CHAPTER – II
THE DESIGN OF THE STUDY
A massive programme for the development of small scale industries in India known as 'Industrial Estates Programme' was launched by the Government of India in 1955. This technique of industrialisation was recommended by the Small Scale Industries Board in 1955. The first industrial estate in India was set up at Rajkot (Gujarat) in September 1955 and the first shed allotted in December 1955.

Since the Government of India entrusted the state governments with the responsibility of starting the estates, the Government of Kerala decided to start one industrial estate in each district during the second plan. It was envisaged that each district should have two industrial estates each, one as urban estate, the other as semi-urban or rural estate. This study attempts
to make an economic evaluation of the Industrial estates programme in Kerala. It is based on a survey of all working industrial units in the 17 major industrial estates of Kerala.

2.1 Hypothesis

The industrial estates programme was initiated with the following objectives:

1. to provide immediate large scale employment and
2. to facilitate an effective utilization of resources, capital and skill which might otherwise remain unutilized.

It is hypothesised here that the objectives enunciated have not been served by the industrial estates programme in the state.

2.2 Objectives of the Present Study

The objectives of the present study are as follows:

1. to make an assessment of the programme with regard to the realisation of the objectives of the industrial estates
2. to examine the industrial efficiency and economic viability of small scale industries in the estates and

3. to study the current problems of the small scale industries in the estates.

2.3 **Methodology**

The programme of Industrial Estates is assessed in this study with respect to the following:

1. Promotion of small scale industries
2. Generation of employment
3. Development of entrepreneurship
4. Extent of the utilisation of local resources and
5. Generation of income.

The relative performance of the industrial estates were put forward to be examined by estimating and comparing economic efficiency indicators of the estates such as capacity utilisation, input-output ratio, rate of investible surplus, productivity of labour and capital and labour-capital ratio.
The industrial efficiency and economic viability of the industrial units were examined by finding out the investible surplus of the industrial units under the study.

2.4 The Data

The data for the study were collected both from primary and secondary sources. The primary data were collected from all the 17 major industrial estates in Kerala located at Pappanamcode, Karunagapally, Umayanalloor, Kollakadavu, Mayilthara, Ettumanoor, Changanacherry, Palluruthy, Vazhakulam, Kalletumkara, Ollur, Olavakode, Karakkad, Manjeri, West Hill, Palayad and Kasaragode. The location of the estates is shown in Chapter IV. All industrial units in the estates were surveyed with the help of an elaborate schedule of questions. It was administered personally during 1985-'86. It was thus a census study. The schedule sought among other things detailed information about employment, capital, finance, inputs and output. Data were also collected from raw material depots and godowns in the estates and Small Industries Service Institute.
Secondary data were collected from published works on the relevant topics and from the publications of Small Industries Service Institute.

Annual reports of central and state level organisations relating to the industrial estates were also made use of.

2.5 **Tools of Analysis**

The efficiency and the economic viability of the industrial enterprises were measured by certain indicators. Here, the efficiency of industrial units was evaluated by input-output ratio and the rate of return on the fixed capital investment. The rate of investible surplus was estimated by dividing the amount of investible surplus per year by the cost of fixed capital excluding land and building. Investible surplus has been generally used as an index of industrial efficiency.¹


2.6 **Plan of the Study**

The present study is divided into eight chapters. The first chapter introduces the subject. It explains the background, philosophy and objectives of industrial estates programme.

Second chapter deals with the design of the study. In addition it presents the hypothesis, methodology, tools of analysis, etc. At the end of this chapter a review of literature on the subject is given.

In the third chapter the inception of the idea of Industrial Estates Programme and its progress in India in general and in Kerala in particular is studied. Towards the end of the chapter, a brief mention about the Mini Industrial Estates Programme in Kerala is made.

Chapter four gives a detailed picture of the infrastructural facilities in industrial estates in Kerala. The study is confined to the 17 major industrial estates in the state.

