified by the Government as critical and prestigious 6) the gestation period of the project is more than 5 years These categories can be changed time to time
Ease of Doing Business	Single Desk Clearance	• GoAP has launched one single desk clearance online platform which reduces the time of clearance to 21 working days for starting and operating industry. • The online platform facilitate both pre-establishment and pre-operation stage clearances required from multiple agencies/departments.

	Measures to simplify processes& procedures	• To simplify and fasten the establishment procedure, few steps have been taken by GoAP under single desk clearance such as ○ Spot Approvals should be given where basic documents are required Registration under Professional Tax, Registration of Shops and Establishments, Registration of establishments deploying contractual workmen / interstate migrant workmen among others ○ Deemed Approval based on self-certification should be provided in case of no clearance given. The permission such as Building Permission and Factory Registration should be granted by Gram Panchayat and others ○ Assignment of Inspection to Private Technical Experts should be done while setting up of new establishment and expansion of existing units, particularly in private sector ○ Parallel Processing of clearances -As per applicable laws & regulations for clearance, all intra-approval dependencies should be done on parallel form to fasten the process of establishment
	State Investment Promotion Board (SIPB)	• SIPB has been constituted with the Chief Minister as the Chairman and the Chief Secretary to the Government as Member Convener. The SIPB shall meet once a month for taking final decision on investments/promotion activities and for approval of mega projects
	Empowered Committee of Secretaries	• Every month, Secretaries chaired by the Chief Secretary to the Government and convened by Secretary Industries should meet as empowered committee to monitor and review the following points such as performance of single desk system, policy issues relating to investment facilitation and project grounding, Implementation of all large/mega ongoing projects, screening of all mega project proposals, scrutiny of all issues/proposals which may merit consideration of the SIPB and Any other issue governing industrial environment proposed by Commissioner Industries
Labour & Skill Development	Skilling people to meet industry requirements	• GoAP has set up Andhra Pradesh State Skill Development Corporation (APSSDC) under the Companies Act, 2013. APSSDC would be supporting and promoting vocational training initiatives and institutes which offer train the trainers programme. It would also set up institutes under PPP mode for facilitating the skill development courses. Further, the guidelines of the courses and specific skill set requirement for industry would be decided the APSSDC
	Sector-specific and Market-driven Curriculum	• Industries would be participate in drafting training curriculum to make it sector-specific and would be e incentivized to participate actively in development of skilled manpower
	Manpower Information System (MIS)	• APSSDC would be facilitating the development of MIS in close coordination with Industries and Labor Department to provide detailed information on labor availability across multiple skill levels/sectors, demographics and geographies
International Desks	Assistance to foreign investors	• Facilities such as bespoke investor facilitation, Handholding services in the form of local information and expertise and Comprehensive portal with business opportunity related information would be provided to the potential investors
Fiscal Incentives	Power	• GoAP is committed to supplying uninterrupted 24x7 quality power to all industries operating in the state • Power capacity allocation in 2014 was 8,037 MW and additional 16,484 MW would be added in the next five years • GoAP would provide fixed power cost reimbursement @ 1.00 per unit for a period of five years from the date of commencement of commercial production. However, individual sector consists of different policies resulting into change in rates.

	Incentives for large industry unit	• 100% of stamp duty and transfer duty paid by the industry on purchase or lease of land meant for industrial use would be reimbursed and 100% of stamp duty for lease of land/shed/buildings, mortgages and hypothecations would be reimbursed. • 50% of net VAT/CST or SGST would be reimbursed for a period of 7 years from the date of commencement of commercial production or up to realization of 100% fixed capital investment
	Incentives for MSME	• 100% of stamp duty and transfer duty paid by the industry on purchase or lease of land meant for industrial use would be reimbursed and 100% of stamp duty for lease of land/shed/buildings, mortgages and hypothecations would be reimbursed • For micro & small enterprises, 100% of net VAT/CST/SGST will be reimbursed for a period of 5 years from the date of commencement of commercial production. For medium industries, 75% of net VAT/CST/SGST will be reimbursed for a period of 7 years from the date of commencement of commercial production or up to realization of 100% fixed capital investment
	Incentives for Swachh Andhra	• GoAP is encouraging companies to engage in recycling waste management and use environment friendly products/energy. For the same, 35% subsidy on cost of plant & machinery for specific cleaner production measures limited to 3.5million for MSME and up to 10% subsidy with limited to 3.5million for large enterprises would be provided that would be certified by Andhra Pradesh Pollution Control Board (APPCB). • Further, GoAP would provide 25% subsidy of total fixed capital investment of the project for green measures with a ceiling of 500 million. Some of the green measures include o Waste water treatment with aim to have zero discharge systems o Buildings which obtain green rating under the Indian Green Building Council (IGBC/LEED Certification) or Green Rating for Integrated Habitat Assessment (GRIHA) systems o Use of renewable source of power o Installing Continuous Emission Monitoring System (CEMS) for red category industries o adopting rain water harvesting; restoring water bodies by de-stilting defunct water bodies
	Special Package of Incentives	• Special package of incentives is offered to 1st generation women entrepreneurs and are applicable for micro and small units only • Such as 25% investment subsidy on fixed capital Investment with a maximum limit per unit of 3 million • Seed capital assistance to First Generation Entrepreneurs @15% of the Machinery cost, which would be deducted from the eligible investment subsidy
Incubation Centre for promoting start-ups		• GoAP would encourage setting up of incubation centres in Smart Industrial Township (SIT), premier educational institutes, Mega Industrial parks and start-up villages under PPP mode.
Planned Industrial Development		• Various industrial projects are under pipeline in AP such as Industrial Corridors, National Investment and Manufacturing Zones (NIMZ), Information Technology Investment Regions (ITIR), Smart Industrial Township (SIT), Special Economic Zones (SEZ) and Industrial Parks.
Focus on thrust sectors		• GoAP should frame sector specific policies with a focus on state's position in the value chain, available and potential skill sets, locational advantages. As infrastructure, sector-specific parks, incentives, simplified clearances and skill development should be initiated

Source: Document of Andhra Pradesh Industrial Development Policy 2015-20 (website of APIIC)

The industrial projects of the state are classified into Mega, Large, and MSME projects based on the fixed capital invested and/or direct employment provided (Table 4.17). The Package Scheme of Incentives provides benefits to different kinds of projects based on the type of project. For instance, Mega Project define as the Industrial unit, which sets up with a capital investment of INR 2.5 billion and above or a project that creates employment to more than 2000 persons. Further, incentives for the industries with investment in Plant & Machinery less than INR 2.5 billion would be sanctioned by District Level Committee under the Chairmanship of District Collector and incentives for the industries with investment in Plant & Machinery more than INR 2.5 billion would be sanctioned by the state level committee under the chairmanship of commissioner of Industries

Table 4.17 Benefits for MSMEs and Large Scale Industries (LSIs) under Special Package Scheme of Incentives (PSI) of the Industrial Policy of Andhra Pradesh 2015-20

SL.No.	Description of the Incentives providing	Category of the Enterprise	Enterprise set by the General Category entrepreneur
			General and Women
1	Reimbursement of Stamp Duty / Transfer Duty	Micro	100%
		Small	100%
		Medium	100%
		Large	100%
2	Stamp Duty on Lease Land / Shed	Micro	100%
		Small	100%
		Medium	100%
		Large	100%
3	Stamp Duty on Financial Deed / Mortgage	Micro	100%
		Small	100%
		Medium	100%
		Large	100%
4	Rebate on APIIC IE / IDA	Micro	25% – 1million
		Small	25% – 1million
		Medium	25% – 1million
		Large	25% – 1million
5	Land conversion charges	Micro	25% – 1million
		Small	25% – 1million
		Medium	25% – 1million
		Large	-
6	Investment Subsidy	Micro	15%-2 million
		Small	15%-2 million
		Medium	-
		Large	-
7	Reimbursement of Power Tariff	Micro	INR 0 .75
		Small	INR 0 .76
		Medium	INR 0 .77
		Large	INR 0 .78
8	VAT/CST/SGST	Micro	100%- 5 years
		Small	50%- 5 years
		Medium	25%- 5 years
		Large	25%- 5 years

9	Pavala Vaddi (Reimbursable Interest on Term Loan)	Micro	max. 9% per annum -5years
		Small	max. 9% per annum -5years
		Medium	-
		Large	-
10	Quality Certification	Micro	50% – 0.2 million
		Small	50% – 0.2 million
		Medium	0.25
		Large	0.25
11	Cleaner Production Measures	Micro	25% – 0.5 million
		Small	25% – 0.5 million
		Medium	25% – 0.5 million
		Large	25% – 0.5 million
12	Patent Registration	Micro	50% – 0.2 million
		Small	50% – 0.2 million
		Medium	50% – 0.2 million
		Large	-
13	Seed Capital Assistance	Micro	10% -on machinery -1st generation
		Small	10% -on machinery -1st generation
		Medium	-
		Large	-
14	Reimbursement on skill upgradation	Micro	50% – INR 2000/- per head -one time
		Small	50% – INR 2000/- per head -one time
		Medium	50% – INR 2000/- per head -one time
		Large	-
15	For infrastructure development (limited to 10 million or 15 % cost of the Fixed capital Investment	Micro	-
		Small	-
		Medium	50 % on infrastructure cost and 51 % on infrastructure cost (For Woman Only)
		Large	do

Source: Website of Andhra Pradesh Industrial Infrastructure Corporation

4.4.4. Single Window Clearance System

Andhra Pradesh Industrial Single Window Clearance Act was introduced in 2002, to provide for speedy processing to issue of various licenses, clearances and certificates required for setting up of industrial undertakings for the promotion of industrial development and also to provide for an investor friendly environment in the state of Andhra Pradesh. In 2015, GoAP implemented Single Window Desk Policy to provide all clearances required to setup industry within 21 days. Under the Single Window Policy all the services, functions, and timelines were provided for obtaining various approvals/licences. For the same, an online portal has been launched for the registration. Currently, it provides approvals from 13 different departments for pre-establishment and 11 departments for pre-operation stage.

Table 4.18 Key approvals provided through Single Window Clearance System for establishing an Industrial Project in Andhra Pradesh

S. No.	Department	Name of the Clearance / Approval	Permissible Time Limits
Pre-Establishment Stage Approvals/ Clearances			
1	DISCOM-Department of Energy	Power Feasibility certificate/ sanction of power supply	7 days
		Power Connection	To be based on the length of the HT line
2	Chief Electrical Inspectorate-Department of Energy	Electrical Inspectorate statutory approval for drawings	7 days
3	Department of Municipal Administration & Urban Development	Building /Site Permission / Approval/License from Municipality/ UDA[1] /DT&CP[2] /	7 days
4	Department of Panchayati Raj & Rural Development	Building /Site Permission from Gram Panchayat	15 days / Deemed
5	Department of Municipal Administration & Urban Department	(i). Approval for water supply from ULB[3]s-MA & UD Department	7 days
		Water Connection	21 days
	Irrigation & CAD Department	ii). Permission to draw water from river/public tanks, Irrigation & CAD Department	15 days
		Permission to dig new wells from Ground Water Department	
6	Directorate of Factories-Department of Labor Employment Training and Factories	Factory Plan Approval	7 days
7	Directorate of Fire Services-Department of Home	Fire-No Objection Certificate	15 days
8	Commercial Tax- Department of Revenue	Registration for VAT, CST	3 days
9	Andhra Pradesh Pollution Control Board (APPCB)	Consent for Establishment	
		a) Green Category	7 days
		b) Orange Category	15 days
		c) Red Category	21 days
10	Land Administration-Department of Revenue	Approval of change of land use for Industrial purpose	If in Master Plan - 10 days
			If in Master Plan - 21 days
11	Registration & Stamps-Department of Revenue	Registration of Partnership Firms	3 days
12	Drug Control Administration-Department of Health, Medical & Family Welfare	License for manufacture of bulk drugs / formulations / cosmetics	15 days
13	AYUSH-Department of Health, Medical & Family Welfare	License for manufacture of ayurvedic, homeo, siddha, unani	15 days
Pre-Operation Stage Approvals/ Clearances			
1	Chief Electrical Inspectorate-Department of Energy	Final approval from Electrical Inspectorate- Department of Energy-Chief Electrical Inspector	7 days
2	Commercial Tax-Department of Revenue	Registration under Professional Tax	Spot approval
3	Directorate of Factories-Department of Labor	Factory Registration / licensing	7 days / Deemed for Registration only

	Employment Training and Factories		
4	Commissionerate of Labor - Department of Labor Employment Training and Factories	Registration of shops & establishments	Spot approval
5	Directorate of Fire Services- Department of Home	Occupancy certificate from Fire Services Department	15 days
6	Andhra Pradesh Pollution Control Board (APPCB)	Consent for Operation/ Authorization	
		a) Green Category	7 days
		b) Orange Category	15 days
		c) Red Category	21 days
		d) Authorization of units-handling hazardous wastes	Processed along with CFO
7	Directorate of Boilers- Department of Labor Employment Training and Factories	Boiler registration	15 days
8	Commissionerate of Labor - Department of Labor Employment Training and Factories	(i). Registration of establishments deploying contractual workmen	Spot approval
		(ii). Registration of establishments deploying inter-state migrant workmen	Spot approval
9	Andhra Pradesh Pollution Control Board (APPCB)	Registration of plastic manufacturers / recyclers	15 days
10	District Collector/ Civil Supplies Department	License for storage of petroleum, diesel and Naptha	15 days
11	Prohibition & Excise Department of Revenue	License for possession and use of Rectified Spirit and Denatured Spirit	21 days

Source: Websites of APIIC (Govt. of Andhra Pradesh)

Note: [1] Urban Development Authority, [2] Directorate of Town & Country Planning, [33] Urban Local Bodies

4.4.5. Sector Specific Policies

The state government of Andhra Pradesh has implemented various sector specific policies to promote investments in those sector. However, these policies are valid for only five years (2015-20). Table 4.19 shows the policies implemented by the Government of Andhra Pradesh.

Table 4.19 Major Sectoral Policies of the State

Policy	Valid Year	Objectives and Targets
Automobile & Automobile Components Policy 2015- 2020	2015-20	• To make Andhra Pradesh as preferred automobile manufacturing destination and to make an industry cluster for automobile and auto components • To attract new investments worth at least INR 200 billion in the sector by 2020 • Identify and address the existing infrastructure gaps affecting the automobile and auto components industry • Encourage skill development in the automobile domain with the help of PPP and Industry Institution partnerships

Textile & Apparel Policy 2015-2020	2015-20	• To develop Andhra Pradesh as textile manufacturing destination, modernize manufacturing set ups and to improve the productivity to cater domestic and international demand • To attract new investments worth INR 60 billion by 2020 • To create additional employment opportunity for 300,000 people by 2020 and 500,000 people by 2025
Biotechnology Policy	2015-2020	• To attract new investments worth INR 60 billion in the sector by 2020 • To create additional employment opportunity for 5,000 skilled personnel in the sector by 2020 • Technology would be provided by GoAP with overall investment cost of INR 20 million and Life science knowledge centre would be established across the state
Aerospace And Defence Manufacturing Policy	2015-2020	• To attract mega Aerospace & Defence manufacturing projects in the State and promote establishment of new Aerospace & Defence clusters in order to promote development of a sectoral ecosystem • To create Industrial township/s catering to Aerospace and Defence manufacturing sectors • To attract new investments worth INR 200 billion in the sector by 2020 • To create 5,000 additional highly skilled employment opportunities in the sector by 2020. • To attract at least 4 anchor unit investments of over INR 10 billion each in the sector in the policy period. • To attract orders for at least 10% of all offset obligations discharged by companies in India over the policy period.
AP Electronics Policy	2014-2020	• To develop Electronics Industry as an important Growth Engine for Andhra Pradesh through effective use of the talent pool, skill enhancement, promotion of innovation & future technologies • To attract investments of INR 400 billion in Electronics System Design & Manufacturing (ESDM) sector • To create an employment of 400,000 by 2020 • Set up of Mega Electronics Hub, Electronic Hardware Parks, Common Facilities Centre
AP Retail Trade Policy	2015-20	• To make Andhra Pradesh a hub for retail logistics by promoting setting up of warehouses and distribution centres • To identify and address existing infrastructure gaps affecting retail trade industry in AP • To attract new investments worth INR.50 billion in the sector by 2020 • To create 20,000 additional employment opportunities in the sector by 2020
AP Information Technology Policy	2014-2020	• To develop quality of life of its citizens, through high-quality Education and Healthcare, increased productivity in Agriculture and allied activities, creation of Employment by promoting Electronics and IT • To attract investment of INR 149 billion in IT and INR 372 billion in Electronics manufacturing • To create employment opportunity for additional 500,000 people by 2020 • To make at least one person e-literate in every household

Source: Website of Department of Industries (Andhra Pradesh) and APIIC

4.5. Overview of Special Economic Zones (SEZs) and Industrial Estates (IEs)

4.5.1. Andhra Pradesh Industrial Infrastructure Corporation (APIIC)

APIIC is a nodal agency, wholly owned Undertaking of Government of Andhra Pradesh, focus on industrial infrastructure development in Andhra Pradesh. APIIC was established in 1973 with authorised capital of INR 200 million. Main objectives of APIIC include formulate, promote, finance, aid, assist, establish, manage and control schemes, projects and develop infrastructure in the state. Currently, APIIC is spread across all the districts of AP with 10 zonal offices. So far, APIIC has developed more than 300 industrial parks spreading over an extent of about 121,655 acres (including allotted area). The parks majorly focus on industrial sectors such as IT, Bio-Tech, Automotive, Apparel, Pharma, Leather and Special Economic Zones in the state. Other keys projects manage by APIIC include Visakha Industrial Water Supply, Convention Centre, Mega Industrial Parks at Parawada, and Pashamylaram.

Figure 4.10 Industrial Zones in Andhra Pradesh

Source: APIIC

Figure 4.11 Key industrial clusters in Andhra Pradesh

Source: Department of Industry and Commerce

Andhra Pradesh Government has identified the potential industrial cluster for the development under Andhra Pradesh Vision 2029. These are shown in Figure 4.12.

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Figure 4.12 Potential industrial clusters

Source: Department of Industry and Commerce

4.5.2. Types of Industrial Areas

APIIC has developed Industrial Parks and SEZ in all the districts of Andhra Pradesh and developed industrial clusters based on the parameters like demand and the availability of the products in the surrounding areas of the cluster locations by availing Government of India grant under Micro & Small Enterprises - Cluster Development Programme (MSE-CDP) scheme for the newly developing clusters and up gradation of existing Industrial Parks

Table 4.20 List of various special Industrial Parks situated in Andhra Pradesh

S. No.	Name	Location
Agro and Food Processing Parks / Clusters		
1.	Srini Food Park Private Limited	Chittoor
2.	Andhra Pradesh Industrial Infrastructure Corporation Ltd Mega Food Park	Krishna
3.	Godavari Mega Aqua Food Park Private Limited	West Godavari
4.	Jain Irrigation systems Ltd.	Kurnool
5.	Nekkanti Mega Food Park Pvt. Ltd.	Nellore
6.	SH Food Processing Pvt. Ltd.	Prakasham
7.	North Coastal Integrated Food Park Pvt. Ltd.	Vizianagaram
8.	M/s. Vyshnavi Mega Food Park Pvt. Ltd.	Chittoor
9.	M/s Sri Varsha Integrated Food Park Pvt. Ltd.	Kadapa
10.	M/s Sri Chandana Integrated Food Park Ltd.	Vizianagaram
11.	Patanjali Food and Herbal Park Pvt. Ltd.	Vizianagaram
12.	Aveena Mega Food Park Pvt. Ltd.	Anantapur
13.	M/s North Andhra Mega Food Park Pvt. Ltd.	Srikakulam
14.	M/s Safe n Fresh Integrated Food ParkPvt. Ltd.	Nellore
15.	M/s Specialized SRK Foods Pvt. Ltd.	Chittoor
Textile and Apparel Parks / Clusters		
1.	Brandix India Apparel City (BIAC)	Visakhapatnam
2.	Integrated Textile Park (ITP)	Edlapadu, Guntur
Aerospace and Defence Parks / Clusters		
1.	Aerospace and Defence Park (on PPP basis)	Palasamudram, Anantapur
		Chittoor
		Nellore districts
2.	Air Cargo and Maintenance, Repair and Overhaul (MRO) facility Park	Visakhapatnam
Life Science Parks / Clusters		

1.	Mega Life Sciences Park	Visakhapatnam
2.	JN Pharma City	Visakhapatnam
IT Parks / Clusters		
1.	Information Technology Investment Region (ITIR)	Visakhapatnam
2.	Electronics Hardware Park	Kakinada (East Godavari)
3.	Electronic Manufacturing Clusters (EMCs)	Nellore
		Chittoor
		Visakhapatnam
		Krishna
4.	Incubation centres	Visakhapatnam
5.		Kakinada
6.		Tirupati

Source: Department of Industry and Commerce

4.5.3. Special Economic Zones (SEZs)

SEZ is the geographical region that are recognised by the Indian Government with an objective to promote export and investment from domestic and foreign sources in India. Indian Parliament passed the Special Economic Zones Act in 2005 (SEZs Act 2005) within which 7 Central Government SEZs were set up across Indi. And Visakhapatnam, Andhra Pradesh is one the SEZ. To encourage industries in the state, government offers special package of incentives and concessions under SEZ policy. The operational SEZs of the state comprise of 3 were IT/ITES SEZs, 5 Multi Product SEZs, 4 Pharmaceuticals SEZs, 2 Textile, 2 Leather Products, 1 Building Products, 1 Port based SEZ and 1 Food Processing SEZ. Visakhapatnam district has the highest number of SEZs (10), followed by Nellore district with 5 SEZs and East Godavari with 3 SEZs.

