Chapter - III

EVOLUTION OF INDUSTRIAL ESTATES

- Origin of Industrial Estate
- Early History
- Classification or types of Industrial Estates
- Objectives of Industrial Estates
  
  (i) Providing Infrastructure for the use of Industrial Units
  
  (ii) Assisting the potential entrepreneurs and developing industrial units
  
  (iii) Development of underdeveloped areas
  
  (iv) Facilitating development planning

- Advantages
- Limitations
- Programme of Industrial Estates in India
  
  Programme of Industrial Estates in Maharashtra

- Location consideration
- Layout and Buildings
- Common facility Centres and other services
An idea of industrial estate is as old as more than 100 years. This could be traced from the publication of United Nation's. Prior to that, however, human civilization knew the advantages of living together and later on it recognized the advantages in the grouping of economic activities at one place. Industrial estates have been recognized as a useful tool for rapid industrialisations, since it facilitates promotion of small scale industries.

Industrial estates vary from place to place, particularly in respect of facilities provided therein. The term industrial estate is a generic concept, which represents a planned clustering of industrial units in a developing area providing built-in factory accommodation and all modern facilities. William Bredo defines an industrial estate as "a tract of land which is subdivided and developed according to a comprehensive plan for use of a community of industrial enterprises". He further elaborated that a comprehensive plan must make a


detailed provision for streets and roads, transportation facilities, installation of utilities and construction of factory buildings which may be sold or leased out to the occupants. In the context of Indian economic planning, the terminology 'Industrial Estate' is used to designate a developed area, offering standard factory buildings on rent, hire-purchase or outright purchase basis and a variety of basic facilities and services including electricity, water supply, and roads to occupants. According to Dr. P.C. Alexander, "Industrial Estate is a group of factories constructed on an economic scale in suitable sites with facilities of water, transport, electricity, steam, watch and ward and first-aid provided with special arrangements for technical guidance and common service facilities'. The definition given by Alexander is more elaborate than the one given by Dr. Bredo. The important features of both the definitions are the same. The only difference is that Dr. Alexander has emphasised the provision of technical and common service facilities. The study made by the United Nations entitled 'Policies and Programmes for the establishment of Industrial Estates' defined an industrial estate as "a planned clustering of industrial enterprises offering standard factory buildings erected in advance of demand

and a variety of services and facilities to the occupants\textsuperscript{1}. The emphasis of all these definitions, more or less, has been placed on the same factors like provision of proper factory accommodation in advance of or on demand and on other basic industrial prerequisites.

**Early History:**

Early in 1930, the industrial estates were established in the private sector on profit motive basis in the USA, UK, Canada and in few other countries. These industrial estates had been used as a mechanism to stimulate the growth and efficiency of small industries. An industrial estates or - trading estates - were first established in U.K. before World War II to divert industry into what were called "depressed" or "distressed" areas i.e. areas of heavy unemployment\textsuperscript{2}.

The following terms are used for industrial estates in some countries:

\begin{itemize}
  \item \textsuperscript{2} Srinivasan, Op. Cit., p. 35.
\end{itemize}
<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Terms</th>
<th>Name of country</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Planned or organised tracts, District or park.</td>
<td>USA</td>
</tr>
<tr>
<td>2.</td>
<td>Trading Estates or Industrial Estate</td>
<td>UK</td>
</tr>
<tr>
<td>3.</td>
<td>Industrial Nucli /Industrial Zone</td>
<td>Italy</td>
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<td>4.</td>
<td>Industrial Plaza/Industrial Region</td>
<td>Canada</td>
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<tr>
<td>5.</td>
<td>Industrial Regions</td>
<td>USSR</td>
</tr>
<tr>
<td>6.</td>
<td>Industrial Sub-Division</td>
<td>Puertorico</td>
</tr>
<tr>
<td>7.</td>
<td>Industrial Cities</td>
<td>Mexico</td>
</tr>
<tr>
<td>8.</td>
<td>Industrial Estate</td>
<td>Japan, Cylon, Burma, India, Denmark, Netherland, etc.</td>
</tr>
</tbody>
</table>

Source: UN, Department of Social and Economic Affairs, Industrial Estates, Policies and Progress, p. 4 and Establishment of Industrial Estates in underdeveloped countries. pp. 4 -16.
The functions of all the industrial estates having different names are more or less similar directed towards the development of industries of different sorts.