Fifth chapter analyses the structure and the operational pattern of the industrial units in the 17 major industrial estates in Kerala.
Sixth chapter evaluates the performance of industrial estates with regard to the realisation of the objectives of the programme. Operational and economic efficiency of the enterprises are discussed towards the end of the chapter.

In the seventh chapter the problems of the units in the industrial estates of Kerala are studied in detail. Problems relating to the supply of raw materials, power, marketing, labour, finance, technical and managerial aspects are analysed and presented in this chapter.

Chapter eight is the concluding chapter. It presents the summary of the main findings of the study.

2.7 Review of Literature

Many scholars have attempted to study the different aspects of the industrial estates programme. It may be pointed out here that 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. It was suggested that a well
planned industrial estate encourages the development of industries and areas in its vicinity. It thus becomes a nucleus for the further development of industries and injects an element of dynamism into the process of socio-economic development of that region.

The first pioneering study on industrial estates was conducted by P.C. Alexander.² It was an evaluation study covering a period upto the end of the second five year plan. The major conclusion of this study is that with proper planning industrial estates programme can be a very effective tool for development. Otherwise industrial estates will prove to be a waste of national resources. Eugene Stanley characterises Alexander's study as a real contribution to the literature of a relatively new branch of technology - The social technology.

M.A. Oommen³ has conducted another evaluative study on small industries in India. The major development programmes which he investigated related to the modernisation of traditional sector, industrial estates programme,

the rural industries project and the special programmes of assistance, viz., financing, marketing and services.

Oommen's study brought to light the potentialities and weaknesses of the programme. Bad planning, lack of proper assessment of potential resources available, failure to assess the techno-economic viability of the project, says Oommen, resulted in waste of scarce investible resources.

His analysis with reference to the working of the units led to the following conclusions:

i) The objective of creating more output and employment per unit of capital has not been achieved satisfactorily in the industrial estates of Kerala.

ii) The capital-output ratio in the estates of Kerala was higher than that in the small scale factory sector and in certain cases even exceeded that in the large scale sector of industry.

iii) The capital-labour ratio, was also of a high order in the estates compared to the small scale sector approximately to that of the large scale sector in some cases.
iv) The estates of Kerala have not utilised local raw materials except in the case of timber based and rubber based industries.

v) Though Kerala has a rich reservoir of indigenous skills, it has not been utilised in a planned manner.

vi) The performance in respect of mobilization of local savings has been encouraging though Kerala lags behind compared to several estates outside the state.

vii) The contribution of the estates to the regional income is negligible. Thus the programme has made little impact on the economy.

N. Soma Sekhara's study is another important contribution in this field. This is a "two-in-one study". It contains information regarding a benchmark study of industrial estates in Mysore conducted in 1962 and a follow up of the same in 1972. In this study Soma Sekhara poses the question: whether the industrial estates in India in general have delivered the goods? In finding

\[\text{N. Soma Sekhara, N., The Efficacy of Industrial Estates in India with Particular Reference to Mysore, Vikas Publishing House Pvt. Ltd., Delhi, 1975.}\]
out the answer he separated the positive aspects of the programme from the negative aspects and identified the causes for only the modest accomplishment of the programme. On the basis of the findings he made a number of suggestions to overhaul the entire programme of industrial estates in India. He has also suggested a number of strategic and technical changes in the policy of the Government with regard to industrial estates programme.

According to Somasekhara industrial estates have not achieved many of the objectives for which they were intended, namely, fostering the development of small enterprises, industrial development of backward areas, rural industrialisation, decentralisation of industrial development, etc. He further points out that the industrial estates have not been economically viable since the programme had not made a dent on many of the problems like slum clearance, relieving cities of congestion and over-crowding and provision of employment opportunities of the type "earn while you learn" to students of universities and polytechnics, etc.

Another finding of this study was that most of the units were not been financially viable. Industrial estates had superior command over finance
from both institutional and non-institutional agencies and this led to over capitalisation which became a curse for the industrial estates. The author concludes with the suggestion that the success of industrial estates depends on the economic and financial viability of the units, scientific planning and product management.

