# AN ECONOMIC EVALUATION OF INDUSTRIAL ESTATES IN KERALA

THESIS SUBMITTED TO
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# C E R T I F I C A T E

Certified that the thesis "An Economic Evaluation Of Industrial Estates In Kerala" is the record of bonafide research carried out by Miss. Meera Bai,M. under my guidance. The thesis is worth submitting for the degree of Doctor of Philosophy in Economics.

(DR.K.C. SANKARANARAYANAN).

# D E C L A R A T I O N

I declare that this thesis is the record of bonafide research carried out by me under the supervision of Dr. K.C.Sankaranarayanan, Professor and Head of the Department of Applied Economics, Cochin University of Science and Technology. I further declare that this has not previously formed the basis of the award of any degree, diploma, associateship, fellowship or other similar title of recognition.

Cochin - 22,
17 July 1987.

M Meera Bai

- MEERA BAI, M -

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The study "An Economic Evaluation of Industrial Estates in Kerala" was started in May 1984, an year before I got formal registration as a full time research scholar in the Department of Applied Economics, the then University of Cochin, (at present the name of the University is changed into Cochin University of Science and Technology) Cochin - 682 022. The study is limited to the 17 major industrial estates functioning in the State of Kerala.

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# CHAPTER - I

# I N T R O D U C T I O N

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After the Second World War several new institutional techniques have been adopted in promoting and guiding industrialisation both in industrially advanced and newly industrialised countries. Of these institutional techniques, the technique of industrial estates occupies an outstanding place. In this chapter a brief discussion of the meaning, origin, philosophy and objectives of industrial estates is made.

## 1.1 The Meaning of Industrial Estate

Industrial estate, an important plank of small industry development programme, is a branch of social technology of development.

William Bredo defines an industrial estate as "a tract of land which is sub-divided and developed according to a comprehensive plan for the use of community

of industrial enterprises".[1] The concept of industrial estate is a recent addition to the list of industrial techniques that have been applied more or less successfully to the basic problem of initiating and sustaining the development of small and medium scale industries and creating new industrial centres to foster development in regions, which would lag behind left to themselves. It belongs properly to a new branch of technology - 'the social technology of development'.[2]

The United Nations Industrial Development Organisation (UNIDO) defines an industrial estate as a "Planned clustering of industrial enterprises offering standard factory buildings errected in advance of demand and a variety of services and facilities to the occupants".[3]

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1 Bredo William, Industrial Estates - Tool for Industrialisation, International Industrial Development Centre, Stanford Research Institute, California, 1960, p.1.

2 Planning Department, Government of Karnataka, Evaluation of the Industrial Estates Programme in Karnataka, Directorate of Evaluation, Bangalore, 1978.

3 United Nations Industrial Development Organisation, 'Policies and Programme for the Establishment of Industrial Estates', International Symposium on Industrial Development, Athens, 1967.

Thus planned clustering and group character of industrial enterprises are the remarkable features of the programme of industrial estates.

The programme of industrial estates is a method of fostering the growth of small industrialists. William Bredo opines that "it introduces into the development process a dynamic element".[4] Thus industrial estates try to tap the latent entrepreneurial talent and provide a place for investment of small blocks of capital in industry.

A United Nations (U.N.) publication defines an industrial estate as "a device for expanding, strengthening and locating small or medium scale industries as a part of a broad programme of industrialisation and social development".[5] Industrial estates provide an organisational set up in which medium and small scale industries get a favourable environment for development.

In the opinion of P.C. Alexander, industrial estate is a "group of factories constructed on economic scale in suitable sites with facilities of water,

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[4] Bredo William, op. cit., p.9.

[5] United Nations, The Physical Planning of Industrial Estates, Department of Economic and Social Affairs, New York, 1962, p.6.

transport, electricity, steam, bank, post office, canteen, watch and ward and first aid and provided with special arrangements for technical guidance and common service facilities. The estate combines in itself some of the important schemes of assistance to small industries and provides a total outlay for integrated development".[6]

Different definitions given above throw light to certain important aspects of industrial estates. The following are the important aspects of industrial estates:

i) Planned and group character of industrial enterprises

ii) Construction of industrial buildings in advance of demand

iii) Standardisation in the construction of industrial buildings and

iv) Provision of a variety of services and facilities to the occupants.

In general, the industrial estate is a multi-purpose tool and an omnibus technique taking care of a number of problems - provision of suitable factory

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[6] Alexander, P.C., Industrial Estates in India, Asia Publishing House, Bombay, 1963.

premises, utilities, facilities and services, economy in the investment on social overheads and the increased scope for inter-servicing and inter-trading, development of complimentarity in production and creation of the spirit of co-operation, decentralisation of industry for the development of backward areas, rural industrialisation, achieving a specific locational pattern, town planning and removal of slums and so on.[7]

## 1.2 Origin of the Idea

There are certain theoretical and pragmatical considerations with regard to the origin of the idea of industrial estates. With the rapid emergence of large scale enterprises, the question of competitive viability and economic efficiency of small scale industries vis-a-vis the large scale had to be settled and various countries adopted different measures to promote small scale industries. The programme of establishing industrial areas and estates is considered to be the most significant one of all such measures. It was envisaged that industrial

[7] Ibid, pp.5-8.

estates would promote small industrial enterprises by modernisation, increase in productivity, reduction in cost of production and upgradation of the quality of the products.

The industrial estate is a generic term and it has different names in various countries. They are known as "Trading Estates" in the United Kingdom (U.K.), "Industrial Parks or Industrial Districts" in the United States of America (U.S.A.), "Industrial Zones and Industrial Nuclei in Italy, "Industrial Plaza" in Canada, "Industrial Regions" in the Union of Soviet Socialist Republics (U.S.S.R.) and "Industrial Estates" in many countries including India. These differ in meaning and content since they are organised in many ways to provide a variety of services.

The term "Industrial Estates" covers the three variants of the concept, namely, Industrial areas, Industrial Estates and Industrial Townships. An industrial area is one wherein the infrastructural facilities and services are provided but factory accommodation is constructed by entrepreneurs. In an industrial estate,

both infrastructural facilities and factory accommodation are provided by the sponsoring authority. In an industrial township, besides the infrastructural facilities and factory sheds, housing accommodation and other civic amenities associated with a town are also provided.

There are a number of other variants of the industrial estate like ancillary industrial estate and functional industrial estate. Besides, there are incubators, workshops or service industry-bay and flatted-factories also. An ancillary industrial estate is one where only small scale industries which are ancillary to a particular large industry are housed. Such an industrial estate is attached to the Hindustan Machine Tools (H.M.T.), Bangalore. Functional industrial estate is organised for small units in a particular industry. Such an estate for sports goods is organised in Delhi near the Okhale Industrial Estate. An incubator is a small and fully serviced unit. It serves as a reception centre for refugee or displaced small firms. It also serves as a Pilot-Cell for small firms going into production. The Yaba Industrial Estate near Lagos in Nigeria is a good example of incubators. The workshop-bay which are designed for very small firms and

meant for the artisan who does mainly repair work are found in Europe generally and particularly in Scandinavian countries. The service Industry-bay is placed in the shopping centre to provide space for repair shops and enterprises. This is found in the new Towns of Britain. Also on the basis of location industrial estates are categorised into urban estates, semi-urban estates and rural estates.

The first industrial estate, the Traffort Park Estate (Manchester, England) in the United Kingdom was set up in 1896, by a private group. The second one was the Clearing Industrial District (Chicago) in the United States of America in 1899 by a private corporation. The third was the Industrial Zone of Naples in Italy which was founded in 1904. Since then industrial estates have been established in many countries both by public and private investment.

In short, the programme of industrial estate is of western origin. Industrial estates are the outgrowth of economic depression in 1930's and the second world war. In this period the establishment of industrial

estates and areas was influenced by a number of objectives and policies and profitability was only remotely important. The estates then set up in the United Kingdom created employment opportunities in specified depressed areas; later the scope of programme was extended to include overhead facilities, grants and loans, temporary tax exemptions, subsidies or rent, etc. In the United States too, the trend have shown a marked shift from profit making to the promotion of non-profit schemes aimed at area and community development.

## 1.3 Philosophy of Industrial Estates

The public investment in economic and social overhead capital (SOC) provides sufficient infrastructural base and it catalyses private enterprise and investment. The industrial estates provide a minimum of social overhead capital that is absolutely necessary for directly productive activities. The SOC comprises of basic services like transportation, communication, power and water supply and drainage systems.

The philosophy of the programme of industrial estates rests primarily on two major premises, namely, economies of scale and economies of agglomeration.

Economies of scale are said to arise because an estate sheltering a large number of small enterprises, all of them enjoying the advantages in common in the form of overheads, take the character of a single firm. An industrial estate wherein a number of industrial enterprises are housed becomes a complex of inter-dependent and inter-related industries. Industrial estates also serve as risk-absorbing device, because the capital investment of the entrepreneurs for starting enterprises in the estates gets considerably reduced with the provision of large variety of facilities and services by the sponsors.[8]

Profit motivation is the main factor for private investment and enterprise. Entrepreneurs engaged in traditional economic activities like agriculture, trade or cottage industry will be attracted to modern small industry only if they bring them a rate of return higher than that in the alternative economic pursuits. Industrial estates serve as a nursery for new entrepreneurs. Operation of economies of scale and external

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[8] Mathur, O.P., Manual on Industrial Estates, Small Industries Extension Training Institute, Hyderabad, 1971.

economies of agglomeration make enterprises within the estate more efficient than their counterparts outside the estate.

## 1.4 Objectives of Industrial Estates

The industrial estates programme has been a multi-purpose tool and is a technique taking care of a number of industrial problems. It is a method of "..... Organising, housing and serving industry".[9] The objectives of the programme in different countries are different. The main objective of industrial estates in Britain has been the development of backward areas. In the United States it has been area planning to reduce over-crowding and congestion in cities. In Italy, the emphasis has been on industrialisation and raising the economic standards of the people. In the U.S.S.R. it has been balanced development of the national economy through the balanced distribution of the productive forces. Among the developing countries Pureto Rico, perhaps, in addition to India has been emphasising industrial estates in its industrialisation programme.

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[9] United Nations, Establishment of Industrial Estates in Under Developed Countries, Department of Economic and Social Affairs, New York, 1961, p.1.

In general industrial estates are expected to achieve the following objectives.

1. Promotion of small scale industries by providing facilities, assistance and guidance to small industrialists in establishing, operating and managing their units

2. Decentralisation of industries from big cities, urban areas and highly industrialised centres to other places

3. Development of industries and employment in backward regions

4. Provision of facilities of all types at one place for the smooth functioning of industry

5. Provision of build up factory accommodation to the small entrepreneurs so as to make them ready to start their industries without any inconvenience or delay and

6. Rapid industrialisation of the country through the development of small industries.

Thus attraction of industries from big cities, making the economy self-supporting by promoting employment of the local man-power, decongestion of urban areas by decentralising industries, rehabilitation of displaced small industries, general economic development and promoting small and medium industries are the objectives of the programme.

# CHAPTER - II

# THE DESIGN OF THE STUDY

# 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]

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[1] (i) V.K.R.V. Rao, 'A Study in the Working of the Intensive Area Scheme', Khadi and Village Industries Commission, Institute of Economic Growth, New Delhi, 1965, p.838 and

(ii) Bandhopadyaya, Industrialisation through Industrial Estates, a Pattern of Economic Decentralisation, Bookland, Pvt. Ltd., Calcutta, 1969, p.181.

## 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. Eugne Stanley characterises Alexander's study as a real contribution to the literature of a relatively new branch of technology - The social technology.

M.A. Oommen[3] 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,

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[2] Alexander, P.C., Industrial Estates in India, Asia Publishing House, Bombay, 1963.

[3] Oommen, M.A., Small Industry in Indian Economic Growth - A Case Study of Kerala, Research Publication in Social Sciences, Delhi, 1972.

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[4] 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

[4] 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[5] 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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[5] Duraid Yawer, Rural Industrialisation for Developing Countries, Chetana Publication, Delhi, 1978.

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.

Bharti[6] 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

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[6] Bharti, K.K., Industrial Estates in Developing Economies, National Publishing House, New Delhi, 1978.

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, pre-ponderance 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[7] made a study of industrial development of Vidarba. He says that the government

[7] Palsapure, P.Z., Industrial Development of Vidarbha, Popular Prakashan, Bombay, 1975.

has undertaken the scheme of industrial estates for fostering industrial development on a decentralised pattern and relieving congesion 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

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8 Bhattacharya, S.N., Rural Industries and Industrial Estates, B.R. Publishing Corporation, Delhi, 1980.

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[9] 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

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[9] Ram, K. Vepa, Small Industry - The Challenge of the Eighties, Vikas Publishing House Pvt. Ltd., Delhi, 1983.

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[10] 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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[10] Vasanth Desai, Problems and Prospects of Small Scale Industries in India, Himalaya Publishing House, Bombay, 1983.

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[11] 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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[11] Ramakrishna Sarma, Industrial Development of Andhra Pradesh, Himalaya Publishing House, Bombay, 1982.

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[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 fiftees 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 catalystic agents for the growth of small industries. But one of his notable findings

[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.[13] in their studies have suggested industrial estates should serve as "nursery bed for entrepreneurs".

Sanghvi, R.L.[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.

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[13] Dhar, P.N. and Lydall, H.P., The Role of Small Enterprises in Economic Development, Asia Publishing House, Bombay, 1961.

[14] Sanghvi, R.L., Role of Industrial Estates in a Developing Economy, Multi-Tech. Publishing Company, Bombay, 1979.

A study was conducted by the Maharashtra Chamber of Commerce[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[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

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[15] Maharashtra Chamber of Commerce, 'Some Industrial Estates are Sick', Eastern Economist, Vol. 51, S.No.10, Sept. 6, 1968.

[16] Dhanikar, 'Some Industrial Estates are Sick', 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. Madhavan[17] 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.

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[17] Madhavan, S., 'Organisation of Industrial Estates', Commerce, Vol. 119 (1969), July, 19th, 1969.

The Working Group[18] 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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[18] Working Group on Industrial Estates, Eastern Economist, September 22, 1972.

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. Kovjalgi[19] 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. Vepa[20] 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

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19 Kovjalgi, V.S., 'Industrial Estates in Karnataka', Commerce, Vol. 1974, (October-December) November, 1974.

20 Ram, K. Vepa, 'Industrial Estates should Promote Development in Small Towns, Yojana, Vol.11, June 25, 1967, p.23.

the industrial areas of metropolitan towns, to have balanced dispersal of industries in semi-urban and rural areas, to relieve unemployment and under employment 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)[21] 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

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[21] 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. Prabhakar[22] 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.

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[22] Prabhakar, K.V., 'Industrial Estates in Mysore', Eastern Economist, Vol.57, September 17, 1971.

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[23] 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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[23] Mathai, P.M., 'Industrial Estates - An Integral Part of Regional Development', Yojana, Vol.13, May 4, 1969.

Maharashtra Economic Development Council[24] (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.

William Bredo[25] in the United Nations (U.N.) Conference Paper vehemently argues for industrial estates programme for attaining rapid economic development.

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[24] Findings of the Maharashtra Economic Development Council Study Group, 'Industrial Estates in Maharashtra', Part-I, March 26, 1966.

[25] William Bredo, 'The Industrial Estate - Social Technology for Economic Development', U.N. Conference Paper, Geneva, 1963.

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 imeplementing 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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26 State Planning Board, Industrial Estates in Kerala, Trivandrum, 1975.

27 Krishnakumar, S., Strategy for a Massive Effort for Small Industries Development in Kerala State, Government of Kerala, Trivandrum, 1975.

28 Report of the Study Group Set up by the Steering Committees of the State Level, Bankers Committee, Kerala.

Prakash[29] 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[30] on the mini industrial estates suggests certain modifications required in the implementation.

Om Prakash Mathur[31] 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

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29 Prakash, B.A., 'Mini Industrial Estates Programme in Kerala - A Case Study of Trichur District, Indian Management, December, 1980.

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

31 Om Prakash Mathur, 'The Future of Industrial Estates', Yojana, Vol. 15,1971.

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.

# CHAPTER - III

# INDUSTRIAL ESTATES PROGRAMME IN INDIA WITH SPECIAL REFERENCE TO KERALA

# CHAPTER - III

## INDUSTRIAL ESTATES PROGRAMME IN INDIA WITH SPECIAL REFERENCE TO KERALA

The importance of small scale industries in the context of Indian economy is well recognised. Small industries in India had a glorious past. Their decline started after the advent of British rule in India and they practically vanished with the evolution of the modern factory industry in this country. As a matter of fact, small scale industries have now become an important ingredient in the plan of industrialisation of our country. It is hoped that the objective of decentralised industrial growth can be served by the development of such industries. As Indian planning is aimed at the achievement of a socialistic pattern of society, there cannot be two opinions about the fact that the said objectives can be achieved only by the decentralisation and wide distribution of both economic activity and economic

advantages. From the view point of employment and distribution of economic activity on decentralised pattern, small scale industries seem to be the most appropriate instrument.

The importance attached to the development of small industry is evident from the policy outlined by the Government of India. It has been stated that "cottage and small industries have a very important role in the national economy, offering as they do, scope for individual, village or co-operative enterprises and means for rehabilitation of displaced persons. These industries are practically suited for the better utilisation of local resources and for the achievement of local self-sufficiency in respect of certain types of essential consumer goods.[1] The small scale industries occupy a prominent position in our economy, and they have to play a strategic role in the economic development of the country. The Gandhian school of economic thinkers has for a long time been emphasising the expansion of small scale and cottage industries and, later on, similar

[1] Government of India, Industrial Policy Resolution, New Delhi, 1948.

suggestions were made by the Village and Small Scale Industries Committee and the Karve Committee. The Second Industrial Policy Resolution dated April 30th 1956 may be regarded as the most authoritative enunciation of government policy on small industries. The Resolution says that they provide immediate large scale employment, offer a method of ensuring a more equitable distribution of the national income and facilitate an effective mobilisation of resources of capital and skill, which might otherwise remain unutilised.[2]

Small industries provide larger employment opportunities, facilitate better mobilisation of local resources and make adequate supply of essential consumer goods. The small industries meet the limited local demands and exploit resources of the area and this give immediate benefits to the community in contrast to large industry. They can make their working flexible enough by adopting technological advances, product changes, economical operations under varying conditions and they may easily meet the demands of local markets. They also

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[2] Government of India, Industrial Policy Resolution, New Delhi, 1956.

serve as an effective tool for dispersing the industries on a decentralised pattern. For area planning and community development, they should be kept in view. For these reasons, there is a case for the development of small industries in the country through incentives and assistance from the government in a comprehensive way.

The government have sponsored a large number of schemes to promote small scale industries in the country. They are mainly aimed at providing a suitable and favourable environment for further development. It is true that at present small scale industries in India are suffering from several handicaps, which undermine their efficiency and stand in the way of their healthy development and expansion. These handicaps are mainly in respect of high cost of production, low competitive strength, imperfect organisational set up, lack of up-to-date technical knowledge, insufficient marketing organisation, absence of standardisation and inadequate financial resources. A number of recommendations were made by the International Planning Team (1954) and the Karve Committee (1955) for recognising and to re-equip small industries. The government has also endeavoured to implement, as far as possible, the basic

recommendations of these committees through a policy of protective assistance to small scale industries.

Much emphasis has been given to the development of small industry under the five year plans. This is evident from the table-3.1.

Table - 3.1

Expenditure by the Government of India on Small Industries: Plan-Wise

| Five Year Plans | Expenditure (Rs. in Crores) |
|---|---|
| 1 | 2 |
| First Plan (1951-'56) | 5.20 |
| Second Plan (1956-'61) | 55.00 |
| Third Plan (1961-'66) | 113.00 |
| Annual Plan (1966-'69) | 53.00 |
| Fourth Plan (1969-'74) | 221.00 |
| Annual Plan (1979-'80) | 104.00 |
| Sixth Plan (1980-'85) | 616.00 |

Source: Economic Times, Special Supplement, June 12, 1986.

During the first plan period the government expenditure on small industries was Rs.5.2 crores. By the sixth plan the amount increased 118 times as that of the first plan period.

Government of India adopted various schemes of assistance to small scale industries. It includes the provision of credit facilities on easy terms, guidance in production and management through the Industrial Extension Service, facilities for training for small entrepreneurs and marketing. Generally lack of suitable factory accommodations is one of the main hurdles for the development of small industries. Small industrialists are confronted with a number of problems in acquiring land, buildings and other basic facilities for setting up the factories. An important addition to the measures of assistance by the government to small scale industries is the starting of industrial estates where the provision of built-up factory accommodation is provided to small industrialists.

Accepting the recommendations of the International Planning Team, Small Scale Industries Board at its meeting held in January 1955 decided

to execute the idea of establishing industrial estates in India as a measure for the development of small scale industries.

The chief objectives of the programme of industrial estates started by the Government of India are:

1. to encourage the growth of small scale industries
2. to shift the small industries from congested areas to the estate premises with a view to increasing their productivity
3. to encourage growth of ancillary industries in the townships
4. to achieve decentralised industrial development in small towns and large villages
5. to introduce modern techniques, collective purchases of raw materials and sale of finished goods and
6. to enable these units to avail themselves of goods and services of one another so as to make them complementary and independent.[3]

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[3] Planning Department, Government of Karnataka, Evaluation of the Industrial Estates Programme in Karnataka, Directorate of Evaluation, Bangalore, 1978.

To sum up, the primary objective has been development of small scale industries. The secondary objective is promotion of regional economic growth. During the first two five year plans, promotion and growth of small scale industries were given emphasis but during the third plan, decentralisation and development of backward regions were focussed.

The state governments were entrusted with the responsibility of planning and developing industrial estates. The Union Government extends loans to cover 75 per cent of the outlay for land, buildings, roads, power transmission, water supply, etc. Apart from this grants are also provided for the entire expenditure on preparing plans, blue prints and estimates of industrial estates.

The history of industrial estates in India can be traced back to the year 1947, when the then Bombay State appointed a special officer to recommend centres in the state where industrial estate could be established. Though a number of centres in the state was recommended, the scheme did not materialise satisfactorily for want of finance. However, the idea lingered on and in 1952, the

Bombay state granted a loan to Poona Municipal Corporation for developing an industrial estate at Hadaosar. The lead given by Bombay state was followed by the then Saurashtra state (now in Gujarat) when in 1955 it was decided to set up an industrial estate near Bhatti Nagar Railway Station in Rajkot. The main objective of setting up the estate in Rajkot was to consolidate the growth of small scale industries that had come to be established during the second world war.

Though the programme of industrial estates was introduced in India towards the end of the first five year plan, it gained momentum only in the second five year plan. This was made possible by the decision of the government to increase their investment in the Small Scale Industrial Sector[4] from Rs.44 million to Rs.200 million in 1957.

The progress of the programme in India during the five year plans is shown in table-3.2.

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[4] Government of India, Ministry of Commerce and Industry, Bulletin of Small Industries, December 1958, No.10, p.2.

Table - 3.2

Progress of Industrial Estates Programme in India During Five Year Plans

| Five Year Plans | No. of Industrial Estates Sanctioned | Expenditure (Rs. in lakhs) |
|---|---|---|
| 1 | 2 | 3 |
| First and second plans | 120 | 1,022.07 |
| Third plan | 458 | 2,255.45 |
| Three annual plans | | |
| 1966-'67 | | 215.66 |
| 1967-'68 | | 151.43 |
| 1968-'69 | | 229.39 |
| Fourth plan | 612 | 1,542.52 |
| Fifth plan | 796 | 2,461.28 |
| Sixth plan | - | 4,500.00 |

ource: Figures compiled from the Report of the Progress of Industrial Estates in India, 1978-'79 and the Report of the Development Commissioner, Small Industries Development Organisation, Small Scale Industries.

During the first five year plan, 10 industrial estates were sanctioned to be set up by State Governments of Kerala, Tamil Nadu, Uttar Pradesh and West Bengal. Consequently industrial estates were started at Palghat, Trivandrum, Kottayam, Quilon and Trichur in Kerala, Guindy and Virundhumagar in Tamil Nadu, Kanpur and Agra in Uttar Pradesh and Kalyani in West Bengal. In addition the construction of 2 estates, one at Okhala, New Delhi and the other at Naini (U.P.) were undertaken by the National Small Scale Industries Corporation.

In the second five year plan, 110 industrial estates were sanctioned in different parts of the country. The expenditure incurred on industrial estates during the first and second five year plans was Rs.1,022.07 lakhs.

The programme made rapid progress in the third five year plan. Up to the end of the third plan, schemes for 458 industrial estates had been sponsored and Rs.2,255.45 lakhs were spent.

The fourth five year plan emphasised the consolidation of the industrial estates programme. An amount of Rs.1,542.52 lakhs was spent during the fourth plan period. By the end of the fourth plan, 612 industrial estates had been sponsored.

The expenditure on the industrial estates programme during the fifth five year plan (1974-'79) was around Rs.2,461.28 lakhs. During the period 184 new industrial estates were sponsored in the country. With this addition the total number of industrial estates sponsored in the country reached the figure of 796 by the end of March 1979.

During the sixth plan period, government spent an amount of Rs.4,500 lakhs for industrial estates in India. That is by sixth plan, government expenditure on industrial estates increased by 4.4 times as that of first and second plans.

By the end of March 1985, there were 799 industrial estates out of which 659 were functioning. The details of progress as available upto 31st March 1985 is given in table-3.3.

From table-3.3 it can be seen that 82 per cent of the sponsored industrial estates are functioning at present.

The state-wise plan expenditure on the industrial estates programme during the year 1981-'82, 1982-'83 and 1983-'84 is given in table-3.4.

Table - 3.3

Positions of Industrial Estates in India

| Number | Position till March 1980 | Position till March 1985 |
|---|---|---|
| 1 | 2 | 3 |
| Industrial estates sponsored | 796 | 799 |
| Industrial estates functioning | 633 | 659 |
| Industrial estates not functioning | 72 | 140 |
| Sheds constructed | 19,368 | 21,547 |
| Sheds allotted | 18,057 | 17,253 |
| Sheds occupied | 17,451 | 17,253 |
| Plots allotted | 26,213 | 24,563 |
| Plots occupied | 22,910 | 24,006 |

Source: Figures compiled from the Report of Small Industries Development Organisation, Small Scale Industries, New Delhi.

## Table - 3.4

## Plan Expenditure on Industrial Estates: State-Wise

(Rs. in Lakhs)

| Sl. No. | State/Union Territory | Actual Expenditure 1981-'82 | Anticipated Expenditure 1982-'83 | Outlay in 1983-'84 |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| A. | States | | | |
| 1. | Andhra Pradesh | .. | .. | .. |
| 2. | Assam | 23.25 | 28.84 | 35.00 |
| 3. | Bihar | 55.74 | 59.00 | 35.00 |
| 4. | Gujarat | 3.40 | 7.00 | 7.00 |
| 5. | Haryana | 18.79 | 20.00 | 75.00 |
| 6. | Himachal Pradesh | 14.00 | 30.00 | 32.00 |
| 7. | Jammu Kashmir | N.A. | N.A. | N.A. |
| 8. | Karnataka | 277.50 | 200.00 | 530.00 |
| 9. | Kerala | 10.87 | 24.00 | .. |
| 10. | Madhya Pradesh | 27.52 | 42.45 | 55.00 |
| 11. | Maharashtra | 25.00 | 30.00 | 30.00 |
| 12. | Manipur | 7.27 | 7.00 | 10.00 |
| 13. | Meghalaya | 2.00 | 7.30 | 5.00 |
| 14. | Nagaland | 8.10 | 10.00 | 9.84 |
| 15. | Orissa | 4.12 | 1.12 | 20.62 |
| 16. | Punjab | .. | .. | .. |
| 17. | Rajasthan | -- | 1.10 | 1.00 |
| 18. | Tamil Nadu | 24.90 | 47.59 | 21.05 |
| 19. | Sikkim | 6.99 | 10.50 | 5.00 |
| 20. | Tripura | N.A. | N.A. | N.A. |
| 21. | Uttar Pradesh | 108.12 | 135.00 | 185.00 |
| 22. | West Bengal | .. | 0.60 | 1.00 |
| | Total .. | 617.57 | 661.50 | 1,057.51 |

(Contd..)

Table-3.4 (Contd.)