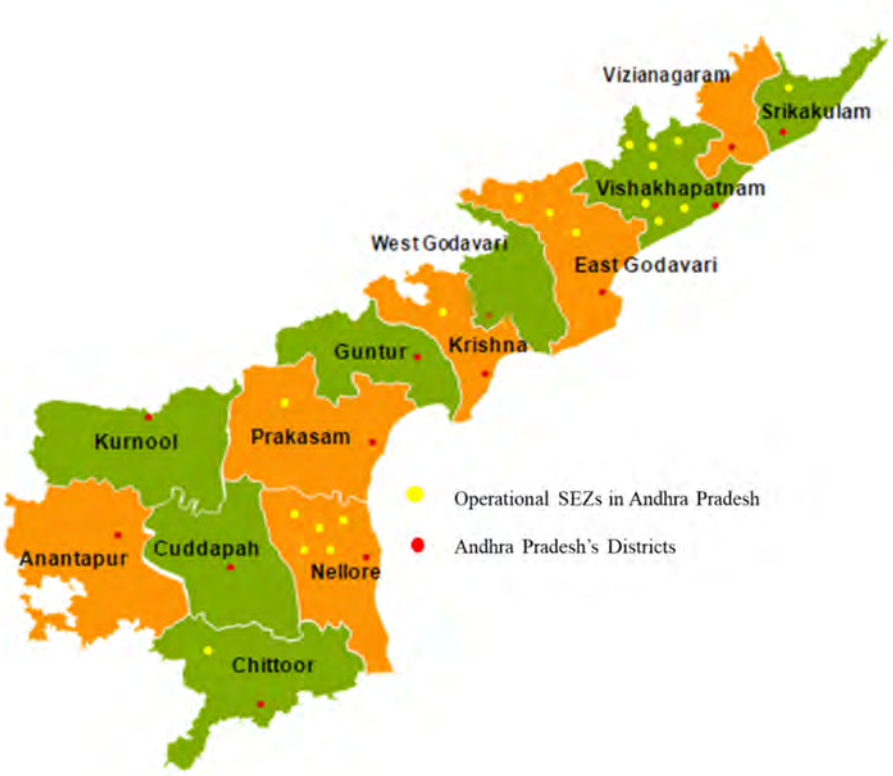

Figure 4.13 Number of SEZs, by Andhra Pradesh district

Source: Various Government Websites

4.5.3.1. *Incentives offered by SEZs*

Special Economic Zones (SEZs) Policy was announced in April 2000 under Export & Import by Government of India which provides various incentives to the tenants of SEZs. Government of India guidelines suggests that SEZs can be developed in public-private partnership or the joint sector domain or by State Governments themselves. Currently, there are 16 functional SEZ's in AP. Table 4.21 lists down such incentives and facilities available to the units and the developer offered by AP government.

Table 4.21 List of Incentives and Facilities Offered to the Units in SEZs and the SEZ Developers

S. No.	For the Units in SEZs	For SEZ developers
1.	Duty free import/domestic procurement of goods for development, operation, and maintenance of SEZ units	Exemption from customs/excise duties for development of SEZs for authorized operations approved by the BOA (Board of Approval)
2.	100% Income Tax exemption on export income for SEZ units under Section 10AA of the Income Tax Act for first 5 years, 50% for next 5 years thereafter and 50% of the ploughed back export profit for next 5 years. *(Sunset Clause for Units will become effective from 01.04.2020 wherein no Income Tax exemption would be given to SEZ units which will be setup after 01.04.2020)*	Income Tax exemption on income derived from the business of development of the SEZ in a block of 10 years in 15 years under Section 80-IAB of the Income Tax Act. *(Sunset Clause for Developers has become effective from 01.04.2017)*

3.	Exemption from Central Sales Tax, Exemption from Service Tax and Exemption from State sales tax. These have now subsumed into GST and supplies to SEZs are zero rated under IGST Act, 2017.	SEZ developers are also entitled for GST (CGST, SGST, and IGST) exemption.
4.	Single window clearance for Central and State level approvals.	SEZ Developers are deemed licensees for setting up of an electricity production or distribution unit within the SEZ. They do not require a separate distribution license for electricity distribution.

Source: Website of Special Economic Zones in India

4.5.4. Major Upcoming Industrial Developments

In order to attract foreign and domestic investment in the state and to encourage local industrial establishments, GoAP has planned various mega industrial projects in the state. An Industrial Area Development Authorities under the aegis of article 243 Q of the constitution would set up that would facilitate and encourage investment for these industrial zones such as Special Investment Regions (SIRs), industrial corridor nodes, etc. Further, majority of the industrial projects would be on Public-Private partnership mode. Some of the mega projects include Visakhapatnam-Chennai Industrial Corridor (VCIC), Chennai-Bengaluru Industrial Corridor (CBIC), Petroleum, Chemicals & Petrochemicals Investment Region (PCPIR), National Investment and Manufacturing Zones (NIMZ), Information Technology Investment Regions (ITIR) and others.

4.5.4.1. *Industrial Corridors*

Andhra Pradesh industrial corridors project would prove to be a crucial project to promote the developments of industries in the state. The project would connect majority of the districts and would increase the number industrial establishments in the state. As a result, economic base would become stronger in the coming years. The projects are funded by various multi-lateral agencies such as Asian Development Bank (ADB), Japan International Cooperation Agency (JICA), etc.

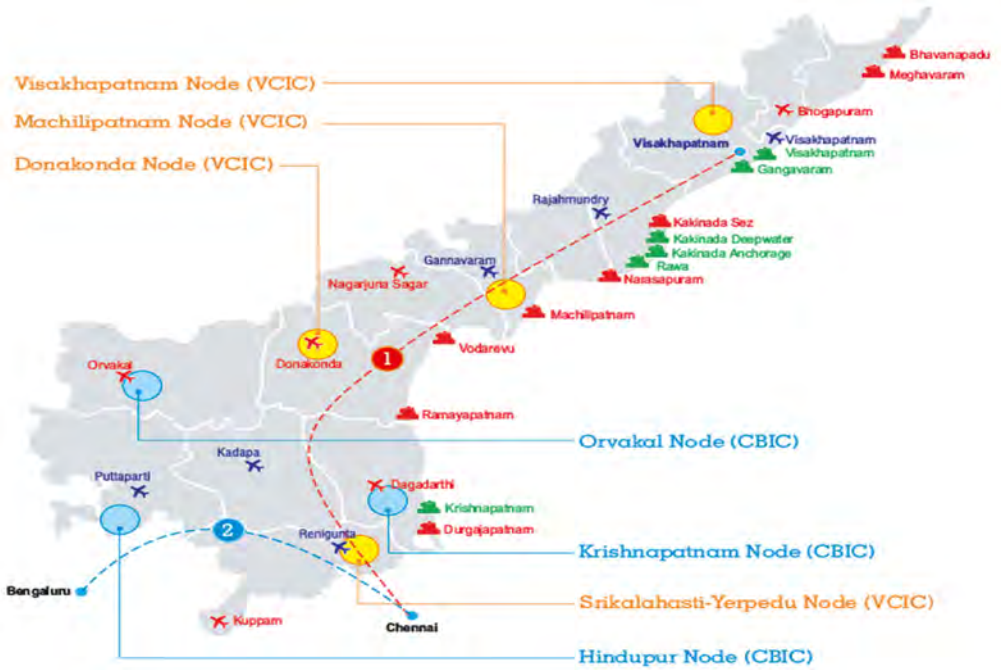

Figure 4.14 Andhra Pradesh Industrial Corridors Project

Source: APIIC
Note: 1-VCIC, 2-CBIC

4.5.4.2. *Visakhapatnam – Chennai Industrial Corridor (VCIC)*

The VCIC is part of the East Coast Economic Corridor, which is India's first coastal economic corridor. The corridor (VCIC) would run over 800 km from north to south covering almost the entire coastline of the state and connecting four nodes including Visakhapatnam (Phase I), Srikalahasti-Yerpedu (Phase I), Kakinada (Phase II) and Gannavaram-Kankipadu (Phase II). Industrial sector such as engineering, Pharma, textile sectors are expected to grow within the nodes of corridor. GoAP is also planning to develop infrastructure and connect industrial clusters of the State. For instance, Naidupeta cluster is located 8 km west of Naidupeta town in Nellore district which is near to Yelped – Srikalahasti Node. The cluster is consisting of Multiproduct SEZ spread in 2,549 Acre, Naidupeta Industrial Park in 1,244 Acres and Attivaram Industrial Park in 406 Acres. Further, the cluster has presence of some keys companies such as M/s Greentech Industries, M/s Prime Electricals Pvt. Ltd., Hindustan National Glass and Industries, Loyala Textiles Limited, Nithya Steels and Alloys, etc.

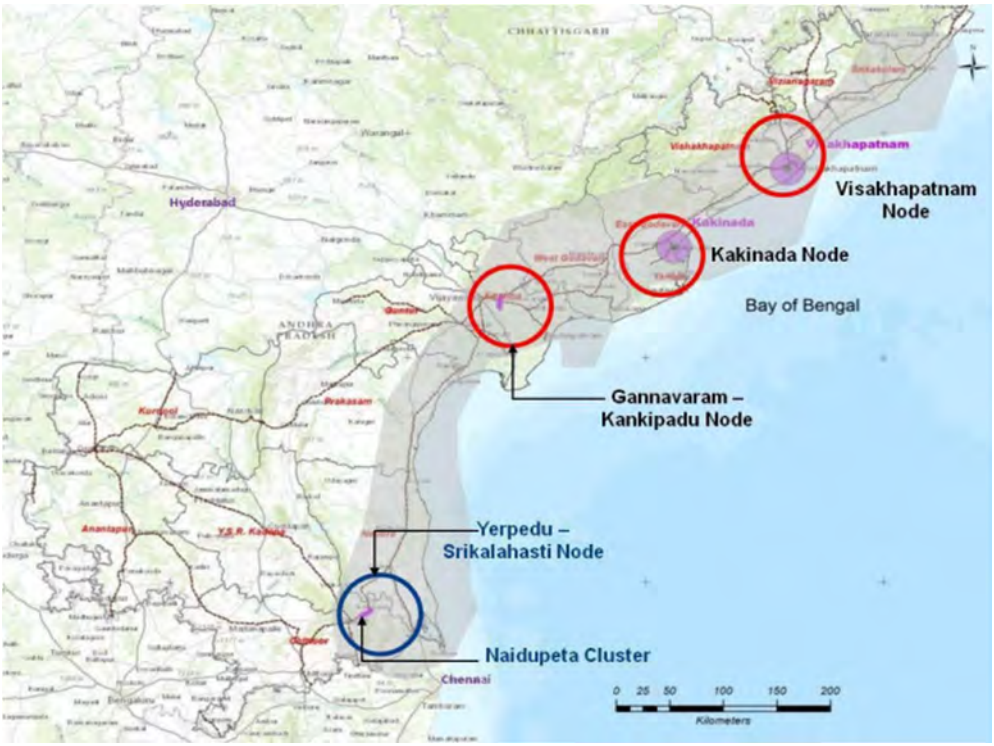

Figure 4.15 Industrial Clusters and Nodes of Visakhapatnam Chennai (VCIC)

Source: APIIC

4.5.4.3. *Chennai – Bengaluru Industrial Corridor (CBIC)*

The CBIC project is initiated by Government of India to develop the infrastructure sector of three state in order to transform the regions into a globally competitive investment destination. The project would be connecting several nodes within the three states (Karnataka, Andhra Pradesh and Tamil Nadu) and would develop the industrial areas close to the nodes. The project is expected to complete by 2023. Andhra Pradesh is key part of the project connecting three nodes within the state including Krishnapatnam Node covering 10,479 Acre, Hindupur Node covering 10,700 Acre and Orvakal Node covering 7,800 Acre.

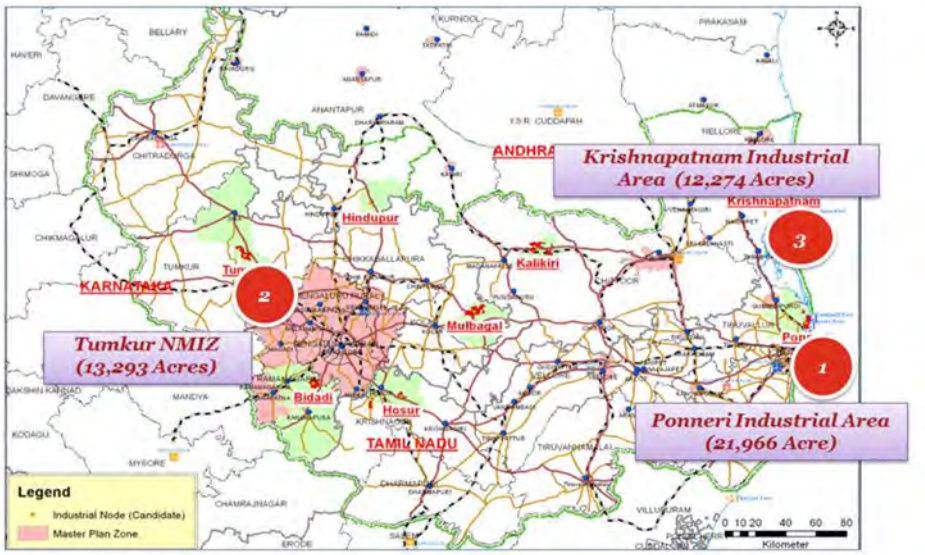

Figure 4.16 Chennai – Bengaluru Industrial Corridor (CBIC) Map

Source: Department of Industrial Policy & Promotion, MoCI, GoI

4.5.4.4. *Andhra Pradesh Petroleum, Chemicals & Petrochemicals Investment Region (APPCPIR)*

GoAP has initiated the PCRIR project in order to attract investments, both domestic and foreign, in the Petroleum, Chemicals and Petrochemical industry. The project was issued under PCPIR Policy released in May 2007. The internal infrastructure of the PCPIR would be built and managed by a Developer, or a group of Co-developers. The PCPIR would be consist of manufacturing facilities for domestic & export led production in petroleum, chemical & petrochemical sectors, refineries SEZs, industrial parks, FTW Zones and Export Oriented Units. PCPIRs at Visakhapatnam-Kakinada in the state of Andhra Pradesh is the largest PCPIR in India. APPCPIR would be consist of 6 SEZs (Figure 4.17) covering 7,325 hectares, refineries at Visakhapatnam and Kakinada, proposed utility project within the region such as Power Project of NTPC, Utility centre by Sumitomo Corporation, Japan and. LNG terminals at Gangavaram Port (by Petronet) and at Kakinada Port (GAIL & SHELL)

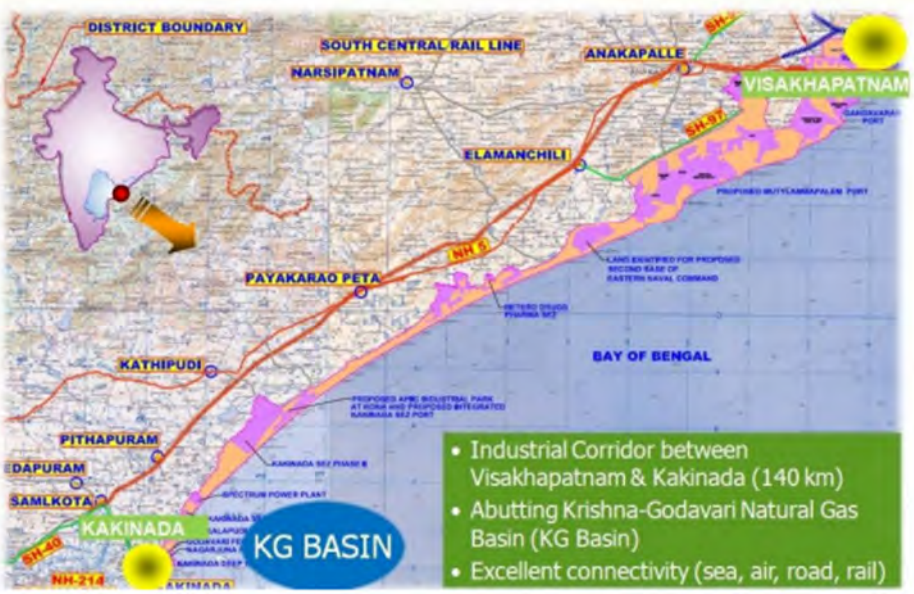

Figure 4.17 Location of APPCPIR

Source: Website of APPCPRI

4.5.4.5. *National Investment and Manufacturing Zones (NIMZ)*

NIMZ are define as large integrated industrial townships with state of-the-art infrastructure. According to NIMZ project, eight Investment Regions would be built along the Delhi Mumbai Industrial Corridor (DMIC) project as National Investment and Manufacturing Zones (NIMZs) and fourteen NIMZ outside DMIC region. Prakasam and Chittoor districts have been selected as outside NIMZ in Andhra Pradesh. NIMZ Chittoor would be built on land area of 12,819 Acre with cost of INR 400 billion. NIMZ Prakasam would be built on area of 14,231 Acre with cost of INR 108.6 billion.

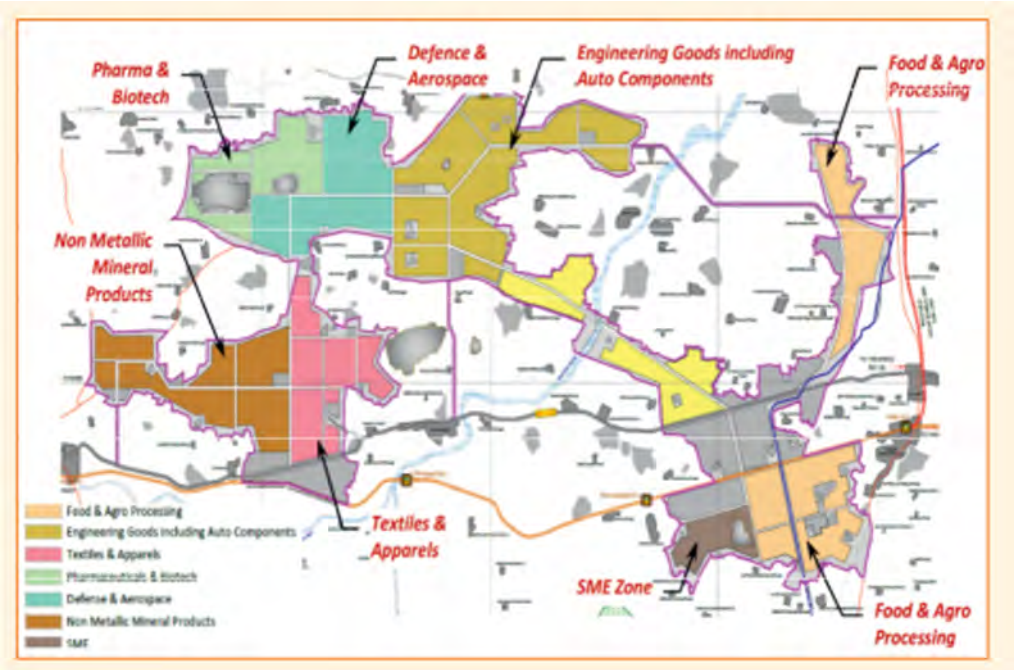

Figure 4.18 NIMZ Chittoor Map

Source: Website of APIIC

4.5.4.6. *Information Technology Investment Regions (ITIR)*

Government of India has initiated an Information Technology Investment Regions (ITIRs) policy in May 2008 to promote investment in the Information Technology (IT) / Information Technology Enabled Services (ITES)/ Electronic Hardware Manufacturing (EHM) units. Andhra Pradesh state government have been proposed ITIRs in two districts including Visakhapatnam and Chittoor in 2013. Such regions could include new integrated townships, SEZs, industrial parks etc. As per policy, the region should be covering an area of 40 sq.kms (40% processing and 60% Non-processing). AP has proposed INR 500 billion for Vizag (Visakhapatnam) ITIR. However, the Vizag project has not yet started.