Duraid Yawer considers industrial estates as an important and successful measure to create new centres of industry and to re-invigorate the old rural towns. An industrial estate, says he, provides factories with roads, power, water and drainage services. This assists an industrialist greatly by relieving him of the complications and difficulties of searching for a site, planning and constructing a suitable factory and providing utilities. He is further helped by not forcing to find a large outlay at the start of the operation.

The author further states that industrial estates have advantages for the local community other than the rents they bring in. They fetch opening for employment to the area, bring new and lively people, workers and managers into the district to invigorate it

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socially and more money to fill the tills of local tradesmen and the pockets of local businessmen and professional operators. Yawer considers the benefits of industrial estates as positive and promise much assistance to the developing countries.

Yawer stresses the need for careful planning to ensure a proper location for estates and full provisions of services and transport facilities. Further he says that the financial backing must be cautiously arranged for the project which should not be too fancy and expensive. He pleads for the careful research into the layout of the factory buildings and the type of construction which will be best suited to the industries to be attracted to that particular area. Another finding of his study is the need for training programmes for foremen and workers. Recreational facilities must not be overlooked for the many incomers who will require sport and amusement for their leisure time. Industrial estates, says the author, have various types of benefits like economic, national and regional. In brief the author's view is that if industrial estates were set up by a regional authority, which has a wider scope
and power than a municipality, they would help towards a systematic industrialisation in the balanced region.

Bharti⁶ made an evaluative study of industrial estates in developing countries. In the study he presents a comprehensive and critical survey of industrial estates. After reviewing the policies and objectives of the programme, an up-to-date study of its progress in different countries has been made. He has discussed policies, problems and the various steps involved in the physical planning of industrial estates in India and in other countries. He has stressed the need for pre-project planning.

According to the author, industrial estates occupy a prominent place in the industrial planning of India. He integrates important aspects of small scale industries in the Indian context. Small enterprises are labour intensive and are effective means for exploiting latent local resources for productive purposes. Small enterprises have to be technically efficient and cost conscious in order to serve as an effective instrument of industrialisation. The establishment of

industrial estates, says Bharti, is an important measure of assistance by the government to small industries.

Bharti further emphasises the need for a policy of extending governmental support and assistance for the rapid development of small industries in developing countries.

After making a detailed survey of the progress of industrial estates programme in the states and union territories of the country, Bharti concludes his study with some concrete and logical suggestions with a view to making industrial estates a potent and effective tool for industrialising the economy of the country. Unsound approach, absence of infrastructure, uneconomic land development and construction, delays in the construction and allotment, absence of common service facilities, unsound admission policies, absence of suitable entrepreneurs, unsatisfactory condition of semi-urban and rural areas, under-utilization of capacity, absence of co-operative units, lack of housing facilities to workers, lack of co-ordinated action, preponderance of capital-intensive industries, etc. are some of the important causes responsible for the failure of many estates in the country.
According to the author the performance should stress not only quantity but also the quality. Success should be measured not by the number of sheds constructed but by the production and employment created by the estates. The author is of opinion that the industrial estates in India do not present a very satisfactory picture of development. There are a number of defects in the planning, layout, allocation and working. But still it cannot be denied that they have created an environment favourable for industrial development. He says that India with its socialistic policy and teeming millions wanting employment cannot do without an effective programme of industrial estates. In short, Bharti in his study tried his best in assessing the achievements, difficulties and problems of industrial estates in developing countries with reference to India. He also succeeded in making some valuable suggestions to improve and strengthen the programme. These suggestions to a great extent can be adopted for a better and more successful implementation of the programme in future.

P.Z. Palsapure made a study of industrial development of Vidarba. He says that the government

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has undertaken the scheme of industrial estates for fostering industrial development on a decentralised pattern and relieving congestion in big cities. The objective of the industrial estates, says Palsapuri, is to promote rapid development of small scale industries and to facilitate the industrialisation of economically backward and rural areas. Being located at one place, the units in the estates are able to make use of the goods and services of other and they become complementary to one another. According to him the distinctive feature of the industrial estate is that it is exclusively for small scale industries and economically backward or rural areas. Industrial estates, he adds, will help the pattern of clustered decentralisation rather than to spread the industries unevenly over the area. It is feasible to develop industries closer to the semi-urban or rural areas. Instead of attracting workers into urban agglomerations, he suggests that before considering proposal for starting a new industrial estate a detailed survey of resources of the area should be carried out for assessing the possibilities of different types of industries. On the basis of such
detailed study and in consultation with the local businessmen and industrialists, the state government should advise on the types of industries that can be developed in the industrial estates.

