CHAPTER VIII

CONCLUSION
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In chapter VII problems faced by units in the industrial estates were presented. In this chapter the summary of the main findings of the study is given.

The present study was an endeavour to examine as to:

(i) how far the industrial estates have been able to accomplish the desired objectives effectively and efficiently

(ii) whether the economic performance of the industrial units located in the estates is satisfactory or not, and

(iii) whether it helped to improve the efficiency of the small units.

It is obvious that if the industrial units are provided with all the basic facilities and services, they will be economically strong and will contribute
their share to the industrial production of the state. For better performance the units operating in an industrial estate should generate mutual economic interdependence and complementarity in production. This will lead to inter-servicing and inter-trading, and also to a sense of joint enterprise and co-operation.

Pre-project planning of the scheme, thoughtful lay-out and economical construction of factory buildings, adequate provision of basic facilities and services and better selection of industrial units are all factors which make for and lead to the efficiency of the industrial units in industrial estates and ultimately to the development of small scale industries on a sound footing.

To evaluate the performance of industrial estates in Kerala, an on-the-spot study through a schedule of questions was conducted. All the industrial estates which are functioning and the industrial units in industrial estates were covered by the survey.

The survey was undertaken in 1986. At the time of the survey, 138 units in 17 major industrial
estates were functioning. Majority of the industrial estates in the state are urban. For instance, in all the 17 estates, 10 are urban and 7 semi-urban (See table-4.2).

8.1 Sponsorship and Types of Industrial Estates

The scheme of industrial estates is sponsored by the Central Government but the states have the responsibility of construction and management of the estates directly through their own departments. In Kerala this is done through Kerala State Small Industries Development and Employment Corporation (SIDECO).

8.2 Size of Industrial Estates

Information collected through the schedule of questions shows wide variations in the size of the existing industrial estates. In India, estates over 12.5 hectares in size are regarded as large, those between 4 and 12.5 hectares as medium and those under 4 hectares are small. In Kerala most of the estates are medium-sized ones (see table-4.3).
8.3 Factory Sheds and Industrial Units

Since industrial estates are established primarily for providing facilities in the form of land and building to industrialists on economic terms, the government has constructed a large number of factory sheds in these industrial estates. In the initial period the occupancy rate was about 90 per cent. Occupancy rate was higher in urban estates than semi-urban/rural estates (see tables 4.5 and 4.6). During that period 310 units were working. But, at present, the number of sheds occupied by the entrepreneurs has come down as the number of the units declined to 138. Consequently, employment and total annual production also have gone down.

8.4 Site Selection and Location of Estates

The success of an industrial estate depends mainly upon its location, particularly with regard to the nearness of market and sources of raw materials and presence of entrepreneurs, skilled workers and socio-economic overheads such as water, power, transport and communications. Site of industrial estates should,
therefore, be decided after a careful and thorough study of locational advantages and disadvantages as well as potentiality of development of the area. In Kerala, the government has mainly taken into consideration the availability of land followed by proximity to city and availability of basic facilities. Urban industrial estates are suitably located in respect of the aforesaid factors but in the case of semi-urban industrial estates, selection of sites was not done systematically and scientifically.

8.5 Pre-Project Planning

Pre-project planning has vital importance in the selection of site for industrial estates. Availability of land, proximity to city, availability of infrastructure, availability of transport facilities and nearness to market should be taken into consideration. In Kerala in the case of several estates proper pre-project planning was not undertaken. So many of the units have not performed well.
8.6 **Layout of Industrial Estates**

So far as the layout of industrial estates is concerned, the Government of India has recommended that the layout should be made in such a way that the following percentages of land utilisation are broadly followed:

<table>
<thead>
<tr>
<th></th>
<th>Large Estates</th>
<th>Medium Estates</th>
<th>Small Estates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Under factory plots</td>
<td>55%</td>
<td>50%</td>
<td>40%</td>
</tr>
<tr>
<td>2. Under roads and open spaces</td>
<td>35%</td>
<td>35%</td>
<td>40%</td>
</tr>
<tr>
<td>3. Under administrative and amenity buildings</td>
<td>10%</td>
<td>15%</td>
<td>20%</td>
</tr>
</tbody>
</table>

It is important that the land should be used in an economical and effective way, so that the maximum utilisation of the available land is possible. In Kerala medium-sized estates have greater utilisation of land than small-sized estates (see table-4.3).
8.7 Size and Design of Factory Buildings

The factory sheds constructed in industrial estates are of different size. In Kerala four types of sheds were constructed – Special type, A type, B type and C type (see table 4.4). Most of the sheds constructed in Kerala are of C type (see table-4.5).