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| B. | Union Territory | | | |
| 23. | Andaman and Nikobar Island | 1.15 | 3.40 | 1.05 |
| 24. | Arunachal Pradesh | .. | 10.00 | 13.02 |
| 25. | Chandigarh | 5.00 | .. | .. |
| 26. | Dadra and Nagar Haveli | 5.56 | 25.00 | 13.45 |
| 27. | Delhi | 358.38 | 428.70 | 557.00 |
| 28. | Goa, Daman and Diu | .. | .. | .. |
| 29. | Lakshadweep | .. | .. | 1.00 |
| 30. | Mizoram | 8.00 | 8.00 | 12.00 |
| 31. | Pondicherry | 5.00 | 10.00 | 10.00 |
| | Total | 383.09 | 485.10 | 607.52 |
| | Grand Total | 1,000.66 | 1,146.60 | 1,665.52 |

Source: Small Industries Development Organisation, Report 1982-'83, Development Commissioner, Small Scale Industries, New Delhi, pp.107-108.

Table-3.4 shows that the maximum expenditure was incurred by the Karnataka State (Rs.277.50 lakhs). The anticipated expenditure also was maximum in the state of Karnataka (Rs.200 lakhs). In the Union Territory of Delhi the actual and anticipated expenditure were Rs.358.33 lakhs and Rs.478.70 lakhs respectively.

Table-3.5 shows the state-wise details of industrial estates sponsored.

Table-3.5 indicates that the maximum number of industrial estates have been sponsored in Madhya Pradesh (131) and Andhra Pradesh stands on the second place with 106 estates, and the lowest number of industrial estates is in Nagaland where only one estate has been sponsored. Other states like Gujarat, Bihar, Karnataka, Maharashtra, Punjab, Orissa, Tamil Nadu and West Bengal have also done satisfactorily well as far as the number of industrial estates sponsored is concerned.

Table-3.6 shows the categorisation of industrial estates - functioning.

## Table - 3.5

## Industrial Estates Sponsored, Functioning, Not Functioning and Under Construction Upto March 31, 1985: State-Wise

| State/Union Territory | Sponsored | Functioning | Not Functioning | Under Construction |
|---|---|---|---|---|
| 2 | 3 | 4 | 5 | 6 |
| States | | | | |
| Andhra Pradesh | 106 | 82 | 11 | 13 |
| Assam | 8 | 8 | .. | .. |
| Bihar | 55 | 41 | 7 | 7 |
| Gujarat | 79 | 60 | 7 | 12 |
| Haryana | 15 | 14 | 1 | .. |
| Himachal Pradesh | 8 | 8 | .. | .. |
| Jammu & Kashmir | 18 | 15 | 3 | .. |
| Karnataka | 30 | 28 | .. | 2 |
| Kerala | 17 | 17 | .. | .. |
| Madhya Pradesh | 131 | 87 | 27 | 17 |
| Maharashtra | 62 | 54 | 2 | 6 |
| Manipur | 2 | 1 | .. | 1 |
| Meghalaya | 2 | 2 | .. | .. |
| Nagaland | 1 | 1 | .. | .. |
| Orissa | 26 | 23 | 1 | 2 |
| Punjab | 31 | 20 | 11 | .. |
| Rajasthan | 13 | 13 | .. | .. |
| Sikkim | 3 | .. | .. | 3 |
| Tamil Nadu | 51 | 51 | .. | .. |
| Tripura | 4 | 3 | 1 | .. |
| Uttar Pradesh | 94 | 72 | .. | 22 |
| West Bengal | 20 | 15 | .. | 2 |
| Total | 776 | 615 | 71 | 90 |

(Contd..)

Table-3.5 (Contd.)

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| B. | Union Territories | | | | |
| 23. | Andaman and Nickobar Islands | 1 | 1 | .. | .. |
| 24. | Arunachal Pradesh | 1 | 1 | .. | .. |
| 25. | Chandigarh | 1 | 1 | .. | .. |
| 26. | Dadra and Nagar Haveli | 2 | 2 | .. | .. |
| 27. | Delhi | 2 | 2 | .. | .. |
| 28. | Goa, Daman and Diu | 7 | 7 | .. | .. |
| 29. | Mozoram | 2 | 1 | 1 | .. |
| 30. | Pondicherry | 6 | 5 | .. | 1 |
| | Total | 796 | 635 | 72 | 91 |

Source: Figures compiled from the Report of Small Industries Development Organisation, Small Scale Industries, New Delhi.

## Table - 3.6

## Categorisation of Industrial Estates Functioning: State-Wise

| Sl. No. | State/Union Territories | Categories | | | Total |
|---|---|---|---|---|---|
| | | Urban | Semi-Urban | Rural | |
| 1 | 2 | | 3 | | 4 |
| 1. | Andhra Pradesh | 34 | 37 | 21 | 82 |
| 2. | Assam | 2 | 5 | 1 | 8 |
| 3. | Bihar | 19 | 11 | 11 | 41 |
| 4. | Gujarat | 33 | 17 | 10 | 60 |
| 5. | Haryana | 6 | .. | 8 | 14 |
| 6. | Himachal Pradesh | 5 | 2 | 1 | 8 |
| 7. | Jammu & Kashmir | 3 | .. | 12 | 15 |
| 8. | Karnataka | 5 | 10 | 13 | 28 |
| 9. | Kerala | 3 | 8 | 6 | 17 |
| 10. | Madhya Pradesh | 54 | 30 | 3 | 87 |
| 11. | Maharashtra | 30 | 18 | 6 | 54 |
| 12. | Manipur | 12 | 1 | .. | 1 |
| 13. | Orissa | 16 | 4 | 3 | 23 |
| 14. | Punjab | 11 | .. | 9 | 20 |
| 15. | Rajasthan | 9 | 1 | 3 | 13 |
| 16. | Tamil Nadu | 19 | 19 | 13 | 51 |
| 17. | Tripura | .. | 1 | 2 | 3 |
| 18. | Uttar Pradesh | 30 | 12 | 30 | 72 |
| 19. | West Bengal | 12 | .. | 3 | 15 |
| 20. | Andaman & Nikobar Islands | .. | .. | | 1 |
| 21. | Arunachal Pradesh | .. | 1 | .. | 1 |
| 22. | Chandigarh | 1 | .. | .. | 1 |
| 23. | Dadra & Nagar Haveli | .. | .. | 2 | 2 |
| 24. | Delhi | 1 | .. | 1 | 2 |
| 25. | Goa, Daman & Diu | .. | 1 | 6 | 7 |
| 26. | Mizoram | 1 | .. | .. | 1 |
| 27. | Pondicherry | .. | 2 | 3 | 5 |
| 28. | Nagaland | .. | .. | 1 | 1 |
| | Total | 296 | 169 | 170 | 635 |

Source: Industrial Estates in India, Progress Report, Op.cit., pp.21-22.

The table-3.6 shows that out of 635 industrial estates functioning 296 estates are in the urban areas, 169 estates in the semi-urban areas and 170 estates are in the rural areas. In other words 47 per cent of the estates are functioning in the urban areas and 53 per cent in the semi-urban and rural areas.

## 3.1 Industrial Estates Programme in Kerala

Kerala has been the traditional home of several small scale industries in India. The Government of Kerala promote small scale industries with the hope of generating more employment opportunities as unemployment is one of the most important problems of the state which warrants immediate attention. There are many factors which contribute to the problem of unemployment in the state. Compared to the other states of India, the cropping pattern of Kerala is less labour intensive resulting in a lower proportion of workers in the agricultural sector. The cropping pattern in Kerala is dominated by perennial crops which are high value yielding but less labour intensive. Besides, the high density of population and its growth result in a higher proportion of the

population in the younger age group. Further, the decline of industrial sector is also due to the decay of traditional industries such as coir, handloom, cashew, etc. Since the agricultural sector is fully saturated, there is little scope for further expansion in employment. The secondary sector has shown a declining trend in recent decade. The tertiary sector of the economy, however, absorbs a good percentage of work-force contributing a larger share of the state income. Individuals who have sufficient capital to invest have been attracted to tertiary sector rather than to secondary sector. Consequently the secondary sector of the state have become stagnant. In fact the major responsibility of the backwardness of the state can be attributed to its low share of the secondary sector in the domestic products.

Kerala has a well-developed infrastructure. The banking system in the state is well distributed. The power is available at a reasonable rate. Above all she has a unique concentration of rare minerals such as monozite, sercon, ilmenite, China Clay, etc. and a vast marine resources. Besides she has the highest level of literacy. All these factors are favourable to launch

a massive and dynamic programme for industrialisation. Industrialisation in turn opens opportunities for the creation of immediate and permanent employment. Development of small scale sector is the answer to the massive unemployment problem. It is in this perspective that one should look upon the importance and relevance of the small scale industries in the state.

Since the first five year plan, the state government has been given more and more importance to small scale industries. Table-3.7 shows the gradual rise in the number of registered small units.

Table - 3.7

Total Number of Registered Small Units as on 31-3-1985

| Year | No. of Units |
|---|---|
| 1 | 2 |
| 31--3--1978 | 12,118 |
| 31--3--1979 | 13,386 |
| 31--3--1980 | 15,974 |
| 31--3--1981 | 18,954 |
| 31--3--1982 | 21,977 |
| 31--3--1983 | 24,884 |
| 31--3--1984 | 28,117 |
| 31--3--1985 | 33,809 |

Source: Figures compiled from Kerala Economic Review, 1978-'85.

Table-3.7 shows that over the year 1978 the number of registered small scale units increased 2.79 times by 1985.

Table-3.8 throws light on the plan-wise expenditure in Kerala on the development of village and small scale industries.

Table - 3.8

Expenditure on Village and Small Scale Industries: Plan-Wise

(Rs. in Lakhs)

| Five Year Plans | Outlay | Expenditure |
|---|---|---|
| 1 | 2 | 3 |
| First Plan | 112 | 50 |
| Second plan | 582 | 425 |
| Third plan | 800 | 630 |
| Three Annual Plans (1966-'67 to 1968-'69) | 512 | 551 |
| Fourth plan | 1,022 | 1,015 |
| Fifth plan (1974-'78) | 1,604 | 1,825 |
| Annual Plans (1978-'79, 1979-'80) | 891 | 2,529 |
| Sixth plan | 4,980 | 4,488 |
| Total 1st to 6th plan | 10,503 | 11,513 |

Source: Figures compiled from Kerala Economic Review, 1978-'85.

It is evident from table-3.8 that by the end of sixth plan the total outlay on village and small scale industries was amounted to Rs.10,503 lakhs. But the actual expenditure was Rs.11,513 lakhs. In other words over the first plan the total outlay on village and small scale industries increased by 44.46 times and expenditure 89.76 times by the sixth plan.

Following the decision of the Central Government, the State Government decided to launch a programme of industrial estates as a tool for the development of small scale industries. Industrial estates, a device for promoting dispersed industrial development, play a significant role in promoting small scale industries in Kerala. The programme of industrial estates was launched in Kerala during the second plan period. The programme envisaged (a) providing factory accommodation at suitable sites, with common amenities and other basic facilities (b) bringing together a number of different industrial units so as to facilitate the setting up of common service centres (c) promoting small scale industries by all possible means and assisting them by way of collective purchases of raw materials and sale of finished goods

and creating expert-decorpse and self-help amongst them and (d) helping to achieve dispersal of industries in rural and backward areas and providing incentives to small entrepreneurs.[5]

Since the State Governments were entrusted with the responsibility of 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 and the other as a semi-urban or rural estate.

Four out of ten industrial estates sanctioned in the first plan by the Union Government were in Kerala. During the second plan, financial assistance for establishing five new estates was allocated to the state which came to about 7 per cent of the total allocation to all the states. In the third plan nine more estates were started. Thus at the end of third plan there were altogether 18 major industrial estates in the state. During the fourth plan no new estate was launched, as the emphasis was on the consolidation of the existing industrial estates.

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[5] State Planning Board, Evaluation Division, Industrial Estates in Kerala, An Evaluation Study, Trivandrum, 1972.

In Kerala all the 18 major industrial estates came into existence in two series. Eight of them viz., Pappanamcode, Kollakadavu, Ettumanoor, Palluruthy, Olavakode, West Hill, Palghat and Ollur come under the first series that started during the second plan and the beginning of the third plan period. Those coming under the second series namely, Karakulam, Umayanalloor, Changanacherry, Kalletumkara, Karakkad, Manjeri, Karunagapally, Mayilthara, Kasaragode and Vazhakulam were started during the subsequent period in third five year plan. The number of estates rose from 5 to 18 and the value of production by small enterprises located in them went up from Rs.135 lakhs to 219 lakhs. Employment provided also increased from 488 persons to 1,880 persons during the decade 1958-'68.

All the major industrial estates functioning at present are administered by the Kerala State Small Industries Development and Employment Corporation (SIDECO) through an administrative officer in each estate on behalf of the Director of Industries and Commerce.

In each successive five year plan, the Government of Kerala had given more and more attention to the development of industrial estates in the state. By the end of

fourth plan period, the expenditure of the government on industrial estates was amounted to Rs.261.69 lakhs. During the period 1976-'77, the government expenditure was Rs.10 lakhs. During the sixth plan period the government earmarked a sum of Rs.400 lakhs on various schemes under industrial estates programme. This included provisions for a Common Facility Service Centre at Changanacherry, Functional Industrial Estate for Leather at Kasaragode, for rubber in Malappuram and for ceramics at Mangattuparamba. Provision was also made for an industrial estate for Harijan at Thonnakkal. Seventh Plan included schemes like functional industrial complexes for Electronics industry including units for manufacturing components and industrial estates for Non-resident Indians in selected centres in the northern, central and southern regions of the state. Separate provision is made for "No Industries Districts". An amount of Rs.1350 lakhs is provided in the seventh plan for these purposes. Thus the State Government had given due attention to the development of industrial estates in the State. Table-3.9 shows the plan-wise outlay and expenditure on industrial estates in Kerala.

Table - 3.9

Outlay and Expenditure on Industrial Estates: Plan-Wise

(Rs. in Lakhs)

| Plan | Outlay | Expenditure |
|---|---|---|
| 1 | 2 | 3 |
| II Plan | 81.95 | 78.23 |
| III Plan | 125.00 | 98.19 |
| IV Plan | 100.00 | 85.27 |
| V Plan (1976-'77) | -- | 10.00 |
| VI Plan | 400.00 | -- |
| VII Plan | 1,350.00 | -- |

Source: State Planning Board, Draft Sixth Five Year Plan and Draft Seventh Five Year Plan, Government of Kerala, Trivandrum.

Table-3.10 shows the progress of industrial estates in Kerala.

Table - 3.10

Progress of Industrial Estates in Kerala

| Description | December 1979 | December 1975 | December 1980-'81 | 1981-'82 | 1982-'83 |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| No. of major industrial estates | 17 | 18 | 17 | 17 | 17 |
| No. of sheds completed | 515 | 533 | 515 | 515 | 515 |
| No. of sheds working for production | 333 | 387 | N.A. | 397 | N.A. |
| No. of units working | N.A. | 231 | 206 | 210 | 218 |
| Employment | 2,840 | 4,180 | 2,280 | 2,333 | 2,320 |
| Investment in plant and machinery (Rs.in lakhs) | N.A. | N.A. | 436.45 | 445.62 | 458.4 |
| Total annual production (Rs. in lakhs) | 324 | 392 | 1,418.08 | 1,153.13 | 1,266.99 |

Source: Progress Report of the Industrial Estates, SISI, 1984.

Table-3.10 presents the profile of the major industrial estates at different time points. From the table it is seen that there had been 18 per cent decline in employment from 1970-'83 but total annual production increased from Rs.324 lakhs in 1970 to Rs.1,266.99 lakhs in 1983. Taking the time period from 1980-'83 the annual output decreased but employment and investment in plant and machinery increased marginally.

Table - 3.11

Profile of the Major Industrial Estates in Kerala for the Year 1982-'83

| Sl. No. | Name of the estates | No. of Working Units | Employment | Investment in plant and machinery | Annual Output | Output per Capital | Output per Labour | Labour per Capital |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1. | Pappanamcode | 22 | 259 | 59.57 | 136.05 | 2.27 | .54 | 4 |
| 2. | Karunagapally | 4 | 35 | 13.95 | 17.24 | 1.24 | .49 | 3 |
| 3. | Uamayanalloor | 9 | 99 | 43.75 | 27.20 | 0.62 | .27 | 2 |
| 4. | Kollakadavu | 15 | 196 | 48.74 | 59.36 | 1.22 | .30 | 4 |
| 5. | Mayilthara | 7 | 30 | 17.25 | 23.50 | 1.36 | .78 | 2 |
| 6. | Ettumanoor | 22 | 214 | 52.78 | 182.57 | 3.46 | .85 | 4 |
| 7. | Changanacherry | 16 | 242 | 49.35 | 143.75 | 2.91 | .59 | 5 |
| 8. | Palluruthy | 5 | 57 | 7.51 | 29.42 | 3.92 | .52 | 8 |
| 9. | Vazhakulam | 8 | 90 | 9.09 | 30.35 | 3.34 | .34 | 10 |
| 10. | Kalletumkara | 12 | 68 | 21.44 | 43.84 | 20.04 | .64 | 3 |
| 11. | Ollur | 22 | 245 | 53.43 | 133.21 | 2.47 | .54 | 5 |
| 12. | Olavakode | 12 | 273 | 14.61 | 77.06 | 5.27 | .28 | 18 |
| 13. | Karakkad | 11 | 175 | 8.77 | 61.42 | 7.00 | .35 | 19 |
| 14. | Manjeri | 10 | 59 | 13.03 | 9.48 | 0.73 | .16 | 5 |
| 15. | West Hill | 23 | 165 | 25.59 | 137.98 | 5.39 | .84 | 6 |
| 16. | Palayad | 9 | 42 | 13.86 | 16.07 | 1.16 | .38 | 3 |
| 17. | Kasaragode | 11 | 72 | 7.35 | 25.63 | 3.49 | .36 | 10 |
| | Total | 218 | 2,320 | 458.47 | 1,153.13 | 2.52 | .50 | 5 |

Source: Progress Report of the Industrial Estates, 1984.

Table-3.11 presents information regarding the performance of the 17 major industrial estates in Kerala for the year 1982-'83. Output-capital ratio for all estates taken together is 2.52. The highest ratio of 7 is for the Karakkad estate and the Umayanalloor estate has the lowest ratio of 0.62; output per labour is the highest for the Ettumanoor estate. Labour per capital is the highest for the Karakkad estate and the lowest for the Umayanalloor and the Mayilthara estates. The Karakkad and the Olavakode estates have higher ratio of output-capital and labour capital. But output-labour ratio for both these estates are lower than the average for all estates.

## 3.2 Mini Industrial Estates Programme in Kerala

The Mini Industrial Estates Programme launched by the State Government of Kerala in April 1975 is an offshoot from the idea of industrial estates making it more adoptable to the regional requirements of the state for more effective decentralisation of local industries and utilisation of local resource endowments. The main objectives of the programme were:

1. to provide employment opportunities for absorbing the educated unemployed

2. to make full utilisation of the local raw material resources of the state

3. to mobilise financial resources from the various channels and from financial institutions and

4. to generate an industrial outlook among the public at large.[6]

The programme was meant for setting up of 1000 mini industrial estates, with 10 industrial units in each estate. The idea was to start one such estate in all the 971 panchayaths in the state. As per the programme the panchayath would arrange for free gift of suitable land with infrastructure and the Industries Department will arrange for the construction of the estate, provide facilities like internal roads, water supply, electricity, etc. The selected entrepreneurs should put in at least 10 per cent of the total outlay for each unit, state government would advance another 10 per cent and balance 80 per cent to be mobilised from financing institutions in the state.

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[6] Bureau of Economics and Statistics, Government of Kerala, Mini Industrial Estates in Kerala, Trivandrum, 1979.

Under this programme 10 of estates with 1,080 sheds are completed till March 1983. The summary statement of the progress of industrial estates including 108 mini industrial estates 8 development plots and 6 development areas are presented in table-3.12 for the years 1980-'81; 1981-'82 and 1982-'83.

Table - 3.12

Progress of Mini-Industrial Estates, Development Plots and Development Areas in Kerala

| Description | 1980-'81 | 1981-'82 | 1982-'83 |
|---|---|---|---|
| Total No. of Units | 570 | 575 | 616 |
| Total employment | 3,669 | 4,198 | 4,012 |
| Investment in plant and machinery (Rs. in lakhs) | 906.09 | 952.42 | 1,096.45 |
| Total value of production (Rs. in lakhs) | 1,779.21 | 2,395.65 | 2,635.10 |

Source: Progress Report of the Industrial Estates, SISI, 1984.

It is clear from table-3.12 that there has been steady increase in the number of units; investment in plant and machinery and total value of production even the years from 1980 to 1983. Total employment increased from 1980-'81 to 1981-'82 and it declined in the year 1982-'83.

From the foregoing discussion it is evident that there has been progressive achievement in the programme of industrial estates in India. The number of working units, employment and output have increased many fold from the time of the initiation of the programme. However, a number of pitfalls and failures have been pointed out by various studies in the working of the estates particularly rural and semi-rural estates. According to Reserve Bank Study on Industrial Estates the rate of utilisation of sheds in all the states was 75 per cent in urban estates against 56 per cent in semi-urban estates and 42 per cent in rural estates.[7] It has been pointed out that "rural estates with their locational drawbacks have exhibited very poor performance

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[7] Desai Vasant, Problems and Prospects of Small Scale Industries in India, Himalaya Publishing House, Bombay, 1983.

in terms of the utilisation of sheds and infrastructure facilities and have proved to be empty shells".[8] Lack of proper attention to a preliminary investigation of the suitability of the location of industrial estates, the absence of infrastructure for the growth of industries, the high cost involved in the development of land and construction of buildings by governmental agencies and the absence of common service facilities have contributed to the sad plight of Industrial Estates in Kerala.

The planning of an industrial estate should be envisaged as an integral part of the regional development process and industrial development programme of the region.

With regard to the mini industrial estates in Kerala the original target for establishing 1,000 estates has not been achieved. So far only 108 estates are completed. The capacity utilisation for the operating units has been nearly 50 per cent.[9] The main reasons for idle capacity are wrong selection of products, problems connected with marketing and inadequate finance especially working capital.

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[8] Sanghivi, R.L., Role of Industrial Estates in a Developing Economy, Multi-Tech. Publishing Co., Bombay, 1979.

[9] Small Industries Service Institute, 'Summary Statement of Progress of Industrial Estates, Trichur, 1984.

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# CHAPTER - IV

# INFRASTRUCTURAL FACILITIES IN INDUSTRIAL ESTATES IN KERALA

# CHAPTER - IV

## INFRASTRUCTURAL FACILITIES IN INDUSTRIAL ESTATES IN KERALA

In the last chapter the industrial estates programme in India with special reference to Kerala was discussed. Here it is proposed to discuss the infrastructural facilities available in industrial estates in Kerala.

Table-4.1 presents the list of major industrial estates and their location as on March 1986. The same information is given in Map No.4.1.

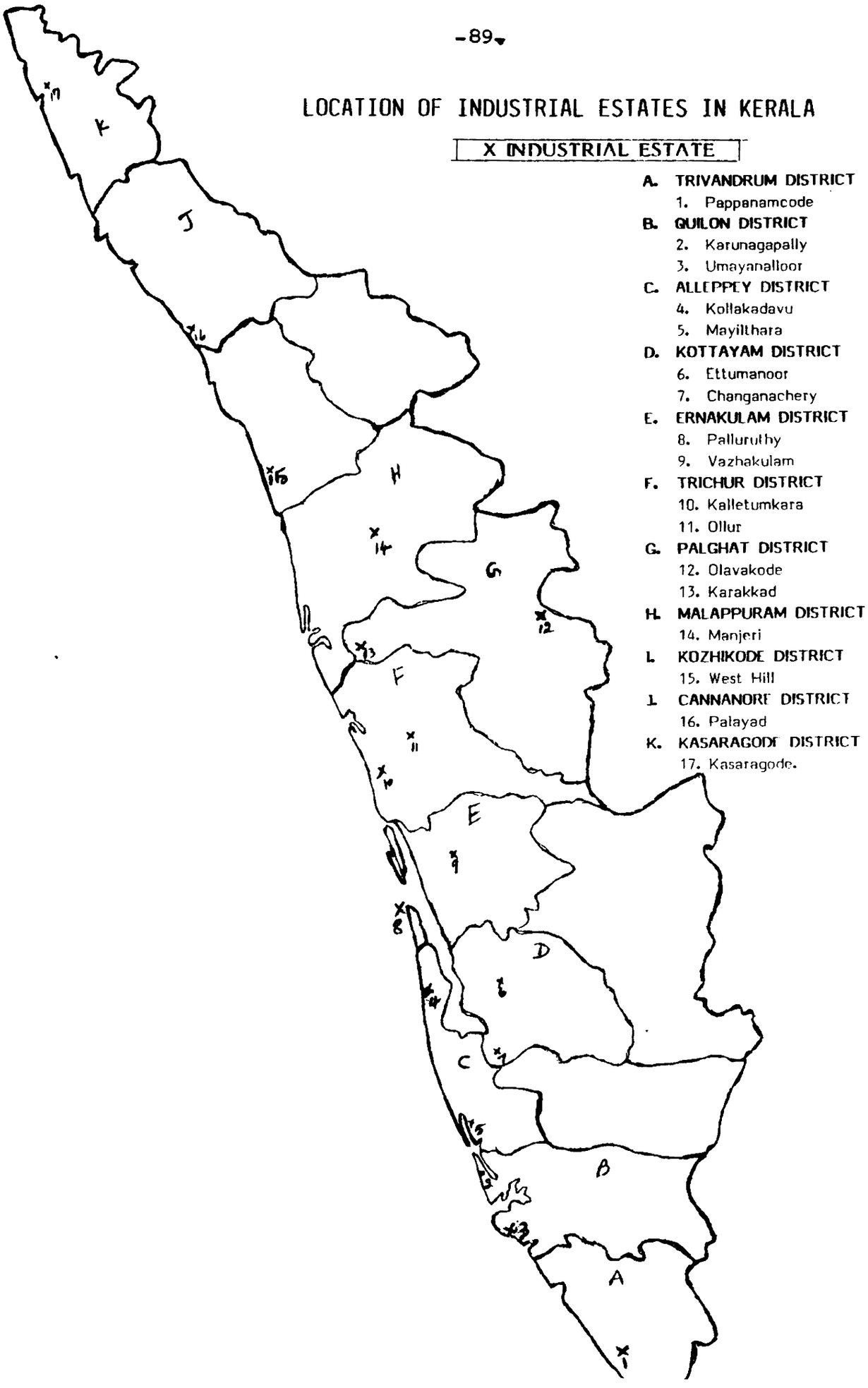
Table - 4.1

List of Major Industrial Estates and Their Location

| Sl. No. | Name of the Estate | District |
|---|---|---|
| 1. | Pappanamcode | Trivandrum |
| 2. | Karunagapally | Quilon |
| 3. | Umayanalloor | Quilon |
| 4. | Kollakadavu | Alleppey |
| 5. | Mayilthara | Alleppey |
| 6. | Ettumanoor | Kottayam |
| 7. | Changanacherry | Kottayam |
| 8. | Palluruthy | Ernakulam |
| 9. | Vazhakulam | Ernakulam |
| 10. | Kalletumkara | Trichur |
| 11. | Ollur | Trichur |
| 12. | Olavakode | Palghat |
| 13. | Karakkad | Palghat |
| 14. | West Hill | Kozhikode |
| 15. | Manjeri | Malappuram |
| 16. | Palayad | Cannanore |
| 17. | Kasaragode | Kasaragode |

Source: Survey Data

# LOCATION OF INDUSTRIAL ESTATES IN KERALA



Originally there were two industrial estates in Trivandrum district, one at Pappanamcode and the other at Karakulam. But at present only Pappanamcode industrial estate is functioning in the district. This was established in 1957. It was one of the oldest estates in Kerala. It has an area of 9.17 hectares and is situated about one Kilometre away from Trivandrum city, the capital of Kerala.

In Quilon district two industrial estates are working. They are the Karunagapally industrial estate and the Umayanalloor industrial estate. The Karunagapally industrial estate is situated at Karunagapally on an area of 3.7 hectares adjacent to the Karunagapally Railway Station and the Umayanalloor industrial estate is situated at Umayanalloor about 8 Kilometres away from the Quilon Municipal Town and has an area of 11.37 hectares. Both these estates started functioning in 1965.

In Alleppey district, there are two industrial estates - one at Kollakadavu and the other at Mayilthara. The Kollakadavu industrial estate was established in 1957 and is situated in an area of 14.4 hectares of land, 10 Kilometres away from the Mavelikkara Railway Station.

The Mayilthara industrial estate was established in 1964 and is situated in an area of 4.04 hectares by the side of N.H. 47 near Sherthalai.