4.5.4.7. *Smart Industrial Township (SIT)*

Under Andhra Pradesh Industrial development policy 2015-2020, GoAP would built Smart Industrial Township across various districts with the support of local self-government. GoAP would be providing infrastructure facilities to the districts. Following external infrastructure for SIT

a) Four lane road to the nearest national highway
b) Dedicated feeder for uninterrupted power supply
c) Dedicated water supply
d) Right of way to create a connectivity to the nearest railway line and or port
e) Fiber connectivity with no bandwidth constraints

In addition, construction of some foreign country specific industrial clusters are under-pipeline in Andhra Pradesh. For instance, KIA motors (South Korean company) would be setting up a manufacturing facility in Anantapur and other Korean companies are also planning to establish their business in the state. Therefore, GoAP would built a “mini South Korean township” in Anantapur town, about 60 km, from the under-construction automobile manufacturing facility of South Korean car major, KIA Motors, near Penukonda. Hence, Anantapur is expected to become a Korean hub in the coming years.

Also, Japanese industrial cluster is expected to set in the state after the visit of Andhra Pradesh CM to Japan in 2014. The Governments of Andhra Pradesh (A.P.) and has signed Memorandums of Cooperation (MoCs) for the development of A.P.’s capital region (Amaravati), establishment of industrial clusters and logistical network(s), support to the industry and smart energy sectors and human resource development. In addition, MoUs have been signed with METI, NEDO, Sumitomo Corporation, NEC, Mizuho Bank for investment purpose.

4.6. Investment by Japanese and Other Foreign Businesses

4.6.1. Foreign Direct Investments (FDI)

As per RBI statistics from 2016-17, Andhra Pradesh (including Telangana) ranked 6th, among all the states in the country in terms of the foreign investment that the state had attracted. Sectors such as petrochemicals, automotive, textiles, aerospace, renewable energy, food processing and the leather sectors have majorly attracted FDI in the state. Chart 4.12 shows the year-wise FDI inflows received by Andhra Pradesh (including Telangana) during (April – March) 2013-14 to (April – March) 2016-17. During the last five years, the state received a total of INR 454.7 billion in FDI equity inflows. Andhra Pradesh (including Telangana) FDI inflow increased to INR 147.7 billion in 2016-17 from INR 40.3 billion in 2013-14. In 2017-18, FDI declined by more than 45% generating INR 80.4 billion, however, till second quarter of 2018-19, AP (with Telangana) regained the FDI amount and reached INR 97.7 billion. In 2017-18, developments in global markets such as an increase in the US interest rates, growth in the advanced economies and others, which led to disinterest among the foreign investors to invest in India. Andhra Pradesh was affected from the overall FDI decline and received almost half FDI amount (2017-18) in comparison to last year (Chart 4.12)

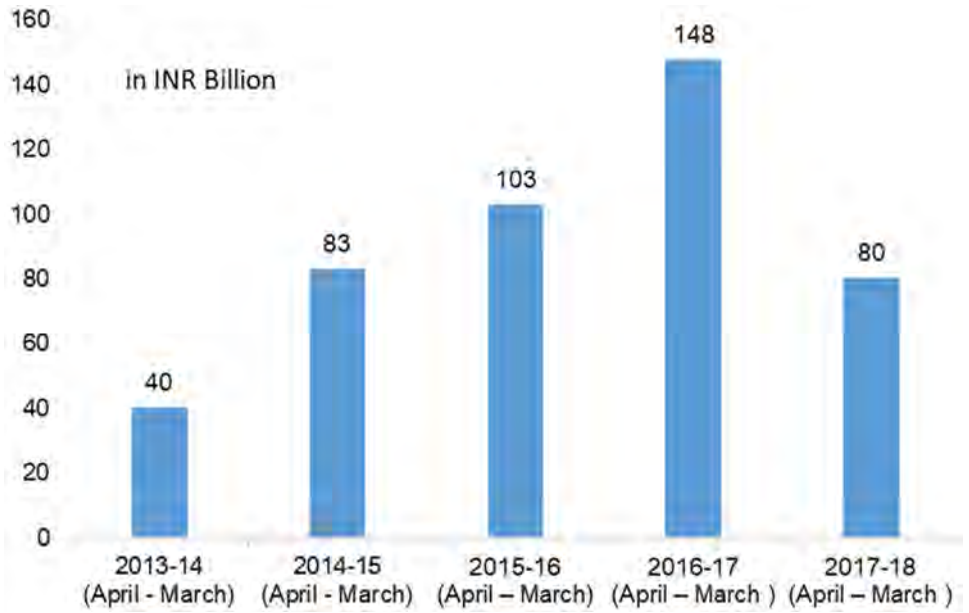

Chart 4.12 Andhra Pradesh's (including Telangana) year-wise received FDI Equity Inflow from 2013-14 to 2017-18

Source: Website of Dept. of Industrial Policy & Promotion (Govt. of India)

According to the RBI, Hyderabad Regional Office has a share of 4% in India's cumulative FDI inflows and ranked 6th after the regional offices of Tamil Nadu and Gujarat. Some of the FDI key projects in AP are under-construction such as real estate project, named Celest, in Vishakhapatnam, Medi City in Amravati and Kia motors's car manufacturing facility in Anantapur. Medi City is one of the largest FDI project in Andhra Pradesh, would be investing

around INR 146 billion by B.R. Shetty group of Abu Dhabi. The project would create 400 medical seats and would set up 1000 bed hospital that would be serving free of cost.

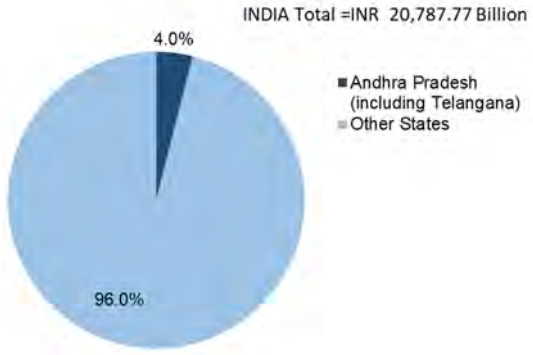

Chart 4.13 Cumulative FDI Inflow from all countries From Jan. 2000 to March 2018

Source: Website of Dept. of Industrial Policy & Promotion (Govt. of India)

4.6.2. Recent Investments (Domestic and Foreign)

According to the Department of Industrial Policy & Promotion (DIPP), FDI inflows in Andhra Pradesh (including Telangana) between April 2000 and March 2018 reached INR 823.9 billion. The proposed investment of the intention project (excluding Telangana) increased from INR 215 billion in 2014 to INR 295 billion in 2017 (Chart 4.14). Out of total intention value, only INR 45 billion was implemented in the 2017. Further, in 2017, only 62 projects were implemented out of 154 intention projects (Chart 4.15). However, in the coming years, more projects are expected to be implemented in the state. Also, Andhra Pradesh government has signed 734 MoUs involving investments of about INR 4.39 trillion, at Sunrise AP Investment Summit 2018. Under these MoUs, Reliance Industries Ltd would be investing INR 500 billion in the digital technology and oil and gas sectors, a greenfield port for INR 40 billion would be set up at Bhavanapadu. Out of 734 MoUs, 10 MoUs were signed in the aerospace and defence sectors with an aim to bring investments of INR 94.06 billion.

Chart 4.14 Status of Industrial Memorandum Intention & Implementation of Projects (2012-2017)

Source: Website of Dept. of Industrial Policy & Promotion (Govt. of India): SIA Statistics

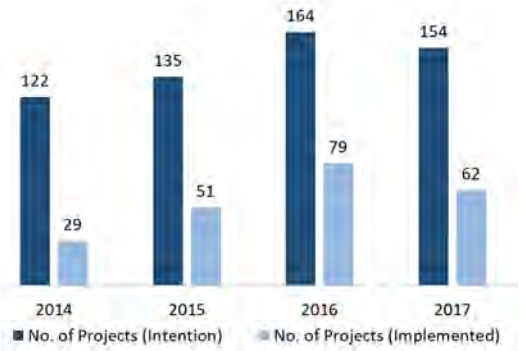

Chart 4.15 Status of Industrial Memorandum Intention & Implementation of Investment -Value (2012-2017

Source: Website of Dept. of Industrial Policy & Promotion (Govt. of India): SIA Statistics

4.6.3. Presence of Japanese Companies

As per Embassy of Japan statistics, Andhra Pradesh (excluding Telangana) has 16 registered Japanese companies as of October 2017. The state has captured only 1.2% in term of top preferred destination for the Japanese companies (Chart 4.16). Currently, Japanese companies such as, Kikuwa, Aisan, Piolax, Unicharm Nola & Dola, Isuzu, Kobelco Construction Equipment, Nippon Seiki, Nittan Valves. and many more have their offices and factories in Andhra Pradesh. Majority of the Japanese companies are located in Sri city of Andhra Pradesh.

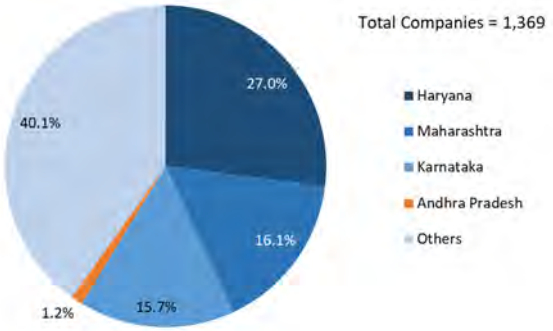

Chart 4.16 States of India with highest number of Japanese Companies (as of October 2017)

Source: Website of the Embassy of Japan in India

In terms of growth of Japanese Business Establishments in India, Andhra Pradesh (including Telangana) registered CAGR of 30.16% during 2008-17. Japanese establishment increased from 25 in 2008 to 130 in 2017. Japanese Business Establishment include Liaison Office/ Branch Office etc. of a Japanese company in India, Indian Subsidiary of a Japanese company and Business Enterprise founded in India by Japanese nation.

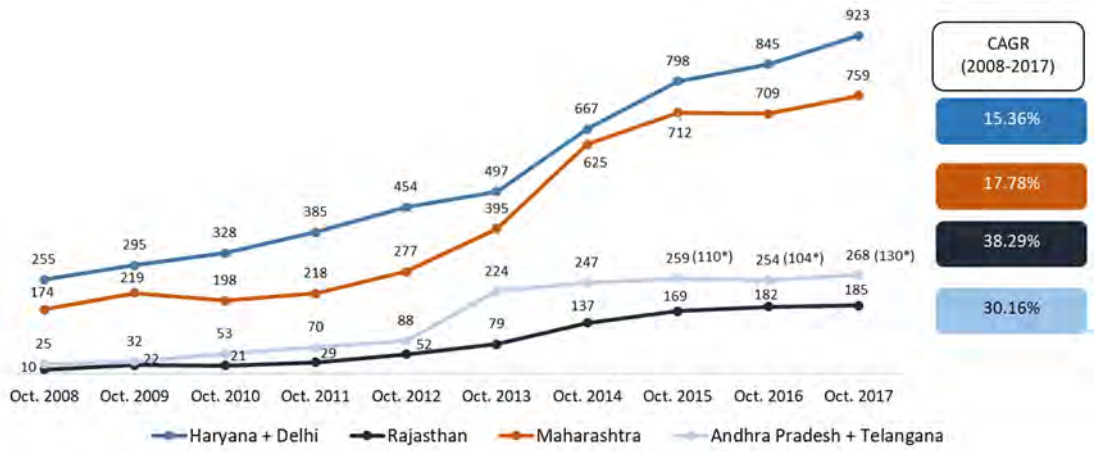

Chart 4.17 Year-wise number of Japanese Business Establishments in Andhra Pradesh, Haryana, Rajasthan, and Maharashtra (2008-2017)

Source: Website of the Embassy of Japan in India

Note: * Oct. 2015, 2016, and 2017 data for New Andhra Pradesh in round brackets

Large number of Japanese projects are under pipeline in Andhra Pradesh.

- In 2018 Japanese building materials and housing equipment manufacturer LIXIL Corporation would be investing INR 4.77 billion in acquiring Hyderabad based company 'Sentini Sanitarywares Private Limited' and also the company recently set up new manufacturing facility near Vijayawada, Andhra Pradesh in order to expand its business in India.
- Another Japanese company named THK would be investing INR 13 billion to build a manufacturing facility in Sri city. Toray Industries (India), would be investing INR 10 billion to set up manufacturing unit in Sri City.

Further, the Indian Government has signed MOUs with Japanese companies to provide skill development trainings as per industry requirements:

- Andhra Pradesh State Skill Development Corporation (APSSDC) has entered into a MoU with Johnson Controls-Hitachi Air Conditioning India Limited (JCH-IN) to set up Model Skill Development Centres (MSDCs) in the State. MSDCs would be offering courses in AC repair and maintenance for four batches of 20-30 candidates each, training about 600 candidates a year.
- In addition, there is high demand for trained engineers for multi-national companies located in Nellore special economic zones (SEZs). For instance, Meidensha's group company Prime Meiden requires nearly 600 to 800 qualified human resources to work at its Menakur SEZ factory engaged in manufacture of power transmission and distribution systems in the next five years. Therefore, many Japanese companies have tied-up with the NBKR Institute of

Science and Technology, Vidyanagar, Nellore district, to train suitable human resources as per their company requirement.

Currently, GoAP is planning to develop South Korean City project in order to attract more Korean companies. However, there is no specific industrial area or cluster for Japanese companies. Government of Andhra Pradesh need to focus on developing industrial cluster based on foreign countries requirements to attract more investment.

4.7. Labour Information and Working Environment

4.7.1. Key Labour Statistics

According to Labour Bureau of India statistics, Andhra Pradesh had over 39 million persons which were of the working age (aged 15 years or more) in 2015. This is 4.3% of the 926 million persons, of age 15 years or more, residing in the whole country. Andhra Pradesh had 19.5 million males and 19.9 million females of the working age (15 years or more). 32.3% of the total working age population lives in urban area which is lower in comparison to India statistics (34.7%). Majority of the working population lives in rural area (67.7%) owing to agriculture sector which employed 57.7% of total working population.

Labour Force Participation Rate (LFPR) is defined as the number of persons in the labour force per 100 persons of working age (15 years & above). Overall LFPR of Andhra Pradesh is 62.5 which is higher than that of the whole country 50.3 (Table 4.22). Further, LFPR of females in Andhra Pradesh is 46.6 which double than the national LFPR of 23.7 for women. The urban women of Andhra Pradesh have low participation in the state's economic activities in comparison to rural participation. The LFPR of urban female 16.4 and rural female is 50.3. The reason for high employment of female in rural location is due to agriculture sector and also, fewer restrictions on women workers and high conviction rates for crimes against women have contributed in the growth of women labour force participation rate in AP.

Table 4.22 Labour Force Participation Rate (%) for persons aged 15 years & above in Andhra Pradesh / India (2015-16)

Description	Men	Women	All
Andhra Pradesh			
Rural	81.9	56.1	69.2
Urban	67.9	22.1	44.8
Rural + Urban	78.1	46.6	62.5
India			
Rural	77.3	26.7	53.0
Urban	69.1	16.2	43.5
Rural + Urban	75.0	23.7	50.3

Source: Fifth Annual Employment - Unemployment Survey (2015-16) Labour Bureau, Govt. of India

The main effects of having a low female participation in the Workforce is that, it does not allow the economic growth of the region to be at an optimum level. Secondly, the unemployment rate of the region goes up. Andhra Pradesh is facing both of these effects. The Unemployment Rate (UR) of any region can be defined as the number of persons unemployed per 100 persons in the labour force (employed + unemployed persons). The UR of women in the state is 4.2 which is lower than the national UR of women, that is, 8.7 (Table 4.23). The urban unemployment rate of the state is 9.5 which is high in comparison to national urban unemployment rate of 4.9.

Whereas, the state is in better position in term of rural areas. Andhra Pradesh's rural UR is 3.4, owing to high employment in agriculture sector.

Table 4.23 Unemployment Rate (per 100) for persons aged 15 years & above in Andhra Pradesh / India (2015-16)

Description	Men	Women	All
Andhra Pradesh			
Rural	4.0	3.4	3.8
Urban	2.8	9.5	4.4
Rural + Urban	3.7	4.2	3.9
India			
Rural	4.2	7.8	5.1
Urban	3.3	12.1	4.9
Rural + Urban	4.0	8.7	5.0

Source: Fifth Annual Employment - Unemployment Survey (2015-16) Labour Bureau, Govt. of India

As per the Fifth Annual Employment – Unemployment Survey (2015-16) carried out by the Labour Bureau (Govt. of India), 57.7% of workers were engaged in Agriculture and related activities, followed by Manufacturing sub-sector employed 8.4% of the total workforce of Andhra Pradesh which is lower than the national workforce working in the manufacturing sector, that is 10.5% (Chart 4.18).

Chart 4.18 Distribution of Workers % (aged 15 years & above) by Industry in Andhra Pradesh / India (2015-16)

Source: Fifth Annual Employment - Unemployment Survey (2015-16) Labour Bureau, Govt. of India

The distribution of workforce in the Agriculture, Forestry, and Fishing sector has increased for Andhra Pradesh owing to growing food processing industry and government initiatives. In comparison with 2013-14 statistics, all the sectors including construction, wholesale and retail trade, manufacturing and others have witnessed marginally decline in their share in 2015-16

(Chart 4.19). However, agriculture sector of Andhra Pradesh has witnessed increasing share from 2013-14 to 2015-16.

Chart 4.19 Distribution of Workers (aged 15 years & above) by Industry in Andhra Pradesh (2013-14 and 2015-16)

Source: Fifth Annual Employment - Unemployment Survey (2015-16) Labour Bureau, Govt. of India

Andhra Pradesh revise wages on half yearly basis based on the Consumer Price Index. Minimum wages provided to the workers in Andhra Pradesh consist basic pay and Variable Dearness Allowance (VDA) (Table 4.24) As per latest statistics (April, 2017- Sep, 2017), the average Minimum wage for unskilled worker was INR 8,055 per month, wages depending on occupation. Minimum wage for skilled worker was INR 11,670 per month. Wages are given as per normal working hours which is 9 hours for an adult. Occupation such as Lab Technician, Ministry in any trade, Production Assistant, Blacksmith, etc. falls under skilled labour category, Supervisor, Works Supervisor, /Computer Programmer, Asst. Engineer, etc. are falls under highly skilled category. Apart from highly skilled, skilled, semi-skilled, un-skilled category, GoAP has made 'office-staff' category which include managers, steno, Clerk / Typist /Cashier/ Data Entry Operator and unskilled. In comparison to minimum wage for skilled, semi-skilled and unskilled, Maharashtra offered high wages in comparison to AP, Rajasthan. Table 4.25 shows the per month minimum wage comparison of four states (2017).

