

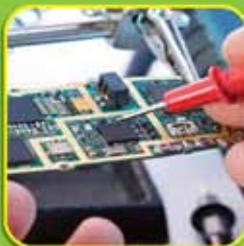
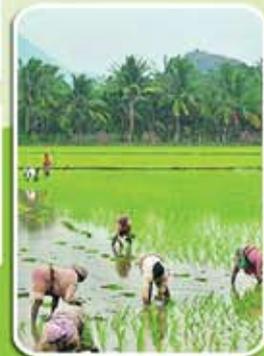


Government of Kerala

INDUSTRIAL POTENTIAL SURVEY REPORT



PALAKKAD DISTRICT 2014



.....
Department of Industries & Commerce
District Industries Centre
Palakkad
.....



Government of Kerala

INDUSTRIAL POTENTIAL SURVEY REPORT
PALAKKAD DISTRICT
2014

District Industries Centre
Palakkad
March 2015



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KERALA
Date : 31-03-2015



Message

I am extremely happy to know that the District Industries Centre, Palakkad is coming out with a publication "Industrial Potential Survey Report 2014" of Palakkad District. MSME is the most vibrant sector in Kerala. Besides Palakkad District is the most potential district for industrial growth in the State. The survey has focused on availability of resources, infrastructure and sectors with high potential for growth. I am sure this will be immensely useful to the general public, administration, and the small scale industrialists in particular. I congratulate Shri. Krishna Kumar, General Manager, Shri. Shibu Kumar, Manager and all the team members for undertaking such an endeavour.

P.M FRANCIS



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Message

The Micro Small and Medium Enterprises sector contributes significantly to manufacturing output, employment and export of the State. The manufacturing enterprise sector contributes 8% of GDP of the State. The growing service sector also influence the overall economy of the nation. Hence MSME sector plays a vital role in development of economy.

It is matter of great pleasure that, the DIC Palakkad has conducted a study on industrial potential and prepared a report. This report analyses the problems and challenges faced in enterprise sector and highlights the prospects and possibilities for development.

India's Make in India policy and the proposed Cochin - Coimbatore Corridor, Integral Coach Factory etc are the adding opportunities for tapping the potential of the district. Various self-employment schemes and entrepreneurial support policies of government will definitely attract the investors and pave the way to increase the economic growth of this agrarian district.

I would like to place on record a special word of appreciation for the effort taken by DIC for bringing out this analytical report. I hope this will be beneficial to industrialists, planners and academicians to fulfil the vision of transforming Palakkad in to a major hub of enterprises.

P. MARYKUTTY IAS
DISTRICT COLLECTOR

Foreword

The development of a nation mainly depends upon the industrial growth and thus Micro, Small and Medium level enterprises play a great role not only in investing a large sum of money but also in providing employment. This report on Industrial potential survey in Palakkad district is prepared with an aim to analyse the industrial scenario of the district on par with the availability of resources and infrastructure and thus to identify potential industrial sectors prominent for rapid industrialisation based on the consumer taste and demand of the people. Efforts have also been made to point out the weaknesses in infrastructural facilities and to study the problems faced by the entrepreneurs in MSME sector. Some suggestions gathered from the prominent industrialists and promoters are also summarised in this report.

The geographical nature and abundance of agricultural products in Palakkad are immensely helpful for setting up of a large number of manufacturing units in MSME sector. The government objective of achieving balanced regional development, encouraging new and prospective entrepreneurs, optimum utilisation of scarce resources, making use of highly sophisticated technology and exploiting local skills etc have been kept in mind while preparing this report. The role of other govt agencies involved in industrial promotion in the district and the industrial growth achieved through them are also considered in this report.

A team of officers in the District and Taluks, under the supervision of Sri. D.S. Shibukumar, Manager (Economic Investigation), have undertaken this task and have been meticulous in completing the job. I thank all Assistant District Industries Officers and Industrial Extension Officers in all Taluks and officers in DIC who have contributed with valuable data, analytical contents and other supports. I also express my sincere thanks to KSDIC, KINFRA, SIDCO, Lead Bank, Census department, and other district level offices in Palakkad for providing data for the preparation of this publication.

I hope the study, which provides useful information on the assessment, problems and shortcomings in the process of implementation of industrial promotion activities, would be extremely useful to the planners and policy makers to take suitable corrective actions to ensure prompt development of industry in the district.

Palakkad,
16th March 2015.

K.N. Krishnakumar
General Manager DIC

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Chapter 1

INTRODUCTION

1.1 MSME sector: the backbone of economy

Today, in the domestic and International arena Micro and Small Enterprises (MSEs) have been regarded as the engine of economic growth and development. MSEs are constituting nearly about 90% of the total enterprises in most of the economies (especially in developing economies) which creates marvelous employment opportunities and is accounting major share of exports and industrial production.