In Kottayam district the industrial estates are located at Ettumanoor and Changanacherry. The Ettumanoor industrial estate was established in 1957 and is situated on 12.27 hectares of land adjacent to the Ettumanoor Railway Station. The Changanacherry industrial estate was established in 1964 and is situated on an area of 5.86 hectares of land,4 Kilometres away from the Changanacherry town.

In Ernakulam district the industrial estates are located at Palluruthy and Vazhakulam. The Palluruthy industrial estate was established in 1962 and is situated on a plot of 0.68 hectares near the Cochin Harbour. Vazhakulam industrial estate was established in 1964. It is situated on an area of 1.87 hectares by the side of Periyar river on the Alwaye-Perumbavoor road.

In Trichur district the two industrial estates are located at Ollur and Kalletumkara. The industrial estate at Ollur was established in 1957. It was one of

the four estates set up during the second five year plan and is thus one of the oldest estates in Kerala. It is situated nearly 7 Kilometres away from Trichur town. The total area of the estate is 12 hectares. This is one of the largest estates in Kerala. It is bounded by the railway line on one side and N.H. 47 on the other side. The Ollur Railway Station is very close to it. The Kalletumkara industrial estate was set up in 1964. It is 10 Kilometres away from Irinjalakuda town and half a kilometre away from Irinjalakuda Railway Station. It has an area of 2 hectares.

The industrial estates in Palghat district are located at Olavakode and Karakkad. The former is near the Olavakode Railway Station and has an area of 8.87 hectares. It was established in 1958. Karakkad industrial estate is situated near the Shornur Railway Station and has an area of 4.45 hectares. It started functioning in the year 1968.

In Kozhikode district the industrial estate is located at West Hill. It was established in 1958 and is situated at West Hill in Calicut city. It is adjacent to the West Hill Railway Station. It has an area of 4.64 hectares.

The industrial estate in Malappuram district is situated in the heart of the Manjeri town on a plot of 2.02 hectares. It was established in 1964.

In Cannanore district the industrial estate is located at Palayad. It was established in 1958 and is situated about 8 Kilometres away from Tellicherry town on an area of 7.22 hectares.

In Kasaragode district industrial estate was established in 1965 and is situated at Vidyanagar near the Kasaragode town on an area of 7.20 hectares.

## 4.1 Determination of Location

The location of an industrial estate is an important factor as it affects profoundly the viability of the estate and its tenant industries as well as the economic position of the chosen community.[1]

The criteria for selecting location of industrial estates are the following:

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[1] Oommen, M.A., Small Industry in Indian Economics - A Case Study of Kerala, Research Publication in Social Sciences, Delhi, 1972.

1. nearness to a railway station
2. convenience and facilities for marketing
3. availability of raw materials and
4. availability of skilled labour.[2]

In India the selection of site for estates was made taking into consideration physical features of the site, availability of water and transportation facilities. These facilities are generally available to a great extent in urban than rural areas. As all the early series of estates came to be established in urban or semi-urban areas most of them have these facilities.

William Bredo points out that two major factors should be kept in mind in choosing the region for industrial estate. One is the potential impact of the new industrial complex on the development of the region. In the case of the industrial estates developed by a governmental agency, it is especially important to take into account the probable impact

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[2] Planning Department, Government of Karnataka, Evaluation of Industrial Estates Programme in Karnataka, Directorate of Evaluation, Bangalore, 1978.

of such industrial investments on employment and regional standards of living. The other location factor is the extent to which the industrial estate may facilitate improvement in the competitive position of new or existing industry.[3]

Industrial estates in Kerala are mostly located in urban centres. But it does not follow that they are located in economically advanced areas. For one thing, most of the estates are on the periphery of large towns rather than in them. Further the rural-urban distinction based on population is not sharp in Kerala due to the heavy density of population. On the whole we may say that the urban estates are located in comparatively advanced areas and the semi-urban and the rural estates in less developed areas. Further all the estates are located near railway station. Telephone connection and power are available in all these estates.

In Kerala the authorities followed a policy of establishing two major industrial estates in each district - one urban and one rural or semi-urban estate. Table-4.2 shows urban/semi-urban/rural nature of industrial estates in Kerala.

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[3] Bredo William, Industrial Estates - Tool for Industrialisation, International Industrial Development Centre, Stanford Research Institute, 1960.

Table - 4.2

Urban/Semi-Urban/Rural/Pattern of Industrial Estates[4]

| Sl. No. | Estate | Year of Establishment | Name of the Nearest Town | Population of the Nearest Town (1981 Census) | Distance | Urban/Semi Urban/ Rural |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. | Pappanamcode | 1957 | Trivandrum | 483,086 | 4 k.m. | Urban |
| 2. | Karunagapally | 1965 | Karunagapally | 487,385 | 5 k.m. | Urban |
| 3. | Umayanalloor | 1965 | Quilon | 137,943 | 8 k.m. | Urban |
| 4. | Kollakadavu | 1957 | Mavelikkara | 26,700 | 10 k.m. | Semi-urban |
| 5. | Mayilthara | 1964 | Sherthalai | 41,000 | 2 k.m. | Semi-urban |
| 6. | Ettumanoor | 1957 | Ettumanoor | 35,367 | 3 k.m. | Semi-urban |
| 7. | Changanacherry | 1964 | Changanacherry | 52,400 | 4 k.m. | Urban |
| 8. | Palluruthy | 1962 | Ernakulam | 515,000 | 7 k.m. | Urban |
| 9. | Vazhakulam | 1965 | Alwaye | 25,400 | 9 k.m. | Semi-urban |
| 10. | Kalletumkara | 1964 | Irinjalakuda | 26,200 | 10 k.m. | Semi-urban |
| 11. | Ollur | 1957 | Trichur | 79,000 | 7 k.m. | Urban |
| 12. | Olavakode | 1958 | Palghat | 113,400 | 4 k.m. | Urban |
| 13. | Karakkad | 1965 | Shornur | 35,120 | 4 k.m. | Semi-urban |
| 14. | West Hill | 1958 | Calicut | 403,200 | 4 k.m. | Urban |
| 15. | Manjeri | 1964 | Manjeri | 53,959 | 2 k.m. | Urban |
| 16. | Palayad | 1958 | Tellicherry | 76,500 | 8 k.m. | Urban |
| 17. | Kasaragode | 1965 | Kasaragode | 44,400 | 5 k.m. | Semi-urban |

Source: Survey Data

[4] The name, distance and population of the nearest town are given to indicate whether the estate is urban, semi-urban or rural. Not only the place of the location of the estate but its proximity to towns and cities are also considered for the purpose of classification. Urban estates are those which are located in towns or cities with a population over 50,000 or in the vicinity thereof. Semi-urban estates are those which are in areas comprising small towns located at a reasonable distance from large cities and having a population between 5,000 and 50,000 and rural estates are those which are located in villages with a population of less than 5,000.

From Table-4.2 it can be seen that 10 out of 17 estates in Kerala are located in cities or large towns with population of over 50,000 or in the vicinity thereof. Hence they can be considered as urban estates. The other seven estates can be considered as semi-urban estates as they are located in places having a population between 5,000 and 50,000. At present no estate falls in the category of rural estate in the state.

## 4.2 Need for Techno-Economic Survey

The planning of an industrial estate requires sufficient information on data base. Pre-investment feasibility survey or techno-economic survey provides the information to this purpose. There are two kinds of investigations in this - (1) area development survey and (2) industry outlook survey. The area development survey helps in listing an inventory of the resources and markets of the region including location of available skills. This helps in making a list of industries appropriate for the region. The industry outlook surveys bring out the technical and economic problems of specific industries, existing on projects and helps to evaluate the potentiality for growth. But "in regard to Kerala" the decision of location of the

estates were made by the District Development Councils in which political influence predominated. No enquiry seems to have been made in regard to the potential entrepreneurs or other resources available in an area before locating an estate.[5]

## 4.3 Economies of Agglomeration in the Estates

Industrial estates are having the advantages of external economies of agglomeration. The infrastructural and other supporting facilities available in the estates contribute these external economies. The provision of sheds, roads, water and power constitutes basic infrastructural facilities. Besides these, there are other amenities like service stations, depots, etc. to be offered in the estates or in the nearby areas.

Water supply, electricity and telephone connections and good metalled roads are provided in all the estates in Kerala. Banks and Post Offices exist in most of the estates. Common service workshop of the Government of Kerala and the workshop of the Director of Small Industries Service Institute, Trichur are located in the Ollur estate.

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[5] Oommen, M.A., op.cit.

The absence of common service facilities will reduce considerably the possible gains of external economies. Facilities for technical guidance are not provided in any of the estates in Kerala.

The service workshop and the Training Centre of the SIDECO exist in the estates. The central workshop of small industries service institute provide common services to the small scale industrial units. According to the annual publication of SISI, Trichur the following services are available from the workshop:

1. Training in mechanical engineering trade, machinery operation
2. Manufacture of complete parts and components, tools, dies, moulds, etc.
3. Checking of products, components, etc. for dimensional accuracy and
4. Short-term technical training courses ranging from 3 to 6 months.

Through the raw materials depot of the SIDECO construction materials and raw materials like mild steel, cement, etc. are sold to the industrial units on quota basis.

## 4.4 Economies of Scale in Industrial Estates

Economies of scale are defined as falling cost per unit of output. With the increase in the size of an industrial estate, the average cost of estate development is expected to decline on account of the economies of scale. Infrastructure facilities are essentially indivisible.

Consequently, the cost of infrastructural facilities per square metre for a small estate would be much higher than those for a medium or a large scale estate. Studies conducted by R.L. Sanghvi in the estates of Gujarat reveals that the average cost of development per square metre was lower in the case of the large-sized estates than in the case of small-sized estates. The absence of many common facilities in some estates in Kerala are due to the small size and, therefore, they are deprived of much economies of scale.

The spread effects and linkage effects that are supposed to come out of establishment of the industrial estates in less developed areas are also neglible when the estates are of small size.

## 4.5 Economy in Layout

There are slight variations among the industrial estates with regard to the lay out and construction of sheds. The areas acquired for the industrial estates are seen to be based not on any survey of requirements or appraisal of the expected demand for sheds. The following norms are considered desirable for economical and efficient utilisation of land in the estates:

1. Area under factory plot 60 to 65 per cent of total area
2. Area under roads upto 20 per cent of the total area
3. Area under open space upto 10 per cent of total area and
4. Area under administrative and other buildings upto 5 to 10 per cent.[6]

In Kerala sheds occupied only 22 per cent of the total land - roads accounted for 16 per cent open space was sustained - 60 per cent.[7] The major

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[6] Desai, Vasant, Problems and Prospects of Small-Scale Industries in India, Himalaya Publishing House, Bombay, 1983.

[7] Somasekhara, N., The Efficacy of Industrial Estates in India with Particular Reference to Mysore, Vikas Publishing House (Pvt.) Ltd., Delhi, 1975.

consideration appeared to be ready availability of land, cost of acquisition and easy accessibility. Table-4.3 gives the name of industrial estates with their area and utilisation.

Table - 4.3

Percentage of Area Utilisation: Estate-Wise

| Sl. No. | Name of the Industrial Estates | Total Area (in Hectares) | Percentage of Area Utilised |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| 1. | Pappanamcode | 9.17 | 100 |
| 2. | Karunagapally | 3.70 | 28 |
| 3. | Umayanalloor | 11.37 | 70 |
| 4. | Kollakadavu | 14.40 | 99 |
| 5. | Mayilthara | 4.04 | 100 |
| 6. | Ettumanoor | 12.27 | 83 |
| 7. | Changanacherry | 5.86 | 100 |
| 8. | Palluruthy | 0.68 | 72 |
| 9. | Vazhakulam | 1.87 | 80 |
| 10. | Kalletumkara | 2.02 | 100 |
| 11. | Ollur | 12.05 | 100 |
| 12. | Olavakode | 8.87 | 54 |
| 13. | Karakkad | 4.45 | 37 |
| 14. | Manjeri | 2.02 | 30 |
| 15. | West Hill | 4.64 | 48 |
| 16. | Palayad | 7.22 | 29 |
| 17. | Kasaragode | 7.20 | 22 |

Source: Kerala State Small Industries Corporation.

The industrial estate at Kollakadavu is the largest one with an area of 14.40 hectares. Of the 17 estates only 5 estates viz., Pappanamcode, Mayilthara, Changanacherry, Kalletumkara, and Ollur have 100 per cent utilisation of the area. The highest per centage of unutilised area is found in the industrial estate, Kasaragode. It is significant to note that the percentage of unutilised area is greater in small estates than in large estates. In respect of above 1/3 of total number of estates, the area utilisation is less than 40 per cent. This evidently shows that capital is locked up in an asset like land which also means the diminution of the total rentable area of the estates. The need for adequate project planning for the industrial estate has become, therefore, more apparent. Since the industrial activities in some of the large industrial estates are likely to expand in future, a feasibility study may be taken up in this regard and necessary steps initiated for the bulk acquisition of land near and around such estates of high potential. Lay out and designs of industrial estates are of great significance from the point of reducing the cost of construction and as such emphasis has to be given to the most economical and efficient utilisation of land available.

The sheds in the industrial estates are of uniform type and size. The description of the various types of sheds are given in table-4.4.

Table - 4.4

Description of Types of Sheds

| Type | Size |
|---|---|
| 1 | 2 |
| Special type | 120' x 60' |
| A type | 80' x 40' |
| B type | 60' x 30' |
| C type | 40' x 20' (old type) |
| | 32' x 20' (new type) |

The details of the sheds constructed and occupied in all the 17 industrial estates at the initial period are given in table-4.5 and 4.6.

Table - 4.5

Details of Sheds Constructed: Estate-Wise

| Sl. No. | Name of the Estate | Special | A Type | B Type | C Type | Total |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. | Pappanamcode | 3 | 2 | 8 | 32 | 45 |
| 2. | Karunagapally | .. | 1 | 2 | 16 | 19 |
| 3. | Umayanalloor | .. | 4 | 12 | 26 | 42 |
| 4. | Kollakadavu | .. | 4 | 6 | 32 | 42 |
| 5. | Mayilthara | .. | 1 | 2 | 16 | 19 |
| 6. | Vazhakulam | .. | 1 | 4 | 16 | 21 |
| 7. | Palluruthy | .. | 3 | 4 | .. | 7 |
| 8. | Changanacherry | 3 | 8 | 14 | 8 | 33 |
| 9. | Ettumanoor | .. | 5 | 20 | 32 | 57 |
| 10. | Kalletumkara | .. | 1 | 2 | 16 | 19 |
| 11. | Ollur | .. | 6 | 10 | 32 | 48 |
| 12. | Olavakode | .. | 5 | 18 | 26 | 49 |
| 13. | Karakkad | .. | 1 | 5 | 16 | 22 |
| 14. | West Hill | .. | 4 | 14 | 24 | 42 |
| 15. | Manjeri | .. | 1 | 2 | 16 | 19 |
| 16. | Palayad | .. | 1 | 2 | 8 | 11 |
| 17. | Kasaragode | .. | 1 | 2 | 16 | 19 |
| | Total | 6 | 49 | 127 | 332 | 514 |

Source: Kerala State Small Industries Corporation.

Table - 4.6

Details of Sheds Occupied: Estate-Wise

| Sl. No. | Name of the Estate | Special | A Type | B Type | C Type | Total |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. | Pappanamcode | 3 | 2 | 8 | 32 | 45 |
| 2. | Karunagapally | .. | 1 | 2 | 12 | 15 |
| 3. | Umayanalloor | .. | 4 | 11 | 10 | 25 |
| 4. | Kollakadavu | .. | 4 | 5 | 28 | 37 |
| 5. | Mayilthara | .. | 1 | 2 | 13 | 16 |
| 6. | Vazhakulam | .. | 1 | 4 | 16 | 21 |
| 7. | Palluruthy | .. | 3 | 4 | .. | 7 |
| 8. | Changanacherry | 3 | 8 | 14 | 6 | 31 |
| 9. | Ettumanoor | .. | 5 | 17 | 31 | 53 |
| 10. | Kalletumkara | .. | 1 | 2 | 16 | 19 |
| 11. | Ollur | .. | 6 | 10 | 30 | 46 |
| 12. | Olavakode | .. | 5 | 17 | 25 | 47 |
| 13. | Karakkad | .. | .. | 5 | 14 | 19 |
| 14. | West Hill | .. | 4 | 14 | 24 | 42 |
| 15. | Manjeri | .. | 1 | 2 | 12 | 15 |
| 16. | Palayad | .. | 1 | 2 | 8 | 11 |
| 17. | Kasaragode | .. | 1 | 1 | 11 | 13 |
| | Total | 6 | 48 | 120 | 288 | 462 |

Source: Kerala State Small Industries Corporation.

The utilisation of factory accommodation by small scale industries may be considered as an index of the progress of the programme. In Pappanamcode, Vazhakulam, Palluruthy, Kalletumkara, West Hill and Palayad all the constructed sheds were leased out. In Olavakode estate there is 95.92 per cent of utilisation of factory accommodation. The lowest utilisation is in Umayanalloor estate (59.52%).

Special type sheds were constructed only in two estates - Pappanamcode and Changanacherry. In both these estates all the 6 special type sheds were occupied by the small scale industrialists. Out of 49 A-type sheds, 120B-type sheds and 332 C-type sheds 48 A-type sheds, 120 B-type sheds and 288 C-type sheds were leased out. On the whole out of 514 sheds constructed 462 (89.88%) were occupied by the small scale industrialists.

# CHAPTER - V

# PROFILE OF THE STRUCTURE OF INDUSTRIAL UNITS

# CHAPTER - V

## PROFILE OF THE STRUCTURE OF INDUSTRIAL UNITS

This chapter analyses the structure and operational pattern of the industrial units in the 17 major industrial estates in Kerala. For this purpose a general survey of all the working units was conducted. But only 118 industrial units gave detailed information. So the analysis is based on the informations furnished by the 118 units. The results of the survey are presented below.

Out of the 218 units which were working during the period 1983-'84, only 138 units are functioning at present. The survey reveals that within a period of two years 80 units were closed down. The percentage of closed down units to total units is 36.7. Table-5.1 shows the estate-wise closing down of the working units from 1983 to 1986.

Table - 5.1

Decline of the Working Units from 1983-'84 to 1986: Estate-Wise

| Sl. No. | Name of the Estate | No. of Working Units as on 1983-'84 | No. of Working Units as on 1986 | No. of Closed Units as on 1986 | Percentage of Decline |
|---|---|---|---|---|---|
| 1. | Pappanamcode | 22 | 12(54.55) | 10 | 45.45 |
| 2. | Karunagapally | 4 | 4(100) | -- | -- |
| 3. | Umayanalloor | 9 | 5(55.56) | 4 | 44.44 |
| 4. | Kollakadavu | 15 | 10(66.67) | 5 | 33.33 |
| 5. | Mayilthara | 7 | 3(42.86) | 4 | 57.14 |
| 6. | Ettumanoor | 22 | 10(45.45) | 12 | 54.55 |
| 7. | Changanacherry | 16 | 9(56.25) | 7 | 43.75 |
| 8. | Palluruthy | 5 | 5(100) | -- | -- |
| 9. | Vazhakulam | 8 | 4(50) | 4 | 50 |
| 10. | Kalletumkara | 12 | 7(58.33) | 5 | 41.67 |
| 11. | Ollur | 22 | 18(81.82) | 4 | 18.18 |
| 12. | Olavakode | 12 | 6(50) | 6 | 50 |
| 13. | Karakkad | 11 | 7(63.64) | 4 | 36.36 |
| 14. | Manjeri | 10 | 7(70) | 3 | 30 |
| 15. | West Hill | 23 | 16(69.57) | 7 | 30.43 |
| 16. | Palayad | 9 | 8(88.89) | 1 | 11.11 |
| 17. | Kasaragode | 11 | 7(63.64) | 4 | 36.36 |
| | Total | 218 | 138(63.30) | 80 | 36.70 |

Source: Survey Data (Figures in the bracket show percentage)

In all the 17 major industrial estates in Kerala, only in two, viz., Karunagapally and Palluruthy estates no units were closed down. Twelve units (54.55%) in Pappanamcode estate, 10 units each in the estates of Kollakadavu and Ettumanoor (66.67% and 45.45% respectively), 3 units (42.86%) in Mayilthara estate, 5 units (55.56%) in Umayanalloor estate, 7 units each in the estates of Kalletumkara, Karakkad, Manjeri and Kasaragode (58.33%, 63.64%, 70% and 63.64% respectively), 9 units (56.25%) in Changanacherry estate, 4 units (50%) in Vazhakulam estate, 18 units (81.22%) in Ollur estate, 6 units (50%) in Olavakode estate, 16 units (69.57%) in West Hill estate and 8 units (88.89%) in Palayad estate are still engaged in production.

Five units (62.5%) in Pappanamcode estate, 3 units each in the estates of Karunagapally, Ettumanoor, West Hill, Palayad and Kasaragode (75%, 60%, 23.08%, 37.5% and 75% respectively), 4 units each in the estates of Umayanalloor and Olavakode (80% and 66.67% respectively), one unit (14.29%) in Kollakadavu estate 2 units each in the estates of Palluruthy, Vazhakulam and Kalletumkara (40%, 50% and 28.57% respectively), 10 units (55.56%) in Ollur estate and 6 units (85.71%)

in Karakkad estate are engaged in the production of engineering and metal products. In the estates of Mayilthara, Changanacherry and Manjeri no units are engaged in the production of engineering and metal products. Altogether 51 units are engaged in engineering and metal based industry.

One unit each in the estates of Karunagapally, Kollakadavu, Ettumanoor and Palluruthy ( 25% , 14.29%, 20%, 20% respectively). Four units each in the estates of Kalletumkara and Ollur are producing plastic items (57.14% and 22.22% respectively). In the estates of Pappanamcode, Umayanalloor, Mayilthara, Changanacherry, Vazhakulam, Olavakode, Karakkad, Manjeri, West Hill, Palayad and Kasaragode no units are engaged in the production of plastic items. On the whole, 12 units are manufacturing plastic products.

Out of the 118 units surveyed 14 units (11.86%) are engaged in the production of chemical products. One unit each in the estates of Pappanamcode, Mayilthara and Karakkad, 2 units each in the estates of

Vazhakulam, Ollur, Manjeri and Palayad and 3 units in the West Hill estate are engaged in the production of chemical products.

One unit each in the estates of Pappanamcode, Umayanalloor, Ettumanoor, Palluruthy, Ollur and Kasaragode and two units each in the estates of Kollakadavu, Olavakode, West Hill and Palayad are rubber based units. In Manjeri estate 4 out of 7 units (57.14%) are engaged in the production of rubber based products. In Changanacherry estate all the 9 units (100%) are rubber based units. On the whole 27 are rubber based units. In percentage terms it constitutes22.88.

One unit each in the estates of Pappanamcode, Palluruthy, Kalletumkara, Ollur, Manjeri and Palayad, 3 units in Kollakadavu estate and 4 units in West Hill estate are Paper and Wood based units. On the whole 13 units belong to this category.

In West Hill estate one unit is engaged in the production of Bakery items like bread, biscuits

etc. In the study it is included in the 'Miscellaneous' category. Table-5.2* shows the nature of distribution of the units.

Engineering and metal based units constitute the largest proportion. Fifty one out of 118 (43.22%) units come under this category. Rubber based units occupy the second position with 22.88 per cent of the total. Chemical units occupy third position with 11.88 per cent of the total. The fourth position is occupied by paper and wood based units with 11.02 per cent of the aggregate and plastic units occupy the fifth position with 10.17 per cent.

## 5.1 Form of Organisation

Various forms of organisations exist in the business world, namely, sole proprietorship, partnership, joint stock company, co-operatives, etc.

* It is evident from the table that estate-wise, the Mayilthara estate and industry-wise, the miscellaneous category contains only one unit each. So they cannot be considered as representative ones. Due to this in the economic evaluation of the programme of industrial estates in the state the present study takes into consideration the next item in order excluding the Mayilthara estate and the miscellaneous category.

Table - 5.2

Distribution of the Growth: Industry-Wise

| Sl. No. | Name of the Estate | Engineering and Metal Based | Plastic Based | Chemical Based | Rubber Based | Paper and Wood Based | Miscel-laneous | Total |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1. | Pappanamcode | 5(62.50) | -- | 1(12.5) | 1(12.5) | 1(12.5) | -- | 8(100) |
| 2. | Karunagapally | 3(75.00) | 1(25.00) | -- | -- | -- | -- | 4(100) |
| 3. | Umayanalloor | 4(80.00) | -- | -- | 1(20.00) | -- | -- | 5(100) |
| 4. | Kollakadavu | 1(14.29) | 1(14.29) | -- | 2(28.57) | 3(42.86) | -- | 7(100) |
| 5. | Mayilthara | -- | -- | 1(100) | -- | -- | -- | 1(100) |
| 6. | Ettumanoor | 3(60.00) | 1(20.00) | -- | 1(20.00) | -- | -- | 5(100) |
| 7. | Changanacherry | -- | -- | -- | 9(100) | -- | -- | 9(100) |
| 8. | Palluruthy | 2(40.00) | 1(20.00) | -- | 1(20.00) | 1(20.00) | -- | 5(100) |
| 9. | Vazhakulam | 2(50.00) | -- | 2(50.00) | -- | -- | -- | 4(100) |
| 10. | Kalletumkara | 2(28.57) | 4(57.14) | -- | -- | 1(24.23) | -- | 7(100) |
| 11. | Ollur | 10(55.56) | 4(22.22) | 7(11.11) | 1(5.56 ) | 1(5.56 ) | -- | 18(100) |
| 12. | Olavakode | 4(66.67) | -- | -- | 2(33.33) | -- | -- | 6(100) |
| 13. | Karakkad | 6(85.71) | -- | 1(14.29) | -- | -- | -- | 7(100) |
| 14. | Manjeri | -- | -- | 2(28.57) | 4(47.14) | 1(14.29) | -- | 7(100) |
| 15. | West Hill | 3(23.08) | -- | 3(23.08) | 2(15.38) | 4(30.77) | 1(7.69) | 13(100) |
| 16. | Palayad | 3(37.50) | -- | 2(25.00) | 2(25.00) | 1(12.50) | -- | 8(100) |
| 17. | Kasaragode | 3(75.00) | -- | -- | 1(25.00) | -- | -- | 4(100 |
| | Total | 51(43.22) | 12(10.17) | 14(11.86) | 27(22.88) | 13(11.02) | 1(0.85) | 118(100) |

Source: Survey Data.

The entrepreneur's choice of the form of organisation depends on various factors such as nature of unit, financial requirements, market and personal desires. The survey conducted in the industrial estates indicates that the individual proprietorship and partnership are the most popular forms of ownership patterns.

In Pappanamcode estate 4 out of 8 (50%) units are sole proprietorship concerns and the other 4 units (50%) are partnership concerns. In Karunagapally estate out of 4 units, 2 units (50%) are single proprietorship concerns, one unit (25%) is partnership concern and one unit (25%) is co-operative concern. In Umayanalloor estate out of 5 units, 2 units (40%) are sole proprietorship concerns and 3 units (60%) partnership concerns. In Kollakadavu estate out of 7 units, 5 (71.4%) units are sole proprietorship concerns, one unit (14.3%) a private limited firm and the other one (14.3%) a co-operative concern. In Mayilthara estate the only one unit which came under the survey is a single proprietorship concern. In Ettumanoor out of 5 units, 2 (40%) units are single proprietorship concerns, another 2 (40%) units partnership concerns and one unit (20%) a co-operative unit. In

Changanacherry estate, out of 9 units, 6 units (66.7%) are sole proprietorship concerns and 3 units (33.3%) partnership concerns. In Palluruthy estate all the 5 units are partnership concerns.

In Vazhakulam estate, out of 4 units, 2 units (50%) are sole proprietorship concerns and the other 2 units (50%) partnership concerns. In Kalletumkara estate, out of 7 units, 4 units (57.14%) are sole proprietorship concerns and 3 units (42.86%) partnership concerns. In Ollur estate, out of 18 units, 13 units (72.22%) are partnership concerns, 4 units (22.22%) single proprietorship concerns and one unit (5.56%) a private limited firm. In Olavakode estate, out of 6 units, 3 units (50%) are single proprietorship concerns, 2 units (33.33%) partnership concerns and one unit (16.67%) a private limited firm. In Karakkad estate, out of 7 units, 2 units (28.6%) are single proprietorship concerns, 4 units (57.14%) partnership concerns and one unit (14.26%) a private limited firm. In Manjeri estate, out of 7 units, 2 units (28.7%) are single proprietorship concerns and 5 units, (71.3%) partnership concerns. In West Hill estate, out of 13 units, 6 (46.15%) are sole proprietorship concerns, 6 units (46.15%) partnership concerns

and one unit (77%) run by a co-operative society. In Palayad estate out of 8 units, one unit (12.5%) is a single proprietorship concern and the other 7 units, (87.5%) partnership firms. In Kasaragode estate, out of 4 units 3 units (75%) are single proprietorship concerns and the other one (25%) a private limited company. Thus out of 118 units, 49 units (41.53%) are sole proprietorship concerns and 60 units, (50.85%) partnership concerns, 5 units, (4.24%) private limited firms and 4 units (3.39%) co-operatives. Table-5.3 reveals the estate-wise distribution of units based on their organisation/ownership pattern.