Table 4.24 Minimum Wage Rates in Andhra Pradesh from January, 2016 to July,2018

Name of the Category (Technical)	Minimum Wages Category	Oct 2015 - Mar 2016	Apr 2016 - Sep 2016	Oct 2016 - Mar 2017	Apr 2017 - Sep 2017
Highly Skilled	Basic Pay	10,079	10,079	10,079	10,079
	VDA	3,484	4,029	4,278	4,479
	Total	**13,563**	**14,108**	**14,357**	**14,558**
Skilled	Basic Pay	8,079	8,079	8,079	8,079
	VDA	2,793	3,230	3,430	3,591
	Total	**10,872**	**11,309**	**11,509**	**11,670**
Semi-Skilled	Basic Pay	6,579	6,579	6,579	6,579
	VDA	2,279	2,635	2,798	2,930
	Total	**8,858**	**9,214**	**9,377**	**9,509**
Un-Skilled	Basic Pay	5,579	5,579	5,579	5,579
	VDA	1,926	2,227	2,365	2,476

	Total	7,505	7,806	7,944	8,055
Office Staff		**Oct 2015 - Mar 2016**	**Apr 2016 - Sep 2016**	**Oct 2016 - Mar 2017**	**Apr 2017 - Sep 2017**
Manager	Basic Pay	10,079	10,079	10,079	10,079
	VDA	3,484	4,029	4,278	4,479
	Total	**13,563**	**14,108**	**14,357**	**14,558**
Steno/Accountant	Basic Pay	6,579	6,579	6,579	6,579
	VDA	2,279	2,635	2,798	2,930
	Total	**8,858**	**9,214**	**9,377**	**9,509**
Clerk / Typist /Cashier/ Data Entry Operator	Basic Pay	6,079	6,079	6,079	6,079
	VDA	2,102	2,431	2,581	2,703
	Total	**8,181**	**8,510**	**8,660**	**8,782**
Unskilled	Basic Pay	5,579	5,579	5,579	5,579
	VDA	1,926	2,227	2,365	2,480
	Total	**7,505**	**7,806**	**7,944**	**8,059**

Source: Website of the Labour Department Andhra Pradesh (labour.ap.gov.in)

Table 4.25 Minimum Wage Rates Comparison (INR per month)

State	Rajasthan	Haryana	Maharashtra	Andhra Pradesh
Highly-skilled	7,202	10,568	-	14,558
Skilled	5,902	9,585/ 10,064	4,344-13650	11,670
Semi-skilled	5,642	8,694.2/ 9,128	4,144-12,950	9,509
Unskilled	5,382	8,280	3,944-12,450	8,055

Source: Various Websites

4.7.2. Amendments in Labour Laws

Andhra Pradesh government aims to become one amongst the three best states in India by 2022, the best state by 2029 and a leading global investment destination by 2050. In order to fulfil the vision, GoAP recently amended and implemented labour laws to enhance the business environment and to create job opportunities in the state. Recent amendments focus on relaxation on size of the establishment, disputes within the establishment, overtime working hours and others.

Table 4.26 Recent amendments in Labour Laws in Andhra Pradesh

Original Act	Amendment Act Name / Notification	Amendment / Notification Year	Amendment(s) / Exemptions Provided	Implications
Contract Labour (Regulation and Abolition) Act, 1970	Contract Labour (Regulation and Abolition) Andhra Pradesh Act	2015	Applicability of the Contract Labour (Regulation and Abolition) Act, 1970 for establishments and contractors has been increased from twenty contract workers to fifty contract workers	This amendment has made it easier for some of the small and medium sized companies which have less than 50 contract workers. They do not have to fulfil the condition of registration and getting a license for employing less than 50 contract workers.

				Earlier, all the establishments which had 20 or more contract workers had to get themselves registered and get a license for the contract workers.
Industrial Dispute Act, 1947	Industrial Disputes (Andhra Pradesh) Act,2015	2015	For applicability of Chapter V-B regarding "pre-condition of permission from the Appropriate Government, notices, compensation for lay-off, retrenchment, closure", the minimum number of workmen in the industrial establishment is increased from 100 to 300 workmen	The number of workmen has increased in order to take Government approval. Disputes between workman and employer should be inform as early as possible for the settlement. Also, in the Industrial Dispute Act, the word 'Go Slow' has been explained
			No dispute between the workman and his employer connected with or arising out of discharge, dismissal, retrenchment or termination will be treated as an industrial dispute if any such dispute is not raised in conciliation proceeding within a period of three years from the date of such discharge, dismissal, retrenchment or termination.	
			Explanation of "Go Slow" is provided:- It means "any such activity by any number or persons, employed in any industry, acting in combination or with common understanding, to slow down or to delay the process of production or work purposely whether called by work to rule or by any other name so as the fixed or average or normal level of production or work or output of workman or workmen of the establishment is not achieved	
AP Labour Welfare Fund Act 1987	AP Labour Welfare Fund Act 1987,2015	2015	According to sub-section of section 10 of this act, every employee should contribute INR 2 per year to the fund and employer should contribute INR 5, in respect of each such employee which has increased to INR 30 from INR 2 and INR 70 from INR 5	As per amendment, new contribution amount for employee would be INR 30 and for employee, amount would be INR 70

Source: Various Government Directory and news articles

4.7.3. Female Labour

The female workforce in Andhra Pradesh is 19.9 million out of the total workforce of 39 million 2015. This means that there are about 50.5% females in the total workforce of the state. According to the Fifth Annual Employment - Unemployment Survey, the participation of female labour in Andhra Pradesh has decreased over the last decade (Chart 4.20). Also, the Female

Labour Participation Rate of females in Andhra Pradesh (46.6%) is higher than the national LFPR of India (23.7%).

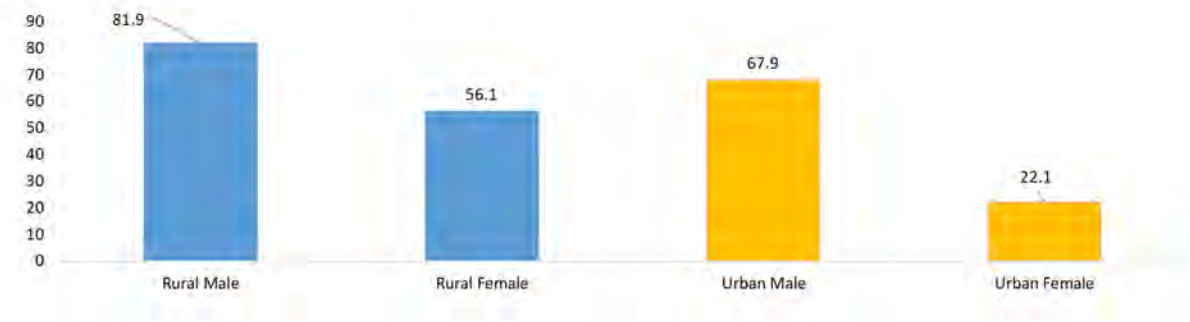

Chart 4.20 Female Labour Force Participation Rate(in %) in Andhra Pradesh (2015-16)
Source: Fifth Annual Employment - Unemployment Survey (2015-16)

Low female labour force participation is mainly due to low literacy rate, early marriage, stability in family income, long distance to work place, lack of skill training programmes, unsafe to travel for work, etc. Further, urban female LFPR is low in comparison to rural female LFPR as rural female are mainly engaged in agriculture and related activities. On the other hand, urban females are dependent on service sector which is niche and limited opportunities in comparison to agriculture sector of the state. However, Government of Andhra Pradesh has amended the labour laws to encourage women labour participant in the state. State government has made compulsory for IT companies and other establishment to provide security and basic amenities for working women. Now, female labours are allowed to work on night shift working hours from 8.30 pm to 6 am.

Table 4.27 Recent amendments in Labour Laws related to Female Labour

Original Act	Amendment Act Name / Notification	Amendment / Notification Year	Amendment(s) / Exemptions Provided	Implications
Maternity Benefit Act, 1961	Maternity Benefit (Amendment) Act	2017	• Increase in the maternity leave from 12 to 26 weeks for working women less than two surviving children • Provisions for work from home for nursing mothers • Mandatory provision for establishments having 50 or more employees to have the facility for creche • Extension of 12 weeks of maternity benefits to the' commissioning mother' and the 'adopting mother' from the date the child is hand over.	The paid maternity leave can be availed 8 weeks before the expected date of delivery. Before the amendment, it was 6 weeks
Andhra Pradesh Shops and Establishments Act, 1988	Andhra Pradesh Shops and Establishments Act, 1988	2016	Earlier women were not allowed to work beyond 8.30 p.m. Now, government has permitted to work between 8:30 pm and 6:00 am with conditions such as Consent of the woman worker is required, Adequate protection of dignity, honour and safety should be provided, Employer should provide adequate protection from instances of sexual harassment at workplace Transportation facility must be provided to the women workers from the establishment to the doorstep of their residence	With the implementation of the law, working condition for women will improve particularly in-service sector.

Source: Various news articles

4.7.4. Labour Relations

As per the Andhra Pradesh Statistics Abstract 2016, total number of industrial disputes (strikes and lockouts), number of workers affected, and the number of man-days lost, all of them have from 2013 to 2015. The year 2015 witnessed 14 number of industrial disputes in the state, involving 15,500 number of workers and affecting loss of over 2 million man-days.

Figure 4.19 Number of Industrial Disputes in Andhra Pradesh from 2013 to 2015

Source: Andhra Pradesh Statistics Abstract 2016

Key causes for industrial disputes include wages and allowances, bonus, reinstatement of terminated / suspended workers, leave and hours of work, retrenchment, and others. In order to reduce the disputes in factories, GoAP recently amended the Industrial Dispute Act, the changes would encourage the employees to report regarding disputes as early as possible for dismissal. Hence, number of disputes in AP is expected to reduce in the coming years.

4.8. Development of Human Resource

4.8.1. Status of Higher and Technical

Development of skilled manpower is pre-requisite for economic and industrial growth. Andhra Pradesh realised this fact and has been focussing on infrastructure development and providing technical education to its youth. Currently, Andhra Pradesh has 28 State University including 1,933 private colleges and 250 Government colleges, 7 Deemed University and 3 Central University offering courses from various streams. In 2015-16, AP had 322 engineering colleges, 394 MBA colleges, 159 MCA colleges and 313 polytechnic institutes. The trend of the numbers of technical institutes for the last three years has been shown in Chart 4.21. The total number of MCA colleges is constantly decreasing whereas demand for polytechnic institutes is increasing owing to growing interest for practical and skill development learnings which are more income oriented.

As per APSSDC, Andhra Pradesh will face an incremental human resources requirement of approximately 10 million skilled workers between 2012 till 2022, across the high-priority and emerging sectors. To fulfil the requirement, government is targeting to provide skilling and entrepreneurship training to 20 million people in AP in the next 15 years.

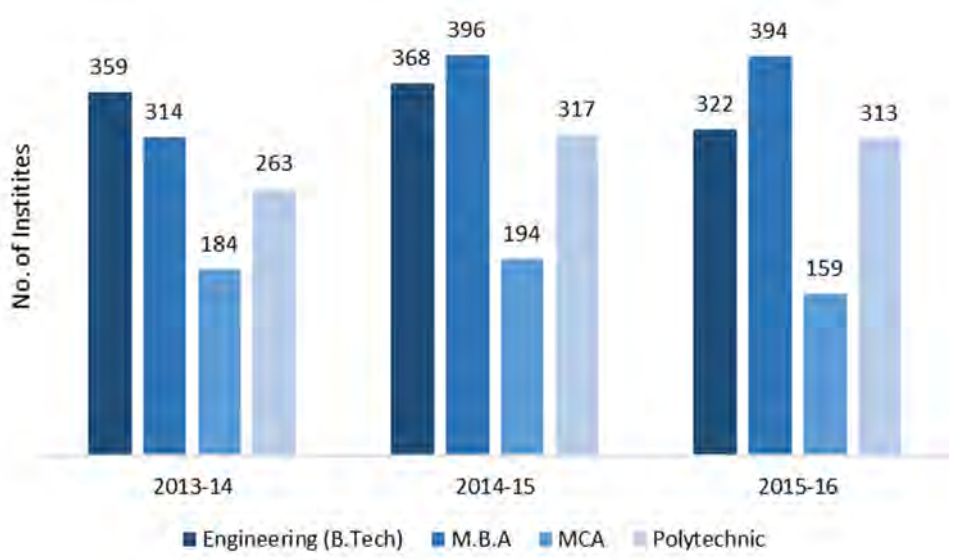

Chart 4.21 Number of Technical Education Institutions (Govt. + Private) in Andhra Pradesh (2013-14 to 2016-17)

Source: Statistical Abstract Andhra Pradesh Report

The Directorate of Technical Education is responsible for imparting requisite technical skills in the field of Engineering and Technology, Architecture and Urban Planning, Management, and Computer Application. According to DIRECTORATE OF ECONOMICS & STATISTICS (2016-17), the state had a total of 328 engineering colleges (310 govt. and 18 private) with

student strength of 88,439 and 311 polytechnic institutes (82 govt. aided and 229 privates) with student strength of 81,603. (Table 4.28).

Table 4.28 Technical Education Institutions (Govt. + Private) and No. of Admission

Course	2013-14		2014-15		2015-16		2016-17	
	Number of Institutes	Admissions	Number of Institutes	Admissions	Number of Institutes	Admissions	Number of Institutes	Admissions
Engineering (B.Tech)	359	164,115	368	173,634	322	74,300	328	88,439
M.B.A	314	31,662	396	46,530	394	29,027	-	-
MCA	184	13,400	194	13,750	159	4,498	-	-
Polytechnic	263	73,451	317	47,046	313	83,617	311	81,603

Source: Statistical Abstract Andhra Pradesh Report

Revised budget for the development of education sector for 2017-18 was INR 203 billion increased from INR 197 billion (2016-17). This budget spends on opening of new colleges, maintenance & upgradation of existing colleges, scholarships, machinery and equipment, teacher's salaries and other schemes. For instance, about 64% of school budget spend on payment of salaries in Mandal Praja Parishads and Zilla Praja Parishads. Further, the education budget has some funds for teacher's training programmes approved by Project Approval Board (PAB) such as in-service Training of Teachers for 10 days, induction training of teachers for 10 days with outlay of INR 5.5 million., school leadership management course for 30 days, Training for Educational Officers, Training of Master Trainers, etc.

Figure 4.20 shows the two organizational structure for technical education and skill development. Department of Labour Employment, Training and Factories with Department of skill development, Entrepreneurship and Innovation (DSDEI) together, established a corporation on public private partnership(PPP) 'APSSDC' (Figure 4.20) which promotes skill-development & entrepreneurship in the state of Andhra Pradesh. To motivate people to opt for the training programmes in various skills APSSDC planned to set up counselling centres in the 29 villages that constitute CRDA (Capital Region Development Authority) in 2015. The layout of the centres has been finalised, however, no information is available regarding the implementation and construction of the centres. APSSDC, also planned to begin Gram Tarang Employability Training Services within which training in skills such as sewing, jute bag manufacturing and terracotta jewellery would be offered to the villagers.

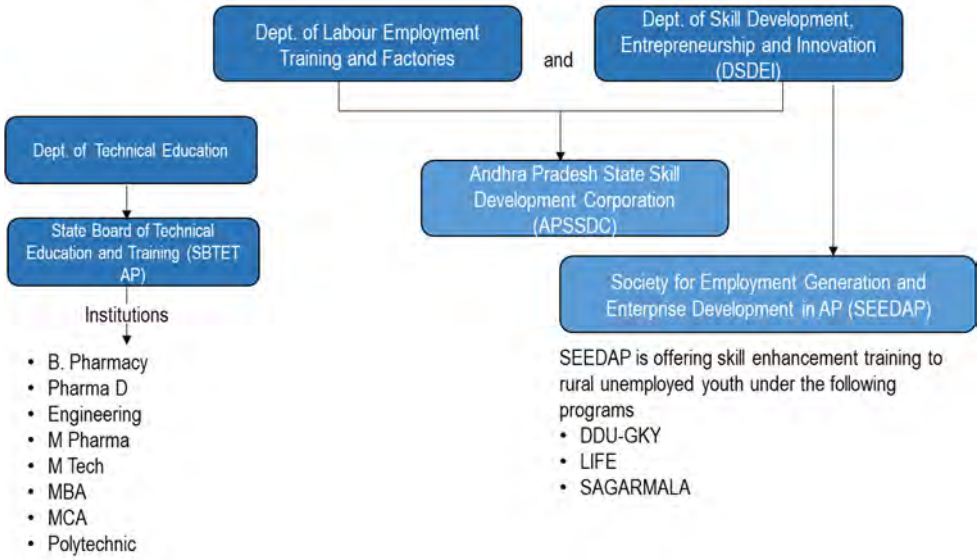

Figure 4.20 Organisational structure for skill development & technical education in AP

Source: Various Government Websites

4.8.2. Status of Industrial Training Institutes (ITIs)

Industrial Training is part of Craftsman Training Scheme, was introduced by government of India, however, the responsibilities under the scheme were transferred to concerned State Government department that is Directorate of Labour Employment Training and factories. Currently, Commissioner of Employment and Training (Figure 4.21) is managing ITIs of the state and also providing certificate courses.

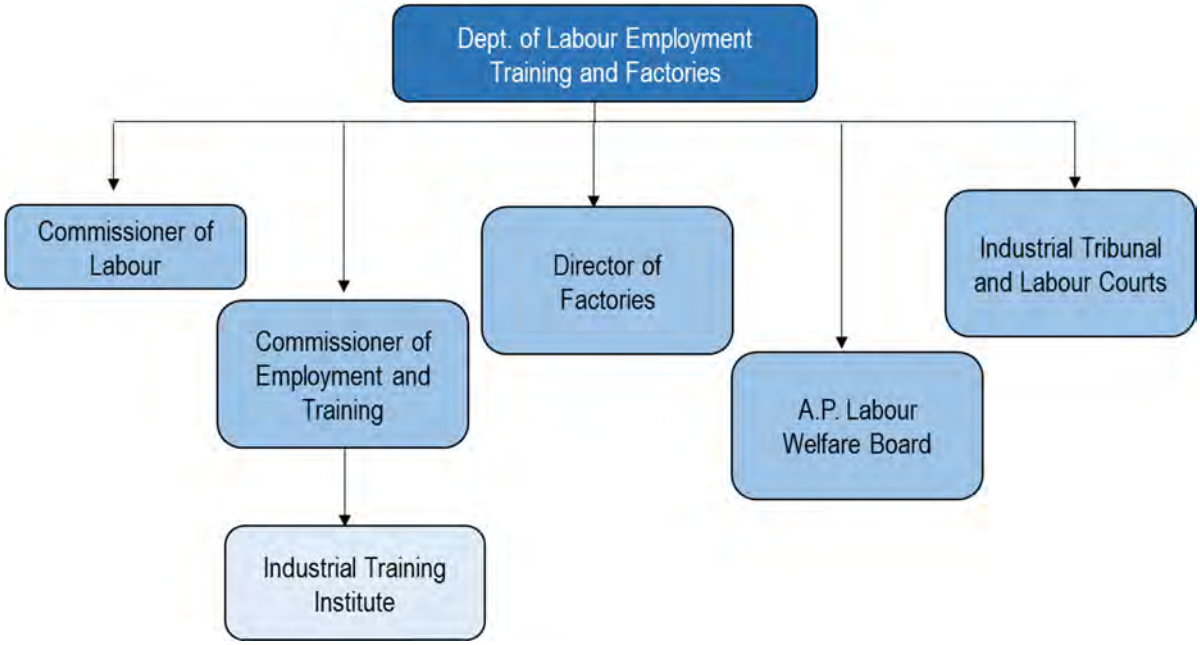

Figure 4.21 Organisational structure for industrial training in AP

Source: Various Government Websites

The Industrial training institutes are spread across all the regions of Andhra Pradesh including Srikakulam, Visakhapatnam, East Godavari, Krishna and Chittoor. In 2014-15, there were total 477 ITIs in AP including 78 Government and 399 Private. These ITIs provided training to 58,117 people (Government: 12,894 + Private: 45,223) in AP during 2014-15. Visakhapatnam has highest number of ITIs is (64) with 9,534 students, followed by Prakasam (44) with 4,039 and Chittoor (40) with 4,309. On the other hand, Srikakulam and Vizianagaram have the lowest number of institutes, i.e., 22 and 27.