S.N. Bhattacharya\(^8\) is another person who strongly advocates the role of industrial estates in developing the small industries. According to him an industrial estate is a group of factories constructed on an economic scale on suitable site with facilities of water, transport, electricity, bank branch, post office, hospital, etc. and provided with certain arrangements for technical and economic guidance and other common service facilities.

Promotion of small industries, decentralisation of industry from large urban centres and minimising congestion in the big cities, encouraging the development of rural and industrially backward areas and paying the way for balanced regional development, providing the base for new town or a growing suburb of a metropolitan area, modernisation of the existing

industries by shifting them to better premises and promotion of special types of industrial activities like ancillary and single trade industrial units, etc. says Bhattacharya, are the important objectives of industrial estates programme.

He opines that industrial estates can be broadly divided into two - industrial estates based on resources and industrial estates based on ancillary units. Card board industry, paper industry, paper product industry, fruits and vegetable canning industry, plywood industry, leather goods industry, animal feed industry, fish canning industry, etc. belong to the category of industrial estates based on resources whereas tool die making units, foundary units, general engineering units, watch units, transister radio units, etc. belong to the other category of industrial estates based on ancillary units.

In his study Bhattacharya throws light to the various problems of industrial estates. It has been observed that many of the units are not working satisfactorily due to lack of financial, technical and economic assistance. He has found out that lack of
marketing facilities, lack of adequate finance, lack of managerial capability, lack of requisite knowledge of financial analysis, lack of perspective plan for long term development, lack of adequate support from the relevant concerns to help the units at the time of their distress, the presence of bureaucratic system, etc. are the important problems of industrial estates. Moreover in many cases it was found that the officer in charge of the estate has not requisite urge, zeal, initiative, etc. to move the ball in the right court. Inspite of all these Bhattacharya considers the industrial estates as an important bridge between industrialisation and urbanisation policies and contribute to the balanced economic and urban development.

Ram, K. Vepa in one of his studies on small industry considers the establishment of industrial estates as a comprehensive programme of assistance for speedy development of small industries. Industrial estates programme aims at the over all promotion and development of small industries, decentralised industrial development in small towns and large villages, assisting in the growth of ancillary industries in the townships surrounding

major industrial undertakings, both in the public and private sectors and enabling small scale industries to shift from congested areas to estate premises with a view to increasing their productivity.

Vepa in his study has thrown light to the objectives of industrial estates programme and especially to the promotional features of the programme. He has revealed the role of the central government in establishing and maintaining industrial estates. He has made a detailed study of the facilities provided to the entrepreneurs in industrial estates. His study has brought out the nature of different types of estates, prevailing in the country. The conclusion of his analysis is that the main objective of the programme namely development of modern small scale industries, has been fulfilled.

Industrial estates, says Vepa, have a welcome diffusions effect that has conducive to the overall growth of small scale industries. From the survey he conducted, he has found out the fact that industrial estates programme if used with discrimination is an effective tool for integrated development of industries. According to him it has been instrumental in stimulating industrial
development in backward and rural areas and also in the building up of healthy ancillary relationship. Further it creates a psychological feeling of support by a government agency and the new entrepreneurs find the industrial estates authority a valuable ally for tackling the obviously complex procedural problems.

Vepa winds up his study by giving certain suggestions. According to him industrial estates have to be properly co-ordinated with the broader development programmes and they should be properly planned also. Homogeneity rather than heterogeneity is to be the guiding criterion while selecting industrial units. Due consideration is to be given to the secondary growth effect in order to regulate any haphazard growth around the estates. The location of industrial estates, says he, is to be decided only on techno-economic consideration. In brief, the author considers the industrial estates programme as an important tool for the development of small industries.