The relatively higher proportion of partnership is an indicator of the attempts on the part of the entrepreneurs to mobilise larger resources for investment. Compared to other forms of ownership, partnership concerns can competitively respond to market situation by mobilising larger resources for technical, financial and management purposes.

Table-5.4 shows the industry-wise distribution of type of ownership/organisation.

Table - 5.3

Organisation/Ownership Pattern of Units - Estate-Wise Distribution

| Sl. No. | Name of the Estate | Single Proprietorship | Partnership | Private Limited | Co-operative and Others | Total |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. | Pappanamcode | 4(50.00) | 4(50.00) | -- | -- | 8(100) |
| 2. | Karunagapally | 2(50.00) | 1(25.00) | -- | 1(25.00) | 4(100) |
| 3. | Umayanalloor | 2(40.00) | 3(60.00) | -- | -- | 5(100) |
| 4. | Kollakadavu | 5(71.43) | -- | 1(14.23) | 1(14.23) | 7(100) |
| 5. | Mayilthara | 1(100) | -- | -- | -- | 1(100) |
| 6. | Ettumanoor | 2(40.00) | 2(40.00) | -- | 1(20.00) | 5(100) |
| 7. | Changanacherry | 6(66.67) | 3(33.33) | -- | -- | 9(100) |
| 8. | Palluruthy | -- | 5(100) | -- | -- | 5(100) |
| 9. | Vazhakulam | 2(50.00) | 2(50.00) | -- | -- | 4(100) |
| 10. | Kalletumkara | 4(57.14) | 3(42.86) | -- | -- | 7(100) |
| 11. | Ollur | 4(22.22) | 13(72.22) | 1(5.56) | -- | 18(100) |
| 12. | Olavakode | 3(50.00) | 2(33.33) | 1(16.67) | -- | 6(100) |
| 13. | Karakkad | 2(28.57) | 4(57.14) | 1(14.23 | -- | 7(100) |
| 14. | Manjeri | 2(28.57) | 5(71.43) | -- | -- | 7(100) |
| 15. | West Hill | 6(46.15) | 6(46.15) | -- | 1(7.69) | 13(100) |
| 16. | Palayad | 1(12.5) | 7(87.5) | -- | -- | 8(100) |
| 17. | Kasaragode | 3(75.00) | -- | 1(25.00) | -- | 4(100) |
| | Total | 49(41.53) | 60(50.85) | 5(4.24) | 4(3.39) | 118(100) |

Source: Survey Data

Table - 5.4

Ownership Pattern of Units: Industry-Wise Distribution

| Sl. No. | Name of the Industry | Proprie-torship | Partner-ship | Private Limited | Co-oper-ation | Total |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. | Engineering and metal based | 20(39.22) | 28(54.90) | 2(3.92) | 1(1.96) | 51(100) |
| 2. | Plastic based | 4(33.33) | 6(50.00) | 1(8.33) | 1(8.33) | 12(100) |
| 3. | Chemical based | 3(21.43) | 10(71.43) | 1(7.14) | -- | 14(100) |
| 4. | Rubber based | 15(55.56) | 11(40.74) | 1(3.70) | -- | 27(100) |
| 5. | Paper and wood based | 7(53.85) | 5(38.45) | -- | 1(7.69) | 13(100) |
| 6. | Miscellaneous | -- | -- | -- | 1(100) | 1(100) |
| | Total | 49(41.53) | 60(50.85) | 5(4.24) | 4(3.39) | 118(100) |

Source: Survey Data

Of the 51 units producing engineering and metal products 20 units, (39.22%) belong to single proprietorship category, 28 units, (54.90%) partnership category, 2 units, (3.92%) private limited firms and one unit (1.96%) a co-operative society. Out of the 12 units producing plastic products 4 units (33.33%) belong to single proprietorship category, 6 units (50%)

partnership category, one unit,(8.33%) a private limited firm and the other one unit (8.33%) under a co-operative society. Out of 14 units producing chemical products 3 units (21.43%) are single proprietorship concerns, 10 (71.43%) partnership concerns and one (7.14%) a private limited firm. In rubber based units out of 27, 15 units (55.56%) are single proprietorship concerns, 11 (40.74%) partnership concerns and one (3.70%) a private limited concern. In paper and wood based units, out of 13 units, 7 (53.85%) are single proprietorship concerns, 5 (38.45%) partnership concerns and one (7.69%) a co-operative society. The only one unit which comes under miscellaneous category is under a co-operative society.

## 5.2 Age-Profile of the Industrial Units

The industrial estates of Pappanamcode, Karunagapally, Kollakadavu, Ettumanoor, Palluruthy, Ollur, Olavakode, West Hill and Palayad were set up in 1957 and the units occupied the sheds and started production from 1958 onwards. The remaining industrial estates were completed in 1964 and the units started production in the same year.

Table-5.5 shows the age-profile of the industrial units in these estates.

Table - 5.5

Age-Profile of the Units: Estate-Wise

| Sl. No. | Name of the Estate | Above 20 Years Upto 1965 | 15 Years to 19 Years 1966-'70 | 10 Years to 14 Years 1971-'75 | 5 Years to 9 Years 1976-'80 | Below 4 Years 1981-'85 | Total |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1. | Pappanamcode | 2(25.00) | 1(12.50) | 2(25.00) | 2(25.00) | 1(12.50) | 8(100) |
| 2. | Karunagapally | -- | -- | 1(25.00) | 2(50.00) | 1(25.00) | 4(100) |
| 3. | Umayanalloor | 1(20.00) | -- | -- | 2(40.00) | 2(40.00) | 5(100) |
| 4. | Kollakadavu | -- | -- | 3(42.9) | 2(28.6) | 2(28.60) | 7(100) |
| 5. | Mayilthara | -- | 1(100) | -- | -- | -- | 1(100) |
| 6. | Ettumanoor | -- | 1(20.00) | -- | 2(40.00) | 2(40.00) | 5(100) |
| 7. | Changanacherry | -- | -- | 2(22.2) | 5(55.60) | 5(55.60) | 9(100) |
| 8. | Palluruthy | 4(75.00) | -- | -- | 1(25.00) | -- | 5(100) |
| 9. | Vazhakulam | -- | -- | -- | 2(50.00) | 2(50.00) | 4(100) |
| 10. | Kalletumkara | -- | 1(14.30) | 3(42.30) | 2(28.60) | 1(14.30) | 7(100) |
| 11. | Ollur | 1(56.00) | -- | 5(27.80) | 7(38.90) | 5(27.80) | 18(100) |
| 12. | Olavakode | 1(16.70) | 1(16.70) | -- | 2(33.30) | 2(33.30) | 6(100) |
| 13. | Karakkad | -- | 2(28.60) | 1(14.3) | 2(28.60) | 2(28.60) | 7(100) |
| 14. | Manjeri | -- | -- | -- | 2(28.60) | 5(71.40) | 7(100) |
| 15. | West Hill | 3(23.1) | 1(7.70) | 4(30.10) | 2(15.40) | 3(23.10) | 13(100) |
| 16. | Palayad | -- | -- | 3(37.50) | 1(12.50) | 4(50.00) | 8(100) |
| 17. | Kasaragode | -- | 1(25.00) | 1(25.00) | 1(25.00) | 1(25.00) | 4(100) |
| | Total | 12(10.17) | 9(7.62) | 25(21.18) | 34(28.81) | 38(32.20) | 118(100 |

Source: Survey Data.

Out of the 118 units surveyed, 2 units (25%) in Pappanamcode estate, one unit each in the estates of Umayanalloor, Ollur and Olavakode (2J%, 5.6% and 16.7% respectively), 4 units (75%) in the Palluruthy estate and 3 units (23.1%) in West Hill estate are above 20 years old. Such units are not working in the other estates viz., Karunagapally, Kollakadavu, Mayilthara, Ettumanoor, Changanacherry, Vazhakulam, Kalletumkara, Karakkad, Manjeri, Palayad and Kasaragode.

One unit each in the estates of Pappanamcode, Mayilthara, Ettumanoor, Kalletumkara, Olavakode, West Hill and Kasaragode (12.5%, 100%, 20%, 14.3%, 16.7%, 7.7% and 25% respectively) and 2 units (28.6%) in Karakkad estate are 15 to 19 years old.

One unit each in the estates of Karunagapally, Karakkad and Kasaragode (25%, 14.43% and 25% respectively), 2 units each in the estates of Pappanamcode and Changanacherry (25% and 22.2% respectively), 3 units each in the estates of Kollakadavu, Kalletumkara and Palayad (42.9%, 42.3% and 37.5% respectively), 5 units (27.8%) in Ollur estate and 4 units (30.1%) in West Hill estate are 10 to 14 years old.

Two units each in the estates of Pappanamcode, Karunagapally, Umayanalloor, Kollakadavu, Ettumanoor, Vazhakulam, Kalletumkara, Olavakode, Karakkad, Manjeri and West Hill (25%, 50%, 40%, 28.6%, 40%, 55.6%, 50%, 28.6%, 33.3%, 28.6%, 28.6%, 15.4% respectively) are 5 to 9 years old. In the estates of Palluruthy, Palayad and Kasaragode, there are one unit each which are 5 to 9 years old. In the estates of Changanacherry and Ollur 5 units (55.6%) and 7 units (38.9%) respectively fall this category of 5 to 9 years old. In terms of percentage they account 25, 12.5 and 12.5 respectively.

One unit each in the estates of Pappanamcode, Karunagapally, Kalletumkara and Kasaragode (12.5%, 25%, 14.3% and 25% respectively), 2 units each in the estates of Umayanalloor, Kollakadavu, Ettumanoor, Vazhakulam, Olavakode and Kasaragode (40%, 28.6%, 40%, 50%, 33.3% and 28.6% respectively); 2 units (23.1%) in West Hill estate, 4 units (50%) in Palayad estate and 5 units each in Ollur, Changanacherry and Manjeri estates (27.8%, 55.6% and 71.4% respectively) are less than 4 years old. These units have started production only from 1982 onwards.

Thus out of the 118 units, 38 units (32.2%) are less than 4 years old; 34 units (28.81%) 5 to 9 years old; 25 units, (21.18%) 10 to 14 years old, 9 units,

(7.62%) 15 to 20 years old and 12 units, (10.17%) above 20 years old. Out of the total 118 units, 97 units (82.20%) were established after 1970.

Table-5.6 shows the age-profile of the industrial units on the basis of nature of organisation/ ownership.

Table - 5.6

Age-Profile of the Units: Organisation/Ownership-Wise Distribution

| Sl. No. | Form of Organisation | 20 Years and Above | 15 to 19 Years | 10 to 14 Years | 5 to 9 Years | Below 4 Yrs | Total |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1. | Single proprietorship | 3 (6.1) | 4 (8.2) | 11 (22.4) | 17 (34.5) | 14 (28.6) | 49 (100) |
| 2. | Partnership | 8 (13.3) | 2 (3.3) | 10 (16.7) | 16 (26.7) | 24 (40) | 60 (100) |
| 3. | Private limited | 1 (20) | 1 (20) | 2 (40) | 1 (20) | .. | 5 (100) |
| 4. | Co-operatives | .. | 2 (50) | 2 (50) | .. | .. | 4 (100) |
| | Total | 12 (10) | 9 (8) | 25 (21) | 34 (29) | 38 (32) | 118 (100) |

Source: Survey Data.

Out of 49 single proprietorship concerns 3 units (6.1%) are above 20 years old; 4 (8.2%) 15 to 19 years old; 11(22.4%) 10 to 14 years old; 17, (34.5%) 5 to 9 years old and 14 (28.6%) less than 4 years old. Out of 60 partnership concerns, 8 (13.3%) are above 20 years old, 2 (3.3%) 15 to 19 years old; 10 (16.7%) 10 to 14 years old, 16 (26.7%) 5 to 9 years old and 24 (40%) less than 4 years old. Out of 5 units which are private limited concerns one unit (20%) is above 20 years old, another one (20%) 15 to 19 years old, 2 (40%) 10 to 14 years old and one (20%) 5 to 9 years old. Out of 4 co-operative concerns 2 (50%) are 15 to 19 years old and the other 2 (50%) 10 to 14 years old.

Table-5.7 shows the age-profile of the units - industry-wise.

Out of the 51 engineering and metal based industrial units, 8 (15.7%) are above 20 years old, 3 (45.9%) 15 to 19 years old, 11 (21.6%) 10 to 14 years old, 14 (25.5%) 5 to 9 years old and 15 (29.4%) below 4 years old. Out of the 12 plastic based industrial units, one (8.3%) is above 20 years old, one (8.3%)

Table - 5.7

Age-Profile of the Units: Industry-Wise Distribution

| Sl. No. | Name of the Industry | 20 Years and Above | 15 to 19 Years | 10 to 14 Years | 5 to 9 Years | Below 4 Years | Total |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1. | Engineering and metal based | 8(15.7) | 3(45.9) | 11(21.6) | 14(27.5) | 15(29.4) | 51(100) |
| 2. | Plastic based | 1(8.3 ) | 1(8.3 ) | 3(25 | 4(33.3) | 3(25) | 12(100) |
| 3. | Chemical based | -- | 2(14.3) | 4(18.9) | 5(35.7) | 3(21.4) | 14(100) |
| 4. | Ruber based | 2(7.4) | 1(3.7) | 6(22.2) | 8(29;6) | 10(37) | 27(100) |
| 5. | Paper and wood based | 1(7.7) | 1(7.7) | 1(7.7) | 3(23.02) | 7(53.8) | 13(100) |
| 6. | Miscellaneous | -- | 1(100) | -- | -- | -- | 1(100 |
| | Total | 12(10) | 9(8) | 25(21) | 34(29) | 38(32) | 118(100 |

Source: Survey Data.

15 to 19 years old, 3 (25%) 10 to 14 years old, 4 (33.3%) 5 to 9 years old and 3 (25%) less than 4 years old. Out of the 14 chemical industrial units, 2 (14.3%) are 15 to 19 years old, 4 (28.9%) 10 to 14 years old, 5 (35.7%) 5 to 9 years old and 3 (21.4%) below 4 years old. Out of the 27 rubber based industrial concerns, 2 (7.4%) are above 20 years old, one (3.7%) 15 to 19 years old, 6 (22.2%) 10 to 14 years old, 8 (29.6%) 5 to 9 years old and 10 (37%) below 4 years old. Out of the 13 paper and wood industrial units, one (7.7%) is above 20 years old; another one (7.7%) 10 to 14 years old; 3 (33.3%) 5 to 9 years old and 7 (53.8%) below 4 years old. The only one unit which comes under miscellaneous group is 17 years old.

## 5.3 Details of the Plots and Buildings

The following few paragraphs throw light in the details regarding plots and buildings in the industrial estates of Kerala. Table-5.8 gives estate-wise number of owned units and rented units.

Table - 5.8

No. of Owned Units and Rented Units: Estate-Wise

| Sl. No. | Name of the Estate | No. of Units Owned | No. of Units Rented | Total |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 1. | Pappanamcode | 1(12.5) | 7(87.5) | 8(100) |
| 2. | Karunagapally | -- | 4(100) | 4(100) |
| 3. | Umayanalloor | -- | 5(100) | 5(100) |
| 4. | Kollakadavu | 3(42.86) | 4(57.14) | 7(100) |
| 5. | Mayilthara | -- | 1(100) | 1(100) |
| 6. | Ettumanoor | -- | 5(100) | 5(100) |
| 7. | Changanacherry | -- | 9(100) | 9(100) |
| 8. | Palluruthy | -- | 5(100) | 5(100) |
| 9. | Vazhakulam | -- | 4(100) | 4(100) |
| 10. | Kalletumkara | 1(14.29) | 6(85.71) | 7(100) |
| 11. | Ollur | 1(5.56) | 17(94.44) | 18(100) |
| 12. | Olavakode | -- | 6(100) | 6(100) |
| 13. | Karakkad | -- | 7(100) | 7(100) |
| 14. | Manjeri | -- | 7(100) | 7(100) |
| 15. | West Hill | 2(15.38) | 11(84.62) | 13(100) |
| 16. | Palayad | 4(50) | 4(50) | 8(100) |
| 17. | Kasaragode | 1(25) | 3(75) | 4(100) |
| | Total | 13(11.02) | 105(88.98) | 118(100) |

Source: Survey Data

Out of the 118 units surveyed 13 (11.02%) are owned units and 105 (88.98%) rented ones. There are no owned unit in the industrial estates of Karunagapally, Umayanalloor, Mayilthara, Ettumanoor, Changanacherry, Palluruthy, Vazhakulam, Olavakode, Karakkad and Manjeri. One unit (12.5%) in Pappanamcode estate, 3 (42.86%) in Kollakadavu estate, one (14.29%) in Kalletumkara estate, one (5.56%) in Ollur estate, 2 (15.38%) in West Hill estate, 4 (50%) in Palayad estate and one (25%) in Kasaragode estate are owned ones. Out of the 118 units, 7 (87.5%) in Pappanamcode estate, 4 (100%) in Karunagapally estate, 5 (100%) in Umayanalloor estate, 4 (57.14%) in Kollakadavu estate, one (100%) in Mayilthara estate, 5 (100%) in Palluruthy estate, 4(100%) in Vazhakulam estate, 6 (85.71%) in Kalletumkara estate, 17 (94.44%) in Ollur estate, 6 (100%) in Olavakode estate, 7 (100%) in Karakkad estate, 7 (100%) in Manjeri estate, 11 (84.62%) in West Hill estate, 4(50%) in Palayad estate and 3 (75%) in Kasaragode estate are rented units. In short, in these estates the number of rented units exceeds the number of owned units.

Table-5.9 gives information regarding estate-wise number of A, B and C type sheds.

Table - 5.9

No. of A, B & C Type Sheds - Estate-Wise

| Sl No. | Name of the Estate | A Type | B Type | C Type | Total |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1. | Pappanamcode | -- | 4(50%) | 4(50%) | 8(100%) |
| 2. | Karunagapally | -- | 1(25%) | 3(75%) | 4(100%) |
| 3. | Umayanalloor | 1(20%) | 2(40%) | 2(40%) | 5(100%) |
| 4. | Kollakadavu | -- | -- | 7(100%) | 7(100%) |
| 5. | Mayilthara | -- | 1(100%) | -- | 1(100%) |
| 6. | Ettumanoor | -- | -- | 5(100%) | 5(100%) |
| 7. | Changanacherry | -- | 5(55.56%) | 4(44.44%) | 9(100%) |
| 8. | Palluruthy | -- | 5(100%) | -- | 5(100%) |
| 9. | Vazhakulam | -- | 4(100%) | -- | 4(100%) |
| 10. | Kalletumkara | 1(14.23%) | -- | 6(85.71%) | 7(100%) |
| 11. | Ollur | 2(11.11%) | 5(27.78%) | 11(61.11%) | 18(100%) |
| 12. | Olavakode | 2(33.33%) | 3(50%) | 1(16.67%) | 6(100%) |
| 13. | Karakkad | -- | 1(14.23%) | 6(85.71%) | 7(100%) |
| 14. | Manjeri | -- | 3(42.86%) | 4(57.14%) | 7(100%) |
| 15. | West Hill | -- | 3(23.01%) | 10(76.92%) | 13(100%) |
| 16. | Palayad | -- | 5(62.5%) | 3(37.5%) | 8(100%) |
| 17. | Kasaragode | -- | -- | 4(100%) | 4(100%) |
| | Total | 6(5.08%) | 42(35.59%) | 70(59.32%) | 118(100%) |

Source: Survey Data.

Out of the 118 sheds, 6 (5.08%) are 'A' type, 42 (35.59%) 'B' type and 70 (59.32%) 'C' type sheds. There are no 'A' type sheds in the estates of Pappanamcode, Karunagapally, Kollakadavu, Mayilthara, Ettumanoor, Changanacherry, Palluruthy, Vazhakulam, Karakkad, Manjeri, West Hill, Palayad and Kasaragode. One unit each in Umayanalloor and Kalletumkara estates (20% and 14.23% respectively) and 2 units each in Olavakode and Ollur estates (11.11% and 33.33% respectively are of 'A' type sheds. There are no 'B' type sheds in the estates of Kollakadavu, Ettumanoor, Kalletumkara and Palayad. Four sheds (50%) in Pappanamcode estate, one (25%) in Karunagapally estate, 2 (40%) in Umayanalloor estate, one (100%) in Mayilthara estate, 5 (55.56%) in Changanacherry estate, 5 (100%) in Palluruthy estate, 4 (100%) in Vazhakulam estate, 5 (27.78%) in Ollur estate, 3 (50%) in Olavakode estate, one (14.23%) in Karakkad estate, 3 (42.86%) in Manjeri estate, 3 (23.01%) in West Hill estate and 5 (62.5%) in Palayad estate are of 'B' type ones. There are no 'C' type sheds in the estates of Mayilthara, Palluruthy and Vazhakulam. Four sheds (50%) in Pappanamcode estate, 3 (75%) in Karunagapally estate, 2 (40%) in Umayanalloor estate, 7 (100%) in Kollakadavu estate, 5 (100%) in

Ettumanoor estate, 4 (44.44%) in Changancherry estate, 6 (85.71%) in Kalletumkara estate, 11 (61.11%) in Ollur estate, one (16.67%) in Olavakode estate, 6 (85.71%) in Karakkad estate, 4 (57.14%) in Manjeri estate, 10 (76.92%) in West Hill estate, 3 (37.5%) in Palayad estate and 4 (100%) in Kasaragode estate belong to 'C' type category.

## 5.4 Shift Pattern and Working Days

All the units are working round the year. But 102 units operate only one shift of 8 hours while 16 units operate more than one. Estate-wise distribution of units on the basis of number of working days is given in table-5.10.

Of the 8 units in Pappanamcode estate, 2 (25%) work 200-250 days, 5 (62.5%) 250-300 days and one unit (12.5%) more than 300 days a year. In the estates of Karunagapally, one unit (25%) works below 200 days a year and 3 units (75%) work 250-300 days. In Umayanalloor estate, out of 5 units, one (20%) work below 200 days, 2 (40%) 200-250 days and

Table - 5.10

Distribution of the Units on the Basis of Number of Working Days: Estate-Wise

| Sl. No. | Name of the Estate | Below 200 Days | 200-250 Days | 250-300 Days | Above 300 Days | Total |
|---|---|---|---|---|---|---|
| 1. | Pappanamcode | -- | 2(25) | 5(62.5) | 1(12.5) | 8(100) |
| 2. | Karunagapally | 1(25) | -- | 3(75) | -- | 4(100) |
| 3. | Umayanalloor | 1(20) | 2(40) | 2(40) | -- | 5(100) |
| 4. | Kollakadavu | -- | -- | 6(85.71) | 1(14.29) | 7(100) |
| 5. | Mayilthara | -- | 1(100) | -- | -- | 1(100) |
| 6. | Ettumanoor | 2(40) | 2(40) | 1(20) | -- | 5(100) |
| 7. | Changanacherry | 2(22.2) | 2(22.2) | 4(44.4) | 1(11.1) | 9(100) |
| 8. | Palluruthy | 1(20) | -- | 4(80) | -- | 5(100) |
| 9. | Vazhakulam | 1(25) | 1(25) | 2(50) | -- | 4(100) |
| 10. | Kalletumkara | 1(14.29) | -- | 3(42.86) | 3(42.86) | 7(100) |
| 11. | Ollur | 2(11.11) | 3(16.67) | 8(44.44) | 5(27.78) | 18(100) |
| 12. | Olavakode | 1(16.67) | 1(16.67) | 4(66.67) | -- | 6(100) |
| 13. | Karakkad | -- | -- | 5(71.43) | 2(28.57) | 7(100) |
| 14. | Manjeri | 1(14.29) | 2(28.57) | -- | 4(57.14) | 7(100) |
| 15. | West Hill | 1(7.69) | 3(23.08) | 7(53.85) | 2(15.38) | 13(100) |
| 16. | Palayad | 1(12.5) | -- | 6(75) | 1(12.5) | 8(100) |
| 17. | Kasaragode | 1(25) | -- | 2(50) | 1(25) | 4(100) |
| | Total | 16(13.56) | 19(16.10) | 62(52.54) | 21(17.90) | 118(100) |

Source: Survey Data

2 (40%) 250-300 days a year. In Kollakadavu estate, out of 7 units, 6 units (85.71%) work 250-300 days and one unit (14.29%) above 300 days a year. The only one unit (100%) in Mayilthara estate works 250-300 days. In Ettumanoor out of 5 units, 2 units (40%) work below 200 days, 2 (40%) 200-250 days and one (20%) 250-300 days. In the industrial estate of Changanacherry out of 9 units, 2 (22.2%) work below 200 days, 2 (22.2%) 200-250 days; 4 (44.44%) 250-300 days and one (11.1%) above 300 days. In Palluruthy estate, out of 5 units, one (20%) works below 200 days and 4 (80%) 250-300 days. In Vazhakulam estate, out of 4 units, one (25%) works below 200 days, another one (25%) 200-250 days and 2 (50%) 250-300 days. In Kalletumkara estate, out of 7 units, one (14.29%) works below 200 days, 3 (42.86%) above 300 days. In Ollur, out of 18 units, 2 (11.11%) work below 200 days, 3 (16.67%) 200-250 days, 8 (44.44%) 250-300 days and 5 (27.78%) above 300 days. In Olavakode estate, out of 6 units, one (16.67%) works below 200 days, another one (16.67%) 200-250 days and 4 (66.67%) 250-300 days. In Karakkad estate out of 7 units, 5 (71.43%) work 250-300 days and 2 (28.57%) above

300 days. In Manjeri estate, out of 7 units, one (14.29%) works below 200 days, 2 (28.57%) 200-250 days and 4 (57.14%) above 300 days. In West Hill estate, out of 13 units, one (7.69%) works below 200 days, 3 (23.08%) 200-250 days, 7 (53.85%) 250-300 days and 2 (15.38%) above 300 days. In Palayad estate out of 8 units, one (12.5%) works below 200 days, 6 (75%) 250-300 days and one (12.5%) above 300 days. In Kasaragode estate, out of 4 units, one (25%) works below 200 days, 2(50%) 250-300 days and one unit (25%) above 300 days. Thus in the estates of Pappanamcode, Kollakadavu, Mayilthara and Karakkad no unit works below 200 days. Units working above 300 days are seen only in the estates of Pappanamcode, Kollakadavu, Changanacherry, Kalletumkara, Ollur, Karakkad, Manjeri, West Hill, Palayad and Kasaragode. In short, out of the 118 units, 16 (13.56%) work below 200 days; 19 (16.10%) 200-250 days; 62 (52.54%) 250-300 days and 21 (17.80%) above 300 days.

## 5.5 Capital Structure

The industrial units located in the estates could save a lot on account of the facilities available in the estates. For example, they need not spend anything

in plot, building etc. The substantial investment that they have to make is on plant and machinery. Table-5.11 shows the estate-wise distribution of investment in plant and machinery.