Courses such as Mechanic Refrigeration and Air Conditioner, Electronic Mechanic, Data Entry, Carpentry, Plastic Technology, Certificate Course in Computer Application Garden Supervisor, etc. are offered in the institutes which are mainly based on short-term and long term time duration, i.e. six months to 2 years. Also, there are many women focussed ITIs in AP which offered free short term courses such as training in beautician, internet concepts & browsing, tie & dye, sewing machine repair and maintenance, jute bag making, zari work and hand embroidery which would encourage the household women to start their own enterprise and getting placements in companies.

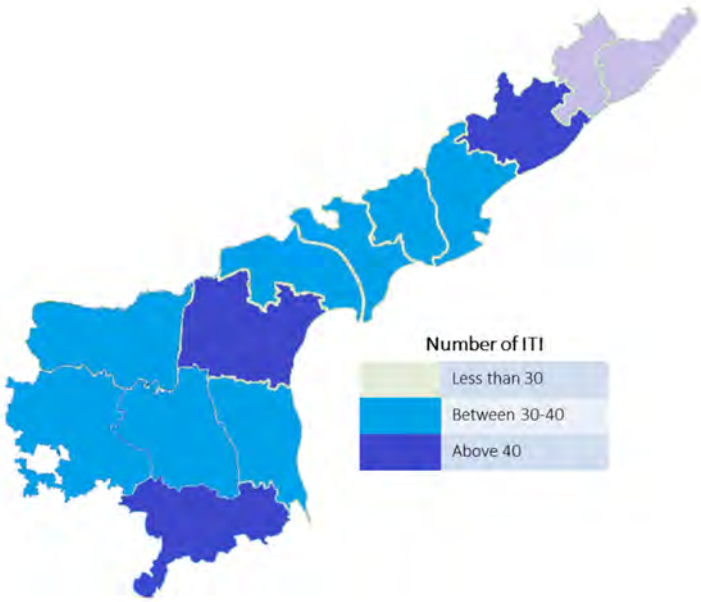

Figure 4.22 District-wise presence of ITI in Andhra Pradesh (2014-15)
Source: Statistical Abstract Andhra Pradesh Report (2016)

Further, ITIs in AP tied-up with international and national universities to offer sector specific training which are aligned with industry requirements. For instance, ITIs have tied ups with international universities specializing in Aerospace & Defence training and research. However, the ratio between the engineers, supervisors and tradesmen trained from ITIs is not appropriate due to millions of engineering graduates coming out every year. According to the industrial employment statistics, for one engineer there should be four supervisors and 17 tradesmen in the

industrial sector. Further, the number of government institutes have declined from 80 in 2013-14 to 78 in 2014-15 and private institutes have declined from 420 in 2013-14 to 399 in 2014-15. In addition, Government requires fund to procure equipment and other infrastructure to train the tradesmen. However, in 2017, Government planned to set up a state-level industrial training institute (ITI) in Visakhapatnam with an initial intake of 1,050 students in 17 trades. However, the plan is still in proposal stage and government has not yet stated any starting date for the institute.

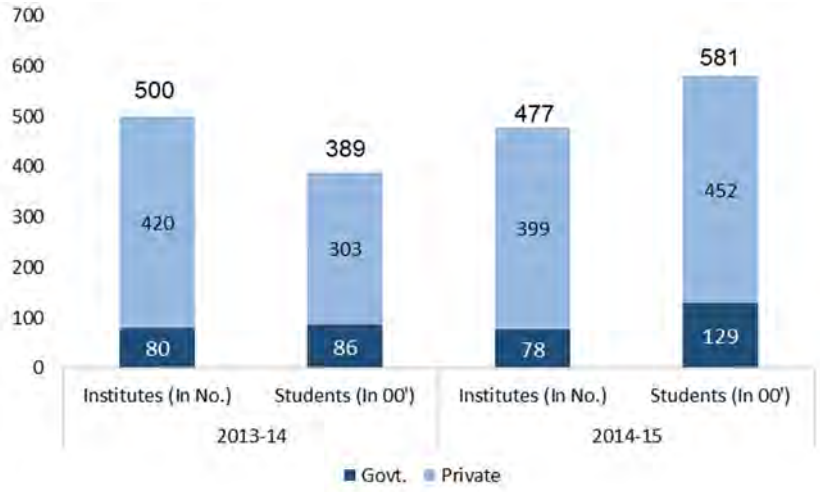

Chart 4.22 ITI in Andhra Pradesh

Source: Andhra Pradesh Statistical Abstract

4.8.3. Skill Development Initiatives

State of Andhra Pradesh has set the vision for the skill development of 20 million in next 15 years (during FY 2015-16 to FY 2029-30). In order to fulfil the mission, GoAP established Andhra Pradesh State Skill Development Corporation (a PPP Section-8, not-for-profit organization, with 51% equity stake of private sector and that of 49% of Govt.) to tackle the shortage of skilled workforce in various sectors. To address this issue, APSSDC is establishing Skill Development Centres (SDCs) in Engineering Colleges, Polytechnics, and other institutions. In 2015, Government of Andhra Pradesh has established 17 SDCs in various engineering colleges. Further, government has set yearly target for skilling human resources, such as by 2018-19, 1.2 million candidates should be skilled and by 2019-20, 1.6 million candidates. Fresh Skill development training would be given to new entrants related to Recognition of Prior Learning (RPL), re-skilling and up-skilling, entrepreneurship and skill development in traditional art and craft. Government has categorised the candidates to provide training as per their eligibility including dropouts, out of college (unemployed), degree/PG, farmers and allied workers, women and self-employed, secondary & senior secondary level, etc.

Ministry of Skill Development Entrepreneurship also established Society for Employment Generation and Enterprise Development in Andhra Pradesh (SEEDAP) to train rural unemployed youth under three programs including DDU-GKY, LIFE and SAGARMALA.

Table 4.29 Road Map for Skill Development Scheme in Andhra Pradesh

Sl. No.	Initiatives	Target Segment	Enrolment (Yearly Output) FY2015-16	Enrolment (Yearly Output) FY2016-17	Enrolment (Yearly Output) FY2017-18	Enrolment (Yearly Output) FY2018-19	Enrolment (Yearly Output) FY2019-20
A.	Other Skill Development Initiatives in the State						
1	NULM (MEPMA)	Drop Outs / Semi Skilled	53,400	100,000	130,000	169,000	219,700
2	Minority Corporation	Drop Outs / Semi Skilled	5,710	6,000	7,800	10,140	13,182
B.	Skill Development initiatives by Department of Skill Development, Entrepreneurship & Innovation (SDEI)						
1	Women	Drop Outs / Semi Skilled		3,375	5,000	6,500	8,450
2	Engineering Colleges	Engineering students	9,077	7,500	40,000	52,000	67,600
3	Polytechnics Colleges	Polytechnic students			15,000	19,500	25,350
4	Recognized Prior Learning	Up skilling of semi-skilled		5,000	10,000	13,000	16,900
5	Agri/Fisheries/Animal husbandry	Dropouts / Semi Skilled			10,000	13,000	16,900
6	Livelihood Enhancement training(JBMV/Electronics/ NASSCO M/Andhra Yuva Shakti/Sectoral trainings)	Dropouts / Semi Skilled	1,950	35,225	44,000	57,200	74,360
7	Training of Trainer	Multiple target intervention		600	5,000	6,500	8,450
8	Placement Incentive Scheme	Dropouts / Semi Skilled		5,000	5,000	6,500	8,450

Source: Website of AP State Skill Development Corporation (APSSDC)

GoAP is aiming to reduce the gap between trainees and industries requirement through continuous skill gap assessment, industry validation of curriculum, apprenticeship, internship, on-the-job opportunities for the candidates, regularly organize industry leadership forums, partnership with industry, etc. Also, Government encourages companies to fund skill development institutes and related activities as under Indian Companies Act 2013, every qualifying company requires spending of at least 2% of its average net profit on CSR. And vocational skill is one of the permitted activities for spending by the firm under CSR. Apart from state sponsor skill development schemes, Central Government also funded some schemes for skill development in the state through programs such as Deen Dayal Upadhyaya Grameena Kaushalya Yojana (DDU-GKY), National Urban Livelihood Mission (NULM), Pradhana Mantri kaushlaya Vikas Yojana (PMKVY).

In 2016-17, AP had 328 engineering colleges (Graduate), which accounted to be third highest after Tamil Nadu having 526 and Maharashtra 365. From the last few years, demand for engineering courses is declining in overall India, as a result, All Indian Council for Technical Education (AICTE) is targeting to close down 800 colleges across India and reduce the number of seats as per demand. The decision of AICTE is impacting in the numbers of state's

engineering colleges. Also, poor quality of education system, lack of upgraded infrastructure and low qualified faculty have resulted into decline in the demand for engineering colleges in AP. For instance, engineering subjects should be taught by post graduate qualified teachers and in about 125 colleges, graduates are teaching under graduates resulting in poor quality teaching. In addition, most of the colleges do not have advanced labs or libraries well-stocked with the latest books on engineering and no e-learning facility is there in colleges. Therefore, Government need to focus on other subjects to offer the students and should focus on train the existing teachers with updated knowledge or hire highly qualified teachers. Further, GoAP need to focus on improving the infrastructure facilities mainly in government institutes as students from rural background prefers government institutes for low fees structure.

4.9. Emerging Opportunity: Food Processing Industry

India is the second largest food producer in the world after China. In India, the food sector has emerged as a high growth and high-profit sector due to its immense potential for value addition, particularly within the food processing industry. Food processing in India covers fruits and vegetables plantations, grain processing, spices, milk and dairy products, meat and poultry, fisheries, non-alcoholic and alcoholic beverages, as well as other consumer product groups such as confectionery, chocolates, cocoa products, soya-based products, mineral water and high protein foods. Andhra Pradesh has huge potential for the growth of food processing industry, contributing key share to the country's food sector. AP top ranked in marine exports in the country, contributes more than 70 per cent to the country's total marine exports and one of the leading states in horticulture, produce nearly 2 million hectare (Ha) under different fruit crops.

4.9.1. Raw material for Food Processing Industry

Andhra Pradesh is an agro-based economy, Agriculture and Allied sectors contribute more than 27% of GSDP as against 15% India's total GDP. Agriculture, being the backbone of state's economy, remains the major source of employment, supporting more than 60% of population. AP covers a total Geographical Area of 162,970 sq. km in the State, out of which Net Area Sown including Fish Culture for cultivation was 60, 770 sq. km and constituted 37.30% in 2016-17 and Gross Area irrigated in the State was 35,820 sq. km in the same period. Currently, agriculture and allied sectors of AP is growing at double digit in comparison to agriculture sector India, i.e. AP grew by 17.8% in 2017-18 and India by 3% in the same period. Sub sectors such as horticulture, livestock and fishing sector contributed major share in the growth of agriculture and allied sector registering double digit growth rate of 17.16%, 13.05% and 30.8% in 2017-18. According to Directorate of Economics & Statistics, the total production of food grains in the State was 14.9 million tonnes in 2016-17 as against 14.4 million tonnes in 2015-16 recording an increase of 3.78 %. Further, Andhra Pradesh is known as "the bejewelled rice bowl of India" as it is one of the top rice producing states of the country. Moreover, Government of Andhra Pradesh spends about INR 400 million on agriculture research and allocated INR 2.8 billion for the development of basic infrastructure facilities for agriculture allied sector and establishment of laboratories and another INR 5 billion on agri mechanisation. Government is focusing on improving the agriculture sector through various initiatives and has launched Agro & Food Processing policy 2015-20.

Table 4.30 Details of Agri production in Andhra Pradesh (2016-17)

Category	Items	Total Production (in million MT)
Agricultural Crops	Cereals & Millets (includes barley, bajra, maize, rice, wheat, jowar, ragi, and small millets)	13.9
	Pulses (includes gram, tur, and other pulses)	0.93
	Oilseeds (includes castor seed, groundnut, linseed, rapeseed and mustard, nigerseed, safflower, sunflower, sesamum, and soybean	2.5
	Sugarcane	7.8
Horticulture Crops	Fruits (mango, lemon, batavia , banana, cashewnut, coconut , tomato)	2217.8
	Vegetables (onion, turmeric, bhendi, guava, brinjal)	1.12
	Spices (chillies dry, ginger, pepper, turmeric, Arecanuts, Coriander, Ajwain, tamarind, others)	3.5
Egg. Meat and Milk	Milk	12.178 MMTs
	Meat	6.33 LMTs
	Egg	15.8 Billion

Source: Directorate of Economics & Statistics

The state has five agroclimatic zones including Krishna Godavari Zone, Southern Zone, North Coastal Zone, Scarce Rainfall Zone & High-Altitude Tribal Zone and has five different soil types to cultivate a wide range of crops. Principal crops of Andhra Pradesh include rice, jowar, bajra, ragi, maize, pulses and sugarcane and oil seeds such as groundnut, sunflower and soybean. The state has huge areas under fruit and vegetable cultivation with large production of fruits such as mangoes, lemon, batavia, banana, cashewnut, coconut, guava and vegetables such as onion, bhendi, brinjal and tomatoes.

Figure 4.23 Food Map of Andhra Pradesh, by district

Source: Ministry of Food Processing Industries, Govt. of India

During the year 2016-17, there was a total production of 14.9 million MT of food grains in the state which included 13.9 million MT of cereals & millets and 0.93 million MT production of pulses. Among cereals and millets, major production was of rice/ paddy with 12 million MT and maize with 1.6 million MT. Among the commercial crops, sugarcane had the production of 7.8 million MT followed by 1.56 million MT production of cotton. Andhra Pradesh is among one of the leading states in horticulture sector including fruits and vegetables production and exports. In 2016-17, a total production of 2.09 million MT of mangoes, 0.16 million MT of lemon, and 0.57 million MT of banana was registered. The state also produced 12.18 million MT of milk, with 15.8 billion eggs, 0.56 million MT of marine fisheries.

Some of the major production clusters have been mentioned in Figure 4.24. The major production clusters12 of Andhra Pradesh include banana, rice, sweet orange, okra, turmeric, livestock, sorghum and tomato.

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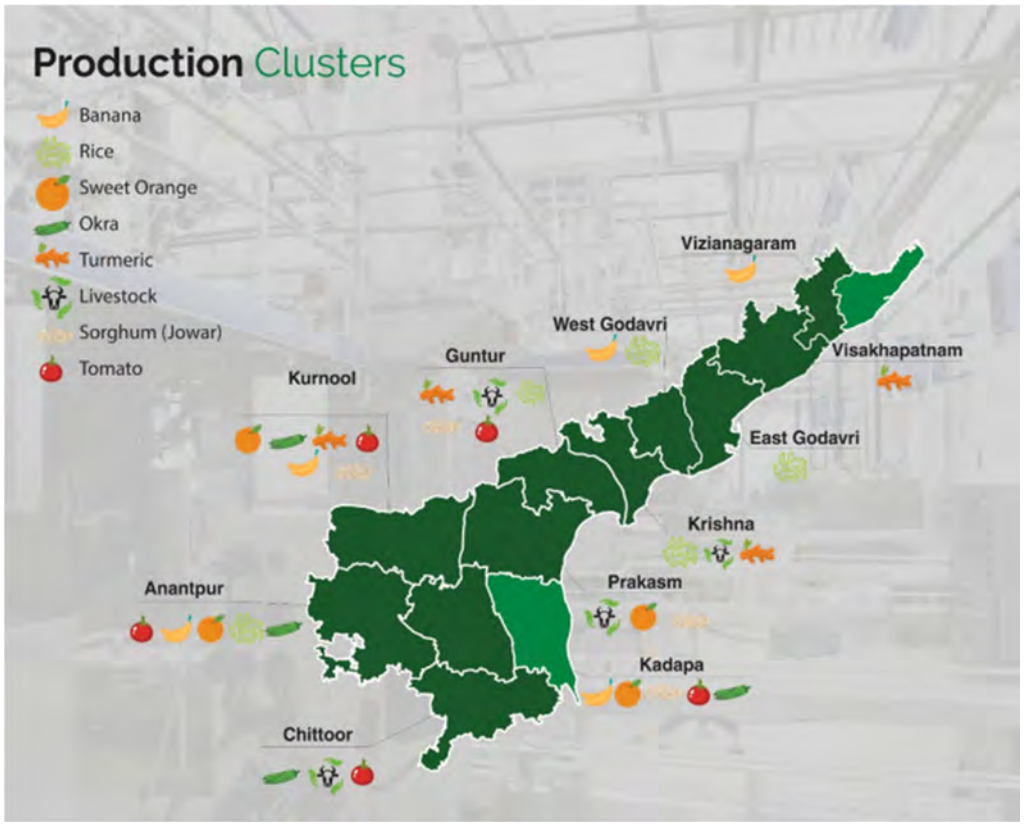

Figure 4.24 Major Production Clusters of Andhra Pradesh

Source: Ministry of Food Processing Industries, Govt. of India

Andhra Pradesh has the presence of five Agri Export Zones (AEZ) which stands in third rank after Maharashtra (8) and West Bengal (6). These AEZs come under the Agricultural and Processed Food Products Export Development Authority (APEDA), Government of India.

Agri Export Zone (AEZ) was launched by government of India in 2001 under EXIM Policy 2001. Agricultural & Processed Food Products Export Development Authority (APEDA) was appointed as the Nodal Agency on behalf of Central Govt. The prime objective of state government is to identify the product with export potential, which have comparative advantage in local production. AEZ is a specific geographical region in a country recognised as agriculture-based processing industries for export purpose only. In 2006, 60 Agri Export Zones were set up across 230 districts in 20 states of India with investment of INR 17 billion, however, no additional zones have been set up post that. In term of fiscal incentives, AEZ can avail the benefits of Export Promotion Capital Goods Scheme which was earlier limited to direct exporters only. Another incentive includes duty free fuel for power generation for the food processing companies which have power cost more than 10% of their total cost of production.

Table 4.31 Agri Export Zones (AEZs) of Andhra Pradesh

S. No.	AEZ Project	Area / Districts
1.	Mango Pulp & Fresh Vegetables	Chitoor
2.	Mango & Grapes	Rangareddy, Medak, Mehboobnagar
3.	Mangoes	Krishna
4.	Gherkins	Districts of Mahboobnagar, Rangareddy, Medak, Karimnagar, Warangal, Ananthapur and Nalgonda
5.	Chilli	Guntur

Source: Website of The Agricultural and Processed Food Products Export Development Authority (APEDA)

4.9.2. Presence of Food Processing Industry

Currently, there are six potential agri-processing clusters identified by Government of Andhra Pradesh. Food processing products include Cashew, Sugarcane, Coconut, Mango, Spices, Maize, Milk, Egg, Paddy, Groundnut, Sweet Orange, Papaya, Pomegranate, Tomato, Onion, Meat and others. According to the Ministry of Food Processing Industries, there are more than 6000 companies in food processing sector across the state. Further, as per Press Information Bureau (GoI) statistics 2012-13, there were 5,735 factories of food processing including 3,563 manufacturing units of grain mill products, starches and starch products, followed by 421 units of vegetable and animal oils and fats and 318 units of dairy product and lastly 822 units of other food products. Figure 4.25 shows the key processing clusters in the food processing sector of the state.