**Classification or Types of Industrial Estates:**

An industrial estates are having numerous functions, aims, geographical placements etc., although their main attention is towards providing infrastructure for the promotion, functioning and development of industrial units. On the basis of different characteristics, the industrial estates may logically be classified into different types. This classification though imaginary, provides knowledge about functions and purpose of any given industrial estate. In such classification the same estate may perhaps be classified into different classes. For example, an estate classified as cooperative industrial estate, may be urban industrial estate.

(a) **Classification based on location:**

An industrial estate may be classified on the basis of its geographical placement as below:-
(i) **Industrial Tract**:

This is a simply an industrial tract of land which provides utility services, access roads and streets but no building. This is the American usage. This type of industrial tract, for example, is identified in between Poona and Bombay all along the road or rail tract. Prior to 1955 the Government has made special efforts to develop the industries in the area along the above tract. Lateron this tract is informally known as industrial estate of the State.

(ii) **Industrial Sub-Division**:

This is an industrial tract of land which provides buildings for small scale industries, but does not provide utility services. It has been adopted from Puerto Rico. The British Usage industrial cluster is identical with it.

(iii) **Industrial District/Zone**:

Factory building and special services are provided for the use of industrialists. This type is in USA.
(b) **Classification as per Population:**

Industrial estates in India may be classified as against their objectives to remove the disparities in the levels of development between Urban and Rural areas as below:

1. Urban Industrial Estate
2. Semi-urban Industrial Estate
3. Rural Industrial Estate.

(c) **Classification as Per Functions:**

According to nature of functions there can be three kinds of industrial estates:

1. General Industrial Estate
2. Functional Industrial Estate
3. Ancillary Industrial Estate.

The first type of industrial estates are established for non-specialised industries. In such an industrial estates, all types of industrial units are encouraged. There is hardly any restriction on the type of industry.
All the industrial estates in India are generally of this type. This type of industrial estates are useful for general development of all kinds of industries.

The second type of industrial estates are known as functional industrial estates in which the functions of one particular industry is sub-divided into number of small scale units located in the neighbourhood of one another, their manufacturing activities being coordinated according to declared programme.

Third type of industrial estates are known as ancillary industrial estates. The Government of India has taken various measures for promotion of small scale units as ancillaries to large undertakings. One of such measure is the setting up an ancillary units in an industrial estates located near large factories.

(d) Classification as per size:

An industrial estate may be classified on the basis of its size as given below:

(i) Mini-industrial estate
(ii) Large scale industrial estate
(iii) Medium scale industrial estate.
The industrial estates in Maharashtra, as per organizational characteristics are classified into three forms:

(i) Estate organised by Government

(ii) Estate organised by local bodies

(iii) Estate organised by Co-operative or Joint Stock Company/or by Corporate Body.

An entire cost of construction and development of estate is borne by the any agency as referred to above. This agency takes care of the estate from its promotion to its functioning.

Objectives of Industrial Estates:

(i) Providing infrastructure for the use of Industrial Units:

The lack of infrastructure does not permit any industrial unit to grow and function smoothly. Under-developed area do not possess the infrastructure for facilitating development of industrial unit. At such
places and even at developed or at developing places
Industrial Estate may provide the necessary infrastruc-
ture for the growth of small industrial units such as
factory accommodation at suitable sites with facilities
of water, transport, banks, post and telegraph office,
canteens, watch and ward, dispensaries, residential
houses, etc. It also provides common service centre for
the use of all the industrial units. This centre
devotes to repair of machinery and manufacturing of the
parts required to machinery used by the industrial units.