Table-5.11 shows that in the estates of Umayanalloor, Mayilthara, Changanacherry and Palluruthy, all units have fixed investment above Rs.1 lakh. One unit (12.5%) in Pappanamcode estate, 2 units (50%) in Karunagapally estate, 3 units (42.3%) in Kollakadavu estate, 2 units (40%) in Ettumanoor estate, one unit (25%) in Vazhakulam estate, one unit (14.3%) in Kalletumkara estate, 2 units (11.1%) in Ollur estate, one unit (16.7%) in Olavakode estate, one unit (14.3%) in Karakkad estate, 2 units (28.6%) in Manjeri estate, 7 units (53.9%) in West Hill estate, one unit (12.5%) in Palayad estate and one unit (25%) in Kasaragode estate have only less than Rs.1 lakh fixed investment. Two units (25%) in Pappanamcode estate, 2 units (40%) in Umayanalloor estate, one unit (14.3%) in Kollakadavu estate, one unit (100%) in Mayilthara estate, one unit (20%) in Ettumanoor estate, 3 units (33.3%) in Changanacherry estate, one unit (20%) in Palluruthy estate,

Table - 5.11

Distribution of Investment in Plant and Machinery: Estate Wise

| Sl. No. | Name of the Estate | Below Rs.1.00 Lakh | Rs.1-2.5 Lakhs | Rs.2.5-5 Lakhs | Rs.5-10 Lakhs | Total |
|---|---|---|---|---|---|---|
| 1. | Pappanamcode | 1(12.5) | 2(25) | 4(50) | 1(12.5) | 8(100) |
| 2. | Karunagapally | 2(50) | -- | 2(50) | -- | 4(100) |
| 3. | Umayanalloor | -- | 2(40) | 2(40) | 1(20) | 5(100) |
| 4. | Kollakadavu | 3(42.3) | 1(14.3) | 3(42.3) | -- | 7(100) |
| 5. | Mayilthara | -- | 1(100) | -- | -- | 1(100) |
| 6. | Ettumanoor | 2(40) | 1(20) | 1(20) | 1(20) | 5(100) |
| 7. | Changanacherry | -- | 3(33.3) | -- | 6(66.7) | 9(100) |
| 8. | Palluruthy | -- | 1(20) | 2(40) | 2(40) | 5(100) |
| 9. | Vazhakulam | 1(25) | 3(75) | -- | -- | 4(100) |
| 10. | Kalletumkara | 1(14.3) | 5(71.4) | 1(14.3) | -- | 7(100) |
| 11. | Ollur | 2(11.1) | 8(44.4) | 6(33.3) | 2(11.2) | 18(100) |
| 12. | Olavakode | 1(16.7) | 3(50) | 2(33.3) | -- | 6(100) |
| 13. | Karakkad | 1(14.3) | 3(42.3) | 3(42.3) | -- | 7(100) |
| 14. | Manjeri | 2(28.6) | 1(14.3) | 2(28.6) | 2(28.6) | 7(100) |
| 15. | West Hill | 7(53.9) | 2(15.4) | 3(23.1) | 1(8.7) | 13(100) |
| 16. | Palayad | 1(12.5) | 5(62.5) | 2(25) | -- | 8(100) |
| 17. | Kasaragode | 1(25) | 2(50) | 1(25) | -- | 4(100 |
| | Total | 25(21) | 43(36) | 34(29) | 16(14) | 118(100) |

Source: Survey Data.

3 units (75%) in Vazhakulam estate, 5 units (71.4%) in Kalletumkara estate, 8 units (44.4%) in Ollur estate 3 units (50%) in Olavakode estate, 3 units (42.3%) in Karakkad estate, one unit (14.3%) in Manjeri estate 2 units (15.4%) in West Hill estate, 5 units (62.5%) in Palayad estate and 2 units (50%) in Kasaragode estate have a fixed investment ranging between Rs.1.00 lakh and Rs.2.5 lakhs. Four units (50%) in Pappanamcode estate, 2 units (50%) in Karunagapally estate, 2 units (40%) in Umayanalloor estate, 3 units (42.3%) in Kollakadavu estate, one unit (20%) in Ettumanoor estate, 2 units (40%) in Palluruthy estate, one unit (14.3%) in Kalletumkara estate, 6 units (33.3%) in Ollur estate, 2 units (33.3%) in Olavakode estate, 3 units (42.3%) in Karakkad estate, 2 units (28.6%) in Manjeri estate, 3 units (23.1%) in West Hill estate, 2 units (25%) in Palayad estate and one unit (25%) in Kasaragode estate have fixed investments between Rs.2.5 lakhs and Rs.5/- lakhs. One unit (12.5%) in Pappanamcode estate, one unit (20%) in Umayanalloor estate, one unit (20%) in Ettumanoor estate, 6 units (66.7%) in Changancherry estate, 2 units (40%) in Palluruthy estate, 2 units

(11.2%) in Ollur estate, 2 units (28.6%) in Manjeri estate and one unit (8.7%) in West Hill estate, have a fixed investment worth between Rs.5.00 lakhs and Rs.10.00 lakhs. Thus out of the 118 units, 25 (21%) have fixed investment below Rs.1.00 lakh, 43 (36%) between Rs.1.00 lakh and Rs.2.5 lakhs, 34 (29%) between Rs.2.5 lakhs and Rs.5.00 lakhs and 16 (14%) between Rs.5.00 lakhs and Rs.10.00 lakhs. This shows that all units are small scale units.

Table-5.12 shows the estate-wise aggregate and average investment in plant and machinery.

The aggregate investment in Plant and machinery in the 17 estates comes to Rs.371.68 lakhs. The average investment comes to Rs.3.15 lakhs. Per unit investment is the highest in the estate of Manjeri and the lowest in the estate of Kalletumkara.

Table-5.13 shows the ownership/organisation-wise distribution of investment in plant and machinery.

Table - 5.12

Aggregate and Average Investment in Plant and Machinery: Estate-Wise

| Sl. No. | Name of the Estate | No. of Firms | Aggregate Investment in Plant & Machinery (Rs. in Lakhs) | Estate-Wise Per Unit Investment (Rs. in Lakhs) |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 1. | Pappanamcode | 8 | 37.00 | 4.6 |
| 2. | Karunagapally | 4 | 7.08 | 1.77 |
| 3. | Umayanalloor | 5 | 24.75 | 4.95 |
| 4. | Kollakadavu | 7 | 14.00 | 2.00 |
| 5. | Mayilthara | 1 | 1.00 | 1.00 |
| 6. | Ettumanoor | 5 | 20.50 | 4.1 |
| 7. | Changanacherry | 9 | 50.00 | 5.6 |
| 8. | Palluruthy | 5 | 24.50 | 4.9 |
| 9. | Vazhakulam | 4 | 6.30 | 1.6 |
| 10. | Kalletumkara | 7 | 10.30 | 1.5 |
| 11. | Ollur | 18 | 54.25 | 3.00 |
| 12. | Olavakode | 6 | 13.45 | 2.2 |
| 13. | Karakkad | 7 | 14.35 | 2.0 |
| 14. | Manjeri | 7 | 40.15 | 5.7 |
| 15. | West Hill | 13 | 32.00 | 2.5 |
| 16. | Palayad | 8 | 13.80 | 1.7 |
| 17. | Kasaragode | 4 | 8.25 | 2.1 |
| | Total | 118 | 371.68 | 3.15 |

Source: Survey Data.

Table - 5.13

Distribution of Investment in Plant and Machinery: Ownership/Organisation-Wise

| Sl. No. | Form of Organisation | No. of Firms | Total Investment (Rs. in Lakhs) | Average Per Unit Investment (Rs. in Lakhs) |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 1. | Single proprietorship | 49 | 137.03 | 2.80 |
| 2. | Partnership | 60 | 185.90 | 3.10 |
| 3. | Private Limited | 5 | 14.25 | 2.85 |
| 4. | Co-operatives | 4 | 34.50 | 8.62 |
| | Total | 118 | 371.68 | 3.15 |

Source: Survey Data

Table-5.13 indicates that the average per unit investment is the highest for the co-operatives. This is followed by partnership firms. The average per unit investment is the lowest for single proprietorship firms. Average per unit investment for the proprietorship concerns is Rs.2.80 lakhs, It is Rs.3.10 lakhs for partnership firms Rs.2.85 lakhs for private limited firms and Rs.8.62 lakhs for co-operatives.

Table-5.14 shows the industry-wise distribution of fixed investment in plant and machinery.

Table - 5.14

Distribution of Fixed Investment in Plant and Machinery: Industry-Wise

| Sl. No. | Name of the Industry | No. of Firms | Aggregate Investment (Rs. in Lakhs) | Per Unit Investment (Rs. in Lakhs) |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 1. | Engineering and metal-based | 51 | 132.88 | 2.61 |
| 2. | Plastic based | 12 | 42.40 | 3.53 |
| 3. | Chemical based | 14 | 33.65 | 2.40 |
| 4. | Rubber based | 27 | 116.45 | 4.31 |
| 5. | Paper and wood based | 13 | 43.30 | 3.33 |
| 6. | Miscellaneous | 1 | 3.00 | 3.00 |
| | Total | 118 | 371.68 | 3.15 |

Source: Survey Data.

Table-5.14 shows that per unit investment is the lowest in the units producing chemical products and the highest in the rubber based units. It is followed by plastics, paper and wood and engineering and metal products units.

## 5.6 Employment and Wage Bill

There is a total employment of 1,196 persons in the 17 industrial estates taken together (excepting the administrative staff of the estate management). Of these, skilled labour constitutes 18.9 per cent, semi-skilled and unskilled labour comes to 71.1 per cent and clerical staff forms 10 per cent of the total employment.

Table-5.15 shows the estate-wise distribution of type of employment.

The percentage of skilled labour is the highest in the industrial estate of Umayanallor and the lowest in the industrial estate of Ettumanoor. The percentage of unskilled labour is the highest in Ettumanoor estate and the lowest in Umayanalloor estate. The percentage of clerical staff is the highest in the industrial estate of Manjeri and the lowest in Ettumanoor estate.

Table-5.16 presents the industry-wise distribution of the type of employment.

Table - 5.15

Distribution of Type of Employment: Estate-Wise

| Sl. No. | Name of the Estate | No. of Firms | Skilled Labour | Semi/Un-skilled Labour | Clerical | Total | Per Unit Employ-ment |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1. | Pappanamcode | 8 | 14(16.1) | 65(74.7) | 8(19.2) | 87(100) | 10 |
| 2. | Karunagapally | 4 | 7(21.2) | 22(66.7) | 4(12.1) | 33(100) | 8 |
| 3. | Umayanalloor | 5 | 16(34.8) | 23(50.0) | 7(15.2) | 46(100) | 9 |
| 4. | Kollakadavu | 7 | 43(34.5) | 74(59.7) | 7(5.6) | 124(100) | 17 |
| 5. | Mayilthara | 1 | 2(23.1) | 9(69.2) | 1(11,55) | 13(100) | 13 |
| 6. | Ettumanoor | 5 | 13(12.0) | 90(83.3) | 5(4.6) | 108(100) | 21 |
| 7. | Changanacherry | 9 | 13(18.1) | 50(69.4) | 9(12.5) | 72(100) | 8 |
| 8. | Palluruthy | 5 | 12(16.7) | 55(76.4) | 5(6.9) | 72(100) | 14 |
| 9. | Vazhakulam | 4 | 6(27.2) | 12(54.5) | 4(18.2) | 22(100) | 5 |
| 10. | Kalletumkara | 7 | 9(10.8) | 68(81) | 7(8.3) | 84(100) | 12 |
| 11. | Ollur | 18 | 15(10.5) | 110(76.9) | 18(12.6) | 143(100) | 7 |
| 12. | Olavakode | 6 | 4(7.3) | 45(81.8) | 6(10.9) | 65(100) | 9 |
| 13. | Karakkad | 7 | 22(17.1) | 100(77.5) | 7(5.4) | 129(100) | 18 |
| 14. | Manjeri | 7 | 5(15.6) | 20(62.5) | 7'21.9) | 32(100) | 4 |
| 15. | West Hill | 13 | 26(26.3) | 60(60.6) | 13(13.1) | 99(100) | 7 |
| 16. | Palayad | 8 | 13(25) | 31(59.6) | 8(15.4) | 52(100) | 6 |
| 17. | Kasaragode | 4 | 5(20) | 16(64.0) | 4(16.0) | 25(100) | 6 |
| | Total | 118 | 226(18.9) | 850(71.1) | 120(10) | 1,196(100) | 10 |

Source: Survey Data.

Table - 5.16

Distribution of Type of Employment: Industry-Wise

| Name of the Industry | No. of Firms | Skilled Labour | No. of Semi/Un-Skilled Labour | Clerical | Total | Per Unit Employment |
|---|---|---|---|---|---|---|
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Engineering and metal based | 51 | 96(20.3) | 322(68.2) | 54(11.4) | 472(100) | 9 |
| Plastic based | 12 | 17(10) | 141(82.9) | 12(7.1) | 170(100) | 14 |
| Chemical based | 14 | 20(21.7) | 59(64.1) | 13(14.1) | 92(100) | 7 |
| Rubber based | 27 | 29(10.9) | 209(78.9) | 27(10.2) | 265(100) | 9 |
| Paper and wood based | 13 | 52(29.4) | 112(63.3) | 13(7.3) | 177(100) | 14 |
| Miscellaneous | 1 | 12(60) | 7(35) | 1(5) | 20(100) | 20 |
| Total | 118 | 226(18.9) | 850(71) | 120(10) | 1,196(100) | 10 |

e: Survey Data.

Engineering and metal based industrial units which constitute 43.22 per cent of the total provide 39.46 per cent of total employment. The average employment per unit comes to 9. Plastic based industrial units constitute 10.17 per cent of the total and provide 14.21 per cent of total employment. The average per unit employment

in this case is 14. Chemical units which constitute 11.86 per cent of the total provide 7.69 per cent of total employment. The average per unit employment in this case is 7. Rubber based units which constitute 22.88 per cent of the total provide 22.16 per cent of the total employment. The average per unit employment is 9. Paper and wood based industrial units which account 11.02 per cent of total units provide 14.80 per cent of the total employment. Average per unit employment here is 14. The miscellaneous group which constitutes 0.84 per cent of total units provides 1.67 per cent of the total employment. But the average per unit employment (20) is the highest in this case. But it cannot be considered as a representative one. So the next group in order is plastic based. This is followed by paper and wood based units, engineering and metal based units and rubber based units. Average per unit employment is the lowest in chemical based units.

Employment of semi-unskilled labour is the highest for plastic based units. This is followed by rubber based units. It is the lowest for paper and wood based units.

Table-5.17 presents total and average wage bill in the 17 estates of Kerala.

Table - 5.17

Total and Average Per Unit Annual Wage Bill: Estate-Wise

| Sl. No. | Name of the Estate | No. of Units | Total Wage Bill (Rs. in Lakhs) | Average Per Unit Wage Bill (Rs. in Lakhs) |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 1. | Pappanamcode | 8 | 6.96 | 0.87 |
| 2. | Karunagapally | 4 | 3.32 | 0.33 |
| 3. | Umayanalloor | 5 | 2.19 | 0.44 |
| 4. | Kollakadavu | 7 | 5.11 | 0.73 |
| 5. | Mayilthara | 1 | 0.66 | 0.66 |
| 6. | Ettumanoor | 5 | 1.65 | 0.33 |
| 7. | Changanacherry | 9 | 7.20 | 0.80 |
| 8. | Palluruthy | 5 | 12.60 | 2.52 |
| 9. | Vazhakulam | 4 | 1.44 | 0.36 |
| 10. | Kalletumkara | 7 | 2.29 | 0.33 |
| 11. | Ollur | 18 | 18.37 | 1.02 |
| 12. | Olavakode | 6 | 3.00 | 0.50 |
| 13. | Karakkad | 7 | 5.00 | 0.71 |
| 14. | Manjeri | 7 | 1.48 | 0.21 |
| 15. | West Hill | 13 | 6.68 | 0.51 |
| 16. | Palayad | 8 | 2.37 | C.30 |
| 17. | Kasaragode | 4 | 2.40 | 0.60 |
| | Total | 118 | 80.72 | 0.68 |

Source: Survey Data.

Pappanamcode estate has 6.78 per cent of the total units and its contribution to toal annual wage bill is 8.62 per cent. Karunagapally estate, has 3.39 per cent of the total units, and its contribution to the total annual wage bill is 1.64 per cent. The estates of Umayanalloor, Kollakadavu, Mayilthara, Ettumanoor, Changanacherry, Palluruthy, Vazhakulam, Kalletumkara, Ollur, Olavakode, Karakkad, Manjeri, West Hill, Palayad and Kasaragode have 4.24 per cent, 5.93 per cent, 0.85 per cent, 4.24 per cent, 7.63 per cent, 4.24 per cent, 3.39 per cent, 5.93 per cent, 15.25 per cent, 5.08 per cnet, 5.93 per cent, 11.02 per cent, 6.78 per cent and 3.39 per cent respectively of the total units and their contribution total annual wage bill is 2.71 per cent, 6.33 per cent, 0.82 per cent, 2.04 per cent, 8.92 per cent, 15.61 per cent, 1.78 per cent, 2.84 per cent, 22.76 per cent, 3.72 per cent, 6.19 per cent, 8.28 per cent, 2.94 per cent and 2.97 per cent respectively. Per unit average annual wage bill is the highest in the estate of Palluruthy (Rs.2.52 lakhs) and the lowest in Manjeri estate (Rs.0.21 lakh).

Table-5.18 shows the industry-wise total and average annual wage bill.

Table - 5.18

Total and Average Annual Wage Bill: Industry-Wise

| Sl. No. | Name of the Industry | No. of Firms | Total Employment | Total Wage Bill (Rs. in Lakhs) | Per Unit Wage Bill (Rs.in Lakhs) |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1. | Engineering and metal based | 51 | 472 | 30.04 | 0.59 |
| 2. | Plastic based | 12 | 170 | 11.90 | 0.99 |
| 3. | Chemical based | 14 | 92 | 6.44 | 0.46 |
| 4. | Rubber based | 27 | 265 | 18.55 | 0.69 |
| 5. | Paper and wood based | 13 | 177 | 12.39 | 0.95 |
| 6. | Miscellaneous | 1 | 20 | 1.4 | 1.4 |
| | Total | 118 | 1,196 | 80.72 | |

Source: Survey Data.

Engineering and metal based units which constitute 43.22 per cent of the total units, contribute 37.22 per cent of the total annual wage bill. Plastic based industrial units with 10.17 per cent of the total units contribute 14.74 per cent of the total wage bill.

Chemical based units with 11.86 per cent of the total units contribute 7.98 per cent of the total annual wage bill. Rubber based units which constitute 22.88 per cent of the total units contribute 22.98 per cent of the total annual wage bill. Paper and wood based units with 11.02 per cent of the total units contribute 15.35 per cent of the total annual wage bill. The miscellaneous group with 0.82 per cent of the total units contributes 1.73 per cent of the total annual wage bill. The largest contribution to total annual wage bill is by the engineering and metal based units. It is followed by the rubber units. The smallest contribution to the total annual wage bill comes from the chemical based units. Per unit wage bill is the highest in plastic based units. It is followed by paper and wood based units. It is the lowest in chemical based units.

## 5.7 Annual Output

Production Data is collected for the 118 units working in the 17 industrial estates. The gross annual output is calculated in rupee terms. Table-5.19 presents the estate-wise total and average per unit output (in rupees).

Table - 5.19

Average Per Unit Output: Estate-Wise

| Sl. No. | Name of the estate | No. of Units | Total Output (Rs. in Lakhs) | Average Per Unit Output (Rs. in Lakhs) |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 1. | Pappanamcode | 8 | 120.45 | 15.06 |
| 2. | Karunagapally | 4 | 20.50 | 5.13 |
| 3. | Umayanalloor | 5 | 18.48 | 3.70 |
| 4. | Kollakadavu | 7 | 38.00 | 5.43 |
| 5. | Mayilthara | 1 | .80 | 0.80 |
| 6. | Ettumanoor | 5 | 31.50 | 6.03 |
| 7. | Changanacherry | 9 | 167.82 | 18.65 |
| 8. | Palluruthy | 5 | 45.40 | 9.00 |
| 9. | Vazhakulam | 4 | 28.30 | 7.08 |
| 10. | Kalletumkara | 7 | 20.96 | 2.99 |
| 11. | Ollur | 18 | 117.55 | 6.53 |
| 12. | Olavakode | 6 | 29.80 | 4.97 |
| 13. | Karakkad | 7 | 60.00 | 8.57 |
| 14. | Manjeri | 7 | 31.28 | 4.47 |
| 15. | West Hill | 13 | 148.51 | 11.42 |
| 16. | Palayad | 8 | 50.64 | 6.33 |
| 17. | Kasaragode | 4 | 15.72 | 3.93 |
| | Total | 118 | 945.71 | 3.93 |

Source: Survey Data.

The industrial estates of Pappanamcode, Karunagapally. Umayanalloor, Kollakadavu, Mayilthara, Ettumanoor, Changanacherry, Palluruthy, Vazhakulam, Kalletumkara, Ollur, Olavakode, Karakkad, Manjeri, West Hill, Palayad and Kasaragode which constitute 6.78 per cent, 3.39 per cent, 4.24 per cent, 5.93 per cent, 0.85 per cent, 4.24 per cent, 7.63 per cent, 4.24 per cent, 3.39 per cent, 5.93 per cent, 15.25 per cent, 5.08 per cent, 5.93 per cent, 5.93 per cent, 11.02 per cent, 6.78 per cent and 3.39 per cent of the total units respectively contribute 12.74 per cent, 2.17 per cent, 1.95 per cent, 4.02 per cent, 0.08 per cent, 3.33 per cent, 17.75 per cent, 4.90 per cent, 2.99 per cent, 2.22 per cent, 12.43 per cent, 3.15 per cent, 6.34 per cent, 3.31 per cent, 15.70 per cent, 5.35 per cent and 1.66 per cent to the gross annual output for the 17 estates respectively. Average per unit output is the highest for the Changanacherry estate (Rs.18.65 Lakhs) and the lowest for the Kalletumkara estate (Rs.2.99 lakhs).

Industry-wise total and average annual output of the units are presented in the table-5.20. Engineering and metal based units, plastic based units, chemical

based units, rubber based units and paper and wood based units which constitute 43.22 per cent, 10.17 per cent, 11.86 per cent, 22.88 per cent and 11.02 per cent of the total units respectively contribute 39.27 per cent, 6.56 per cent, 10.50 per cent, 33.75 per cent and 8.97 per cent to the total output respectively. The miscellaneous category contributes 0.95 per cent to the total output though it constitutes only 0.82 per cent of the total units. Per unit output is the highest for rubber based units (Rs.11.82 lakhs) and it is higher than the total average. The per unit output is the lowest for the units coming under plastics industry. Units belonging to engineering and metal products industry, plastics industry, chemical industry and paper and wood products industry have average per unit output lower than the average of all units.

Table - 5.20

Average Output Per Unit: Industry-Wise

| Sl. No. | Name of the Industry | No. of Firms | Total Output (Rs. in Lakhs) | Per Unit Output (Rs.in Lakhs) |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 1. | Engineering and metal based | 51 | 371.39 | 7.28 |
| 2. | Plastic based | 12 | 62.05 | 5.17 |
| 3. | Chemical based | 14 | 99.32 | 7.09 |
| 4. | Rubber based | 27 | 319.14 | 11.82 |
| 5. | Paper and wood based | 13 | 84.81 | 6.52 |
| 6. | Miscellaneous | 1 | 9.00 | 9.00 |
| | Total | 118 | 945.71 | 8.01 |

Source: Survey Data.

Table-5.21 presents the estate-wise output-capital ratio.

Table - 5.21

Output-Capital Ratio: Estate-Wise

| Sl. No. | Name of the Estate | Total Capital (Rs. in Lakhs) | Total Output (Rs. in Lakhs) | Output-Capital Ratio |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 1. | Pappanamcode | 37.00 | 120.45 | 3.26 |
| 2. | Karunagapally | 7.08 | 20.50 | 2.90 |
| 3. | Umayanalloor | 24.75 | 18.48 | 0.75 |
| 4. | Kollakadavu | 14.00 | 38.00 | 2.71 |
| 5. | Mayilthara | 1.00 | 0.80 | 0.08 |
| 6. | Ettumanoor | 20.50 | 31.50 | 1.54 |
| 7. | Changanacherry | 50.00 | 167.82 | 3.36 |
| 8. | Palluruthy | 24.50 | 45.40 | 1.85 |
| 9. | Vazhakulam | 6.30 | 28.30 | 4.49 |
| 10. | Kalletumkara | 10.30 | 20.96 | 2.03 |
| 11. | Ollur | 54.25 | 117.55 | 2.17 |
| 12. | Olavakode | 13.45 | 29.80 | 2.22 |
| 13. | Karakkad | 14.35 | 60.00 | 4.18 |
| 14. | Manjeri | 40.15 | 31.28 | 0.78 |
| 15. | West Hill | 32.00 | 148.51 | 4.64 |
| 16. | Palayad | 13.80 | 50.64 | 3.67 |
| 17. | Kasaragode | 8.25 | 15.72 | 1.91 |
| | Total | 371.68 | 945.71 | 2.54 |

Source: Survey Data.

The productivity of capital is measured in terms of output per capital invested. It is the highest for the West Hill estate. It is followed by the estate of Vazhakulam and then by the Karakkad estate. The capital productivity ratio is higher for the estates of Pappanamcode, Karunagapally, Kollakadavu, Changanacherry and Palayad when compared with the average for the 17 estates taken together. This ratio is the lowest in the estate of Umayanalloor.

Table-5.22 presents the industry-wise break-up of output-capital ratio.

Table - 5.22

Output-Capital Ratio: Industry-Wise

| Sl. No. | Name of the Industry | Total Capital (Rs.in Lakhs) | Total Output (Rs. in Lakhs) | Output Capital Ratio |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 1. | Engineering and metal based | 132.88 | 371.39 | 2.79 |
| 2. | Plastic based | 42.40 | 62.05 | 1.46 |
| 3. | Chemical based | 33.65 | 99.32 | 2.95 |
| 4. | Rubber based | 116.45 | 319.14 | 2.74 |
| 5. | Paper and wood based | 45.30 | 84.81 | 1.87 |
| 6. | Miscellaneous | 3.00 | 9.00 | 3.00 |
| | Total | 371.68 | 945.71 | 2.54 |

Source: Survey Data.

Capital productivity ratio is the highest for chemical based units. It is followed by engineering and metal based units and then by rubber based units. In the case of all these units productivity ratios are higher than the average for all units. It is the lowest for the units belonging to plastic industry.

## 5.8 Output-Labour Ratio

Estate-wise break-up of output-labour ratio is presented in Table-5.23.

Labour productivity is the highest in Changanacherry estate. In the estates of Pappanamcode, Vazhakulam, Ollur, Manjeri, West Hill and Palayad, labour productivity ratios are higher compared to the average for the 17 estates taken together. It is the lowest in the estate of Kalletumkara. In the estates of Karunagapally, Umayanalloor, Kollakadavu, Ettumanoor, Palluruthy, Kalletumkara, Olavakode, Karakkad and Kasaragode labour productivity ratios are lower compared to the average for all estates taken together.

Table - 5.23

Output-Labour Ratio: Estate-Wise

| Sl. No. | Name of the Estate | Total Output (Rs. in Lakhs) | Total Employment | Output Labour Ratio |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 1. | Pappanamcode | 120.45 | 87 | 1.38 |
| 2. | Karunagapally | 20.50 | 33 | 0.62 |
| 3. | Umayanalloor | 18.48 | 46 | 0.40 |
| 4. | Kollakadavu | 38.00 | 124 | 0.31 |
| 5. | Mayilthara | 0.80 | 13 | 0.06 |
| 6. | Ettumanoor | 31.50 | 72 | 0.44 |
| 7. | Changanacherry | 167.82 | 108 | 1.55 |
| 8. | Palluruthy | 45.40 | 72 | 0.44 |
| 9. | Vazhakulam | 28.30 | 22 | 1.29 |
| 10. | Kalletumkara | 20.96 | 84 | 0.25 |
| 11. | Ollur | 117.55 | 143 | 0.82 |
| 12. | Olavakode | 29.80 | 55 | 0.54 |
| 13. | Karakkad | 60.00 | 129 | 0.47 |
| 14. | Manjeri | 31.28 | 32 | 0.98 |
| 15. | West Hill | 148.51 | 99 | 1.50 |
| 16. | Palayad | 50.64 | 52 | 0.97 |
| 17. | Kasaragode | 15.72 | 25 | 0.63 |
| | Total | 945.71 | 1,196 | 0.79 |

Source: Survey Data.

Industry-wise output-labour ratio is presented in table-5.24.

Table - 5.24

Output-Labour Ratio: Industry-Wise

| Sl. No. | Name of the Industry | Total Output (Rs.in Lakhs) | Total Employment | Output Labour Ratio |
|---|---|---|---|---|
| 1. | Engineering and metal based | 371.39 | 472 | 0.79 |
| 2. | Plastic based | 62.05 | 170 | 0.37 |
| 3. | Chemical based | 99.32 | 92 | 1.08 |
| 4. | Rubber based | 319.14 | 265 | 1.20 |
| 5. | Paper and wood based | 84.81 | 177 | 0.48 |
| 6. | Miscellaneous | 9.00 | 20 | 0.45 |
| | Total | 945.71 | 1,196 | 0.79 |

Source: Survey Data.

Output-labour ratio is the highest for the rubber based units. Chemical based units have output labour ratio higher than the average for all industrial units. It is the lowest for plastic based units. Engineering and metal based units, paper and wood based units and the miscellaneous units have output-labour ratio lower than the average for the total units.