In India, MSE is generally referred to as MSME i.e. Micro, Small and Medium Enterprises. It is well known that the MSMEs play a significant role in nation development through high contribution to Domestic Production, Significant Export Earnings, Low investment Requirements, Operational Flexibility, Location Wise Mobility, Low Intensive Imports, Capacities to Develop Appropriate Indigenous Technology, Import Substitution, Contribution towards Defence Production, Technology – Oriented Industries, Competitiveness in Domestic and Export Markets thereby generating new entrepreneurs by providing knowledge and training.

India accorded high priority to MSMEs from the very beginning and pursued support policies to make these enterprises viable, vibrant and over time, these have become major contributors to the GDP. As per data released by the Ministry of MSME, Govt. of India, at present, there are about 26.1 million enterprises in this sector. The sector has a share of 45 percent in the manufactured output and 8% in the GDP. MSMEs contributed close to 40 percent of all exports from the country and employed nearly 59.7 million people, which is next only to agricultural sector.

Though the MSME sector has weathered and overcome stiff competition in the post liberalization period thanks to their high enthusiasm and inherent capabilities to grow, MSMEs in India are also facing a number of problems like sub-optimal scale of operation, technological obsolescence, supply chain inefficiencies, increasing domestic and global competition, fund shortages, change in manufacturing strategies and turbulent and uncertain market scenario. To survive with such issues and compete with large and global enterprises, MSMEs need to adopt innovative approaches in their operations. MSMEs that are innovative, inventive, international in their business outlook, have a strong technological base, competitive spirit and a willingness to restructure themselves can withstand the present challenges and come out successfully to contribute 22% to GDP.

MSMEs produce an amazing variety and type of products. Over 7500 products are known to be manufactured in this sector. Even in a particular product, there would exist a wide range of qualities or specifications catering to different market segments, particularly in consumer/household products. MSMEs have emerged as major suppliers of mass consumption items like

- leather and leather goods
- plastic and rubber goods
- ready-made garments
- hosiery goods, sheet metal goods
- stationery items - soap and detergents
- domestic utensils
- toothpaste and toothpowder
- safety matches
- preserved foods and vegetables
- wooden and steel furniture
- paints and varnishes etc.

There are about twenty-one major industry groups in the MSME sector. They are the following

- Food Products
- Chemical & Chemical Products
- Basic Metal Industries
- Metal Products
- Electrical Machinery & Parts
- Rubber & Plastic Products
- Machinery & Parts Except Electrical goods
- Hosiery & Garments - Wood Products
- Non-metallic Mineral Products
- Paper Products & Printing
- Transport Equipments & Parts
- Leather & Leather Products
- Miscellaneous Manufacturing Industries
- Other Services & Products
- Beverages, Tobacco & Tobacco Products
- Repair Services
- Cotton Textiles
- Wool, Silk, Synthetic Fibre Textiles
- Jute, Hemp and Mesta Textiles
- Other Services

The present policy of encouraging growth of MSMEs is based on several promotional measures - one of these is reservation of products for exclusive manufacture in the MSE sector, in areas where there is techno-economic justification for such an approach. Large/Medium units can, however, manufacture such reserved items, provided they undertake to export 50% or more of their production.

The list of items reserved exclusive manufacturing in micro and small sector are the following:

Food and allied industries

- Pickles and chutneys
- Bread
- Mustard oil (except solvent extracted)
- Ground nut oil (except solvent extracted)

Wood and wood products

- Wooden furniture and fixtures

Paper products

- Exercise books and registers

Other chemical and chemical products

- Wax candles
- Luxury soaps
- Safety matches
- Fire works
- Agarbathis

Glasses and ceramics

- Glass bangles

Mechanical engineering excluding transport equipments

- Steel almirah
- Rolling shutters
- Steel chains- all types
- Steel furniture- all types
- Pad locks
- Stainless steel utensils
- Domestic utensils- aluminium

1.2 MSMED Act

The Micro Small Medium Enterprises Development (MSMED) Act has come into force with effect from the 2nd October 2006 by an extra ordinary Gazette notification of Govt of India from the Ministry of Law and Justice. As per this Act, the MSMEs are categorised according to investment in plant, machinery and equipments in enterprises in the following manner.