Vasant Desai\(^1\) while discussing the problems and prospects of small scale industries in India, vehemently speaks about the role of industrial estates in

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promoting small scale industries. He considers it as a positive method of stimulating industrial growth. He has tried to examine the performance of industrial estates in India. According to him conceptually, the programme is a success but a number of pitfalls and failures have been encountered in the working of these estates, particularly, in rural and semi-urban areas. The estates at Naine (Allahabad), Okkla (Delhi), Guidny (Madras) are considered as excellent examples of industrial estates in India. A few others like those at Faridabad, Amritsar, Batala, Jullundar, Kanpur, Indore, Bhopal and Raipur may be considered satisfactory. In South India, Krishnagiri, Dindigal, Trichi, Coimbatore, Cochin, Ernakulam and Alwaye have shown a fair progress. But with the exception of these few, the working of all the other industrial estates in India, particularly in rural and semi-urban areas is far from satisfactory.

Ramakrishna Sarma while discussing the industrial development of Andhra Pradesh, has tried to explain critically the performance of industrial estates programme in the state. In his opinion most of the

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industrial estates in the state and in India are working far from satisfactory. According to him a successful working of industrial estates programme would be possible if it is considered purely as an economic activity and if politics do not enter in the location of industrial estates.

V.S. Mahajan\textsuperscript{12} while discussing the growth of agriculture and industry in India firmly establishes the fact that Indian interest in modern small industries began only after the experts from foreign countries recommended such a programme. The Ford Foundation Team and the Team of Japanese Experts had visited the country in the early fifties and had strongly recommended the setting up of modern small units which in their opinion were ideally suited for the country like India with a serious dearth of financial and technical resources. The Government of India decided to start the programme of industrial estates on the basis of the recommendations made by the various teams of experts. He considers the industrial estates as catalytic agents for the growth of small industries. But one of his notable findings

\textsuperscript{12} Mahajan, V.S., Growth of Agriculture and Industry in India, Deep and Deep Publications, New Delhi, 1983.
was that the lack of government's organising ability and its failure to provide appropriate guidelines for the growth of small industries led to the unsatisfactory working of industrial estates in many cases. He points out that the programme does not appear to have caught up the imagination of small industrialists. But still he considers the programme of industrial estates as a tool for creating more employment opportunities and to raise the productive efficiency of modern small industrial units.

Dhar, P.N. and Lydall, H.P.\textsuperscript{13} in their studies have suggested industrial estates should serve as "nursery bed for entrepreneurs".

Sanghvi, R.L.\textsuperscript{14} has analysed the working of industrial estates in Gujarat. It is an evaluative study on the programme and it throws light on a number of issues with regard to the scheme such as the size, location, efficiency, capacity utilisation, industrialisation through the development of small scale industries and their impact on industrial dispersal and regional development.


A study was conducted by the Maharashtra Chamber of Commerce\textsuperscript{15} on the working of industrial estates. Their finding was that some of the estates have been well planned and well developed. Successful working of industrial estates in states like Madras is due to personal attention and bold directives of the Minister and the officials of the concerned department. The study reveals another fact that the success of industrial estates depends on the agency in charge of these estates - the Government, the Co-operatives and the private entrepreneurs.

Mr. Dhanikar\textsuperscript{16} visited some of the industrial estates and found out some facts about the working of industrial estates. According to him some estates like Akola, Jalagoon and other places are not well but some estates like in Nasik are functioning well. His conclusion was that while the scheme has helped in its own way to relieve congestion in some industrial towns, to encourage many persons to enter the industrial field

\textsuperscript{15} Maharashtra Chamber of Commerce, 'Some Industrial Estates are Sick', \textit{Eastern Economist}, Vol. 51, S.No.10, Sept. 6, 1968.