## 5.9 Capital-Labour Ratio

The amount of fixed capital investment needed to provide employment is measured by capital-labour ratios. The only substantial fixed investment of the units in the estates is the investment in machinery since other facilities are offered to the units in the estates. Table-5.25 provides estate-wise break-up of capital-labour ratios.

The machinery capital required per labour employed is found to be the highest in the estate of Manjeri. It is higher in the estates of Pappanamcode, Umayanalloor, Changanacherry, Palluruthy, Ollur, West Hill and Kasaragode compared with the average ratio for all the estates together. The ratio is the lowest in the estates of Kollakadavu and Karakkad. It is lower in the estates of Karunagapally, Ettumanoor, Vazhakulam, Kalletumkara, Olavakode, and Palayad compared with the total average ratio of the 17 estates put together. Table-5.26 shows the industry-wise break-up of capital-labour ratio.

Table - 5.25

Break-Up of Capital-Labour Ratio: Estate-Wise

| Sl. No. | Name of the Estate | Employ-ment | Capital (Rs. in Lakhs) | Capital-Labour Ratio |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 1. | Pappanamcode | 87 | 37.00 | 0.43 |
| 2. | Karunagapally | 33 | 7.08 | 0.21 |
| 3. | Umayanalloor | 46 | 24.75 | 0.54 |
| 4. | Kollakadavu | 124 | 14.00 | 0.11 |
| 5. | Mayilthara | 13 | 1.00 | 0.08 |
| 6. | Ettumanoor | 108 | 20.50 | 0.19 |
| 7. | Changanacherry | 72 | 50.00 | 0.69 |
| 8. | Palluruthy | 72 | 24.50 | 0.34 |
| 9. | Vazhakulam | 22 | 6.30 | 0.29 |
| 10. | Kalletumkara | 84 | 10.30 | 0.12 |
| 11. | Ollur | 143 | 54.25 | 0.38 |
| 12. | Olavakode | 55 | 13.45 | 0.24 |
| 13. | Karakkad | 129 | 14.35 | 0.11 |
| 14. | Manjeri | 32 | 40.15 | 1.25 |
| 15. | West Hill | 99 | 32.00 | 0.32 |
| 16. | Palayad | 52 | 13.80 | 0.27 |
| 17. | Kasaragode | 25 | 8.25 | 0.33 |
| | Total | 1,196 | 371.68 | 0.31 |

Source: Survey Data.

Table - 5.26

Break-up of Capital-Labour Ratio: Industry-Wise

| Sl. No. | Name of the Industry | Industry Employment | Capital (Rs. in Lakhs) | Capital Labour Ratio |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 1. | Engineering and metal based | 472 | 132.88 | 0.28 |
| 2. | Plastic based | 170 | 42.40 | 0.25 |
| 3. | Chemical based | 92 | 33.65 | 0.37 |
| 4. | Rubber based | 265 | 116.45 | 0.44 |
| 5. | Paper and wood based | 177 | 43.30 | 0.24 |
| 6. | Miscellaneous | 20 | 3.00 | 0.15 |
| | Total | 1,196 | 371.68 | 0.31 |

Source: Survey Data.

Industry-wise distribution of capital-labour ratio reveals that it is the highest for the rubber based units. Chemical based units also have capital-labour ratio higher than the average for all industrial units. It is the lowest for paper and wood based units. Plastic products and engineering and metal products industrial units have capital-labour ratios lower than the average for all industrial units.

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# CHAPTER - VI

# ECONOMIC EVALUATION OF INDUSTRIAL ESTATES PROGRAMME

# CHAPTER - VI

## ECONOMIC EVALUATION OF INDUSTRIAL ESTATES PROGRAMME

In the last chapter the profile of the structure of industrial units was discussed. In this chapter, it is proposed to discuss the performance of the programme of industrial estates with regard to the realisation of the objectives of the programme.

As has been pointed out earlier the technique of industrial estates programme has been recognised as a modern tool for rapid industrialisation in many developing countries. The programme has also been considered as an important tool for creating employment opportunities and improving management and productivity in small industrial enterprises. The secondary objective of the programme has been industrial dispersal and regional economic growth.

In this chapter it is proposed to find out whether the objectives - both primary and secondary - for which the industrial estates programme was started had been achieved. For this purpose certain economic indicators such as efficiency coefficient, net value added coefficient, labour productivity coefficient, average net capital output ratio and average capital-labour ratio are used.

The indicators of efficiency were broadly classified into indicators of technical efficiency that is technical productivity and indicators of economic viability that is value productivity. Accordingly, the coefficient of efficiency, coefficient of net value added, productivity of labour and capital-output ratio are indicators of technical efficiency. The coefficients of net value added indicate the productivity of raw materials and the capital-output ratios indicate the productivity of capital. The productivity of labour is obvious. Therefore, the coefficients of net value added, the productivity of labour and the capital-output ratio are the components of the coefficient of efficiency which indicate the overall productivity of inputs. On the other hand, the rate of profit

indicate economic viability that is economic efficiency. It indicates the ability to grow. It has the potential of growth of small enterprises. The distinguishing factor between the rate of profit - an indicator of economic viability - and the coefficient of efficiency - an indicator of technical efficiency - is that the former takes into account the demand element explicitly, whereas the latter does not. Therefore, one could be technically efficient but economically not viable and vice versa although one could expect a technically efficient one also to be economically viable. So interpreted, the indicator of economic viability, namely, the rate of profit is more comprehensive than the indicator of overall technical efficiency that is the coefficient of efficiency. The latter was partial and the former overall. However, the coefficient of efficiency is more stable in spite of being partial as it is based more on technical relationships in production. On the other hand, the rate of return can be erratic as it is influenced more by fluctuations of market factors. This distinction becomes important in comparing the efficiencies of industrial units, particularly, over a period of time.[1]

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[1] Somasekhara, N., The Efficacy of Industrial Estates in India with Particular Reference to Mysore, Vikas Publishing House Pvt. Ltd., Delhi, 1975, p.44.

## 6.1 Primary Objective

The primary objective of the programme of industrial estates is industrialisation through the development of small scale enterprises. Development of small enterprises may mean either (a) creation of new small enterprises or (b) improvement in the efficiency of existing small enterprises or (c) sustaining the otherwise inefficient small enterprises.

### Creation of New Small Enterprises

During the survey it was found that all the working units in the 17 estates were newly started. This leads strength to the point that the primary objective of the industrial estates programme is industrialisation through the development of small scale enterprises.

### Improvement in the Efficiency of Existing Small Enterprises

Since all the units covered by the survey happened to be new units we could not verify this point on the basis of the survey data.

Sustaining the Otherwise Inefficient Small Enterprises

With regard to this point it could be said that without industrial estates the units in them would have died a natural death. Many units reported that their efficiency is mainly due to the factor that they are in industrial estates.

Of the 118 units surveyed 37 have expansion programmes. All these units have plans for additional investment in machinery. Of the 37 units 7 have plans to diversify production. For example, in the Pappanamcode estate 2 units have expansion programmes. Of these 2 units, one intends to start production of engineering items and the other chemical products. In the Karunagapally estate, one unit engaged in cold insulation plastics proposes to enter into the packaging service. In the Kollakadavu estate, 2 units propose to diversify production. One unit intends to start the production of mechanised moulding items and the other furniture items. In the estate of Karakkad, 2 units have the idea of diversifying production. One unit intend to start a rubber based unit and the other

one to start production of automobile spare parts. All the other 29 units propose to increase their production capacity.

## 6.2 Secondary Objective: Regional Economic Growth

It is very difficult to assess the contribution of the industrial estates programme towards the economic growth of the region. But it is assumed that the effects will lead to the economic growth of the region. Here by region we mean only the immediate neighbourhood of the estate.

### (a) Employment

The programme is expected to provide employment to the locally unemployed labour. The survey shows that all the employees working in the estates are from the locality where the estates are located. Around 98 per cent of the skilled and the unskilled workers are from within a distance of 15 km. from the industrial estates.

Most of the entrepreneurs are from the estate itself. Only 3 are from outside Kerala.

(b) Utilisation of Local Resources

Etficient utilisation of local resources such as raw-materials, skills, savings, etc. promotes the growth of an area where the industrial estate is situated. Out of 118 units, only 25 units are utilising resources from other states especially from Bombay and Madras. There is one unit using resources from outside the country that is from Japan. All the remaining units are utilising raw materials available within the state of Kerala.

An important objective of the promotion of small industries is to channelise idle savings for productive purposes. The extent to which industrial estates channelise private savings, into industrial ventures may be considered as a measure of their contribution to capital formation. The study of the selected units reveals that the contribution of the entrepreneurs approximated to 55 per cent of the total capital inclusive of fixed investment in plant and machinery and working capital.

Growth Trends of Production, Employment and Investment

Table-6.1 presents the data regarding investment in plant and machinery, employment and total annual production in the 17 estates from the year 1980-'81 to 1982-'83.

In the estates of Pappanamcode, Ollur, Olavakode and Palayad, there were annual increases in investment in plant and machinery and employment. In the estates of Umayanalloor and Kalletumkara, though there was an increase in investment in plant and machinery from 1980-'81 to 1981-'82, there was no net addition to investment for the year 1982-'83. In the estates of Karunagapally, Kollakadavu, Ettumanoor, Changanacherry, Palluruthy, Vazhakulam, West Hill and Kasaragode, there was no net addition to investment in plant and machinery and employment during this period. In Mayilthara estate there was a decrease in investment in plant and machinery for the year 1981-'82, but it increased during 1982-'83. But there was no change in the level of employment in the estate

Table - 6.1

Growth Trends of Investment, Employment & Output

| Sl. No. | Name of the Estate | Investment in Plant and Machinery (Rs. in Lakhs) | | | Employment | | | Total Production (Rs. in Lakhs) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 1980-'81 | 1981-81 | 1982-83 | 1980-81 | 1981-82 | 1982-83 | 1980-81 | 1981-82 | 1982-83 |
| 1 | 2 | | 3 | | | 4 | | | 5 | |
| 1. | Pappanamcode | 54.09 | 55.34 | 59.97 | 243 | 243 | 259 | 265.33 | 160.55 | 136.05 |
| 2. | Karunagapally | 13.95 | 13.95 | 13.95 | 35 | 35 | 35 | 12.90 | 8.28 | 17.24 |
| 3. | Umayanalloor | 40.75 | 43.75 | 43.75 | 93 | 99 | 99 | 25.34 | 24.95 | 27.20 |
| 4. | Kollakadavu | 48.34 | 48.74 | 48.74 | 196 | 196 | 196 | 227.93 | 104.83 | 59.36 |
| 5. | Mayilthara | 17.75 | 17.25 | 17.25 | 30 | 30 | 30 | 27.60 | 22.60 | 23.50 |
| 6. | Ettumanoor | 52.78 | 52.78 | 52.78 | 274 | 274 | 274 | 175.13 | 179.80 | 182.57 |
| 7. | Changanacherry | 49.35 | 49.35 | 49.35 | 242 | 242 | 242 | 156.80 | 154.30 | 143.75 |
| 8. | Palluruthy | 7.51 | 7.51 | 7.51 | 57 | 57 | 57 | 11.08 | 17.70 | 29.42 |
| 9. | Vazhakulam | 9.09 | 9.09 | -- | 90 | 90 | 90 | 38.90 | 41.37 | 30.35 |
| 10. | Kalletumkara | 19.94 | 21.44 | 21.44 | 62 | 68 | 68 | 67.15 | 81.27 | 43.84 |
| 11. | Ollur | 49.38 | 51.63 | 53.43 | 226 | 235 | 245 | 120.89 | 125.35 | 132.21 |
| 12. | Olavakode | 8.57 | 10.97 | 14.61 | 228 | 250 | 273 | 74.07 | 104.23 | 77.06 |
| 13. | Karakkad | 8.27 | 8.27 | 8.27 | 172 | 172 | 175 | 55.32 | 59.47 | 61.42 |
| 14. | Manjeri | 13.03 | 11.53 | 13.03 | 59 | 59 | 59 | 7.25 | 11.79 | 9.48 |
| 15. | West Hill | 23.59 | 23.59 | 23.59 | 165 | 165 | 165 | 107.28 | 122.29 | 137.98 |
| 16. | Palayad | 12.71 | 13.11 | 13.86 | 36 | 40 | 42 | 19.81 | 18.94 | 16.07 |
| 17. | Kasaragode | 7.35 | 7.35 | 7.35 | 72 | 72 | 72 | 25.25 | 29.37 | 25.63 |

Source: Survey Data.

from 1980-'81 to 1982-'83. In the estate of Karakkad though there was not any net addition to investment and employment from 1980-'81 to 1981-'82, there was an increase in the investment in plant and machinery and employment for the year 1982-'83. In the estate of Manjeri there was a decrease in the investment in plant and machinery for the year 1981-'82 but increased again during 1982-'83. But employment level remained the same irrespective of the variations in the level of investment in plant and machinery.

The estates of Pappanamcode, Kollakadavu, Changanacherry and Palayad showed annual decreases in the output from 1980-'81 to 1982-'83. But in the estates of Ettumanoor, Palluruthy, Ollur, Karakkad and West Hill there was an annual increase in output from 1980-'81 to 1982-'83. In the estates of Karunagapally, Umayanalloor and Mayilthara, the output decreased during 1981-'82 but increased during 1982-'83. In the estates of Vazhakulam, Kalletumkara, Olavakode, Manjeri and Kasaragode production increased first and then decreased.

## 6.3 Capacity Utilisation

The current utilisation of installed capacity is a good indicator of the overall efficiency of the enterprises. During the survey all 118 units were asked to estimate the annual installed capacity output in rupee terms. The percentage of current output to the full capacity output is taken as the degree of capacity utilisation. Estate-wise and industry-wise break-up of capacity utilisation of the units in the 17 estates are given in tables-6.2 and 6.3.

Capacity utilisation for all enterprises in the 17 estates during the year 1985-'86 was around 77 per cent. This means that 23 per cent of the aggregate installed capacity remained unutilised and to that extent the society was deprived of generation of income and employment opportunities. In absolute terms the actual output realised amounted to Rs.945.71 lakhs for 118 units as against installed capacity of Rs.1,228.23 lakhs. In the estates of Karunagapally, Palluruthy, Olavakode, Manjeri and West Hill, the percentage of capacity utilisation is more than 90. The percentage

Table - 6.2

Break-up of Capacity Utilisation: Estate-Wise

| Sl. No. | Name of the Estate | Installed Capacity (Rs. in Lakhs) | Utilised Capacity (Rs. in Lakhs) | Capacity Utilisation |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 1. | Pappanamcode | 165.00 | 120.00 | 0.73 |
| 2. | Karunagapally | 22.00 | 20.50 | 0.93 |
| 3. | Umayanalloor | 26.85 | 18.48 | 0.68 |
| 4. | Kollakadavu | 42.50 | 38.00 | 0.89 |
| 5. | Mayilthara | 1.00 | 0.80 | 0.08 |
| 6. | Ettumanoor | 43.00 | 31.50 | 0.73 |
| 7. | Changanacherry | 280.10 | 167.82 | 0.60 |
| 8. | Palluruthy | 46.50 | 45.40 | 0.98 |
| 9. | Vazhakulam | 29.00 | 28.30 | 0.98 |
| 10. | Kalletumkara | 30.25 | 20.96 | 0.69 |
| 11. | Ollur | 148.00 | 117.55 | 0.79 |
| 12. | Olavakode | 31.00 | 29.80 | 0.96 |
| 13. | Karakkad | 94.20 | 60.00 | 0.64 |
| 14. | Manjeri | 32.17 | 31.28 | 0.97 |
| 15. | West Hill | 167.70 | 148.51 | 0.92 |
| 16. | Palayad | 55.96 | 50.64 | 0.90 |
| 17. | Kasaragode | 19.00 | 15.72 | 0.83 |
| | Total | 1,228.23 | 945.71 | 0.77 |

Source: Survey Data.

of capacity utilisation is the highest for the estates of Vazhakulam and Palluruthy. In percentage terms it amounts to 98. The estates of Manjeri and Olavakode stand second and third respectively with respect to capacity utilisation (97% and 96%). The percentage of capacity utilisation is the lowest in the estate of Changanacherry. In absolute terms the actual output amounted to Rs.167.82 lakhs as against the installed capacity of Rs.280.10 lakhs.

Table - 6.3

Break-up of Capacity Utilisation: Industry-Wise

| Sl. No. | Name of the Industry | Installed Capacity (Rs. in Lakhs) | Utilised Capacity (Rs. in Lakhs) | Capacity Utilisation |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 1. | Engineering and metal based | 410.62 | 367.64 | 0.90 |
| 2. | Plastic based | 85.50 | 62.05 | 0.73 |
| 3. | Chemical based | 127.76 | 99.32 | 0.78 |
| 4. | Rubber based | 490.70 | 319.14 | 0.65 |
| 5. | Paper and wood based | 96.15 | 84.81 | 0.88 |
| 6. | Miscellaneous | 17.50 | 12.75 | 0.73 |
| | Total | 1,228.23 | 945.71 | 0.77 |

Source: Survey Data.

Industry-wise capacity utilisation is the highest in engineering and metal based industrial units followed by paper and wood products. In percentage terms they are 90 and 98 respectively. It is the lowest for rubber based units. In absolute terms the actual production came to the tune of Rs.319.14 lakhs as against the installed capacity of Rs.490.70 lakhs.

## 6.4 Extent of the Market

The extent of the market is another indicator of the efficiency of the enterprises. For this purpose, the percentage of sales of output within the state and outside the state are calculated. The results are presented in table-6.4.

On the estate-wise analysis, the estates of Mayilthara, Manjeri and Kasaragode have cent per cent their sales inside the state. All other estates have sales outside the state. The estates of Kalletumkara, Ollur and Olavakode have sales outside the country. In percentage terms it amounts to 20 per cent, 18 per cent and 12.20 per cent respectively.

Table - 6.4

Break-up of Extent of Market (Percentage): Estate-Wise

| Sl. No. | Name of the estate | Within the State | Outside the State | Exports | Total |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1. | Pappanamcode | 73.00 | 27.00 | -- | 100 |
| 2. | Karunagapally | 82.16 | 17.84 | -- | 100 |
| 3. | Umayanalloor | 80.00 | 20.00 | -- | 100 |
| 4. | Kollakadavu | 75.00 | 25.00 | .. | 100 |
| 5. | Mayilthara | 100.00 | -- | -- | 100 |
| 6. | Ettumanoor | 80.00 | 20.00 | -- | 100 |
| 7. | Changanacherry | 70.00 | 30.00 | -- | 100 |
| 8. | Palluruthy | 75.00 | 25.00 | -- | 100 |
| 9. | Vazhakulam | 75.00 | 25.00 | -- | 100 |
| 10. | Kalletumkara | 55.00 | 25.00 | 20.00 | 100 |
| 11. | Ollur | 63.00 | 19.00 | 18.00 | 100 |
| 12. | Olavakode | 60.00 | 28.80 | 12.20 | 100 |
| 13. | Karakkad | 75.00 | 25.00 | -- | 100 |
| 14. | Manjeri | 100.00 | -- | -- | 100 |
| 15. | West Hill | 73.60 | 24.40 | -- | 100 |
| 16. | Palayad | 80.00 | 20.00 | -- | 100 |
| 17. | Kasaragode | 100.00 | -- | -- | 100 |
| | Total | 59.56 | 23.71 | 16.73 | 100 |

Source: Survey Data.

Table-6.5 presents the industry-wise break-up of extent of market (Percentages).

Table - 6.5

Break-up of Extent of Market: Industry-Wise

| Sl No. | Name of the Industry | Within the State | Outside the State | Exports | Total |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1. | Engineering and metal based | 70.00 | 25.80 | 4.20 | 100 |
| 2. | Plastic based | 82.14 | 17.86 | -- | 100 |
| 3. | Chemical based | 100.00 | -- | -- | 100 |
| 4. | Rubber based | 50.00 | 50.00 | -- | 100 |
| 5. | Paper and wood based | 54.80 | 43.20 | 2.00 | 100 |
| 6. | Miscellaneous | 100.00 | -- | -- | 100 |

Source: Survey Data

Industry-wise, rubber based industrial units have the highest percentage of sales outside the state. This is followed by paper and wood based units and chemical industrial units. Others have their market

limited to the state only. None of the industries except engineering and metal products industry and paper and wood products industry could export their products.

## 6.5 Industrial Efficiency of the Enterprises

The efficiency and economic viability of the industrial enterprises are measured by certain indicators. Here, the efficiency of the industrial units is evaluated on the basis of input-output ratio and the investible surplus on the fixed capital investment. The investible surplus is worked out by substracting wages from the net value added by manufacture. The net value added is the difference between output and input. The rate of investible surplus is estimated by dividing the amount of investible surplus per year by the cost of fixed capital excluding land and building. Table-6.6 and 6.7 present estate-wise and industry-wise break-up of the efficiency ratios and other indicators.

Table - 6.6
Break-up of
Input-Output Level: Estate-Wise

| Sl. No. | Name of the Estate | Input (Rs. in Lakhs) | Output (Rs. in Lakhs) | Input Output Ratio | Efficiency Coefficient |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1. | Pappanamcode | 100.20 | 120.45 | 0.83 | 1.20 |
| 2. | Karunagapally | 15.16 | 20.50 | 0.74 | 1.35 |
| 3. | Umayanalloor | 15.50 | 18.48 | 0.84 | 1.19 |
| 4. | Kollakadavu | 20.16 | 38.00 | 0.53 | 1.88 |
| 5. | Mayilthara | 0.75 | 0.80 | 0.94 | 1.07 |
| 6. | Ettumanoor | 25.80 | 31.50 | 0.82 | 1.22 |
| 7. | Changanacherry | 140.50 | 167.82 | 0.84 | 1.19 |
| 8. | Palluruthy | 30.92 | 45.40 | 0.68 | 1.47 |
| 9. | Vazhakulam | 20.00 | 28.30 | 0.71 | 1.42 |
| 10. | Kalletumkara | 10.38 | 20.96 | 0.50 | 2.02 |
| 11. | Ollur | 90.20 | 117.55 | 0.77 | 1.30 |
| 12. | Olavakode | 20.40 | 29.80 | 0.68 | 1.46 |
| 13. | Karakkad | 33.96 | 60.00 | 0.57 | 1.77 |
| 14. | Manjeri | 24.00 | 31.28 | 0.77 | 1.30 |
| 15. | West Hill | 130.48 | 148.51 | 0.88 | 1.14 |
| 16. | Palayad | 35.64 | 50.64 | 0.70 | 1.42 |
| 17. | Kasaragode | 10.84 | 15.72 | 0.69 | 1.45 |
| | Total | 724.89 | 945.71 | 0.71 | 1.30 |

Source: Survey Data.

Input-output ratio is the highest in the West Hill estate and the lowest in the Kalletumkara estate. It is comparatively high in the estates of Pappanamcode, Umayanalloor, Mayilthara, Ettumanoor and Changanacherry (compared to the aggregate average ratio). This ratio is lower in the estates of Karunagapally, Kollakadavu, Palluruthy, Vazhakulam, Olavakode, Palayad and Kasaragode compared to the total average ratio. In the estates of Ollur and Manjeri the input requirement per unit output is equal to the aggregate input-output ratio for the 17 estates. In absolute terms, it is equal to Rs.0.77 lakhs. Column No.6 (efficiency coefficient) in the table clearly indicates the same idea.

Table - 6.7

Break-up of Input-Output Level: Industry-Wise

| Sl. No. | Name of the Industry | Input (Rs. in Lakhs) | Output (Rs. in Lakhs) | Input Output Ratio | Efficiency Coefficient |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1. | Engineering and metal based | 295.78 | 371.39 | 0.80 | 1.26 |
| 2. | Plastic based | 43.92 | 62.05 | 0.71 | 1.41 |
| 3. | Chemical based | 56.99 | 99.32 | 0.57 | 1.74 |
| 4. | Rubber based | 261.44 | 319.14 | 0.82 | 1.22 |
| 5. | Paper and wood based | 59.76 | 84.81 | 0.70 | 1.42 |
| 6. | Miscellaneous | 7.00 | 9.00 | 0.78 | 1.23 |

Source: Survey Data.

Input-output ratio is the highest for rubber based industry with 0.82 input requirements per unit output. Next in order is engineering and metal based industry with 0.80, then comes miscellaneous unit with 0.78, and that is followed by plastic industry with 0.71, paper and wood based industry with 0.70 - the lowest ratio of 0.57 is indicated for the chemical industry. In terms of efficiency coefficient chemical units are the most economically efficient units and rubber based units comparatively less efficient.

Tables-6.8 and 6.9 present the manufacturing efficiency of the firms estate-wise and industry-wise.

The coefficient of net value added is the highest for Kalletumkara estate (1.019) and the lowest for West Hill estate (0.138).

Table - 6.8

Coefficient of Net Value Added: Estate-Wise

| Sl. No. | Name of the Estate | Net Value Added Coefficient |
|---|---|---|
| 1. | Pappanamcode | 0.202 |
| 2. | Karunagappally | 0.352 |
| 3. | Umayanalloor | 0.192 |
| 4. | Kollakadavu | 0.885 |
| 5. | Mayilthara | 0.067 |
| 6. | Ettumanoor | 0.221 |
| 7. | Changanacherry | 0.194 |
| 8. | Palluruthy | 0.468 |
| 9. | Vazhakulam | 0.415 |
| 10. | Kalletumkara | 1.019 |
| 11. | Ollur | 0.303 |
| 12. | Olavakode | 0.461 |
| 13. | Karakkad | 0.767 |
| 14. | Manjeri | 0.303 |
| 15. | West Hill | 0.138 |
| 16. | Palayad | 0.421 |
| 17. | Kasaragode | 0.450 |

Source: Survey Data.

Table - 6.9

Coefficient of Net Value Added: Industry-Wise

| Sl. No. | Name of the Industry | Net Value Added Coefficient |
|---|---|---|
| 1 | 2 | 3 |
| 1. | Engineering and metal based | 0.256 |
| 2. | Plastic based | 0.413 |
| 3. | Chemical based | 0.743 |
| 4. | Rubber based | 0.221 |
| 5. | Paper and wood based | 0.419 |
| 6. | Miscellaneous | 0.286 |

Source: Survey Data.

It is evident from table-6.9 that the net value added coefficient is the highest for chemical units (0.743) and the lowest for rubber based units (0.221).

Table-6.10 presents the estate-wise labour productivity coefficient.

Table - 6.10

Labour Productivity Coefficient: Estate-Wise

| Sl. No. | Name of the Estate | Net Value Added (Rs.in Lakhs) | Employment | Labour Productivity Coefficient |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 1. | Pappanamcode | 20.25 | 87 | 0.233 |
| 2. | Karunagapally | 5.34 | 33 | 0.162 |
| 3. | Umayanalloor | 2.98 | 46 | 0.065 |
| 4. | Kollakadavu | 17.84 | 124 | 0.144 |
| 5. | Mayilthara | 0.05 | 13 | 0.004 |
| 6. | Ettumanoor | 5.70 | 72 | 0.079 |
| 7. | Changanacherry | 27.32 | 108 | 0.253 |
| 8. | Palluruthy | 14.48 | 72 | 0.201 |
| 9. | Vazhakulam | 8.30 | 22 | 0.377 |
| 10. | Kalletumkara | 10.58 | 84 | 0.126 |
| 11. | Ollur | 27.35 | 143 | 0.191 |
| 12. | Olavakode | 9.40 | 55 | 0.171 |
| 13. | Karakkad | 26.04 | 129 | 0.202 |
| 14. | Manjeri | 7.28 | 32 | 0.228 |
| 15. | West Hill | 18.03 | 99 | 0.182 |
| 16. | Palayad | 15.00 | 52 | 0.288 |
| 17. | Kasaragode | 4.88 | 25 | 0.195 |
| | Total | 220.82 | 1,196 | 0.185 |

Source: Survey Data.

From the table-6.10 it can be seen that labour productivity coefficient is the highest for the Vazhakulam estate (0.377). Next comes the Palayad estate (0.288). It is lowest in the case of the Umayanalloor estate (0.065).

Table-6.11 shows the industry-wise labour productivity coefficient.

Table - 6.11

Labour Productivity Coefficient: Industry-Wise

| Sl. No. | Name of the Industry | Net Value Added (Rs.in Lakhs) | Employment | Labour Productivity Coefficient |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 1. | Engineering and metal based | 75.61 | 472 | 0.160 |
| 2. | Plastic based | 18.13 | 170 | 0.107 |
| 3. | Chemical based | 42.33 | 92 | 0.460 |
| 4. | Rubber based | 57.70 | 265 | 0.218 |
| 5. | Paper and wood based | 25.05 | 177 | 0.142 |
| 6. | Miscellaneous | 2.00 | 20 | 0.1 |

Source: Survey Data.