In accordance with the provision of Micro, Small & Medium Enterprises Development (MSMED) Act, 2006 the Micro, Small and Medium Enterprises (MSME) are classified in two Classes:

(a) **Manufacturing Enterprises:** The enterprises engaged in the manufacture or production of goods pertaining to any industry specified in the first schedule to the industries (Development and regulation) Act, 1951) or employing plant and machinery in the process of value addition to the final product having a distinct name or character or use. The Manufacturing Enterprises are defined in terms of investment in Plant & Machinery.

(b) **Service Enterprises:** The enterprises engaged in providing or rendering of services and are defined in terms of investment in equipment.

The limit for investment in plant and machinery / equipment for manufacturing / service enterprises is classified in the following manner.

Category of enterprises	Manufacturing enterprises	Service enterprises
Micro	Up to 25 lakhs	Up to 10 lakhs
Small	Above 25 lakhs and up to 5 crores	Above 10 lakhs and up to 2 crores
Medium	Above 5 crores and up to 10 crores	Above 2 crores and up to 5 crores

The MSMED Act seeks to facilitate the development of MSMEs as also to enhance their competitiveness. It provides a legal framework for recognition of the concept of enterprise which comprises both manufacturing and service entities. It defines the medium enterprises for the first time and seeks to integrate the three tiers of these enterprises. This Act provides for a statutory consultations mechanism at the national level with balanced representation of all sections of stakeholders, particularly the three classes of enterprises.

1.3 MSMEs in Kerala

The MSME sector in the State is heavily weighted towards the micro enterprises. The State accounts 22.13 lakh numbers of enterprises both in registered and unregistered segments in MSME sector and this contribute an employment of 49.62 lakh numbers. While total number of registered and working MSMEs in the State is 1.95 lakhs with a total investment of Rs.8925 crores and employment generation to the tune of 9.42 lakhs. The registered manufacturing sector accounts 3.5% share of the total GDP of the State and the unregistered manufacturing sector accounts 4.3% share.

1.4 MSMEs in Palakkad District

MSME sector contributes significantly to employment generation and development of local economy, and is a key driver for transition from an agrarian economy to an industrialized economy. MSMEs also contribute to improve the entrepreneurial skills and economic empowerment. MSMEs accounts for a larger share of industrial units which can be seen from the fact that in the year 2013-14, the total number of enterprises in MSME sector in the district (identified or registered only) was 1831 numbers with total employment of 6718 numbers. The number of enterprises and employment has increased at an annual compound growth rate of 24% and 11% respectively. MSMEs contribution to rural development can be observed from the fact that 3471 numbers of the working enterprises are located in urban areas, which accounts for about 20% of the total working enterprises in MSME sector. The remaining 80% of enterprises are located in rural areas. This sector currently produces a large number of quality products ranging from handicrafts to machine parts targeting both domestic and international markets.

1.5 Potential Survey 2014

The Industrial Potential Survey in Palakkad district was carried out with the following objectives

1. To assess the availability of resources in the district
2. To evaluate the infrastructure facilities in the district
3. To analyse the existing industrial status in the district
4. To identify emerging sectors in the district and to suggest profiles of potential industries

For the preparation of this report, secondary data on resources and infrastructure was collected from various departments in the district and some at State level. The primary data related to industries are collected and compiled from the field through the industrial extension officers in the district. Apart from these, the data available in the district, such as

statistics on MSME census and acknowledgment issued under IEM filing are also considered for the assessment.

This report of potential survey and its findings are summarised in to several chapters. The general characteristics of the district are explained in Chapter 2. Chapter 3 describes the resources available in Palakkad district which are essential for industrial development.

In chapter 4, various existing infrastructures such as transport, communication and banking facilities, availability and utilization of industrial land etc are summarised. A review of the existing industrial scenario in the district as a whole and Taluk level and sector wise analysis are done in chapter 5.

In chapter 6, Taluk wise strength, weakness, opportunities and threats (SWOT) are analysed. Sector wise problems and challenges faced by MSME units are explained sector wise in chapter 7. This report concludes with a look forward in to the possible future of industrial growth in the district over the coming years. Prospects and possibilities for industrial development and remedial measures suggested for revival of industrial units are mentioned in chapter 8.

Chapter 9 provides a set of project profiles of some of the candidate industries for investment in the emerging sectors in the district. Block wise sector wise statistical tables showing the number of enterprises along with investment and employment generated for the last five years in Palakkad district are also annexed at the end of this report.