(ii) Assisting the potential
entrepreneurs in promoting
and Developing Industrial Units:

The need for help in promoting industrial units
and their subsequent functioning is envisaged by many,
especially in underdeveloped area, where starting and
running of industrial unit is difficult. Weak financial
position, ignorance of technical know how and marketing
channels, inadequate knowledge about statutory or legal
obligations etc. do not permit the potential entrepreneur
to start its own business. These odds, if removed, the
industrial units may be promoted and developed.
Industrial estates undertake the task of removing these odds and assist the potential entrepreneurs. An industrial estate, by virtue of its being a big and its comprehensive efforts in acquiring and developing land and providing factory buildings with the necessary facilities enables entrepreneur to get factory sheds and other facilities at an economic cost.

(iii) Development of underdeveloped Areas:

In a developing nation the industrial estate is looked upon as an effective and convenient instrument for accelerating the industrial growth in underdeveloped areas and for increasing employment opportunities. In an industrial estate the Government may easily focus its important schemes of assistance, incentives and facilities to small-scale industries and improve their technology. Various facilities are made available to a small entrepreneur in an industrial estate. He would not have been able to get them easily and economically by his individual efforts. An industrial estates, thus, encourage an establishment of industrial units which otherwise would not have been established; it goes a long way to stimulate the latent entrepreneurial talent. It also helps to exploit substantially the local raw
materials and small savings. A well-conceived and well-planned industrial estate encourages development of industries also in its vicinity. It thus becomes a nucleus for further industrial development and injects an element of dynamism into the process of socio-economic growth of the region.

(iv) Facilitating Development Planning:

The programme of setting up of industrial estates is a part of national planning and it aims at providing the best possible locational and technological pattern to the industries in the state in accordance with the objectives of the plan. It is, therefore, very important to ensure that selection of site, sketching of lay-out, planning and industries, supply and storage of raw materials, etc. are done in a planned and systematic manner and conceived in the context of the overall social considerations.

Advantages:

The experiences of the industrial estates all over the world demonstrate that all sizes of industrial enterprises of industrial estates reap the following advantages:
(1) **Provision of suitable accommodation at reasonable cost:**

The industrial estate provides suitable accommodation and services for a large group of industries. It provides factory buildings of all sizes, and administers the affairs. The services provided are cheaper than that have been possible for the owners of factories individually. There is considerable economy in centralized planning, construction of buildings and installation of different facilities.

(2) **Economy in cost of Promotion of Industrial Unit:**

The small industrialists who are allotted factory buildings in an industrial estate save the entire cost of conducting the survey work of the area to find out whether land is suitable for the erection of factory buildings. They get factory buildings on nominal rent, with basic utilities—electricity, water, roads, streets, etc.

(3) **Benefit of External Economy:**

They enjoy external economies, and avail of the large pool of industrial labour, mutual inspiration,
improved industrial and advisory services and technical know-how.

(4) **Free from Congestion**:

Decentralisation is achieved as the industrial estates are located away from the congested areas. In cities, the factories are located in over-crowded areas and hence they do not get many facilities. A well planned estate provides suitable accommodation for the expansion of manufacturing processes in spacious surroundings.

(5) **Facility of Training and Development**:

Industrial estates provide educational and training facilities to the young men, in the demonstration centres, institutes and workshops.

(6) **Employment Opportunities to local people**:

They provide employment to the local people and also boost the employment in other enterprises by creating demand for their products through linkage effects.

(7) **Development of City or Town**:

With the establishment of these estates, modern cities are well-planned, old cities are improved and
traffic congestion is removed.

(8) **Acceleration to Government's Efforts:**

They form an important part of a national industrial programme and encourage industrial investment by improving technology, by making financing easier, by simplifying standardisation measures and by raising the level of productivity.

(9) **Facility to Modernise:**

They help in modernising small-scale industries. As they are situated in healthy environments, they tend to improve the physical productivity of the workers.