Table-6.11 shows that labour productivity is the highest for chemical units (0.46). Rubber based units comes next (0.218). It is the lowest for plastic units (0.107).

Table-6.12 and 6.13 present the estate-wise and industry-wise average net capital-output ratios.

Average net capital-output ratio denotes the amount of gross investment required per value unit of national income. This is the highest for the Umayanalloor estate and the Ettumanoor estate (8.31 and 3.6 respectively) and the lowest for Vazhakulam and Palayad estates (0.76 and 0.92 respectively).

Table-6.13 shows that average net capital output ratio is the highest for plastic units (2.34) and the lowest for chemical units (0.79).

Table - 6.12

Average Net-Capital Output Ratio: Estate-Wise

| Sl. No. | Name of the Estate | Net Value Added (Rs.in Lakhs) | Capital (Rs. in Lakhs) | Average Net-Capital Out-Put Ratio |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 1. | Pappanamcode | 20.25 | 37.00 | 1.83 |
| 2. | Karunagapally | 5.34 | 7.08 | 1.33 |
| 3. | Umayanalloor | 2.98 | 24.75 | 8.31 |
| 4. | Kollakadavu | 17.84 | 14.00 | 0.785 |
| 5. | Mayilthara | 0.05 | 1.00 | 20.00 |
| 6. | Ettumanoor | 5.70 | 20.50 | 3.60 |
| 7. | Changanacherry | 27.32 | 50.00 | 1.83 |
| 8. | Palluruthy | 14.48 | 24.50 | 1.69 |
| 9. | Vazhakulam | 8.30 | 6.30 | 0.76 |
| 10. | Kalletumkara | 10.58 | 10.30 | 0.97 |
| 11. | Ollur | 27.35 | 54.25 | 1.98 |
| 12. | Olavakode | 9.40 | 13.45 | 1.43 |
| 13. | Karakkad | 26.04 | 14.35 | 0.55 |
| 14. | Manjeri | 87.28 | 40.15 | 1.54 |
| 15. | West Hill | 18.03 | 32.00 | 1.77 |
| 16. | Palayad | 15.00 | 13.80 | 1.77 |
| 17. | Kasaragode | 4.88 | 8.25 | 1.69 |
| | Total | 220.82 | 371.68 | 1.68 |

Source: Survey Data.

Table - 6.13

Average Net Capital Output Ratio: Industry-Wise

| Sl. No. | Name of the Industry | Net Value Added (Rs. in Lakhs) | Capital (Rs. in Lakhs) | Average Net Capital Output Ratio |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 1. | Engineering and metal based | 75.61 | 132.88 | 1.75 |
| 2. | Plastic based | 18.13 | 42.40 | 2.34 |
| 3. | Chemical based | 42.33 | 33.65 | 0.79 |
| 4. | Rubber based | 57.70 | 116.45 | 2.02 |
| 5. | Paper and wood based | 25.05 | 45.30 | 1.8 |
| 6. | Miscellaneous | 2.00 | 3.00 | 1.50 |

Source: Survey Data.

Tables-6.14 and 6.15 present the estate-wise and industry-wise capital requirement per labour.

Table - 6.14

Capital Per Labour: Estate-Wise

| Sl. No. | Name of the Estate | Employ-ment (L) | Capital (K) (Rs.in Lakhs) | Capital Per Labour (K/L) |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 1. | Pappanamcode | 87 | 37.00 | 0.425 |
| 2. | Karunagapally | 33 | 7.08 | 0.215 |
| 3. | Umayanalloor | 46 | 24.75 | 0.538 |
| 4. | Kollakadavu | 124 | 14.00 | 0.113 |
| 5. | Mayilthara | 13 | 1.00 | 0.077 |
| 6. | Ettumanoor | 72 | 20.50 | 0.285 |
| 7. | Changanacherry | 108 | 50.00 | 0.463 |
| 8. | Palluruthy | 72 | 24.50 | 0.340 |
| 9. | Vazhakulam | 22 | 6.30 | 0.286 |
| 10. | Kalletumkara | 84 | 10.30 | 0.123 |
| 11. | Ollur | 143 | 54.25 | 0.379 |
| 12. | Olavakode | 55 | 13.45 | 0.245 |
| 13. | Karakkad | 129 | 14.35 | 0.111 |
| 14. | Manjeri | 32 | 40.15 | 1.255 |
| 15. | West Hill | 99 | 32.00 | 0.323 |
| 16. | Palayad | 52 | 13.80 | 0.265 |
| 17. | Kasaragode | 25 | 8.00 | 0.33 |

Source: Survey Data.

One of the objectives of the industrial estates programme as pointed out earlier, was creation of additional employment opportunities. Table-6.14 shows that one unit of capital produces maximum employment in the case of Manjeri estate and the lowest level of employment in the Karakkad estate. It is higher in the estates of Pappanamcode, Umayanalloor, Changanacherry, Palluruthy, Ollur, West Hill and Kasaragode, compared to the aggregate ratio for all the estates. It is lower in the estates of Karunagapally, Kollakadavu, Ettumanoor, Vazhakulam, Kalletumkara, Olavakode and Palayad than the aggregate capital requirement per labour for all the estates. In absolute terms it is equal to Rs.0.311 lakhs for employment of a person.

Table - 6.15

Capital Per Labour: Industry-Wise

| Sl. No. | Name of the Industry | Employment (L) | Capital (K) (Rs.in Lakhs) | Capital per Labour (K/L) |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 1. | Engineering and metal based | 472 | 132.88 | 0.282 |
| 2. | Plastic based | 179 | 42.40 | 0.249 |
| 3. | Chemical based | 92 | 33.65 | 0.366 |
| 4. | Rubber based | 265 | 116.45 | 0.439 |
| 5. | Paper and wood based | 177 | 45.30 | 0.256 |
| 6. | Miscellaneous | 20 | 3.00 | 0.15 |

Source: Survey Data.

Table-6.15 shows that capital requirement per labour is the highest for the rubber based industry. In this industry an investment of Rs.0.439 lakh is required for employment of a person. Chemical industry ranks second with Rs.0.366 lakh, engineering and metal industry require 0.282 lakh, paper and wood products industry Rs.0.256 lakh, plastic industry Rs.0.249 lakh for the creation of a job.

Rate of investible surplus is taken as a criterion for judging industrial efficiency. Tables 6.16 and 6.17 illustrate the rate of investible surplus, estate-wise and industry-wise.

Table-6.16 indicates that rate of investible surplus is the highest in Karakkad estate and the lowest in the Umayanalloor estate. While Karakkad estate has 147.94 per cent as rate of investible surplus, Umayanalloor estate has 1.7 per cent as rate of investible surplus. Vazhakulam estate stands second highest with 109.21 per cent as rate of investible surplus. The estates of Karunagapally, Kollakadavu, Changanacherry, Kalletumkara, Olavakode and Palayad are having higher rates of return than the total average.

Table - 6.16

Rate of Return: Estate-Wise

| Sl. No. | Name of the Estate | Investible Surplus (Rs. in Lakhs) | Fixed Capital Investment (Rs. in Lakhs) | Rate of Return (S/K) 100 |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 1. | Pappanamcode | 13.39 | 37.00 | 36.19 |
| 2. | Karunagapally | 4.04 | 7.08 | 57.06 |
| 3. | Umayanalloor | 0.42 | 24.75 | 1.70 |
| 4. | Kollakadavu | 12.81 | 14.00 | 91.05 |
| 5. | Mayilthara | 0.55 | 1.00 | -ve |
| 6. | Ettumanoor | 4.35 | 20.50 | 21.22 |
| 7. | Changanacherry | 20.12 | 50.00 | 40.24 |
| 8. | Palluruthy | 1.48 | 24.50 | 6.04 |
| 9. | Vazhakulam | 6.88 | 6.30 | 109.21 |
| 10. | Kalletumkara | 8.20 | 10.30 | 80.49 |
| 11. | Ollur | 9.18 | 54.25 | 16.92 |
| 12. | Olavakode | 6.40 | 13.45 | 47.58 |
| 13. | Karakkad | 21.23 | 14.35 | 147.94 |
| 14. | Manjeri | 5.62 | 40.15 | 14.00 |
| 15. | West Hill | 11.43 | 32.00 | 35.72 |
| 16. | Palayad | 12.63 | 13.80 | 91.52 |
| 17. | Kasaragode | 2.48 | 8.25 | 30.06 |
| | Total | 140.1 | 371.68 | 37.69 |

Source: Survey Data.

Table - 6.17

Rate of Return: Industry-Wise

| Sl. No. | Name of the Industry | Investible Surplus (Rs. in Lakhs) | Fixed Capital (Rs. in Lakhs) | Rate of Return |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 1. | Engineering and metal based | 45.57 | 132.88 | 34.29 |
| 2. | Plastic based | 6.23 | 42.40 | 14.69 |
| 3. | Chemical based | 35.89 | 33.65 | 106.66 |
| 4. | Rubber based | 39.15 | 116.45 | 33.62 |
| 5. | Paper and wood based | 12.66 | 43.30 | 29.24 |
| 6. | Miscellaneous | 0.60 | 3.00 | 20.00 |

Source: Survey Data

Table-6.17 shows that industry-wise rate of investible surplus is the highest for chemical industry. This is followed by engineering and metal based units, rubber based units, paper and wood based units, miscellaneous unit in that order. And it is the lowest for plastic based units.

Estate-wise and industry-wise share of wages in value added and in total output are presented in tables 6-18 and 6.19. These concepts are important indicators of the efficiency of the units.

## Table - 6.18

## Percentage of Wages in* Value Added and in Output: Estate-Wise

| Sl. No. | Name of the Estate | Wages (W) (Rs. in Lakhs) | Net Value Added (V) (Rs.in Lakhs) | Output (Y) (Rs. in Lakhs) | Percentage of Wages in Value Added (W/V) 100 | Percentage of Wages in Output (W/Y) 100 |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. | Pappanamcode | 6.96 | 20.25 | 120.45 | 34.37 | 5.78 |
| 2. | Karunagapally | 1.30 | 5.34 | 20.50 | 24.34 | 6.34 |
| 3. | Umayanalloor | 2.56 | 2.98 | 18.48 | 85.91 | 13.85 |
| 4. | Kollakadavu | 5.03 | 17.84 | 38.00 | 28.20 | 13.24 |
| 5. | Mayilthara | 0.60 | 0.05 | 0.80 | Negative | 75.00 |
| 6. | Ettumanoor | 1.35 | 5.70 | 31.50 | 23.68 | 4.29 |
| 7. | Changanacherry | 7.20 | 27.32 | 167.82 | 26.35 | 4.29 |
| 8. | Palluruthy | 13.00 | 14.48 | 45.40 | 89.78 | 28.63 |
| 9. | Vazhakulam | 1.42 | 8.30 | 28.30 | 17.11 | 5.02 |
| 10. | Kalletumkara | 2.29 | 10.58 | 20.96 | 21.64 | 10.93 |
| 11. | Ollur | 18.17 | 27.35 | 117.55 | 66.44 | 15.46 |
| 12. | Olavakode | 3.00 | 9.40 | 29.80 | 31.91 | 10.07 |
| 13. | Karakkad | 4.81 | 26.04 | 60.00 | 18.47 | 8.02 |
| 14. | Manjeri | 1.66 | 7.28 | 31.28 | 22.80 | 5.31 |
| 15. | West Hill | 6.60 | 18.03 | 148.51 | 36.61 | 4.44 |
| 16. | Palayad | 2.37 | 15.00 | 50.64 | 15.80 | 4.68 |
| 17. | Kasaragode | 2.40 | 4.88 | 15.72 | 46.18 | 15.27 |

Source: Survey Data.

* Net

Table - 6.19

Percentage of Wages in Net Value Added and Output: Industry-Wise

| Sl. No. | Name of the Industry | Wages (W) (Rs. in Lakhs) | Net Value Added (Rs. in Lakhs) | Output (Y) (Rs. in Lakhs) | Percentage of Wages in Net Value Added (W/V) 100 | Percentage of Wages in Output (W/Y) 100 |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. | Engineering and metal based | 30.04 | 75.61 | 371.39 | 39.73 | 8.09 |
| 2. | Plastic based | 11.90 | 18.13 | 62.05 | 65.64 | 19.18 |
| 3. | Chemical based | 6.44 | 42.33 | 99.32 | 15.21 | 6.48 |
| 4. | Rubber based | 18.55 | 57.70 | 319.14 | 32.15 | 5.81 |
| 5. | Paper and wood based | 12.39 | 25.05 | 84.81 | 49.46 | 14.61 |
| 6. | Miscellaneous | 1.04 | 2.00 | 9.00 | 52.00 | 11.56 |
| | Total | 80.72 | 220.82 | 945.71 | 36.55 | 8.54 |

Source: Survey Data

From table-6.18 it can be seen that share of wages in value added is the highest in Palluruthy estate and the lowest in Palayad estate. It is higher in the estates of Umayanalloor, Ollur, West Hill and Kasaragode than the aggregate average. Industry-wise,

this percentage is the highest for plastic based units, and it is followed by paper and wood based units, engineering and metal based units, rubber based units in that order the lowest for chemical based units.

Share of wages in total output is the highest in the Palluruthy estate. It is the lowest in the estates of Pappanamcode and Changanacherry. Industry-wise this share is the highest for plastic industry. This is followed by paper and wood based units, engineering and metal based units, chemical based units in that order and the lowest for rubber based units.

## 6.6 Capital Intensity of the Industries

The history of most of the industrial units covered under the study reveals that there was only a marginal increase in employment while there was a substantial increase in investment in machinery from the starting period to the current period. In the case of few units employment actually decreased while investment in machinery and total output increased from the starting period to the current period. The percentage

of skilled labour in total employment is found low (see table-5.15). High output-labour ratio for the units and low percentage of wages in total output are indicators of the capital intensity in output (see tables-5.23 & 6.18). The high capital-labour ratio shows the capital intensity in factor combination (see table-6.14).

# CHAPTER - VII

# PROBLEMS OF INDUSTRIAL UNITS

# CHAPTER - VII

## PROBLEMS OF INDUSTRIAL UNITS

In this chapter problems of units in industrial estates of Kerala are analysed in a detailed manner. The industrial units face several problems. The major among them relate to supply of raw materials, power, marketing, labour, finance, technical and managerial guidance and state policy. All these problems in one way or other affect the smooth working of units in the estates. During the course of the survey entrepreneurs were asked to specify the problems by major heads. An estate-wise account of problems as revealed by the entrepreneurs are presented in table-7.1.

Table - 7.1

Major Problems Faced by the Units: Estate-Wise

| Sl. No. | Name of the Estate | Marketing | | Raw Materials | | Power | | Finance | | Labour | | Technical & Managerial | | State Policy | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FP | NFP | FP | NFP | FP | NFP | FP | NFP | FP | NFP | FP | NFP | FP | NFP | |
| 1 | 2 | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 |
| 1. | Pappanamcode | 5 | 3 | 4 | 4 | 3 | 5 | 2 | 6 | 2 | 6 | 1 | 7 | - | 8 | 8 |
| 2. | Karunagapally | 3 | 1 | 1 | 3 | 1 | 3 | 1 | 3 | 1 | 3 | - | 4 | 1 | 3 | 4 |
| 3. | Umayanalloor | 3 | 2 | 2 | 3 | 2 | 3 | 1 | 4 | 1 | 4 | - | 5 | 1 | 4 | 5 |
| 4. | Kollakadavu | 4 | 3 | 3 | 4 | 3 | 4 | 2 | 5 | 1 | 6 | 1 | 6 | 1 | 6 | 7 |
| 5. | Mayilthara | - | 1 | 1 | - | - | 1 | 1 | - | - | 1 | - | 1 | - | 1 | 1 |
| 6. | Ettumanoor | 5 | - | 3 | 2 | 2 | 3 | 2 | 3 | 2 | 3 | 1 | 4 | 1 | 4 | 5 |
| 7. | Changanacherry | 8 | 1 | 4 | 5 | 3 | 6 | 3 | 6 | 2 | 7 | 3 | 6 | 4 | 5 | 9 |
| 8. | Palluruthy | 5 | - | 2 | 3 | 2 | 3 | 1 | 3 | 1 | 4 | - | 5 | - | 5 | 5 |
| 9. | Vazhakulam | 4 | - | 1 | 3 | 2 | 2 | 2 | 2 | 1 | 3 | - | 4 | - | 4 | 4 |
| 10. | Kalletumkara | 4 | 3 | 3 | 4 | 4 | 3 | 2 | 5 | 2 | 5 | 2 | 5 | - | 7 | 7 |
| 11. | Ollur | 12 | 6 | 6 | 12 | 8 | 10 | 9 | 9 | 5 | 13 | 5 | 13 | - | 18 | 18 |
| 12. | Olavakode | 4 | 2 | 2 | 4 | 2 | 4 | 1 | 5 | 1 | 5 | - | 6 | - | 6 | 6 |
| 13. | Karakkad | 5 | 2 | 3 | 4 | 2 | 5 | 2 | 5 | 2 | 5 | - | 7 | - | 7 | 7 |
| 14. | Manjeri | 6 | 1 | 2 | 5 | 3 | 4 | 2 | 5 | 1 | 6 | 2 | 5 | - | 7 | 7 |
| 15. | West Hill | 8 | 5 | 4 | 9 | 6 | 7 | 6 | 7 | 5 | 8 | 4 | 9 | - | 13 | 13 |
| 16. | Palayad | 6 | 2 | 3 | 5 | 1 | 7 | 3 | 5 | 2 | 6 | 1 | 7 | - | 8 | 8 |
| 17. | Kasaragode | 2 | 2 | 2 | 2 | 1 | 3 | 1 | 3 | 2 | 2 | - | 4 | - | 4 | 4 |
| | Total | 84 | 34 | 46 | 72 | 45 | 73 | 41 | 77 | 31 | 87 | 20 | 98 | 8 | 110 | 118 |

Source: Survey Data

Note: No. of units facing the problem (FP) and not facing the problem (NFP)

Table-7.1 gives an account of the problems faced by the units in the estates. Taking an over-view, it can be said that marketing occupies the top most place among the problems faced by the units in the estates of Kerala. Of the 118 units surveyed 84 units (71.19%) face problems relating to marketing. Next to marketing, raw materials, power and finance are vexing the entrepreneurs most. Nearly 39 per cent of the units (46 out of 118) are facing problems relating to raw materials. The percentage of units affected by problems like power and finance are 38.13 and 34.75 respectively. The number of units facing labour problems is 31 (26.27%). The number of units having problems on account of lack of managerial guidance is 20 (16.78%). The number of units affected by state policy is only 8 (6.78%).

Only 34 units (28.81%) are free from major marketing problems. There is only one estate (Mayilthara) which is free from marketing problems. All the units in Ettumanoor, Palluruthy and Vazhakulam estates are

affected by problems relating to marketing. There is no estate where the proportion of units not having some marketing problems is greater than the proportion of units facing marketing problem.

Despite 39 per cent of units facing problems relating to raw materials, on the whole, fewer units in Karunagapally, Umayanalloor, Kollakadavu, Changanacherry, Palluruthy, Vazhakulam, Kalletumkara, Ollur, Olavakode, Karakkad, Manjeri, West Hill and Palayad reported this problem. Only in the estate of Ettumanoor, the units (3 out of 5) facing the problem outnumber those without it. In the estates of Pappanamcode and Kasaragode, 50 per cent of the units face this problem. In other words 4 out of 8 units and 2 out of 4 units respectively in the two estates face this problem. The only one working unit in Mayilthara estate is also facing the problem of raw materials.

The proportion of units facing the problem of power is comparatively low in all the estates. But in the estates of Kalletumkara and Vazhakulam 4 out of 7 units (57.1%) and 2 out of 4 units (50%) respectively are facing this problem.

Though nearly 35 per cent of the units encounter problems relating to finance, in majority of the estates, the proportion of the units facing this problem is relatively negligible.

Compared with problems of marketing, raw materials, power and finance, problems relating to labour and technical and managerial guidance are of lesser magnitude. But in comparison with the problem of technical and managerial guidance, the problem of labour is of greater importance as 26.27 per cent of the units (31 out of 118) face it. The percentage of units that felt the need for adequate technical and managerial guidance is only 16.95 (20 out of 118).

Except in Mayilthara estate some units in all the estates are affected by labour problems. Five units each from Ollur and West Hill estates, 2 units each from Pappanamcode, Ettumanoor, Changancherry, Kalletumkara, Karakkad, Palayad and Kasaragode estates are among those troubled by labour issues. One unit each from other estates are worried on account of this problem.

The estates of Karunagapally, Umayanalloor, Mayilthara, Palluruthy, Vazhakulam, Olavakode, Karakkad and Kasaragode are not affected by problems relating to technical and managerial guidance. Four units each from Pappanamcode and West Hill estates, 3 units from Changanacherry estate, 2 units each from Kalletumkara and Mayilthara estates, one unit each from Kollakadavu, Ettumanoor and Palayad estates felt the need for better technical and managerial guidance.

Among all problems, the problems on account of state policy is of least magnitude since only 8 units (6.78%) spread over 5 estates of Karunagapally, Umayanalloor, Kollakadavu, Ettumanoor and Changanacherry are reported to have been suffering from adverse state policy.

Table-7.2 shows industry-wise analysis of the problems.

Of the 84 units facing marketing problem 39 units (46.43%) are engineering and metal based units. Nine (10.71%) plastic units, 7 (8.3%) chemical units, 23 (27.38%) rubber based units, 5 (5.95%) paper and

Table - 7.2

Major Problems Faced by the Units: Industry-Wise

| Sl. No. | Name of the Industry | Marketing | | Raw Materials | | Power | | Finance | | Labour | | Managerial & Technical | | State Policy | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FP | NFP | FP | NFP | FP | NFP | FP | NFP | FP | NFP | FP | NFP | FP | NFP | |
| 1 | 2 | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 |
| 1. | Engineering and metal based | 39 | 12 | 22 | 29 | 30 | 21 | 19 | 32 | 10 | 41 | 10 | 41 | - | 51 | 51 |
| 2. | Plastic based | 9 | 3 | -- | 12 | -- | 12 | 1 | 11 | 3 | 9 | 2 | 10 | - | 12 | 12 |
| 3. | Chemical based | 7 | 7 | 5 | 9 | 3 | 11 | 3 | 11 | 2 | 12 | - | 14 | - | 14 | 14 |
| 4. | Rubber based | 23 | 4 | 8 | 19 | 7 | 20 | 7 | 20 | 6 | 21 | 8 | 19 | 8 | 19 | 27 |
| 5. | Paper and wood based | 5 | 8 | 11 | 2 | 5 | 8 | 10 | 3 | 10 | 3 | - | 13 | - | 13 | 13 |
| 6. | Miscellaneous | 1 | - | - | 1 | - | 1 | 1 | - | - | 1 | - | 1 | - | 1 | 1 |
| | Total | 84 | 34 | 46 | 72 | 45 | 73 | 41 | 77 | 31 | 87 | 20 | 98 | 8 | 110 | 118 |

Source: Survey Data.

Note: No. of units facing the problem (FP) and not facing the problem (NFP)

wood products units and one (1.19%) that comes under miscellaneous unit. In other words 76.47 per cent of the engineering and metal based units, 75 per cent of plastic units, 50 per cent of chemical units, 85.1 per cent of rubber based units, 38.46 per cent of the paper and wood based units and 100 per cent of the miscellaneous unit encounter problems relating to marketing.

Excepting plastic based units and miscellaneous unit all other industrial units are facing problems relating to raw materials. Out of the 46 units facing the problem 22 (47.83%) are engineering and metal based units, 5 (10.87%) chemical units, 8 (17.39%) rubber based units and 11 (23.91%) paper and wood units. In other words 43.14 per cent the engineering and metal based units, 35.71 per cent of the chemical based units, 29.63 per cent of rubber based units and 84.62 per cent of paper and wood based units face this problem.

All industry groups excepting miscellaneous group face problems relating to power. Of the 73 units not facing this problem 21 (28.77%) are engineering and metal based units, 12 (16.44%) plastic based units,

11 (15.06%) chemical based units, 20 (27.40%) rubber based units, 8 (10.96%) paper and wood based units and 1 (1.37%) miscellaneous unit. In other words 41.18 per cent of engineering and metal based units, 21.43 per cent of chemical based units, 25.93 per cent of rubber based units, 38.46 per cent of paper and wood based units face this problem.

There are no industry groups where all units are facing the problem of finance excepting the miscellaneous group. Of the 41 units which are affected by problems relating to finance, 46.34 per cent are engineering and metal based units, 2.44 per cent plastic based units, 7.32 per cent chemical based units, 17.07 per cent rubber based units and 24.39 per cent paper and wood based units. In other words 37.25 per cent engineering and metal based units, 8.33 per cent of plastic based units, 21.43 per cent chemical based units, 25.93 per cent of rubber based units, 76.92 per cent of paper and wood based units and 100 per cent of the miscellaneous unit encounter the problem of finance.

Ten out of 51 units (19.61%) are affected by problems relating to both labour and technical and managerial guidance. The percentage of plastic based units facing the problem of labour is 25 and that of technical and managerial guidance 16.67 per cent. Of these two problems chemical based units and paper and wood based units face only the problem relating to labour. In percentage terms it is 14.29 and 76.92 respectively. Regarding rubber based units, the problem relating to technical and managerial guidance is of greater magnitude than labour problem as 8 units out of 27 (30%) felt the need for better technical and managerial guidance. But only 6 units (nearly 22.22%) reported labour problems. In contrast to all other industry groups, the miscellaneous group is free from these two problems.

The 8 units that encounter problems on account of state policy are rubber based units. Nearly 30 per cent of the rubber based units are affected by adverse state policy.

In short no estate or no industry group is free from all the problems. All estates and industry groups are affected by one or the other problem mentioned above. But it is seen that the problems relating to marketing have much impact on the growth of the units in the estates. The problems of raw materials, power and finance also have largely affected the smooth and successful working of the units in the estates.

In the next few pages the major problems are studied in detail, starting with the problem of marketing followed by problems of raw materials, power, finance and ending with other problems.

## 7.1 Marketing Problems

The main reason for incurring loss by the units at the initial period was lack of adequate market. Many entrepreneurs with technical know-how and previous experience in the technical field came forward and started units in the estates. But due to non-availability of facilities to market their products, many units incurred losses. Table-7.3 presents the major problems faced by the units in the area of marketing.

Table - 7.3

Nature of Problems Faced by Units in the Area of Marketing

| Sl. No. | Difficulty | No. of Entrepreneurs for Whom it is Difficult | Percentage |
|---|---|---|---|
| 1. | Slackness in demand | 39 | 46.43 |
| 2. | Competition | 23 | 27.38 |
| 3. | Low quality | 15 | 17.86 |
| 4. | Other problems* | 7 | 8.33 |

Source: Survey Data

*Includes high cost of production, transport bottlenecks, labour problems and credit sales.

Nearly 47 per cent (39 out of 84 units) of the units are affected by the slackness in demand. It was found that most units carry production on the basis of orders collected. So there is no question of inventory accumulation. But any slackening of order results in sudden decrease in production.

Twenty seven per cent of the units (23 out of 84) are affected by competition from other units. Most of the units are working as independent units, serving a competitive market. Nearly 18 per cent of the units

(15 out of 84) face problems of low quality of products. The low quality of the end product is often attributed either to low quality raw materials or to inadequate machinery. Other problems include high cost of production, transport bottlenecks, labour problems and credit sales. High cost of production is a general complaint. Entrepreneurs remarked that high cost of labour has adversely affected the extent of market, especially for units having market outside the state. Seven out of 84 units (8.33%) have these types of problems.

Table-7.4 illustrates the specific marketing problems of different industry groups.

Table-7.4 shows that no industry group is free from marketing problems. Altogether 34 units (28.81%) do not face problem of marketing. Of them 12 are engineering and metalic units, 3 plastic units, 7 chemical units, 4 rubber based units and 8 paper and wood based units. The respective proportion are 23.53 per cent (12 out of 51 units) 25 per cent (3 out of 12 units), 50 per cent (7 out of 14 units), 14.81 per cent (4 out of 27 units) and 61.54 per cent (8 out of 13 units). Thus compared to other industry groups paper and wood based units are in an advantageous position.