8.8 Basis of Allotment and Selection

In Kerala, generally all industrial estates are providing factory accommodation to industrialists on rental basis. Industrialists have to pay economic rent fixed on the basis of the prescribed formula. Most of the industrialists admit that they are being charged economic rent which is certainly much less than the prevailing rates of rent outside the estate for similar accommodation. So far as the question of admission to estates is concerned, 'first come first served' has been the practice in the estates. Except in the case of functional industrial estate at Changanacherry, where preference is given to rubber based units, all other industrial estates follow this principle. It is important that the industrial units to be housed in the industrial estates should be
selected carefully. It is found that no special care has been taken in the selection of the right type and nature of industrial units in the estates. Attempt should be made to select homogeneous group of individual units. Only then complementarity in production, inter-servicing and inter-trading can be achieved.

8.9 Facilities and Services

Power and water are provided in all the estates in Kerala. Beyond providing water and power, very little effort has been made to provide other facilities to the estates in the state. Comparing the small-sized semi-urban estates, urban estates are enjoying more physical facilities. Lack of facilities is perhaps one of the reasons for the high proportion of unoccupied sheds.

8.10 Common Facilities and Services

An industrial estate for small scale industries requires certain types of common services to improve the productivity of the industrial units. These are:
1. a maintenance and repair shop
2. a testing and quality control laboratory
3. technical and management advisory service and
4. common sales and purchase organisation.

In many cases these facilities are lacking.

8.11 Industrial Units - Type and Nature

The entrepreneurs in the industrial estates have started varying types of manufacturing units. Excepting Changancherry, in all the other industrial estates the units are engaged in different lines of production. The industry-wise distribution shows that engineering and metal based units are predominating. This is followed by rubber based units (see table-5.2). The circumstances leading to such prominence of the engineering units may be (1) better performance of the engineering units at the initial period and (2) the availability of raw materials from government.

8.12 Form of Organisation

Individual proprietorship and partnership are the popular forms of ownership pattern. The number of partnership concerns exceeds other forms of
organisations (see table-5.3). Trend analysis shows that recently more of partnership concerns emerged and also some single proprietorship concerns changed into partnerships to expand the units.

8.13 **Age-Profile of the Units**

The study shows that most of the existing units were registered and started production during 1975-'85 period (see table-5.5).

8.14 **Shift Pattern and Working Days**

Majority of the units in the industrial estates are working round the year. Only 13.56 per cent of the units work below 200 days (see table-5.10).

8.15 **Capital Structure**

All the units working in the estates are small scale in nature. The capital investment in plant and machinery does not exceed Rs.10 lakhs in any case (see table-5.11). Per unit investment in plant and machinery is the highest in Manjeri estate and the lowest in Kalletumkara estate (see table-5.12).
Organisation-wise it is the highest in co-operative form of organisation and the lowest in single proprietorship concerns (see table-5.13). Industry-wise per unit investment in plant and machinery is the highest in rubber based industrial units and the lowest in chemical units (see table-5.14).

8.16 Employment and Labour Conditions

It may be recalled that one of the objectives of the industrial estates programme was to provide immediate large scale employment to the people. Small scale industries, being labour intensive, should play a vital role in the creation of employment opportunities. But the results of the study show that because of weak linkage effects the programme could not create as much employment opportunities as was expected.

The programme has provided direct employment only to 1196 persons in Kerala (see table-5.15). A careful look at table-5.15 reveals that urban estates have provided employment to larger number of workers than the semi-urban estates. This is largely because
the number of industrial units functioning in the urban industrial estates is larger than those in the semi-urban estates. It is also seen from table-5.16 that plastic, paper and wood based units provided larger employment opportunities compared to other industrial units.