(10) **Boost to initiative of Entrepreneur:**

Through these estates, the Government can provide special incentives for industrialisation. In the early stage of development, subsidisation is necessary which is provided in the form of reduced rent, cheaper equipment, etc. This all leads to initiate entrepreneurial initiative to promote and develop the industrial unit.
(11) **Facilitate Regional Balance**:  

They guide regional development, and solve many social problems.

(12) **Economy in cost of Development Expenditure**:  

As all other facilities—land, buildings, services, etc. are provided by an industrial estate, only a small amount of money is needed to be invested by an industrialist. "An estate is, thus, a means of mobilizing investment of smaller block of capital and facilitating entry into industry".

**LIMITATIONS**

While there are so many advantages of industrial estates there are certain disadvantages too. They are as enumerated below:

(a) **Danger of over-investment**:  

It is just possible that the organisers of an industrial estate may invest more money in fanciful designs, factory buildings and provision of facilities. It might lead to over-investment.
(b) **Restriction on entry:**

While industries are selected, there is a restriction on the weak ones, and those that have not been given priority, to get accommodation.

(c) **Political hold:**

Industrial units being established at one place may be victim of political leadership harnessed for selfish motives.

(d) **Inconvenience to Urban Dwellers:**

Some industrial estates grow in size and increase the employment. This employment may cause urban congestion leading to disturb city life.

(e) **Disturbance to Social Life:**

The gathering of workers at one place as the incidence of industrial estate, may create social problems like increase in liquor or other intoxicant consumption, crimes, communal tension, labour un-rest etc.

(f) **Concentration of Wealth:**

Normally, rich and well-to-do entrepreneurs get the advantages to start their units in the estates and they
enjoy benefits which must be the privilege of poor.

(g) **Inconvenience to**

**Urban Dwellers from Metropolitan:**

Some industrial estates grow in size and attract
the large mass of people by way of providing employment
and other opportunities to earn. In the absence of
industrial estate, this would not have been happened.
The gathering of people may cause urban congestion leading
to disturb the city life. Traffic congestion, rise in
prices of necessities, water shortage, electricity supply
inadequacies, police interference, etc. disturb the life
of an ordinary people.

**Programme of Industrial Estates in India:**

An establishment of construction of industrial
estates in India since beginning has been considered to
be the biggest of its kind so far undertaken after
independence as compared to any developing countries in
the world\(^1\). The industrial estates in India are based
on the British model.

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1. Industrial Estates in India, Development Commissioner,
Ministry of Industrial Department and Company
Affairs, Govt. of India, New Delhi, p. 5.
The programme of Industrial Estates as a measure for the development of small-scale industries was first adopted in India by the Small Scale Industries Board at its meeting held in January, 1955. The first Industrial Estate was started by the former Government of Saurashtra (now in Gujarat) in a 20 acre plot near the Bhaktinagar Railway station in Rajkot. The work of construction at the Estate commenced in September, 1955, and the first shed in the Estate was allotted to a small industrial unit in December, 1955.

Ten more Industrial Estates were sanctioned towards the close of the First Plan period to be implemented by the State Governments concerned. They were:

- Guindy and Virudhunagar (Madras)
- Kanpur and Agra (Uttar Pradesh)
- Palghat, Trivandrum, Kottayam, Quilon and Trichur (Kerala)
- Kalyani (West Bengal)

A loan of Rs. 57.89 lakhs and a grant of Rs. 0.49 lakh were sanctioned to the State Governments by the

Central Government towards initial expenditure on these Estates. In addition, construction of two Estates, one at Okhla (Near Delhi) and the other at Naini (near Allahabad) was undertaken by the National Small Industries Corporation which was established as a private limited company by the Central Government.

During the initial period industrial estates are expected to:

(i) relieve congestion in industrial areas and big towns and thus to serve as a tool of city planning;

(ii) stimulate growth of industries in the townships surrounding some major industrial plants and thus promote growth of auxiliary industries;

(iii) decentralise industry towards small towns and large villages and thus control urban growth and regulate location of industries.