\textsuperscript{16} Dhanikar, 'Some Industrial Estates are Sick', \textit{Eastern Economist}, Vol. 51, S.No. 10, Sept. 6, 1968.
by creating a favourable climate for industrialisation and generally to promote the development of small scale industries in rural areas, there is till "Great scope for making further progress, particularly in removing the handicaps of the existing estates in respect of essential facilities".

Mr. Dhanikar stressed the need for investigation of the locational advantage, industrial potentialities of the site and the selection of the right type of industries. He complained of the absence of subsidised housing for workers in or near the estates and proto-type production and training centres. He pleaded for consolidating gains made by the estates so far and placing them on a second footing before establishing new estates.

S. Madhavan¹⁷ made a study of industrial estates programme in Tamil Nadu. His finding was that in India, as in other developing countries, industrial estates are mostly small estates meant for small business. These estates have acted as nuclei for future industrial development of the region.

The Working Group on Industrial Estates (WGIE) made a study about the performance of industrial estates in India. The working group is convinced that industrial estates would be a successful aid to the development of industries, especially in the small scale sector, provided care is taken to avoid the defects or deficiencies which its study in depth has revealed. They have found out some causes for the failure of the programme in the rural and backward regions. Failure to bring about a dispersal of industries, wrong location of industrial estates, faulty planning and execution of estates, lack of effective machinery to supervise the day to day operations of industrial estates are some causes among them.

Another finding of WGIE that the percentage of utilisation differed from urban to semi-urban to rural locations. The rate of utilisation of sheds in industrial estates set up in the private sector was not only relatively very high in all cases, but what is more significant, high irrespective of the area of location.

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Working Group concludes its study by making certain recommendations for the improvement of industrial estates. The study emphasised the need for providing adequate financial assistance to the estates and for the efficient management of the estates. The working group has also put considerable attention on the pattern of financing.

V.S. Kovjalgilg19 states that Karnataka state decided to start industrial estates throughout the state with the aim of helping the entrepreneurs whose basic problems are to accommodate his unit a proper place with basic facilities like water, electricity, drainage and sewerage. All these facilities are provided in package form.

Ram, K. Vepa20 in one of his articles on industrial estates suggests that industrial estates should promote development in small towns. He observed that objectives of the programme are to help the development of small industries, to relieve congestion in


the industrial areas of metropolitan towns, to have balanced dispersal of industries in semi-urban and rural areas, to relieve unemployment and underemployment in rural areas and to encourage the growth of ancillary industries in the large scale industries sector.

He points out that barring a few estates located in the major cities like Okhala (Delhi) Guindy (Madras) Santnagar (Hyderabad) and Thana (Bombay) most of the others have not met with unqualified success. He throws light on the reasons for the unsatisfactory performance of the units in many parts of the country. Some of the causes are as follows:

i) The location of many estates have been directed by non-technical considerations

ii) There has been considerable time lag between the construction of the estates and their allotment to entrepreneurs.

iii) The cost of development and of construction of sheds by the government has been high making the rentals much higher than in the private sector.
iv) Many estates do not have enough entrepreneurs.

v) The production capacity of the estates has not been utilised fully. In brief Vepa is of opinion that the industrial estates can promote development in small towns provided the units are well managed.

Small Industries Extension Training Centre (SIET)\(^2\) at Hyderabad in co-operation with the Union and State Governments conducted a seminar on 1967, June 10th and 11th at Hyderabad. The following are some of the valuable conclusions of the seminar:

1. The planning of industrial estates should be conceived as an integral part of the Urban and Regional development process and should be related to the industrial development of regions.

2. It was noted that the estates have been located in metropolitan areas which have the advantages of skilled and specialised services. In the case of medium and small sized cities, industrial

\(^2\)Ibid.
estates have an extension and promotional role to play in the development of small industry and in serving as nuclei for further industrial activities.

3. Regional analysis techniques should determine the suitability of locations for industrial estates. Industrial estates should be established in future in towns which can function as "growth points" based on the size of population and the rate of population growth, the extent of available infrastructure facilities, the functional orientation towards trade and commerce, the inherent capacity for industrialisation, the availability of skilled labour and the availability and willingness of entrepreneurs.