Regarding the wage bill, per unit average annual wage bill is higher in the semi-urban industrial estates than the urban (see table-5.17). Industry-wise it is the highest for plastic based units and the lowest for the chemical units (see table-5.18).

Capital required per labour (in the form of machinery etc.) is the highest in the urban industrial estate of Manjeri. It is the lowest in the Karakkad estate. It is seen that the machinery capital required per labour is higher in the urban industrial estates than in the semi-urban (see table-5.25). Industry-wise it is highest for rubber based and chemical units than the other types of industrial units (see table-5.26).

With regard to labour conditions in the estates of Kerala, the state government has not made provision of residential quarters to the workers in or
near the estates. There is practically no arrangement for training of entrepreneurs, supervisors, foremen and skilled labour. These inconveniences adversely affect the efficiency of workers in the estates.*

8.17 Installed Capacity and Actual Production

The present study shows that about 33 per cent of the aggregate installed capacity remained unutilised (see table-6.2). The percentage of capacity utilisation is the highest for the estates of Palluruthy and Vazhakulam. This may be due to the industrial background of the district, where these estates are located. It is the lowest in the estate of Changanacherry. Industry-wise installed capacity is maximum utilised by the engineering and metal based units and minimum by the rubber based units (see table-6.3).

Regarding the actual production, average per unit output is the highest for the Changanacherry

* The Centre for Management Development, Trivandrum, Kerala Industries Technical and Consultancy Organisation and Kerala State Financial Corporation have recently conducted certain Entrepreneurship Development Programmes.
estates and the lowest for the Kalletumkara estate (see table-5.19). Industry-wise per unit output is the highest for rubber based units and the lowest for plastic based units (see table-5.20).

Productivity of capital and labour can be measured by the level of output. Productivity of capital is the highest for the West Hill estate and the lowest for the Umayanalloor estate (see table-5.21). Industry-wise, it is the highest for the chemical based units and the lowest for plastic based units (see table-5.22). Labour productivity is the highest in the Changanacherry estate and the lowest in the Kalletumkara estate (see table-5.23). Industry-wise it is the highest in rubber based units and the lowest in plastic based units (see table-5.24).

8.18 Marketing Facilities

The units in industrial estates dispose of their products either through their own efforts or with the help of other agencies. The part played by the government agencies is only marginal. It is often complained that there is no provision of a
common sales organisation in any of the estates. The state government, in some cases, attempted to help the units through its purchase schemes, but it cannot be regarded as sufficient marketing assistance. So it is essential that the government should give more help to the industrial units for the disposal of the finished products.

8.19 Utilisation of Local Resources

An important objective of the promotion of the industrial estates programme was efficient utilisation of locally available resources such as raw materials, skills, savings, etc.

The study reveals that, by and large, the units succeeded in using the locally available resources. Only 25 out of 118 units utilise raw materials procured from outside the state. It is also seen that the estates used locally available talent. Only three entrepreneurs are from outside the state. All other are from within the state itself.
8.20  **Economic Efficiency of the Estates**

The economic efficiency of the estates were measured on the basis of certain indicators (Refer Chapter VI). On the basis of the analysis done tables-8.1 and 8.2 are prepared, the first one showing efficiency indicators - estate-wise - and the second showing efficiency indicators - industry-wise.

On the basis of information provided in tables-8.1 and 8.2 the total (17) industrial estates are divided into three categories - category 'A', 'B' and 'C'.

**Category 'A'**

Karunagapally, Kollakadavu, Vazhakulam, Kalletumkara, Olavakode, Karakkad and Palayad estates (7 out of 17) come under this category. The units in these estates are working successfully. They are economically viable and their margin of safety is on the higher side.
Table - 8.1