To-day we have industrial estates in every state. Punjab, Harayana, Himachal Pradesh, Delhi and Karnataka have made substantial progress in the matter of development

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of industrial estates. To-day the industrial estates are looked as an instrument to reduce REDs (Regional Economic Disparities). The Maharashtra has made special efforts in this direction.

Programme of Industrial Estates in Maharashtra:

The Maharashtra Government has realised the need of an establishment of industrial estates at the eve of First Five Year Plan. Industrial Department of the state had prepared a blue print for the same. Accordingly, ten industrial estates were proposed to be established in Second Five Year Plan. The particulars about their locations and types of organisation of these estates are given below:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Location</th>
<th>District</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Nagpur</td>
<td>Nagpur</td>
<td>Government Estate</td>
</tr>
<tr>
<td>2.</td>
<td>Amravati</td>
<td>Amravati</td>
<td>Government Estate</td>
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<tr>
<td>3.</td>
<td>Karad</td>
<td>Satara</td>
<td>Government Estate</td>
</tr>
<tr>
<td>4.</td>
<td>Hadpsar</td>
<td>Poona</td>
<td>Municipal Estate</td>
</tr>
<tr>
<td>5.</td>
<td>Nanded</td>
<td>Nanded</td>
<td>Cooperative Estate</td>
</tr>
<tr>
<td>6.</td>
<td>Parli Vaijnath</td>
<td>Bhir</td>
<td>Cooperative Estate</td>
</tr>
<tr>
<td>7.</td>
<td>Kolhapur</td>
<td>Kolhapur</td>
<td>Cooperative Estate</td>
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<tr>
<td>8.</td>
<td>Sangli</td>
<td>Sangli</td>
<td>Cooperative Estate</td>
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<tr>
<td>9.</td>
<td>Inhalkaranji</td>
<td>Kolhapur</td>
<td>Cooperative Estate</td>
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<tr>
<td>10.</td>
<td>Kurla</td>
<td>Bombay</td>
<td>Cooperative Estate</td>
</tr>
</tbody>
</table>
All the above industrial estates are now in the Talukas which are identified as comparatively developed as against other Talukas in the state.

These estate have made considerable impact in and around the economy. Many thousands of jobs are being provided by them. Among all these estates, Industrial estates at Hadapsar, Karad, Kolhapur, Sangli, Ichalkaranji and Kurla have registered notable performance. These estates are the reasons to attract other industrial units and consequent trade and commerce therein. The programme of industrial estates so started has gone a long way in relieving congestion in above industrial towns.

During the Third Plan Rs. 220/- lakhs have been provided in addition to Rs. 2.0 crores to be made available by the Life Insurance Corporation of India to the co-operative industrial estate societies as loan for in all 57 estates proposed to be established in the plan. Out of the 57 industrial estates proposed to be set up during the Third Plan period six would be Government estates, one Municipal estate and 50 co-operative estates. The details about location and type of these estates are given below:
Position of Industrial Estates in Maharashtra by the end of Mid-sixties:

<table>
<thead>
<tr>
<th>Location</th>
<th>District</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>@1. (a) Parwati</td>
<td>Poona</td>
<td>Government Estate</td>
</tr>
<tr>
<td>(b) Worksheds</td>
<td>Poona</td>
<td>Government Estate</td>
</tr>
<tr>
<td>*2. Kandivali</td>
<td>Bombay</td>
<td>Government Estate</td>
</tr>
<tr>
<td>*3. Paithan</td>
<td>Aurangabad</td>
<td>Government Estate</td>
</tr>
<tr>
<td>*4. Bapti Road</td>
<td>Bombay</td>
<td>Municipal Estate</td>
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<tr>
<td>@5. Gultekadi</td>
<td>Poona</td>
<td>Co-operative Estate</td>
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<tr>
<td>*6. Lonavala</td>
<td>Poona</td>
<td>Co-operative Estate</td>
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<tr>
<td>@7. Baramati</td>
<td>Poona</td>
<td>Co-operative Estate</td>
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<tr>
<td>*8. Sholapur</td>
<td>Sholapur</td>
<td>Co-operative Estate</td>
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<tr>
<td>@9. Barsi</td>
<td>Sholapur</td>
<td>Co-operative Estate</td>
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<tr>
<td>@10. Ahmednagar</td>
<td>Ahmednagar</td>
<td>Co-operative Estate</td>
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<tr>
<td>@11. Shirampur</td>
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<tr>
<td>*12. Kopergaon</td>
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<tr>
<td>*13. Koregaon</td>
<td>Satara</td>
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<tr>
<td>@16. Vita</td>
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<tr>
<td>@17. Jaisingpur</td>
<td>Kolhapur</td>
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<td>@18. Goregaon</td>
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<td>@19. Marol</td>
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<td>@20. Malad</td>
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<td>&amp;35.</td>
<td>Katol</td>
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<td>&amp;37.</td>
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<td>Akola</td>
</tr>
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<td>&amp;38.</td>
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<td>Buldhana</td>
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<td>&amp;39.</td>
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<td>Buldhana</td>
</tr>
<tr>
<td>&amp;40.</td>
<td>Akola</td>
<td>Akola</td>
</tr>
<tr>
<td>✪41.</td>
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<td>Wardha</td>
</tr>
<tr>
<td>✪42.</td>
<td>Yeotmal</td>
<td>Yeotmal</td>
</tr>
<tr>
<td>*43.</td>
<td>Chanda</td>
<td>Chanda</td>
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<table>
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<th>No</th>
<th>Name</th>
<th>City</th>
<th>Type</th>
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<tbody>
<tr>
<td>44</td>
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<td>Aurangabad</td>
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<td>46</td>
<td>Hingoli</td>
<td>Parbhani</td>
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<td>Bhor</td>
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<td>Kurundwad</td>
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<td>Murtizapur</td>
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<td>Vaijapur</td>
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<td>Co-operative Estate</td>
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<tr>
<td>53</td>
<td>Dharmabad</td>
<td>Nanded</td>
<td>Co-operative Estate</td>
</tr>
<tr>
<td>54</td>
<td>Kinwat</td>
<td>Nanded</td>
<td>Co-operative Estate</td>
</tr>
</tbody>
</table>

**Functional Estate**

<table>
<thead>
<tr>
<th>No</th>
<th>Name</th>
<th>City</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>55</td>
<td>Dombivli</td>
<td>Thana</td>
<td>Government Estate</td>
</tr>
<tr>
<td>56</td>
<td>Bhosari</td>
<td>Poona</td>
<td>Government Estate</td>
</tr>
<tr>
<td>57</td>
<td>Nagpur</td>
<td>Nagpur</td>
<td>Government Estate</td>
</tr>
</tbody>
</table>

* Industrial estates in which at least one unit is working

‡ Industrial estate under construction

‡ Co-operative industrial estate which is only registered

& Industrial estate which is not even registered.
Location Consideration:

The success of an industrial estate depends to a very great extent upon its location, particularly with regard to the nearness to markets and raw materials sources and availability of entrepreneurs, skilled workers and socio-economic overheads such as transport and communications. Sites of industrial estates should, therefore, be located after careful and thorough studies of locational advantages and disadvantages as well as of potentiality of development of the area and also of Government's plans about the regional development. Local commercial and technical talent should be also associated with such investigations. Of course the State Government had taken into consideration the possibility of setting up the estates from the viewpoint of industrial potentiality, availability of entrepreneurs, importance of the place and the local demand. But had such investigations been carried out more systematically, and through appropriate agencies and local chambers of commerce and trade associations consulted while finalising the sites for industrial estates, their performance would have been much better than it is at present. At present some industrial estates have been located at sites far away
from the sources of raw materials required for their industries and also from their markets. Due to the absence of industrial background in the neighbourhood, some of the estates have not been able to develop primary or ancillary industrial activities. The lack of entrepreneurs and the shortage of skilled workers was also keenly felt at some places and consequently some of them have not been able to function early and efficiently.