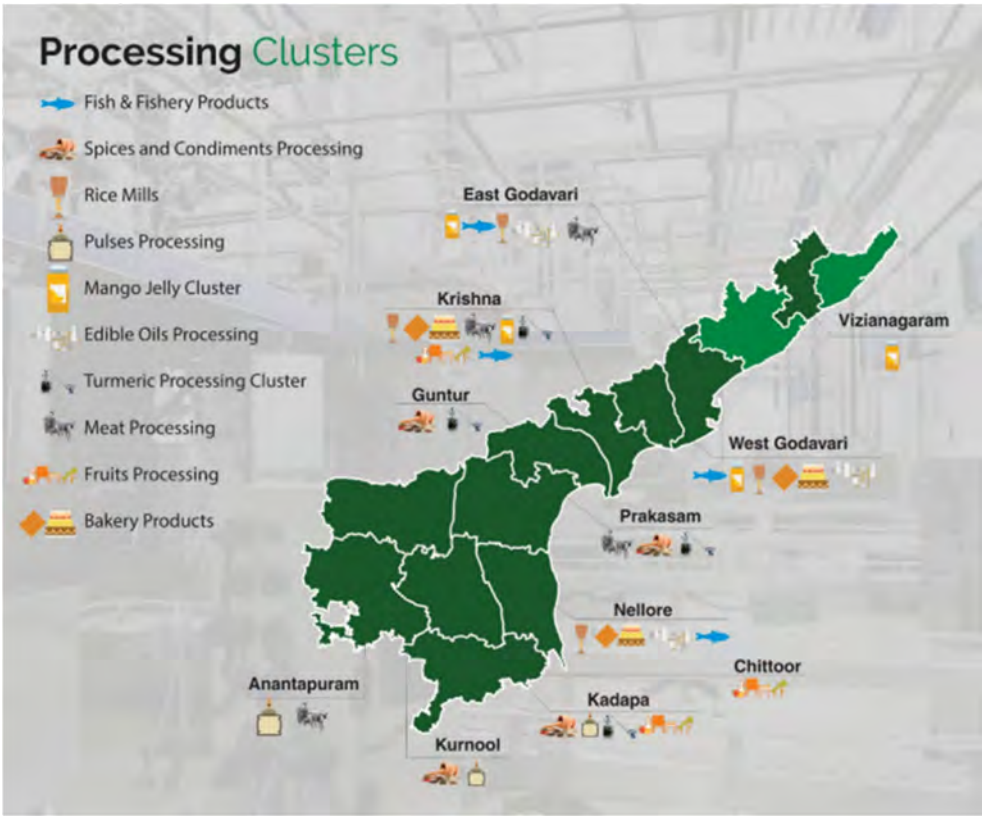

Figure 4.25 Key food processing clusters of Andhra Pradesh

Source: Ministry of Food Processing Industries, Govt. of India

Some of the key Indian and Foreign companies of the Food Processing industry are present in the state. These include some major dairy companies, bakery product manufacturing companies, beverages companies, confectionery manufacturing companies, etc. which have been mentioned in Table 4.32.

Table 4.32 Key Food Processing Sector companies (Indian) in Andhra Pradesh

Name	Headquarter	Location(s) of factory in Andhra Pradesh	Products manufactured in Andhra Pradesh	Revenue (in INR Billion)- FY2017	Major Presence
Indian Companies					
Heritage Foods	Telangana	Chittoor, Vishakapatnam, East Godavari, Vijayanagaram, Guntur	Dairy Products	21.2	Across India
The Andhra Sugars Ltd	Andhra Pradesh	Guntur, Taduvai	Vegetable Oils, Hydrolgenated Oils, Sugar	13	Across India (Mainly in Andhra Pradesh and Tamil Nadu)
Apex Frozen Food	Andhra Pradesh	East Godavari	Shrimps	7.1	Across India and International Market (USA and UK/ Europe)
ITC	West Bengal	Guntur	spices, agri-business (soyameals, wheat, shrimps & prawns, fruir purees, coffee, etc.)	604.9	Across India and International Market
Tanvi Food Ltd.	Telangana	Vijayawada	Packaged food	0.58	Across South region of India
Amul	Gujarat	Vijayawada	Dairy Products	270.6	Across India
Priya Food	Telangana	Vijayawada	Pickles, spices	-	Across South region of India

Source: Economic Development Board Andhra Pradesh

Table 4.33 Key Food Processing Sector companies (Foreign) in Andhra Pradesh

Name	Headquarter	Location(s) of factory in Maharashtra	Products manufactured in Maharashtra	Revenue (in INR Billion)- 2017	Original location	Year of Establishment in India	Factory Set-Up Year (in AP)
PepsiCo India Holdings Pvt. Ltd.	Gurgaon, Haryana	Sri CitySEZ	Beverages	66.6	United States	1989	2015
Kellogg India Private Limited	Maharashtra	Sri City	Cereal	8.3	United States	1990	
Mondelez India Foods	Maharashtra	Sri City	Chocolate	57.8	United States	1948	2016

Private Limited							
Coca-Cola India Private Limited	Gurgaon, Haryana	Chittoor, Vijayawada	Beverages		United States	1992	

Source: Various websites

4.9.3. Policies related to Food Processing Industry

Agriculture is the dominant sector of Indian economy, over 70% of the rural households depend on agriculture sector for employment and livelihood. Agriculture, along with fisheries and forestry, accounts for one-third of the nation's GDP and is its single largest contributor. However, a significant amount of food produce gets wasted in India due to inadequate infrastructure such as packaging facilities, storage, transportation, cold chain, and low levels of processing. Therefore, Government of India is continuously supporting the State Governments and food processing companies for investment through various schemes and other infrastructural support. For instance, Mega Food Park (MFP) is one of the 11th five-year scheme launched by Ministry of Food Processing Industries, Govt. of India (MoFPI) to create Post Harvest Infrastructure to promote Processing across India. Within the plan, various food parks would be established in India; about 37 Mega Food Park project were implemented in 2016. Further, Mega Food Park is backed by efficient supply chain with central processing centre (CPC), primary processing centers (PPC), Field Collection Centers, Self Help groups and Individual Farmers. GoI, Pradhan Mantri Kisan SAMPADA Yojana, approved an investment of INR 4 billion for establishing Mega Food Park at Mallavalli Bapulapadu Mandal Krishna District in AP. Figure 4.26 shows the components Hub & Spoke Model of Mega Food Parks, designed by Government of India

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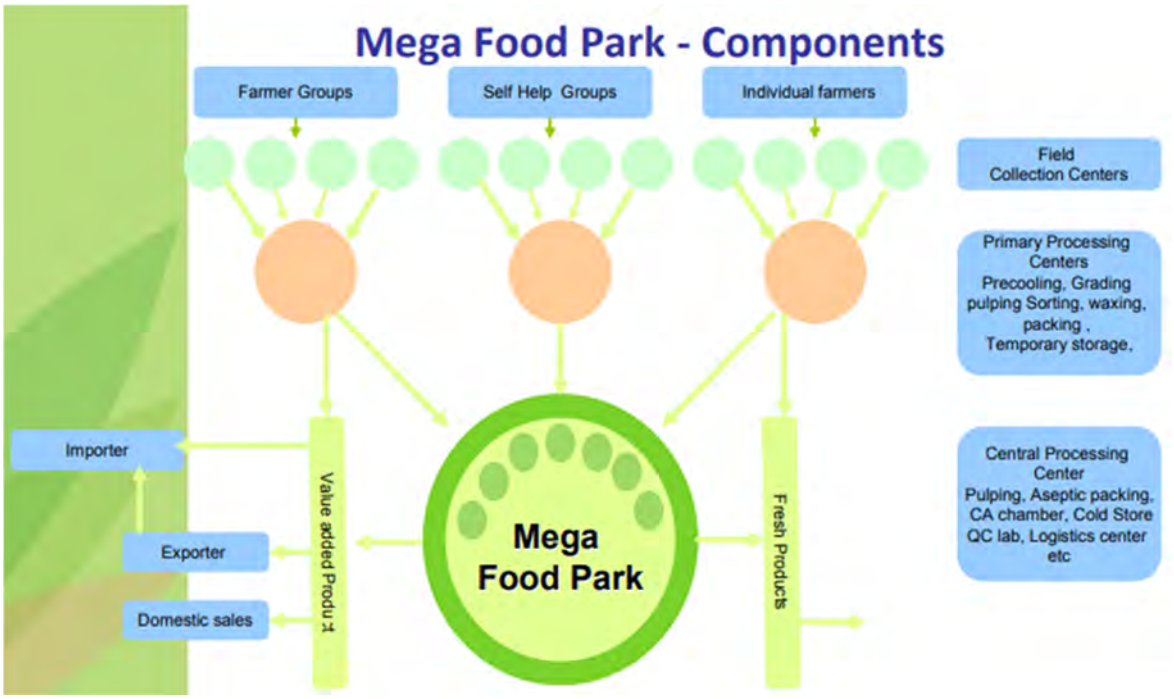

Figure 4.26 Hub & Spoke Model of Mega Food Parks

Source: Ministry of Food Processing Industries

4.9.3.1. *Pradhan Mantri Kisan Sampada Yojana (PMKSY)*

The Ministry of Food Processing Industries, Govt. of India launched this policy in 2017 which is aimed at creation of modern infrastructure for food processing, creation of effective backward and forward linkages - linking farmers, processors and markets, and creation of robust supply chain infrastructure for perishables. Following schemes are being implemented under PMKSY:

- Mega Food Parks Scheme
- Integrated Cold Chain and Value Addition Infrastructure
- Creation / Expansion of Food Processing & Preservation Capacities
- Infrastructure for Agro-processing Clusters
- Creation of Backward and Forward Linkages
- Food Safety and Quality Assurance Infrastructure
- Human Resources and Institution

4.9.3.2. *Rashtriya Krishi Vikas Yojana (RKVY)*

The scheme is a State Plan Scheme of Additional Central Assistance launched in August 2007 as a part of the 11th Five Year Plan by the Government of India. The scheme aims to increase the level of processing, reduction of wastage, value addition, enhance the income of farmers as well as increase exports and government of AP would financial support for the establishment of new food processing units in the state. The scheme is applicable to all Govt./PSUs/Joint ventures / NGOs / Cooperatives/ SHGs / Private Sector /Individuals engaged in establishment / up

gradation / modernization of food processing units would be eligible for financial assistance under the scheme

4.9.3.3. *AP Fisheries Policy*

Through this policy. GoAP would be providing integrated and complete cold chain and preservation infrastructure facilities across AP. Further, Pre-cooling facilities at production sites, reefer vans, and mobile cooling units also assisted under the scheme. Government would also support groups of producers to link with the processors and market through well-equipped supply chain. Products such as Shrimp, Fish, Crabs, squids and any other Fish & Fishery products processing which requires integrated cold chain process are eligible under the scheme. Following are three key components of the scheme, within which at least three need to fulfilled by entrepreneurs in order to get financial support:

- Minimal Processing Centre at the farm level with facility for weighing, sorting, grading waxing, packing, pre-cooling, Control Atmosphere (CA)/ Modified Atmosphere (MA) cold storage, normal storage and Individual Quick Freeze (IQF).
- Mobile pre-cooling vans and reefer trucks.
- Distribution hubs with Control Atmosphere (CA)/ Modified Atmosphere (MA) chambers/ cold storage/ Variable Humidity Chambers, packing facility, Cleaning in Process (CIP) Fog treatment, Individual Quick Freeze (IQF) and blast freezing

Andhra Pradesh Food Processing Society (APFPS) has been designated as the State Nodal Agency by Government of Andhra Pradesh under The Andhra Pradesh Societies Act in November 2012 for development of Food Processing Sector in the State. The Secretary to Chief Minister of Andhra Pradesh is the Chairman of the Society. The Commissioner / Director in charge of allied sectors including Agriculture, Horticulture, Marketing, Animal Husbandry and KVIC are the members of the society. In its role as State Nodal Agency, APFPS focus in enhancing and stabilizing the income level of the farmer, achieving integration of the food processing infrastructure from farm to market, making the food processing sector attractive for both domestic and foreign investors, providing quality check facility, enhancing the competitiveness of food processing industry in both domestic as well as international markets, etc. Some industries such as aerated water, packaged drinking water, rice mills, dal mills, etc and any other activities as notified by GoAP from time to time are count as ineligible industries, for which government would not support in term of incentives/concessions except when the proportion of ineligible items in the total production is less than 10% in value of the total turnover

Further, APFPS is responsible for implementing AP Food Processing Policy 2015-2020 launched by Government of Andhra Pradesh in 2015, in order to establish AP as most preferred

destinations for Industries in Food Processing Sector and also facilitate various incentives / benefits to all eligible Food Processing Enterprises being set up in the State. The Policy aims to attract new investments worth INR 50 billion by 2020. Broadly, following schemes are covered under AP Food Processing Policy 2015-2020:

1. Scheme of Food Parks:
   a) Integrated Food Parks
   b) Mega Food Parks
   c) Ultra Mega Food Parks
2. Scheme for setting up of Cold Chain for Agri / Horti / Dairy / Meat produce
3. Scheme of primary processing centres / primary collection Centres
4. Scheme of establishment of new food processing units
5. Scheme of technology Upgradation / Modernization of Food Processing Units.
6. Scheme for purchase Reefer Vehicles
7. Scheme for setting up / Modernization of Abattoirs
8. Scheme for setting up / Upgrading Testing Labs (including NABL accredited)
9. Scheme for Units set up to process waste produced in food processing units in identified clusters
10. Scheme for Marketing assistance
11. Scheme for quality certification / Patent Registration
12. Scheme to reimburse Road Transport charges to ICD / Port for export of perishable goods
13. Scheme to accelerate research and development in the Food Processing Industries

Table 4.34 AP Food Processing Policy 2015-2020 (Incentives)

Category	Incentives
Capital Subsidy*	Subsidy to an extent of 25% of project cost for setting up new food processing units limited to INR 50 million Subsidy to an extent of 25% of equipment cost for technology up-gradation of existing food processing units limited to INR 10 million Subsidy to an extent of 50% for setting up Primary Processing Centers (PPCs) and Primary Collection Centers (PCCs) limited to INR 25 million Subsidy to an extent of 35% for setting up of cold chain for agriculture/horticulture /dairy /meat produce, limited to INR 50 million
Interest Rebate/Subsidy	Interest subsidy of 7% on the term loan taken for fixed capital investment for food processing units and cold chain infrastructure for a period of 5 years from commencement of commercial operations limited to INR 20 million. Interest subsidy of 7% on the term loan taken for Primary Processing Centers (PPCs) and Primary Collection Centers (PCCs) for a period of 5 years from commencement of commercial operations limited to INR 10 million
Stamp duty & Reg. fee exemption	100% reimbursement of stamp duty and transfer duty paid by the industry on purchase or lease of land meant for industrial use. 100% reimbursement of stamp duty for lease of land/shed/buildings, mortgages and hypothecations
Electricity Duty exemption	Electricity duty will be exempted for captive power plants for self-use, for 5 years from the date of commencement of commercial operation

Land Related Concession/Exemption	If conversion of land for setting up Food Processing unit is permitted by the relevant government authority, Government of AP will reimburse the Non-Agriculture Land Assessment (NALA) tax as applicable
Reimbursement on Transportation	Reimbursement of 30% of road transport charges till inland container depot (ICD) / port for export of perishable goods by food processing units with a ceiling of INR 500,000 per annum per unit for a period of 3 years from the date of commercial production
Technology up-gradation and R&D related Incentives	Government of Andhra Pradesh will provide assistance to food processing industries for research work approved by government undertaken by reputed research institutions, up to 50% of the cost with a ceiling of INR 2.5 million. This would be a onetime grant for a food processing unit
Fiscal Incentives	Reimbursement of Power consumption charges @1.50 per unit for 5 years /INR.1.00 per unit for Fish & Shrimp Processing units. Reimbursement of Non-Agriculture Land Assessment (NALA) tax for the produce purchased direct from farmers Reimbursement of 100% stamp duty, Transfer duty. VAT/CST/GST Reimbursement for micro & small enterprises (100%), medium industries (75%) & Large Industry Units (50%) for 5-7 years

Source: Ministry of Food Processing Industries (GoI)

4.9.4. Infrastructure for Food Processing Industry

Infrastructure plays a key role for the development of an industry and particularly, food processing industry requires high quality infrastructure and logistic facilities, as food is perishable and requires extra care. To promote development of Food related infrastructure such as cold chains and warehouses, GoAP is providing incentives such as reduce tax for non-agricultural land, instruct banks to simplify procedures for loan sanction etc. Currently, the state has four special economic zones across Andhra Pradesh. Also, 66 cold chain units and 15 mega food parks with multiple product, are expected to establish and expand in the coming years. Moreover, GoAP is aiming to establish food parks in each district to attract investment and big industries. Below are the categories of Food Parks which would be established in the state.

- Integrated Food Park: The Minimum area of each Food Park will be 30 acres, with a minimum of 10 food processing units in each. GoAP will provide a grant of 50% of project cost for setting up these food parks, with a limit of INR 200 million.
- Mega Food Park: The Minimum area of each Food Park will be 50 acres, with a minimum of 20 food processing units in each. GoAPwill provide a grant of 50% of project cost or setting up these food parks, with limit of INR 50 million.
- Ultra Mega Food Park: Ultra Mega Food Park is expected to establish in Kuppam with state-of art infrastructure providing plug-and-play facilities to industry. For this park, incentives would be customized as per applicable business case

Table 4.35 List of Food Parks in Andhra Pradesh

S. No.	Mega Industrial Park	Location	Total Land Area Available (in acres)
1	Srini Food Park Private Limited (Operational)	Chittoor	140
2	Andhra Pradesh Industrial Infrastructure Corporation Ltd Mega Food Park (Under Construction)	Krishna	100
3	Godavari Mega Aqua Food Park Private Limited (Under Construction)	West Godavari	57.81
4	Jain Irrigation Systems Ltd. (Under Construction)	Kurnool	623
5	Nekkanti Mega Food Park Pvt. Ltd. (Under Construction)	Nellore	52.22
6	SH Food Processing Pvt. Ltd. (Under Construction)	Prakasham	53.74
7	North Coastal Integrated Food Park Pvt. Ltd. (Under Construction)	Vizianagaram	37.89
8	M/s. Vyshnavi Mega Food Park Pvt. Ltd. (In principle Sanction)	Chittoor	100
9	M/s Sri Varsha Integrated Food Park Pvt. Ltd. (In principle Sanction)	Kadapa	44.78
10	M/s Sri Chandana Integrated Food Park Ltd. (In principle Sanction)	Vizianagaram	40
11	M/s Patanjali Food and Herbal Park Pvt. Ltd. (In principle Sanction)	Vizianagaram	172.84
12	Aveena Mega Food Park Pvt. Ltd. (In principle Sanction)	Anantapur	50
13	M/s North Andhra Mega Food Park Pvt. Ltd. (In principle Sanction)	Srikakulam	60
14	M/s Safe n Fresh Integrated Food ParkPvt. Ltd. (In principle Sanction)	Nellore	53.74
15	M/s Specialized SRK Foods Pvt. Ltd. (In principle Sanction)	Chittoor	45

Source: Ministry of Food Processing Industries (GoI)

In addition, five mini food parks, six cold chain projects, four primary processing centres, six food processing expansion unit project and six processing units in aqua sector are in under-construction stage or planning stage. Around 462 MoUs were signed in the past three years (2015-17) for investment in the food processing sector and 23 companies from food industry has signed agreement worth INR 9.6 billion for the investment in AP (2017). Companies such as Haldiram, Janani Food Pvt., Keventer Agro, ITC, Sesh Sai Foods, MNR Agri Food Products, Food and Inns, Freshfrugies, RF Export, Tifosi Foods, Waycool and Supermarket Grocery Supplier Pvt Ltd. would be investing in Andhra Pradesh Food Processing sector.