Table - 7.4

Problems of Marketing Encountered at Present: Industry-Wise

| Sl. No. | Name of the Industry | Slackness in Demand | Competition | Low Quality | Other Problems | Total |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. | Engineering and metal based | 15 | 13 | 8 | 3 | 39 |
| 2. | Plastic based | 5 | 2 | 2 | - | 9 |
| 3. | Chemical based | 4 | 2 | - | 1 | 7 |
| 4. | Rubber based | 13 | 5 | 3 | 2 | 23 |
| 5. | Paper and wood based | 2 | - | 2 | 1 | 5 |
| 6. | Miscellaneous | -- | 1 | - | - | 1 |
| | Total | 39 | 23 | 15 | 7 | 84 |

Source: Survey Data.

## 7.2 Problems of Non-Availability of Raw Materials

Availability of raw materials in time, at a reasonable rate, is an important factor which affects the smooth running of an industrial unit. Raw materials problems might be due to scarcity of raw materials or its high prices or low quality. Some times there occur transport bottlenecks or some other difficulties. It is to be examined which of these difficulties are worrying the entrepreneurs more. Table-7.5 reveals the problem of raw materials faced by the units at present.

Table - 7.5

Problems of Raw Materials Encountered at Present

| Sl. No. | Difficulty | No. of Entrepreneurs for Whom It is Difficult | Percentage |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| 1. | Scarcity | 22 | 47.83 |
| 2. | Low quality | 15 | 32.60 |
| 3. | High prices | 5 | 10.87 |
| 4. | Other problems* | 4 | 8.70 |
| | Total | 46 | 100.00 |

Source: Survey Data.

*Includes uncertain prices and transport bottlenecks.

Of the 46 units (nearly 39% of the total) indicate the difficulty of raw materials, nearly 48 per cent (22 out of 46) of the units complained of scarcity. More than 32 per cent (15 out of 46) units are worried on account of problems relating to low quality of raw materials. Of the 46 units the number of units facing problems of high prices and other difficulties are 5 and 4 respectively. In percentage terms they constitute 10.87 and 8.70.

Industry-wise analysis of problems of raw materials is shown in table-7.6.

Table - 7.6

Problems of Raw Materials Encountered at Present: Industry-Wise

| Sl. No. | Name of the Industry | Scarcity | Low Quality | High Prices | Other Difficulties | Total |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. | Engineering and metal based | 13 | 7 | 1 | 1 | 22 |
| 2. | Plastic based | -- | - | - | - | -- |
| 3. | Chemical based | 2 | - | 2 | 1 | 5 |
| 4. | Rubber based | 1 | 3 | 2 | 2 | 8 |
| 5. | Paper and wood based | 6 | 5 | - | - | 11 |
| 6. | Miscellaneous | -- | - | - | - | -- |
| | Total | 22 | 15 | 5 | 4 | 46 |

Source: Survey Data.

Of the 22 units facing the problem of scarcity of raw materials, 13 are engineering and metalic units, 2 chemical units, one rubber based unit and 6 paper and wood based units. Of the 15 units for which low quality of raw materials is a major problem, 7 are engineering and metalic units, 3 rubber based units and 5 paper and wood based units.

The problem of high prices affects one engineering and metalic unit, 2 chemical units and 2 rubber units. Of the 4 units which reported other difficulties in their smooth working, one is engineering unit, another one chemical unit and 2 rubber based units.

Of the 6 industry groups, only two groups are free from problems of raw materials. These groups are plastics and miscellaneous. All the remaining 4 groups of industries are seriously or lightly affected by problems of raw materials in one way or the other.

Table-7.7 presents the sources of raw materials of different industry groups.

Engineering and metal based industrial units mainly depend on government quota for raw materials. But government supply of raw materials from depot is limited to the supply of certain iron and mild steel items and cement only. As seen from table-7.7 the source of raw materials of most of the industrial units is outside the state. Sometimes entrepreneurs have to take delivery of the quota of raw materials at far off places and what is gained in price of raw materials is lost in transportation cost. When the requirements are not obtained through

Table - 7.7

Sources of Raw Materials

| Sl. No. | Name of the Industry | Main Raw Materials | Sources of Raw Materials |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| 1. | Engineering and metal based | Mild steel items, sheets and ankles pig iron, coke, Aluminium wire rolls | SIDECO raw materials depot, SAIL, Bangalore, Open market, Controller of Aluminium, Indian Aluminium Company. |
| 2. | Plastic based | HDP (High Density Polythene) Plastic Scraps | Bombay, Madras imported |
| 3. | Chemical based | Bakelite powder Petroleum products | Local market, Open market, IPC (Indian Petroleum Corporation) Bangalore. |
| 4. | Rubber based | Natural rubber & Synthetic rubber | Ernakulam, Kerala and Bombay. |
| 5. | Paper and wood based | Paper and wood | Kerala Forest Dept. Paper Mills, Punaloor, Mysore and Local market. |
| 6. | Miscellaneous | Sugar, Milk and Flour | Local Market. |

normal channels at controlled prices, the entrepreneurs are forced to buy raw materials in the black market at high prices.

Even the industries utilising raw materials available within the state had to purchase them at a high price. The entrepreneur of a unit producing wooden bobbins for textile mills complained that he has to purchase the required wood from the forest department at a heavy price. The entrepreneur of a paper product unit said that he found it profitable to purchase paper from the Paper Mills in Mysore than from Paper Mills in Kerala.

As Eugene Stanley and Richard Morse observed, two basic conditions make the raw materials problem more acute to the small firms in the estates in Kerala. Firstly, the business net-work of suppliers and less developed sales agencies. Secondly, the units in the estates, face chronic and heavy shortage of materials and equipments as they strain to catch up with decades of unfulfilled but even increasing wants. These circumstances tend to reinforce the inherent advantages of large firms in acquiring supplies, namely, the economies in bulk purchases, the planning and purchasing abilities of their procurement staff

and the greater political, social and financial influences which they can bring to bear on the governmental or trading net-work. All on a sudden these problems cannot be solved. Attempts to control the effects of scarcity by an elaborate system of licensing, allocations and import permits have important repercussions which increase rather than decrease the disadvantages of small units. Small units have been able to obtain only a smaller share of the raw material needs through authorised channels and have been forced to resort much more heavily to the black market at premium prices.[1]

## 7.3 Power Shortage

The entrepreneurs in the estates seriously complained about power shortage and power cuts. Its impact was found to be critical for the industry groups like engineering and metalic group and rubber based units. Engineering items and rubber products have to work continuously and any breakdown in between affects

[1] Eugene Stanley and Richard Morse, Modern Small Industry for Developing Countries, McGraw-Hill Book Co., New York, 1965, p.379.

badly the quality of products. All units in the estates depend on electric power. Table-7.8 illustrates the nature of problems connected with power supply and the number of units affected by these problems.

Table - 7.8

Problems of Power Supply Encountered at Present

| Sl. No. | Difficulty | No. of Units | Percentage |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| 1. | High cost | 15 | 33.33 |
| 2. | Scarcity | 10 | 22.22 |
| 3. | Uncertainty | 5 | 11.11 |
| 4. | Other problems | 15 | 33.33 |
| | Total | 45 | 100.00 |

Source: Survey Data.

Of the 45 units affected by the problem of power, 15 units (33.33%) have complained of high cost. Scarcity and uncertainty are other two problems faced by units with regard to power supply, 10 units (22.22%)

are affected by the former and 5 units (11.11%) from the latter. Fifteen units (33.33%) have complained of other problems. Problems connected with power supply especially power breakdowns or power-cuts are common in all the industrial estates of Kerala.

## 7.4 Problem of Finance

Compared to enterprises outside the industrial estate, the problems of finance are limited in case of enterprises inside the estate. The facility of ready-to-occupy factory sheds/plots at subsidised rent is the factor contributing for that ease. Where only developed plots are provided instead of constructed sheds, normally entrepreneurs construct sheds by raising the necessary finance from financial institutions. They require finance not only for the construction of sheds but also to meet the daily expenditure of various types. Applications from the occupants of industrial estates are given more encouragement from the financial institutions and these applications are processed with much ease and speed since the problems that may normally come up pertaining to the title of plot do not arise in case of industrial

estates. So also about the permission required from the local bodies or town planning authorities. But the entrepreneurs inspite of the advantages have their own complaints with regard to rent. The entrepreneurs feel that the economic rent charged by the estates is too high because even the subsidised rental arrears could not be cleared promptly. The terms of outright sale or hire purchase of sheds/plots are reported to be not very much favourable to the entrepreneur.

Table-7.9 shows the nature of financial problems encountered at present by the entrepreneurs in estates of Kerala.

Table-7.9 shows the magnitude of the type of financial problem faced by the units. Of the 41 units for which the problem of finance is a head-ache, 27 units (nearly 66%) are facing the problem of shortage of working capital. Since the units could save investment in land, building and other basic infrastructure, the major financial problem is concerned with working capital. Bank loans were not adequate to meet the growing needs of the units because of high input prices and credit sales. Borrowing from non-institutional agencies is very costly.

Table - 7.9

Nature of Problems of Finance Encountered at Present

| Sl. No. | Difficulty | No. of Entrepreneurs | Percentage |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| 1. | Shortage of working capital | 27 | 65.85 |
| 2. | Shortage of fixed capital | 2 | 4.88 |
| 3. | High rate of interest | 2 | 4.88 |
| 4. | Red-tape in government agencies | 1 | 2.44 |
| 5. | Meagre assistance from government agencies | 1 | 2.44 |
| 6. | Other difficulties* | 8 | 19.51 |
| | Total | 41 | 100.00 |

Source: Survey Data.

*Includes credit sales, delayed settlement of accounts, etc.

The shortage of working capital was stated to be severe during the initial period as many units were running at loss at that time. Only after some period such units could earn internal reinvestible surplus. It is

found that the financial position of most of the old units has improved considerably. Special attention with regard to financial assistance is needed for certain new units.

Two units each face problems of shortage of fixed capital and high rate of interest. One unit each has complained of red-tape on government agencies and meagre assistance from government agencies. Next in importance to the problem of shortage of working capital is other difficulties. It includes difficulties in connection with credit sales and delay in the settlement of accounts. There are 8 units which face these problems. In percentage terms it comes to 19.51. Thus table-7.9 throws light to the fact that the acute financial problems faced by the units are shortage of working capital and other difficulties like credit sales and delay in settlement of accounts. All other problems are lesser in magnitude since these affect altogether only 14.63 per cent of the units (6 out of 41).

Table-7.10 shows industry-wise analysis of problems of finance encountered at present.

Table - 7.10

Problems of Finance Encountered at Present: Industry-Wise

| Sl. No. | Name of the Industry | Shortage of Working Capital | Shortage of Fixed Capital | High Rate of Interest | Red-tape in Govt. Agencies | Meagre Assistance from Govt. | Other Difficulties | Total |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1. | Engineering and metal based | 13 | - | - | 1 | 1 | 4 | 19 |
| 2. | Plastic based | 1 | - | - | - | - | - | 1 |
| 3. | Chemical based | 3 | - | - | - | - | - | 3 |
| 4. | Rubber based | 3 | - | - | - | - | 4 | 7 |
| 5. | Paper and wood based | 6 | 2 | 2 | - | - | - | 10 |
| 6. | Miscellaneous | 1 | - | - | - | - | - | 1 |
| | Total | 27 | 2 | 2 | 1 | 1 | 8 | 41 |

Source: Survey Data

No industry group is free from financial problems. All industry groups are affected by one or the other type of financial problems. To all industry groups the problem of shortage of working capital is causing many inconveniences. Usually the financial problems are largely confined to the problem of working capital shortage and this problem is almost

universal. Of the 27 units having the problem of shortage of working capital 13 are engineering and metal based units (48.15%) and 6 paper and wood product units (22.22%). Comparing with other groups of industries, the engineering and metal based units and paper and wood product units are acutely affected by the problem of shortage of working capital. Three units each are affected with this problem in chemical and rubber based industry groups. Plastics and miscellaneous groups are least affected with the problem of working capital shortage as only one unit each in these two industry groups are adversely affected with the problem.

All industry groups excepting paper and wood products are free from problems of shortage of fixed capital and high rate of interest. Two units are affected with the problem of fixed capital shortage and another two units with the problem of high rate of interest. Only engineering and metal based units have complained of red-tape in government agencies and meagre assistance from government. Of the 19 engineering and metal based units only one unit each has complained of these problems. Other difficulties like credit sales and delay in the settlement

of accounts are faced only by two industry groups. They are engineeri ıg and metal based and rubber based industrial groups. Both in these groups 4 units each are affected by these difficulties. In percentage terms it is 21.05 (4 out of 19 units) and 57.14 (4 out of 7 units) respectively.

## 7.5 Seed Capital Requirements

Seed capital is the venture or risk capital required for the establishment of the enterprise initially. Income from trade and agriculture are the two important sources of initial capital. Table-7.11 shows the major sources of seed capital.

Table - 7.11

The Major Sources of Seed Capital

| Sl. No. | Major Sources | No. of Units | Percentage |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| 1. | Income from trade | 38 | 33.63 |
| 2. | Income from agriculture | 32 | 28.32 |
| 3. | Borrowings from friends and relatives | 18 | 15.93 |
| 4. | Savings from salary | 15 | 13.27 |
| 5. | Other sources | 10 | 8.85 |
| | Total | 113 | 100.00 |

Source: Survey Data.

For 38 units (33.63%) the major source of seed capital is income from trade. Of the 113 units, 32 (28.32%) acquired the initial capital from agriculture. Eighteen units (nearly 16%) got the needed sum from borrowings from friends and relatives and another 15 units (13.27%) from savings from salary. Other sources like borrowings from wife, sale proceeds of agricultural land, etc. are used by owners of 10 units (nearly 9%) for raising the initial capital.

Raising adequate initial capital is a major problem for entrepreneurs especially for the educated, unemployed youth. Many of the graduates and diploma certificate holders raise finance from borrowings from friends and relatives and from other sources. The rigid attitudes of parents and other important family members very often create difficulties of many types to the entrepreneurs in getting finance for starting units in the estates. In these circumstances they are forced to depend on institutional finance. They use these finances either to meet the requirement of constructing factory sheds or acquisition of machinery or both. Mostly the term of

loan ranged from 5 to 10 years. Thinking about the economies of borrowing many entrepreneurs started to take loans from financial institutions. But later fed up with high interest rates many of them changed their attitudes. At this juncture they have decided to take loans from the unorganised sector.

Of the 118 units, 74 units (62.71%) depend on nationalised and non-nationalised banks for working capital. Only 44 units (37.29%) use own finance.

Table-7.12 gives an idea of the various financial institutions which render financial help to the small entrepreneurs in the estates of Kerala.

It is clear from table-7.12 that a large number of entrepreneurs try to solve their problems of shortage of working capital with the help of nationalised banks. In concrete terms 54 units (nearly 73%) are using such help from these banks. Ten units use commercial banks in the private sector. In percentage terms it constitute 13.51. Another 10 units use financial help from other sources. One unit engaged in engineering and metalic industry in Pappanamcode estate depends on Punjab Bank to meet its need for working capital. Another unit engaged in tyre resoling in Kasaragode estate depends on Karnataka

Table - 7.12

Financial Institutions Providing Finance to the Units

| Sl. No. | Name of Financial Institution | No. of Units | Percentage |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| 1. | State Bank of Travancore | 24 | 32.43 |
| 2. | State Bank of India | 11 | 14.86 |
| 3. | Canara Bank | 7 | 9.46 |
| 4. | Syndicate Bank | 5 | 6.76 |
| 5. | Union Bank | 3 | 4.05 |
| 6. | Indian Bank | 3 | 4.05 |
| 7. | Indian Overseas Bank | 1 | 1.35 |
| 8. | Punjab Bank | 1 | 1.35 |
| 9. | Karnataka Bank | 1 | 1.35 |
| 10. | Kerala Financial Corporation | 5 | 6.75 |
| 11. | Co-operative | 3 | 4.05 |
| 12. | Catholic Syrian Bank | 8 | 10.81 |
| 13. | South Indian Bank | 1 | 1.35 |
| 14. | Nedungadi Bank | 1 | 1.35 |
| | Total | 74 | 100.00 |

Source: Survey Data.

Bank to meet its working capital. Kerala Financial Corporation helps 5 units (6.76%) and co-operative sector helps 3 units (4.05%). Of the 3 banks purely in the private sector, Catholic Syrian Bank is providing finance towards working capital to more number of units. Of the total 10 units depending on private banks 8 units (80%) are receiving help from Catholic Syrian Bank.

Table-7.13 reveals the proportion of working capital raised from commercial banks.

Table - 7.13
Proportion of Working Capital Raised from Financial Institutions

| Proportion (Per Cent) | No. of Units | Percentage |
|---|---|---|
| 1 | 2 | 3 |
| Nil | 44 | 37.20 |
| Upto 50 | 15 | 12.71 |
| 50 - 75 | 48 | 40.68 |
| 75 - 90 | 8 | 6.78 |
| 90 - 100 | 3 | 2.54 |
| Total | 118 | 100.00 |

Source: Survey Data.

Of the 74 units using bank finance, the number of units drawing more than 50 per cent of their needed working capital from banking institutions is 59. In percentage terms it comes to 50. Fifteen units (12.71%) limited their borrowing to 50 per cent of their needs.

Most of the entrepreneurs in the estates of Kerala mix the finances of their enterprises with that of their families. This problem is severe and serious with that type of entrepreneurs who have to make a living out of the earnings of their enterprises. Of the total 118 units under study, 109 units were asked the question of whether they mainly depend upon the units for their income. Of the 109 units, 55 units (50.45%) make a living out of the earnings of their enterprises. It implies that nearly half of the total entrepreneurs depend upon the income generated from the estates for their families. The number of units ploughing back the whole profit is very few. Of the total 95 units making profit only 20 units (21.05%) ploughed back the profit to meet their various family

needs. This tendency of the entrepreneurs to mix up the finances of the enterprises with that of the family aggravates the problem.

## 7.6 Other Problems

### 1 Labour

Nearly one fourth of the units under study complained of labour problem as is shown in table-7.14. Want of skilled labour, uionisation, turnover, absenteeism, etc. are the important labour problems which are encountered by the units in the estates of Kerala. Table-7.14 shows the important problems of labour encountered at present.

Table - 7.14

Problems of Labour Encountered at Present

| Sl. No. | Difficulty | No. of Entrepreneurs | Percentage |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| 1. | Want of skilled labour | 11 | 35.48 |
| 2. | Unionisation | 9 | 29.03 |
| 3. | Turnover | 8 | 25.82 |
| 4. | Absenteeism | 3 | 9.67 |
| | Total | 31 | 100.00 |

Source: Survey Data.

Of the 31 units which are suffering from various labour problems 11 units (35.4%) are mainly suffering from the problem of want of skilled labour. Of the remaining 20 units, 9 units (29.03%) are affected by unionisation, 8 units (25.81%) by high labour turnover and 3 units (9.67%) by absenteeism. Certain units secured the services of skilled labour from distant places like Madras and Bombay. In such cases the units had to suffer very high wages. Not only that, the continued stay of such labourers is not assured. This aggravates the situation. Due to unionisation, the units very often offer when they load and unload raw materials and finished products. Very often the labourers organised under various unions bargained high wages even without considering the financial viability of the units they are working in. Labour turnover was due to the concern for higher wages. Sometimes labourers do not turn up for work without giving any advance notice to the employer. The units facing the problem of absenteeism are very few. Such units are only 3.

2. Technical and Managerial Guidance

The need for better technical and managerial guidance is felt by 20 units (nearly 17%). Some of the entrepreneurs had already attended some short duration management development programmes. Of the total 20 units having this complaint, 11 entrepreneurs wanted to take part in the management development programmes but they could not do so mainly because these programmes are very expensive. Another 5 units felt it to be inconvenient to attend the course and the remaining 4 units felt the programme as useless.

3. State Policy

Altogether 8 units (nearly 7%) felt the need for favourable state policy. All these units are engaged in rubber based units. Four units in Changanacherry estate and one unit each in the estates of Karunagapally, Umayanalloor, Kollakadavu and Ettumanoor have felt it. Their demand is that the government should take a sympathetic attitude towards the small units in

the estates. They complained that the government followed irrational norms in fixing rent for various types of sheds and very often the rent charged is very excessive. They demanded the provision of sales tax concession and effective preferential treatment in respect of purchase by government and other public institutions.

# CHAPTER - VIII

# C O N C L U S I O N

# CHAPTER - VIII

# C O N C L U S I O N

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:

| | Large Estates | Medium Estates | Small Estates |
|---|---|---|---|
| 1. Under factory plots | 55% | 50% | 40% |
| 2. Under roads and open spaces | 35% | 35% | 40% |
| 3. Under administrative and amenity buildings | 10% | 15% | 20% |

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 Changancherry

* 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 procurred 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

| Sl. No. | Name of the Estate | Efficiency Co-efficient | Net Value Added Co-efficient | Labour Productivity Co-efficient | Capital Labour Ratio | Capital Productivity Co-efficient | Average Net Capital Output Ratio | Rate of Return | Percentage of Wages in Output | Percentage of Wages in Value Added |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 1. | Pappanamcode | 1.20 | 0.202 | 0.233 | 0.425 | 0.547 | 1.83 | 36.19 | 5.78 | 34.37 |
| 2. | Karunagapally | 1.35 | 0.352 | 0.162 | 0.215 | 0.754 | 1.33 | 57.06 | 6.34 | 24.34 |
| 3. | Umayanalloor | 1.19 | 0.192 | 0.065 | 0.538 | 0.120 | 8.31 | 1.70 | 13.85 | 85.91 |
| 4. | Kollakadavu | 1.88 | 0.885 | 0.144 | 0.113 | 1.274 | 0.785 | 91.50 | 13.24 | 28.20 |
| 5. | Mayilthara | 1.07 | 0.067 | 0.004 | 0.077 | 0.05 | 20.00 | -ve | 75.00 | -ve |
| 6. | Ettumanoor | 1.22 | 0.221 | 0.079 | 0.285 | 0.278 | 3.60 | 21.22 | 4.29 | 23.68 |
| 7. | Changanacherry | 1.19 | 0.194 | 0.253 | 0.463 | 0.546 | 1.83 | 40.24 | 4.29 | 26.35 |
| 8. | Palluruthy | 1.47 | 0.468 | 0.201 | 0.340 | 0.591 | 1.69 | 6.04 | 28.63 | 89.78 |
| 9. | Vazhakulam | 1.42 | 0.415 | 0.377 | 0.286 | 1.317 | 0.76 | 109.21 | 5.02 | 17.11 |
| 10. | Kalletumkara | 2.02 | 1.019 | 0.126 | 0.123 | 1.027 | 0.97 | 80.47 | 10.93 | 21.64 |
| 11. | Ollur | 1.30 | 0.303 | 0.191 | 0.379 | 0.504 | 1.98 | 16.92 | 15.46 | 66.44 |
| 12. | Olavakode | 1.46 | 0.461 | 0.171 | 0.245 | 0.699 | 1.43 | 47.58 | 10.07 | 31.91 |
| 13. | Karakkad | 1.77 | 0.767 | 0.202 | 0.111 | 1.815 | 0.55 | 147.94 | 8.02 | 18.47 |
| 14. | Manjeri | 1.30 | 0.303 | 0.228 | 1.255 | 0.181 | 1.54 | 14.00 | 5.31 | 22.80 |
| 15. | West Hill | 1.14 | 0.138 | 0.182 | 0.323 | 0.563 | 1.77 | 35.72 | 4.44 | 36.61 |
| 16. | Palayad | 1.42 | 0.421 | 0.288 | 0.265 | 1.087 | 0.92 | 91.52 | 4.68 | 15.80 |
| 17. | Kasaragode | 1.45 | 0.450 | 0.195 | 0.33 | 0.592 | 1.69 | 30.06 | 15.27 | 16.18 |

Source: Survey Data

Table - 8.2

Efficiency Indicators - Industry-Wise

| Sl. No. | Name of the Industry | Efficiency Co-efficient | Net Value Added Co-efficient | Labour Productivity Co-efficient | Capital Labour Ratio | Capital Productivity Co-efficient | Average Net Capital Output Ratio | Rate of Return | Percentage of Wages in Output | Percentage of Wages in Value Added |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 1. | Engineering and metal based | 1.26 | 0.256 | 0.160 | 0.282 | 0.569 | 1.75 | 34.29 | 8.09 | 39.73 |
| 2. | Plastic based | 1.41 | 0.413 | 0.107 | 0.249 | 0.428 | 2.34 | 14.69 | 19.19 | 65.64 |
| 3. | Chemical based | 1.74 | 0.743 | 0.460 | 0.366 | 1.258 | 0.79 | 106.66 | 6.48 | 15.21 |
| 4. | Rubber based | 1.22 | 0.221 | 0.218 | 0.439 | 0.495 | 2.02 | 33.62 | 5.81 | 32.15 |
| 5. | Paper and wood based | 1.42 | 0.419 | 0.142 | 0.256 | 0.653 | 1.81 | 29.24 | 14.61 | 49.46 |
| 6. | Miscellaneous | 1.23 | 0.286 | 0.1 | 0.15 | 0.666 | 1.5 | 20.00 | 11.56 | 52.00 |

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.

APPENDIX - I

# INDUSTRIAL ESTATES IN KERALA

## SCHEDULE OF QUESTIONS

1. Name of the estate :

2. Name and address of the unit :

3. Form of organisation : Single/Partnership/Private Limited/ Co-operative

4. Details of the Proprietor:

| Name | Age | Educational Status | Any Training | Previous Job | Job of Family | Why Started | Any Other |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

5. Is the unit working as an ancillary to any other units:

6. a) Date of establishment:

| Date of Application | Project Report Agency | Your Opinion on the Report | Date of Allotment of Plot/ Shed | Date of Starting Production |
|---|---|---|---|---|
| | | | | |

7. Difficulties in starting the unit with regard to:

| Sponsoring Agency | Finance | Raw Materials | Other Facilities | Marketing | Others |
|---|---|---|---|---|---|
| | | | | | |

8. Total investment: Fixed Capital Working Capital Total

9.

| Proprietor's Contribution | Loans from Banks | Govt. Agencies & Industries Department | Financial Intermediaries | Relatives & Others |
|---|---|---|---|---|
| | | | | |

10. Profit or loss during the initial period:

Reasons for loss if any:

11. Details regarding plot and building:

| Owned/ Rented | Rent per Annum | Area of Plot | Area of Shed | Adequate for Expansion |
|---|---|---|---|---|
| | | | | |

12. Number of shifts: Working hours of each shift:

13. Products manufactured:

14. Raw materials: Items Sources

15.

| Annual installed capacity on single shift basis | | Actually utilised capacity Initial period | Current Period |
|---|---|---|---|
| Items | Quantity | Items | Quantity |

16. Reasons for underutilisation of capacity:

Lack of demand/shortage of power, finance, raw materials, skilled labour/marketing problems/any others:

17. The measures to increase capacity utilisation:

18. Employment and Wages:

| No. of Skilled | Unskilled | Administrative | Total | Employees from Local Region | Annual Wages |
|---|---|---|---|---|---|
| | | | | | |

19. No. of working days:

Any overtime: If so, number of days:

20. Is there employees union?

Adversely affecting production?

Revision of wages?

21. The extent of the market: Local/State/National/
Exported

Percentage of each:

22. Difficulties in marketing: Competition/Lack of demand/
Quality/Transportation/
Any other:

23. Is there group-effort among the units in the estate in purchase of raw materials/marketing:

24. Who looks after (1) the technical management:

(2) the financial management:

Any improvement needed?

25. Are the existing machinery adequate?

26. Details of assistance by Government Agencies:

| Raw Materials | Technical Advice | Training | Finance | Marketing | Any Other |
|---|---|---|---|---|---|
| | | | | | |

27. Problems of the unit:

1. Marketing

(a) Slackness in demand
(b) Competition
(c) Low quality
(d) Other problems

2. Raw Materials

   (a) Scarcity
   (b) Low quality
   (c) High prices
   (d) Other problems

3. Power

   (a) High cost
   (b) Scarcity
   (c) Uncertainty
   (d) Other problems

4. Finance

   (a) Shortage of working capital
   (b) Shortage of fixed capital
   (c) High rate of interest
   (d) Red-tape in government agencies
   (e) Meagre assistance from government agencies
   (f) Other difficulties

5. Labour

   (a) Want of skilled labour
   (b) Unionisation
   (c) Turnover
   (d) Absenteeism

6. Technical & Managerial Guidance:

7. State Policy

28. Is the unit working at profit/loss:

29. Is the location of the industrial estate well-chosen?

30. Do you think that being situated in the Estate is advantage us to the unit?

31. What are the expansion programmes for the coming year?

(a) Production capacity
(b) Diversification of production:
(c) Machinery/Employment:

****

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