Fortunately, however some estates like those situated at Kurla, Sangli, Aurangabad, Nanded have been located well in respect of nearness to the sources of raw materials and markets and availability of skilled workers. There are textile, chemical, engineering and several light engineering industrial units at Sangli, Kolhapur, Chikalthana, Waluj, Jalgaon and such other places. Quite a large number of units in these industrial estates are, therefore, in a position to provide various ancillary or other services to the big industrial concerns in the neighbourhood and thus, continually expand the sphere of their activities.

From the viewpoint of transport facilities, some industrial estates can be said to have very good location. The estate at Waluj near Aurangabad or Kurla
in Greater Bombay, for instance is only about two to three miles away from the railway station. However, some industrial estates, especially from Vidarbha and Marathwada are situated far away from the neighbouring cities and railway stations. The remote placement of these estates keeps the main city free from many problems which are normally faced by cities like Poona or Bombay where industrial estates are now in the heart of the Central Business District (CBD). The distance location of the industrial estate from the main city, however, leads to burden industrial units in the respect of transport cost. Further these units suffer from difficulties in the movement of raw materials and finished products. In view of these facts, it will be advisable in future that the Government should carry out thorough prior and proper investigations about locational advantages of the sites and establish the estates only at such sites as have excellent locational advantage. As regards the existing estates situated far away from the sources raw materials and markets, the State Government should extend financial assistance to governing bodies of these estates for the purchase of vehicles for transport of men and material so as to
enable them to overcome their locational handicaps.

**Lay-out and Buildings**:

Since industrial estates are being established primarily for giving facility in the form of land and buildings to those who cannot afford to have them on their own, it is important that these facilities are provided without delay and also at reasonable constructional costs. An accurate assessment of the needs of the occupants would suggest the size and type of accommodation suitable for the industrial unit. Hence the lay-out of the estate is prepared after taking into account not only the aesthetic and civic considerations, but also economic aspects and particularly the most economic utilisation of the available land. The plan ensures economies in land utilisation for roads and common services. It provides for extension in facilities as may be needed with the development of the estate.

The Committee on Selected Buildings Projects appointed by the Planning Commission has suggested the following scheme of land utilisation:

(1) Area under factory plot .. .. 60 to 65%
(2) Area under roads .. .. .. upto 20%
(3) Area under open space ... upto 10%

(4) Area under administrative and other buildings.

The Government of Maharashtra in its note has stated that for a medium estate of about 10 to 30 acres, the following percentages are generally observed.

(1) Area under plots ... 55%
(2) Area under roads ... 25%
(3) Open space ... 10%
(4) Other ancillary buildings ... 10%

Lay-outs of most of the estates and particularly those at Amravati, Aurangabad, Nanded, Nagpur and Karad have been approved by the Small Scale Industries service Institute and satisfy the requirements prescribed by the Director of Town Planning and the Chief Inspector of Factories. Estates at Amravati, Nagpur, Karad, Sangli, Kolhapur and Ichalkaranji have sheds of their own pattern. The Kurla estate has sheds of different sizes between 1,000 and 9,000 Sq. ft. and there is no standard design for construction. In case of the estate at Hadapsar, the Poona Municipal Corporation has provided developed plots of 10,000 Sq. ft. and above, and left the construction of the buildings to the occupants. Like Hadapsar Estate, the occupants of the estate at Ichalkaranji have
constructed their sheds at their cost but have adopted a standard pattern. Thus, the layouts differ from estate to estate but place economy is given attention.

In some estates conspicuous defects in the construction of roads and sheds have been noticed. For example, the estate at Karad does not have pucca roads connecting sheds to the estate roads and consequently, the occupants experience considerable hardships particularly during the rainy season. Many estates have no fence, as a result of which cattle and trespassers are able to move freely through the estate. The sheds of the estate leak in rainy season and adversely affect the machines and the industrial activity. In some estates some sheds do not have independent water connection and sanitary blocks. Some units in the estates suffer from water shortage.