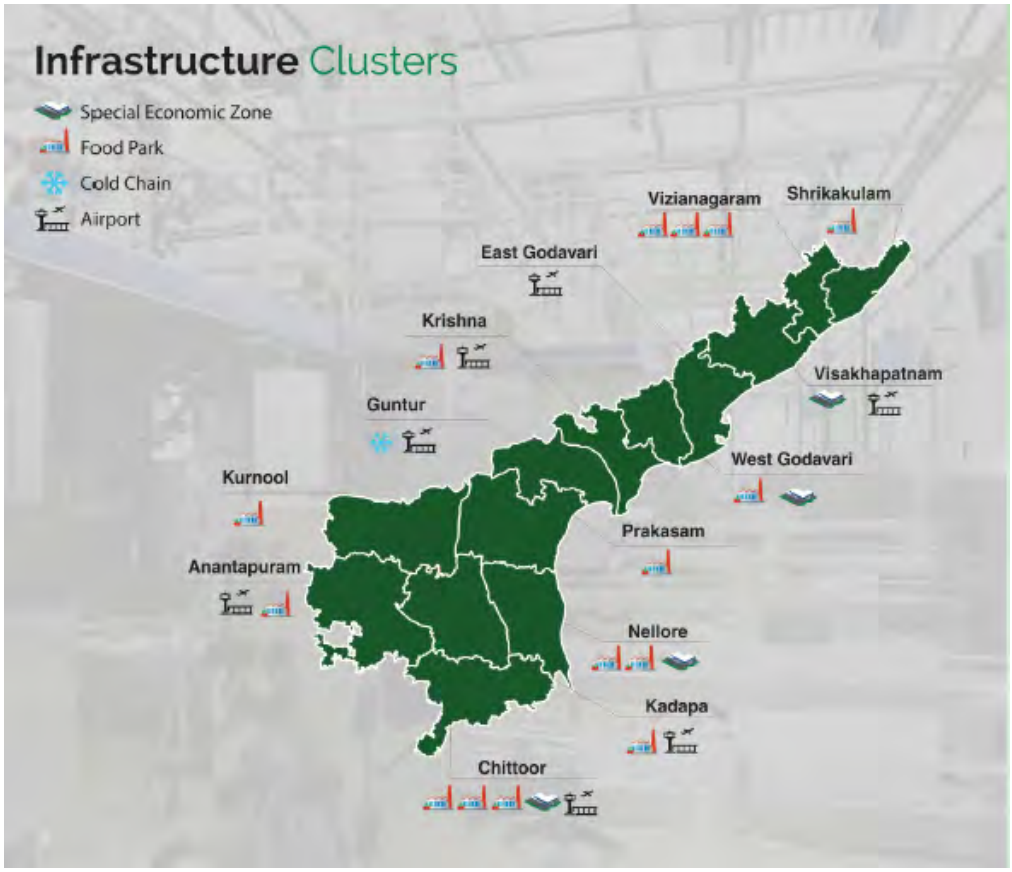

Figure 4.27 Location of infrastructure for Food Processing Industry in Andhra Pradesh

Source: Ministry of Food Processing Industries, Govt. of India

4.9.5. Future outlook of the sector

Food processing industry is one of the most promising industry in the state and in order to promote the industry, Government has implemented various schemes under AP food industry policy 2015-2020. The policy would be focussing on developing the infrastructural facility requires for food processing industry. Currently, the state is facing some challenges such as shortage of adequate infrastructure, lack of trained personnel, outdated technology and lack of detailed policy which create challenges for both local and foreign investors. Food park is new business model in Andhra Pradesh as a result, investors are finding difficulties for funding through loan from the banks; banks are charging higher interest rate of 12.5-16% against 9%. Further, high lease amount for food park has weakened the interest of the investor. For example, Pepsico wanted to acquire 50-acre plot in Srini mega food park, however, the company acquired land in Sri City SEZ. In 2010, Srini offered leasing amount of INR 1.7 million for a 99-year lease in 2010 which increased to 5 million in 2015-16.

Further, 'Scheme of Primary Processing Centres / Primary Collection Centres' didn't prove to be successful in the state. The scheme was launched to develop infrastructure facility such as food storage in rural area. However, the definition of "Primary Processing" and "Secondary Processing" are not clearly defined in the scheme nor in Food Policy 2015-20. Therefore,

Government need to focus on providing detailed policy and should create awareness among the state to attract more investment in food industry.

4.10. Results of questionnaire survey in Andhra Pradesh State

A survey was conducted to corporations which have already established the operation in Andhra Pradesh state. The major topics were current issues and the request to local government, based on the investment environment in Andhra Pradesh.

The survey was conducted through various means, including the mail survey using the survey slip, online survey by e-mail and questionnaire by phone interview. 60 samples are collected, of which 10 samples consist of Japanese MNCs.

The overview of survey is listed as follows. The respondent's industrial pie chart indicates that the dataset consists of wide variety of industries, although the consumer goods and automobile industry have slightly high proportion. The respondents' operation indicates that the establishment mainly appears as the production center, intended to target the Indian market.

Table 4.36 Outline of the survey conducted in Andhra Pradesh

Respondents' industry	Automobile and components Consumer goods Chemicals Pharmaceuticals Electrical, electronic & ITC equipment Non-electric machineries Rubber products Metal products Steel Transportation service Wholesale/Retail Finance& insurance Service Others	N. of questions	27
		Means of data collection	Phone interview, e-mail, letter
		Time period	From October to November, 2018
		N. of samples	60 Of which 10 Japanese and 50 Non-Japanese corporations

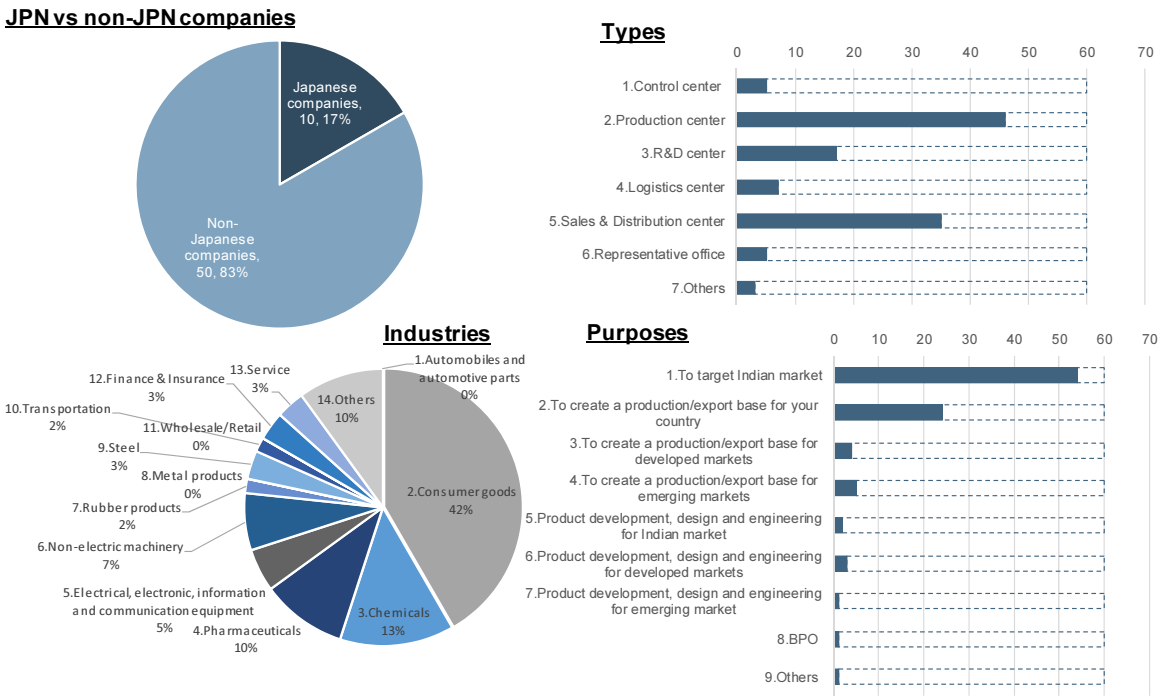

Chart 4.23 The respondent's data collected by survey in Andhra Pradesh

Firstly, we examined the satisfaction with the investment environment of companies operating in Andhra Pradesh. Looking at the whole, "Satisfied" exceeds "Dissatisfied". In terms of items, there are relatively many "Dissatisfied" with industrial development policies, industrial human resource development, water and wastewater, and housing for employees. On the other hand, "satisfied" was mostly in the investment window and procedures, roads, power, hospitals and schools.

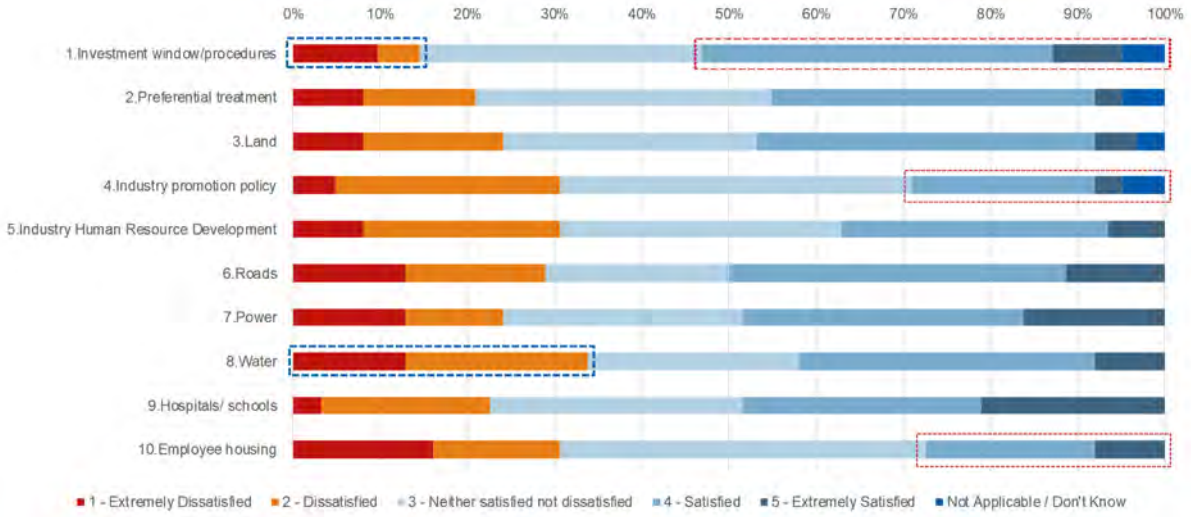

Chart 4.24 How much satsified with the investment environment in Andhra Pradesh each company is

The following describes the current problems and requests to the state government by item.

Regarding the investment reception window and procedures, many complained about the inefficiency of licensing procedures, and approximately 25% of companies answered that "8. Too many permits/approvals". Although there are relatively few requests for state governments, although there are relatively many rationalization plans and measures to prevent delays, “7. Draw up plan to streamline permits/approvals” and “4. To prevent delays, offer employee incentives or impose penalties” There were 10% responses for each, but many companies answered that there was no request.

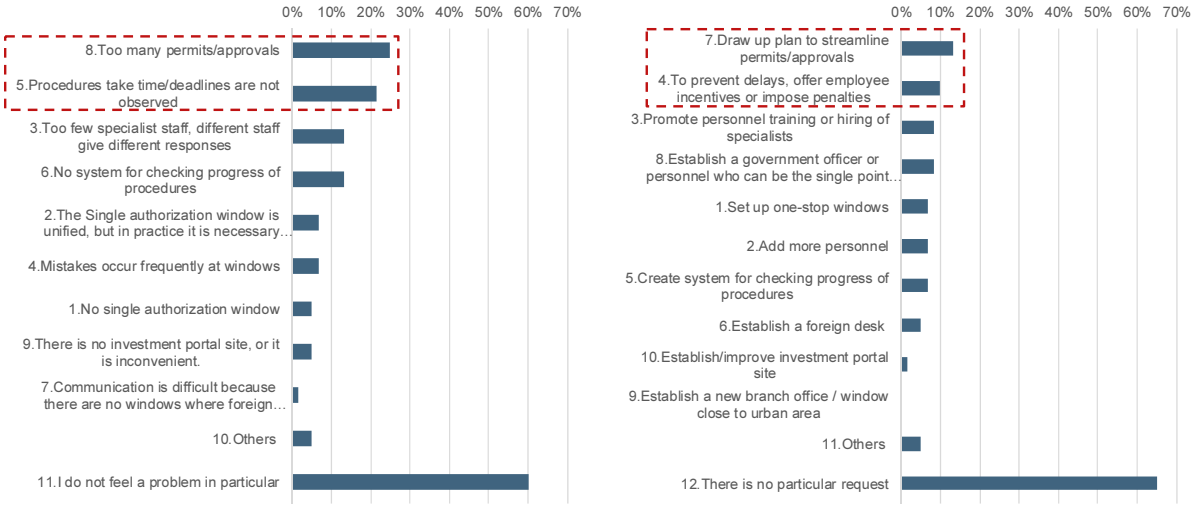

Chart 4.25 Problems of investment recipient counter and procedure in Andhra Pradesh （left） & demands for the state’s government （right）

With regard to incentives, although there are incentives, there is a strong demand for investment cost subsidies, and about 30% of companies are "2. Content of financial incentives not attractive", about 20% of companies "3. Conditions and procedural aspects make it difficult to use financial incentives". In addition, the state government is required to improve the contents of preferential treatment and simplify the procedure, and the majority of companies chose “1. Subsidies for investment costs”, and “3 Reduce electricity costs, etc. " was chosen among approximately 40% of companies.

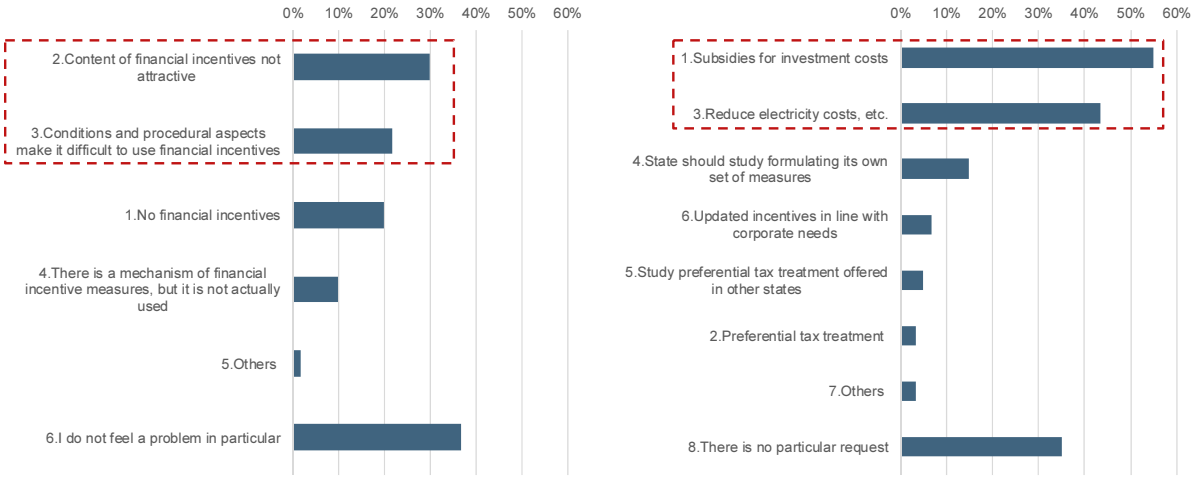

Chart 4.26 Problems of incentivesin Andhra Pradesh （left） & demands for the state's government （right）

There is relatively little mention of land acquisition. There were relatively many opinions such as "5. Contents of land purchase agreements with the government are problematic" and "1. There is no convenient land or it has not been developed", but each is less than 10%, There are few companies that raise problems in the first place. Similarly, although there are not many requests to the state government, for "2. Government should make more industrial estates available to promote competition" and "5. Any dispute related to land should be dealt by the state and the company should not be responsible" There were relatively many expectations and requests.

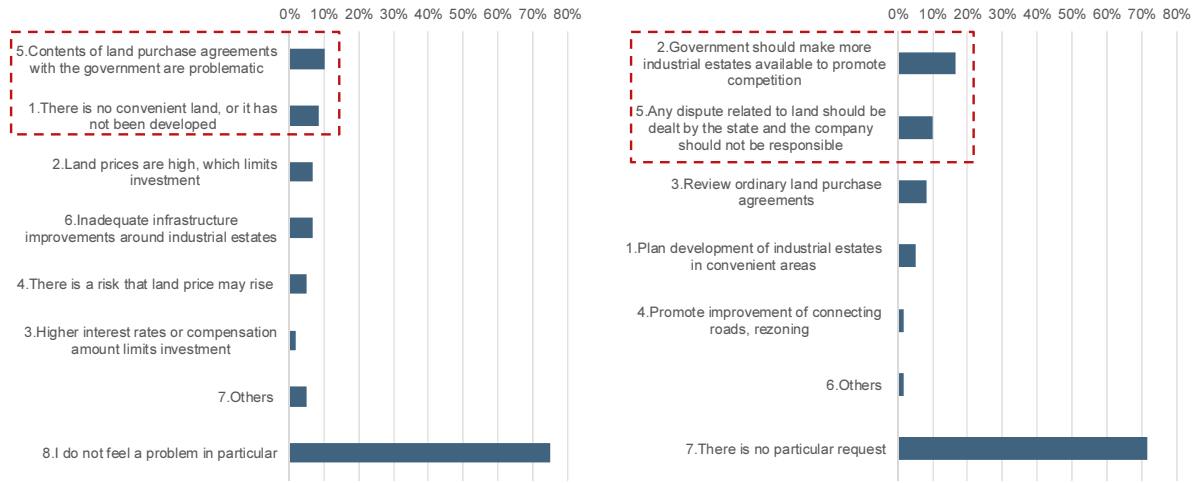

Chart 4.27 Problems of land seizure in Andhra Pradesh （left）& demands for the state's government（right）

In terms of industrial policy, "2. State is not attractive as a market", "5. No policy of industrial promotion from state", "1. No supporting industries are located, hence, cannot find a business partner" has been answered by more than 20% of companies respectively. In addition, with regard to requests to the state government, "5. Establish the Industry Promotion Vision by State"

and “2. Develop supporting industries, strengthen local companies” have been answered by approximately 20% of companies, and are listed at the top The development of supporting industries and the strengthening of local industries are required by formulating the industry promotion policy vision or by making them known.

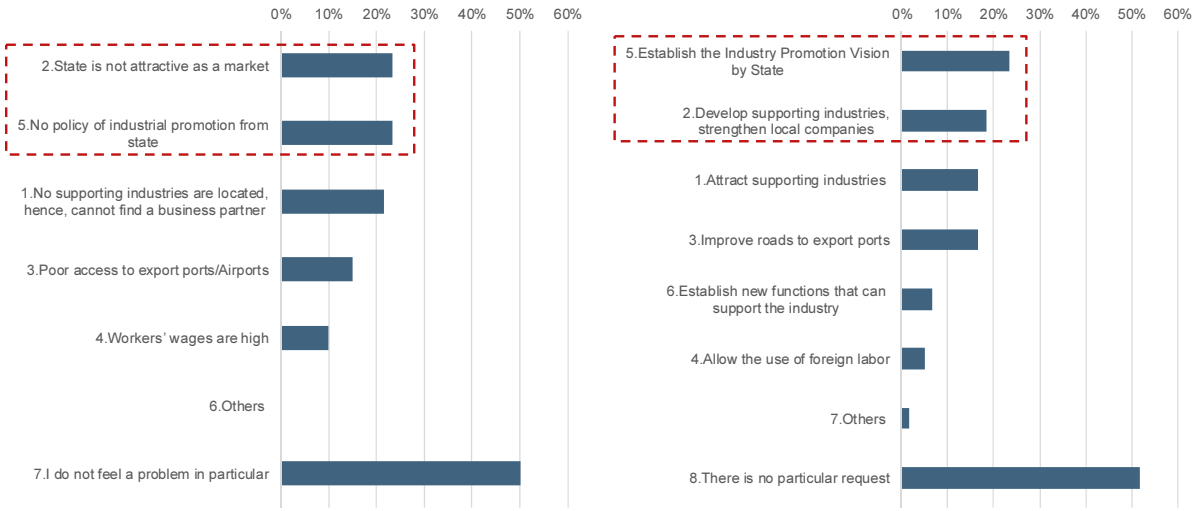

Chart 4.28 Problems of industrial policies in Andhra Pradesh （left） & demand for state’s government （right）

As for industrial human resource development, there is a problem that technical power is not accumulated in the company, as can be seen from “4. High attrition rate” and “6. Workers unwilling to learn skills”. Similarly, when looking at requests to the state government, about 30% of “3. Improve technical education programs” and “1. Formulate a state human resource development plan” are listed, respectively Involvement as is expected.