4. There is considerable scope for reducing development costs of the estates by increasing their design, efficiency and by reducing the areas set apart for roads and ancillary building.

5. The type of industries to be set up should be based on prelocation studies of the available raw materials, the level of skilled labour, markets and investment pattern.
K.V. Prabhakar²² made a study on industrial estates in Mysore. On the basis of his study he recommends that the industrial estates programme should be co-ordinated with the general industrialisation programme. It has been realised that the promotion of ancillary and complementary relationship inside the industrial estate would increase the effectiveness of the industrial estates and strengthen their role in industrial development of the areas. According to him an industrial estates programme will have only a limited impact and usefulness if on the one hand, it does not integrate all or most of these facilities and services and on the other hand it is not backed by an overall development programme for small ancillary units with a state wide coverage. He suggests the setting up of a co-ordinating committee for the purpose of associating representatives of municipalities, banks, post office, electricity boards, technical and research institutions. So that difficulties encountered by the small units are ironed out. According to him the managers of industrial estates should act as the secretaries of the committees.

In brief the most important finding of his study is that emphasis should be given to the setting up of ancillary units since these units can answer the needs of the large units at its doors.

P.M. Mathai in one of his studies says that industrial estates are integral part of regional development. He has revealed that the industrial estates programme was not taken up on a national scale. It was only in 1955 that a comprehensive scheme for industrial estates perfected by drawing upon the experience of the U.K. was formulated. Before that industrial estates were established in a few selected centres to rehabilitate millions of displaced persons from Pakistan. But today the Industrial estates programme in India is the biggest of its kind launched by any developing country and is only next in size or number of estates to that of the United States, says Mathai. His study has revealed several inadequacies like insufficient pre-planning and the absence of required amenities. His conclusion was that the planning of new estate should be an integral part of the regional development process.

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Maharashtra Economic Development Council (MEDC) made a survey under the Chairmanship of Mr. G.V. Purnaik about industrial estates in Maharashtra. The success of industrial estates depends to a great extent upon its location particularly in regard to raw materials, sources and availability of entrepreneurs, skilled workers and socio-economic overheads such as transport and communications. According to the study group, the emphasis should be given to quality rather than quantity. The study group has put forward certain suggestions for the better performance of the estates. Many of their suggestions are notable and their implementation will go a long way towards improving the operational efficiency of industrial estates.


Industrial estates, says he, is a social technology for economic development. It is one among the several effective devices for fostering new entrepreneurship and for orderly industrial expansion.

The Evaluation Division of the State Planning Board\(^{26}\) has conducted a study on the performance of the industrial estates programme in Kerala. It has pointed out that the programme has not achieved all its objectives.

Krishnakumar's report\(^{27}\) on the small scale industries development programme given an overall view of the objectives and targets of the programme of mini industrial estates and the role of industrial department in implementing the programme.

An evaluative study\(^{28}\) on the implementation of the programme was conducted by the study group of the financing banks.

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\(^{28}\) *Report of the Study Group Set up by the Steering Committees of the State Level, Bankers Committee, Kerala.*
Prakash has conducted a study on the programme based on a survey of mini industrial units in Trichur District. The study points out various drawbacks in the implementation of the programme like faulty selection of entrepreneurs, unsuitable location of estates, poor project reports, hasty implementation of the programme, inadequate space for running the units and faulty selection of industries.

Ammukutty's study on the mini industrial estates suggests certain modifications required in the implementation.

Om Prakash Mathur analysed the problems and future of industrial estates. According to him, the programme is a failure. He throws light on the various causes for the failure of the programme. The


30 Ammukutty, 'Problems and Prospects of Mini Industrial Estates', Social Scientist, Vol.8, No.9, April, 1980.

study also gives certain direction to the planners and administrators. These directions and suggestions can be used to a great extent to avoid the shortcomings and improve the future programmes.

Thus there are several studies connected with the programme of industrial estates. But the present study is different from other studies. The present study is an endeavour to examine the economic efficiency of industrial estates in Kerala. Here the stress is on the economic assessment of industrial estates in the state.