Efficiency Indicators - Estate-Wise

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Estate</th>
<th>Efficiency Co-efficient</th>
<th>Net Value Added Co-efficient</th>
<th>Labour Productivity Co-efficient</th>
<th>Capital Productivity Co-efficient</th>
<th>Average Net Capital Out-put Ratio</th>
<th>Rate of Return</th>
<th>Percent- age of Wages in Output</th>
<th>Percentage of Wages in Value Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Pappamamcode</td>
<td>1.20</td>
<td>0.202</td>
<td>0.233</td>
<td>0.425</td>
<td>0.547</td>
<td>1.83</td>
<td>36.19</td>
<td>5.78</td>
</tr>
<tr>
<td>2.</td>
<td>Karunagaspally</td>
<td>1.35</td>
<td>0.352</td>
<td>0.162</td>
<td>0.215</td>
<td>0.754</td>
<td>1.33</td>
<td>57.06</td>
<td>6.34</td>
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<tr>
<td>3.</td>
<td>Umayanalloor</td>
<td>1.19</td>
<td>0.192</td>
<td>0.065</td>
<td>0.538</td>
<td>0.120</td>
<td>8.31</td>
<td>1.70</td>
<td>13.85</td>
</tr>
<tr>
<td>4.</td>
<td>Kollakadavu</td>
<td>1.88</td>
<td>0.885</td>
<td>0.144</td>
<td>0.113</td>
<td>1.274</td>
<td>0.785</td>
<td>91.50</td>
<td>13.24</td>
</tr>
<tr>
<td>5.</td>
<td>Mayilthara</td>
<td>1.07</td>
<td>0.067</td>
<td>0.004</td>
<td>0.077</td>
<td>0.05</td>
<td>20.00</td>
<td>-ve</td>
<td>75.00</td>
</tr>
<tr>
<td>6.</td>
<td>Errumanoor</td>
<td>1.22</td>
<td>0.221</td>
<td>0.079</td>
<td>0.285</td>
<td>0.278</td>
<td>3.60</td>
<td>21.22</td>
<td>4.29</td>
</tr>
<tr>
<td>7.</td>
<td>Chenganacherry</td>
<td>1.19</td>
<td>0.194</td>
<td>0.253</td>
<td>0.463</td>
<td>0.546</td>
<td>1.83</td>
<td>40.24</td>
<td>4.29</td>
</tr>
<tr>
<td>8.</td>
<td>Palluruthy</td>
<td>1.47</td>
<td>0.468</td>
<td>0.201</td>
<td>0.340</td>
<td>0.591</td>
<td>1.69</td>
<td>6.04</td>
<td>28.63</td>
</tr>
<tr>
<td>9.</td>
<td>Vazhakulam</td>
<td>1.42</td>
<td>0.415</td>
<td>0.377</td>
<td>0.286</td>
<td>1.317</td>
<td>0.76</td>
<td>109.21</td>
<td>5.02</td>
</tr>
<tr>
<td>10.</td>
<td>Kalletumkara</td>
<td>2.02</td>
<td>1.019</td>
<td>0.126</td>
<td>0.123</td>
<td>1.027</td>
<td>0.97</td>
<td>80.47</td>
<td>10.93</td>
</tr>
<tr>
<td>11.</td>
<td>Olivur</td>
<td>1.30</td>
<td>0.303</td>
<td>0.191</td>
<td>0.379</td>
<td>0.504</td>
<td>1.98</td>
<td>16.92</td>
<td>15.46</td>
</tr>
<tr>
<td>12.</td>
<td>Olavakode</td>
<td>1.46</td>
<td>0.461</td>
<td>0.171</td>
<td>0.245</td>
<td>0.699</td>
<td>1.43</td>
<td>47.58</td>
<td>10.07</td>
</tr>
<tr>
<td>13.</td>
<td>Karakkad</td>
<td>1.77</td>
<td>0.767</td>
<td>0.202</td>
<td>0.111</td>
<td>1.815</td>
<td>0.55</td>
<td>147.94</td>
<td>8.02</td>
</tr>
<tr>
<td>14.</td>
<td>Menjeri</td>
<td>1.30</td>
<td>0.303</td>
<td>0.228</td>
<td>1.255</td>
<td>0.181</td>
<td>1.54</td>
<td>14.00</td>
<td>5.21</td>
</tr>
<tr>
<td>15.</td>
<td>West Hill</td>
<td>1.14</td>
<td>0.138</td>
<td>0.182</td>
<td>0.323</td>
<td>0.563</td>
<td>1.77</td>
<td>35.72</td>
<td>4.44</td>
</tr>
<tr>
<td>16.</td>
<td>Palayad</td>
<td>1.42</td>
<td>0.421</td>
<td>0.288</td>
<td>0.265</td>
<td>1.087</td>
<td>0.92</td>
<td>91.52</td>
<td>4.68</td>
</tr>
<tr>
<td>17.</td>
<td>Kasaragode</td>
<td>1.45</td>
<td>0.450</td>
<td>0.195</td>
<td>0.33</td>
<td>0.592</td>
<td>1.69</td>
<td>30.06</td>
<td>15.27</td>
</tr>
</tbody>
</table>