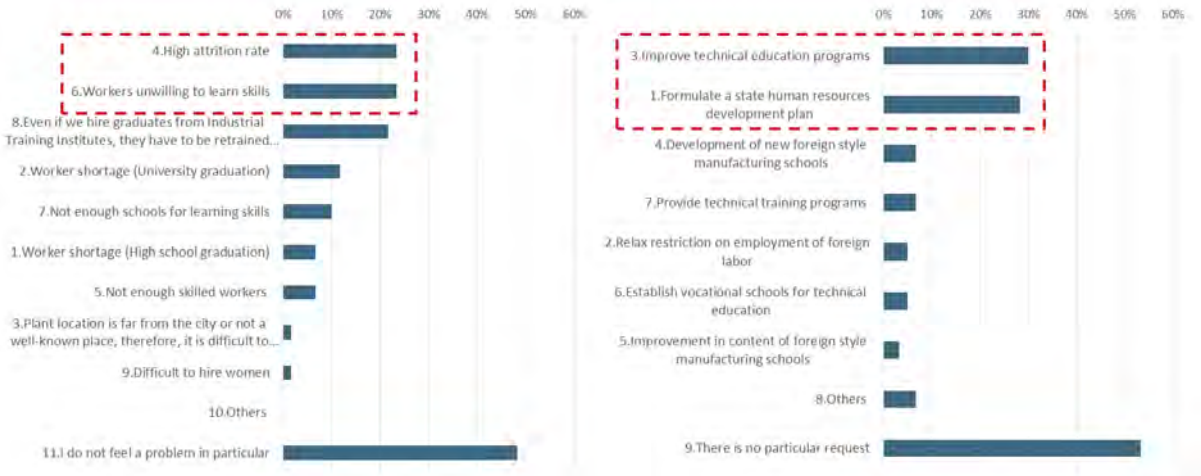

Chart 4.29 Problems of raising industrial talents in Andhra Pradesh （left）& demands for the state’s government（right）

As for roads, the main answers are "5. Lack of street lights, not enough paved roads, poor safety" and "4. Cargo and passenger traffic are not separated ". Many companies do not feel particularly problematic. As for requests to the state government, related answers such as "5. Build sidewalks, install pedestrian traffic lights and street lights " and "4. setting of dedicated roads for trucks and exclusive priority time, site for relocation of distribution facilities" There are many companies that say that there is no demand.

Chart 4.30 Problems of roads in Andhra Pradesh （left） & demands for the state's government （right）

As for power, as in other states, "1. Power supply is not stable, power outages occur frequently", and "1. Strengthen power stations and provide subsidies for self power generation" The systematization of gold, "2. Build substations, install power generators or power storage facilities in industrial estates " are relatively frequently mentioned.

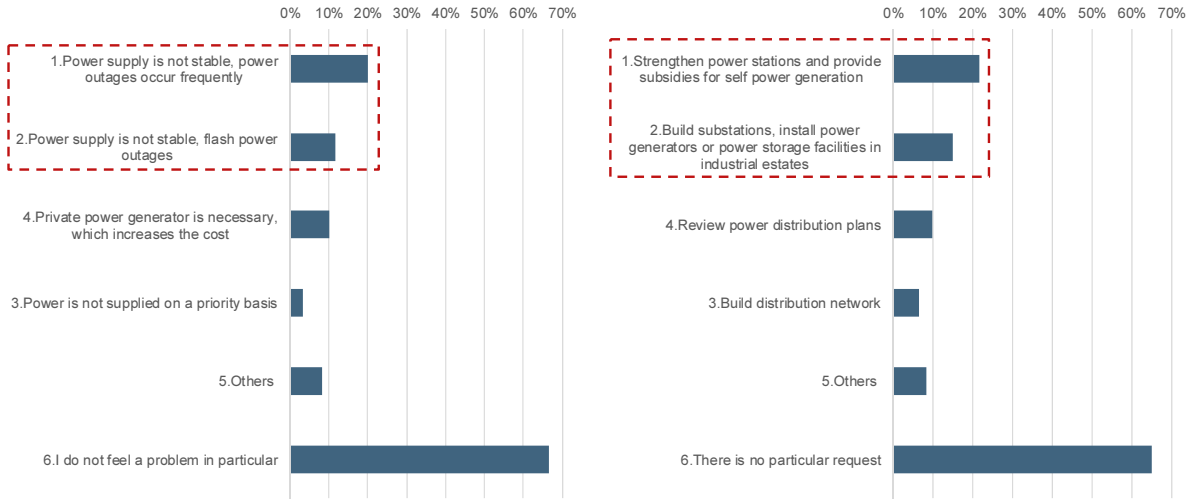

Chart 4.31 Problems of electricity in Andhra Pradesh （left） & demand for the state’s government（right）

As for water, the majority of respondents answered that "1. Insufficient water supply " as in other states. There is a feature that maintenance and enhancement are the most common.

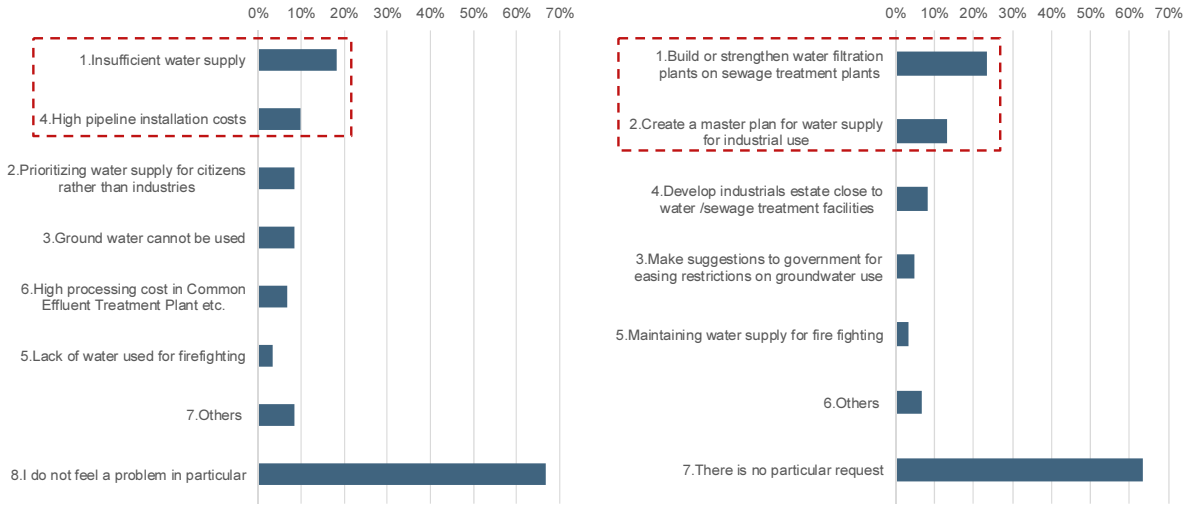

Chart 4.32 Problems of Watersupply/sewage in Andhra Pradesh （left） & demand for the state’s government （right）

The problem of not being able to enjoy high quality services for social infrastructure such as hospitals and schools is a problem common to all over India, and there is a demand for attracting schools and hospitals and for applying medical insurance. Many respondents said that "2. Cannot receive the same standard of services as in developed countries " and "3. High fees for services ". There is a large demand for attracting foreign-only schools and hospitals and commercialization and for “3. Make expats eligible for health insurance”.

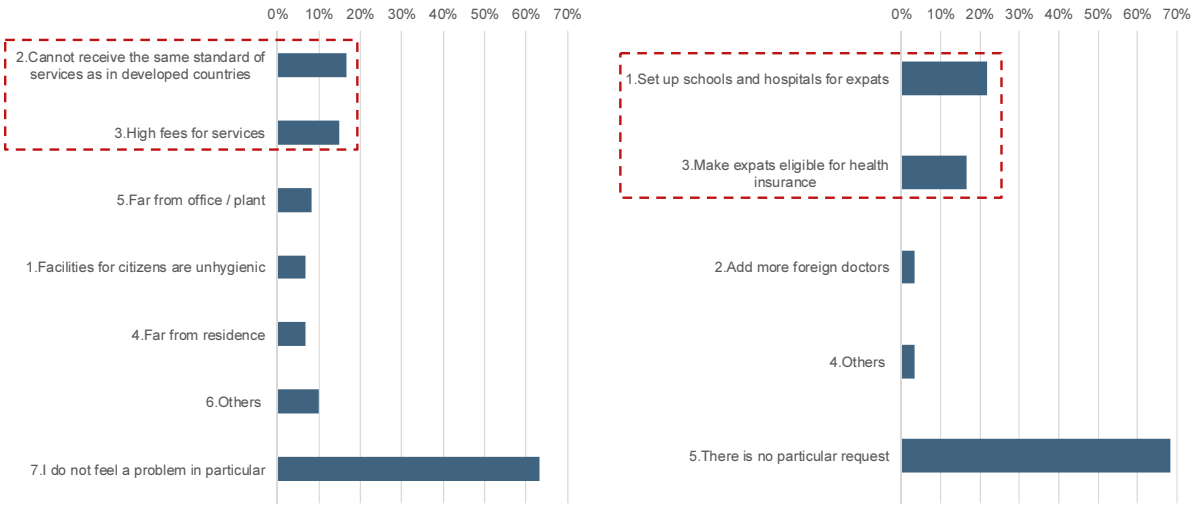

Chart 4.33 Problems of hospitals and schools in Andhra Pradesh （left） & demand for the state's government（right）

From the perspective of employee housing, about 20% of the respondents said that "1. Costs are too high, so employees cannot afford to build their own homes", and the companies are highly interested. In addition, there are many requests to the state government, such as "2. Provide subsidies for housing built by businesses and a lease-back system to public authorities " and "1. Establish a rent subsidy system ".

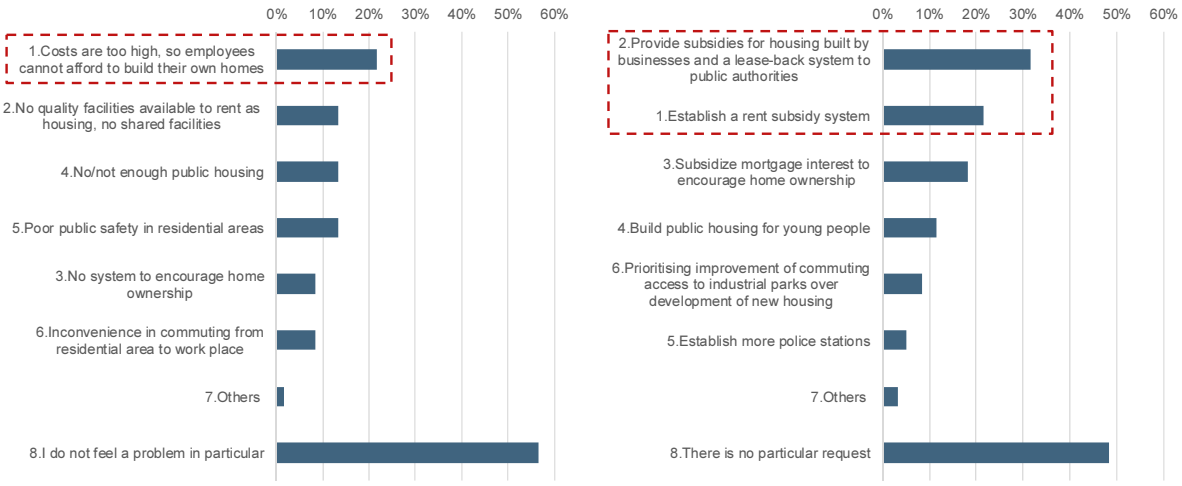

Chart 4.34 Problems of housing for employees in Andhra Pradesh （left） & demands for the state's demand （right）

Finally, with regard to the province, we have confirmed the opinions on development plans in Sri City and Krishnapatnam. "We would like to consider the use of Krishnapatnam Port in the future", "very expectant" positive answers, "enrichment of housing, commerce, hospital, school and other basic facilities for daily life", "procedure Specific requests were obtained, such as transparency, and "expecting improvements in food, which is a major problem for employees." On the other hand, there were answers to some extent that "I do not know about such a plan" "I do not expect" "must develop not only both cities but the whole week".

4.11. Issues Pertaining to Attracting Investment to Andhra Pradesh and Policy Matrix Proposals

4.11.1. Policy-, System- and Procedure-related Issues Faced by Businesses in the State

Based on complaints and issues raised by businesses in the state and the findings of a desktop study of the state, this study has identified policy-, system- and procedure-related issues for improving the investment environment. At present, the Andhra Pradesh state government has adopted very few measures, or else those measures are limited in scope.

To improve the investment environment, investors want single-window service, introduction of a relationship manager and stronger investment incentives comparable to those of other states. With regard to investment incentives in particular, the state should focus on attracting supporting industries to boost competitiveness in the manufacturing industry, rather than giving preferential treatment to less-developed area or large businesses. Further, as far as exports, wide-area logistics and attracting the head offices of major businesses are concerned, businesses should be attracted to import/export ports like Krishnapatnam or industrial estates like Sri City and others close to Tamil Nadu.

Table 4.37 Identifying Policy-, System- and Procedure-related Issues Pertaining to Attracting Investment

Category	Issues	Comments from Businesses	Desktop Study Findings
Investment application procedures	Draw up a plan to streamline permits To prevent delays, give incentives or penalize employees	Too many permits are needed. Procedures are slow and take a long time, and target dates are not adhered to.	The state government introduced a single-window clearance system in 2015 and the portal for approving 13 procedures prior to establishing a company and 11 procedures prior to starting operations is operative, with the system set up to grant approvals within 7 to 21 days for all procedures.
Preferential measures	Create a system and preferential measure procedures to make the system of subsidies for investment costs easy to understand and use	Financial preferential measures are not attractive Criteria for financial preferential measures and procedures are difficult to use Prefential measures exist but our firm cannot use them	The state government has put together a special package scheme for industrial development that provides rebates for stamp duties, electricity charges, CST, loan interest, etc. This package is generous toward SMES and very small businesses but only offers the same preferential measures as other states for large or medium investment. Other special preferential measures are in place for waste recycling and women entrepreneurs.
Industry promotion policies	Create or set out a visualization of the state's industry promotion vision Encourage development of supporting industries	We don't know anything about the state's policies for industry promotion The state has no supporting industries, so it's impossible to find business partners	The state government, ranked third for investment in the manufacturing industry, is carrying out industrial development policies including land banks and simplified investment procedures, operation of a

	and strengthen local businesses	We feel that this state is not appealing as a market	committee to approve mega-projects and so forth, with the aim of becoming a gateway to Southeast Asia, but the difference in policies with those of other states is not clear. The state also has policies for specific sectors with good growth prospects, such as automobiles, textiles, biotech, and aerospace, etc. but these merely set targets for attracting investment and employment, and the policies lack specifics.

Source: NRI

4.11.2. Infrastructure Projects Industry Hopes to See Realized

Based only on questionnaire and desktop study findings, this study was unable to identify infrastructure projects for which there were problems.

However, based on complaints and issues noted in a questionnaire survey of businesses in the state and a desktop study within the state, we assume that there are the following issues pertaining to improving the investment environment for infrastructure.

Table 4.38 Infrastructure Projects Industry Hopes to See Realized by Attracting Investment

Category	Issues	Comments from Businesses	Desktop Study Findings
Roads	Build sidewalks and install pedestrian traffic signals and street lighting Designate truck-only roads or specific times when trucks have priority, prepare new sites for logistics facilities to relocate to Improve roads around industrial estates	Street lighting and paved roads are inadequate, so safety is poor Logistics and person (car) traffic are not separated New or improved roads are needed around industrial estates	Focusing especially on building state roads to industrial estates, a central government project to convert roads in Sagaramala and Bharatmala into six-lane expressways is underway. Additionally, businesses hope that improving the road linking the Nellore district with Karnataka will improve prospects for industrial estates in Nellore.
Electricity	Develop more power generating stations Start a system of subsidies for introducing private generators	The power supply is unstable and power outages are frequent Electricity is expensive May need to encourage solar projects	Even though the state has surplus electricity, industry must obtain electricity through open access and businesses are being asked to reduce use by up to 40%. Electricity rates are INR6.7/kwh, whichis higher compared to last year. The state government has adopted measures to reduce power transmission and distribution loss and to increase APGENCO's generating capacity.
Water and sewerage	Build and boost capacity of water purification plants and water and sewage treatment facilities	Water and sewerage provision is insufficient We dug our own well, since we tend to have water shortages in summer	There are many rivers in the state, but 96% of the water is used for irrigation, and the demand-supply gap is 12.05BCM. Demand for industrial water is forecast to rise to 1.78 BCM in 2029,

Category	Issues	Comments from Businesses	Desktop Study Findings
	Need for water supply from the government		and plans are being drawn up to distribute water flexibly to industry at the district level, allow use of water from government reservoirs for industry, allow construction of reservoirs on government land, build desalination plants, and recycle sewerage.
Hospitals, schools	Attract schools and hospitals for foreigners and create businesses for this Apply the health care system to foreigners	Advanced services on the same level as in developed countries are not available Charges for using school and hospital services are expensive	The state's main policy is to improve remuneration for doctors at public hospitals. There are plans for private investment , etc.through PPP but building hospitals for foreigners is not among the state's policy targets. The main focus of the state's education policy is to improve elementary education to boost literacy rates, etc., and there are no measures for improving education services for foreigners
Employee housing	Create subsidies for businesses building [employee] housing, offer rent subsidies Promote creation of communities offering comfortable living for foreigners	There are few shops or restaurants in residential areas, and such facilities need to be brought in	The state's development of industrial estates does not include mixed use development or improvement of urban functions. Smart Industrial Township projects are only for improving telecom and energy infrastructure connectivity, and do not include plans for commercial facilities or housing development.

Source: NRI

4.11.3. Human Resources Development Issues Faced by Industry

This study assumed issues faced by investors with regard to human resources development, based on complaints and issues noted in a questionnaire survey of businesses in the state and a desktop study within the state. At present, Andrha Pradhesh has implemented almost no measures regarding the respective issues, or measures are limited in scope. These issues should be addressed, in order to improve the investment environment.

The most important issue relating to industrial human resources development is that the content of vocational education provided by the state government and other bodies is not sufficiently practical. Since the skills learned in educational institutions fail to reach the skill levels needed on the manufacturing floor, businesses need to train their workers from the ground up. Instructor education is also insuffient.

Metal molding is an important supporting industry supplying a broad range of industry sectors, and human resources training facilities have been set up. But even with the adoption of the latest equipment, operating costs are high and local SMEs cannot use the facility. The state government should implement a scheme in support of these activities.

Table 4.39 Human Resource Development Issues Pertaining to Attracting Investment

Category	Issues	Comments from Businesses	Desktop Study Findings
Industry human resource deveopment	Draw up and improve state plans for human resources development and technical education programs	The job-leaving rate among Indian workers is high Even if we hire ITI graduates, we end up having to re-train them ourselves to teach them maintenance and how to operate specific equipment, so we incur training costs Programs other than skills training programs are needed too	The state government has set a target of providing vocational training for 20 million people over the next 15 years and set up the Andrha Pradesh Skill Development Corporation (APSSCD) under private sector auspices. It also established 17 skill development centers within engineering colleges. The state has the third-largest number of engineering colleges in the country. The state government supports skills gap evaluations, internships and so forth, with the goal of closing the gap between [worker skills] and the requirements of businesses. The state is also focusing on improving the education infrastructure, with the goals of improving poor-quality university instructors and setting up e-learning programs, etc.

Source: NRI

4.11.4. Issues Pertaining to Promotion of Agriculture and the Food Industry

This study identified specific issues faced by investors with regard to human resources development promotion of agriculture and the food industry based on specific requests by businesses in the state and a desktop study within the state. At present, the Andrha Pradesh state government has implemented almost no measures regarding the respective issues, or measures are limited in scope. These issues should be addressed, in order to improve the investment environment.

Table 4.40 Agriculture and Food Industry Promotion Issues Pertaining to Attracting Investment

Category	Issues	Comments from Businesses	Desktop Study Findings
Agriculture and food industry promotion	Provide support for basic education in skills, etc. for farmers	Motivation toward agriculture is weak; measures are needed to boost motivation Better education needs to be offered to farmers	Agriculture and fisheries is a core industry accounting for 30% of the state's economic activity; it also accounts for 70% of all exports from India. There are five agriculture export zones (AEZ) in the state, and various preferential measures, such as subsidies for investing in primary processing and cold chain facilities, are provided. There are also policies directed specifically at the fisheries industry, and measures are being implemented to support primary processing immediately after catching fish, refrigerated trucks, distribution processing and setting up cold chains for all of these.

Source: NRI