It is necessary to keep the construction costs at as low a level as possible. Construction costs can be reduced substantially by using the abundant and cheap raw materials available locally like bricks, tiles, wood, etc. to the maximum possible extent and by reducing the use of imported or scarce materials like galvanised
Iron sheets. In view of the acute foreign exchange shortage in our country, it is desirable that the Directorate of Industries should, with the help of technical experts and architects, evolve economic standards for the style of buildings and materials used in constructing sheds in industrial estates in future. An early action on these lines is particularly necessary because there have been grievances from occupants in some Government estates that even the provisional rents are high and it would have been possible to construct the buildings more economically. In view of their ambitious programmes of industrial estates and industrial housing, the Government should also encourage setting up of factories producing construction materials such as bricks, tiles, wooden frames, etc. at low costs.

Common Facility Centres and other Services:

The functions of the Industrial Extension Centre of the Small Industries Service Institute established in the estate of Kolhapur are as follows:

(i) To assist the individual manufacture in solving common technical problems.
(ii) To visit small industrial units in the vicinity and suggest improved designs and better techniques of production.

(iii) To enlist small-scale units with National Small Industries Corporation for participation in the Government purchase programme.

(iv) To operate as a common service centre for those units which cannot afford to purchase such costly machines and equipments.

The workshop of the centre is designed to provide the following types of development and common facilities:

(i) Machine shop,
(ii) Heat treatment,
(iii) Welding,
(iv) Blacksmithy,
(v) Sheet Metal,
(vi) Tools and die making
(vii) Testing of hardness, tensile strength and compression.

The Centre is rendering an excellent service to the industrial units in the estate and is well equipped with the useful machines. The cost of the machines in
the centre is about Rs. 10/- to 15/- lakhs. The
monthly income of the centre is about Rs. 85,000/- and
salaries are paid to the extent of Rs. 22,000/- per
month. It has also provided short-term training courses
in machine shop practice, advanced machine shop practice,
blue-print reading, heat treatment of steel and forgings,
cupola and its operations, industrial management, foot­
wear and leather goods manufacturing, etc.

There are various other institutions in and near
the estate at Kolhapur. Labour Welfare Department has
established a recreation centre. The Directorate of
Industries, Government of Maharashtra, have opened
quality Marking Centre for oil engines and Kolhapur
Productivity Council arranges various short-term courses
on subjects like work study, marketing, management,
industrial relations, inventory control and stores
organisation. The co-operative society of the estate
has engaged an industrial engineer to solve the technical
difficulties of its members. It has a Sales Depot
Committee and has recently opened sales depot which
purchases from different firms some spare machine parts
and tools and provides the same to members at moderate
rates. The society of the estate acts an agent of
Maharashtra Small Scale Industries Development Corporation for scarce raw materials.

Like Kolhapur, there is a need to establish common facility centre at Jalgaon. At present such centre exist for limited purpose. It may be pointed out here that prototype production and Training Centres have been established at Okhla, Rajkot and Howrah in collaboration with West Germany, USA, Japan for designing, developing and producing quality machine tools suitable for production in small industries.
Chart No. 1.

Classification of Industrial Estates:

(A) Classification as per Geographical placement:
   i) Industrial tract;
   ii) Industrial sub-Division
   iii) Industrial District Zones.

(B) Classification as per population
   i) Urban Industrial Estates;
   ii) Semi-Urban Industrial estates;
   iii) Rural Industrial Estates.

(C) Classification as per functions:
   i) General Industrial Estates;
   ii) Functional Industrial Estates;
   iii) Ancillary Industrial Estate.

(D) Classification as per size:
   i) Mini Industrial Estates;
   ii) Large size Industrial Estates.

(E) Classification as per organisational pattern:
   i) Estate organised by Government;
   ii) Estates organised by Local Bodies;
   iii) Estates organised by co-operative or Joint Stock Company or by Corporate Body.