Source: Survey Data
<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Industry</th>
<th>Efficiency Coefficient</th>
<th>Net Value Added Co-efficient</th>
<th>Labour Productivity Co-efficient</th>
<th>Capital Labour Ratio</th>
<th>Capital Productivity Co-efficient</th>
<th>Average Net Capital Output Ratio</th>
<th>Rate of Return</th>
<th>Percentage of Wages in Output</th>
<th>Percentage of Wages in Value Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Engineering and metal based</td>
<td>1.26</td>
<td>0.256</td>
<td>0.160</td>
<td>0.282</td>
<td>0.569</td>
<td>1.75</td>
<td>34.29</td>
<td>8.09</td>
<td>39.73</td>
</tr>
<tr>
<td>2</td>
<td>Plastic based</td>
<td>1.41</td>
<td>0.413</td>
<td>0.107</td>
<td>0.249</td>
<td>0.428</td>
<td>2.34</td>
<td>14.69</td>
<td>19.19</td>
<td>65.64</td>
</tr>
<tr>
<td>3</td>
<td>Chemical based</td>
<td>1.74</td>
<td>0.743</td>
<td>0.460</td>
<td>0.366</td>
<td>1.258</td>
<td>0.79</td>
<td>106.66</td>
<td>6.48</td>
<td>15.21</td>
</tr>
<tr>
<td>4</td>
<td>Rubber based</td>
<td>1.22</td>
<td>0.221</td>
<td>0.218</td>
<td>0.439</td>
<td>0.495</td>
<td>2.02</td>
<td>33.62</td>
<td>5.81</td>
<td>32.15</td>
</tr>
<tr>
<td>5</td>
<td>Paper and wood based</td>
<td>1.42</td>
<td>0.419</td>
<td>0.142</td>
<td>0.256</td>
<td>0.653</td>
<td>1.81</td>
<td>29.24</td>
<td>14.61</td>
<td>49.46</td>
</tr>
<tr>
<td>6</td>
<td>Miscellaneous</td>
<td>1.23</td>
<td>0.286</td>
<td>0.1</td>
<td>0.15</td>
<td>0.666</td>
<td>1.5</td>
<td>20.00</td>
<td>11.56</td>
<td>52.00</td>
</tr>
</tbody>
</table>

Source: Survey Data.
Category 'B'

Pappanamcode, Ettumanoor, Changanacherry, Palluruthy, Ollur, West Hill and Kasaragode estates (7 out of 17) belong to category 'B'. The units in these estates are economically viable, but their margin of safety is on the lower side. Even minor troubles will make them sick.

Category 'C'

Estates of Umayanalloor, Mayilthara and Manjeri (3 out of 17) belong to category 'C'. The working of these estate leave much to be desired.

Industry-wise, chemical units are performing well, followed by the miscellaneous unit. Engineering and metal based and paper and wood based units are also working satisfactorily.

In short the above analysis shows that the industrial units, which are set up in the industrial estates coming under the first category, have achieved a greater measure of efficiency as compared with similar units in other estates because of certain locational,
infrastructural and other facilities. Nearness to industrial centres, availability of transport and communication facilities, pre-existing local industrial base, strong raw material base, immediate access to wider markets, etc. have contributed to their greater efficiency. In the case of the estates listed as category 'C' most of these facilities were not adequately developed. So their economic efficiency is below the desired level.

Before concluding this chapter it seems necessary to point out that the evaluation is based on the conventional methods and because of certain difficulties in quantification an extended cost-benefit analysis is not attempted.