Chapter 2

GENERAL CHARACTERISTICS OF THE DISTRICT

2.1 District at a glance

Date of formation	1 st January 1957
Latitude	between 10° 21' and 11° 14' North latitude
Longitude	between 76° 02' and 76° 54' East longitude
Geographical Area	4475.94 sq km
Demography	
Total population (2011 census)	2809934
Male	1359478
Female	1450456
Sex Ratio (female per 1000 males)	1067
Population Density	628 per sq km
Decadal Growth Rate	7.35% (from 2001 census)
Child population (0-6years)	302297
Per Capita income (2012-13 at Constant prices)	Rs.58506
Total literacy rate (2011)	89.31
Male literacy rate	93.10
Female literacy rate	85.79
Administrative setup	
Taluks	6
Villages	163
Grama Panchyats	91
Block Panchyats	13
Corporation	Nil
Municipalities	4
District Panchyat	1
Lok Sabha seats	2
Niyamasabha seats	12
Educational districts	2
Agricultural scenario	
Total cropped area	291194 hect

Major agricultural crops	Paddy, tapioca, banana, plantain, coconut, arecanut, cashew, pepper, vegetables, tubers
Land put to non agriculture uses	43690 hect
Forest cover	152735 hect
Gross irrigated area	
Net irrigated area (2012-13)	85029 hect
Production of rice (2012-13)	189229 tonns
Productivity of rice (2012-13)	2389 kg per hect
Area under paddy cultivation	79201 hect
Production of milk (2012-13)	89863.99 kilo litres
Production of egg (2005-06)	11955 lakh numbers
Production of Meat (2013-14)	1394 tonns
Average annual rainfall	234 cms
Ground water availability (net annual)	750.33 MCM
Industrial status	
Heavy industries	55
Micro Manufacturing	13736
Micro Service	2716
Small Manufacturing	833
Small Service	165
No of development plot/area	4
No of Mini Industrial Area	6
Handloom societies	42
Power loom societies	3
Coir societies	42
General Industrial societies	161

Palakkad, one of the interior districts of Kerala, is unique in many respects. The continuity of the majestic Western Ghats, which stretches over, 1000 kms is broken at Palakkad gap with a width of 32 kms. On either side of the gap are the giant Nilgiris and Anamalais. The climate of the district is greatly influenced by this gap, as it enables the north- east winds to blow spreading its wings right up to the cost throughout the breadth of the gap. Since the district gets the benefit of south-west and north east winds, rainfall is heavy in both the seasons and consequently the Palakkad district has extensive paddy fields and is aptly known as the **granary** of Kerala. The eastern region of the district has high mountains, extensive

ravines and dense forests. In the southern part, there are a number of estates.

The district covers 13.5% of the total forest area in the State and 37% of the total ecological fragile land (EFL) in the State. The total forest area in Palakkad district is 1527.35 sq km, out of these 51.77 sq km belonging to EFL zone, 276 sq km is dense forest, 693 sq km is moderate forest and the rest 607.56 sq km (including plantation area) is open forest land.

Considering the physical features, the district is divided into two natural divisions-midland and highland. The midland region consists of valleys and plains. It leads up to the highland which consists of high mountain peaks, long spurs, extensive ravines, dense forests and tangled jungles. Midland is thick with coconut, areca nut, cashew, pepper, rubber and paddy cultivation. The soil is laterite in the hill and mid land regions. Ottappalam Taluk lies in the midland and highland regions. The road and rail links between Kerala and Tamil Nadu pass through the Palakkad gap.

2.2 Geographical Features

1	Total Area	4475.94 sq kms
2	Urban area	94.60 sq kms
3	Rural area	4381.34 sq kms
4	Wet land area	921.42 sq kms
5	Dry land area	2267.44 sq km
6	Forest area	1527.35 sq km
7	No. of rivers	6

Taluk wise geographical area in the district

Sl No.	Name of Taluk	Area in sq km
1	Alathur	569.02
2	Chittur	1155.1
3	Ottappalam	845.8
4	Mannarkkad	1185.57
5	Palakkad	720.32
	DISTRICT	4475.81

2.3 Administrative Set Up

At present Palakkad district consists of two revenue divisions, six Taluks and 163 villages. The revenue divisions are Palakkad and Ottappalam. Palakkad, Alathur and Chittur Taluks form the Palakkad revenue division and Ottappalam, Pattambi and Mannarkkad Taluks form the Ottappalam revenue division. There are 13 Block Panchayats and 91 Grama Panchayats in the district. Pattambi is the new Taluk formed in 2013 year.

The district includes four Municipalities, which each belong to a Taluk. The largest city in the district is the Palakkad Municipality. The Municipalities, with population estimates for 2011, are:

- Palakkad urban agglomeration (pop. 293000),
- Palakkad city (pop. 130955)
- Shornur (pop. 43533)
- Chittur-Tattamangalam (pop. 32298)
- Ottapalam (pop. 53792)

The 73rd and 74th Constitutional Amendments and the Kerala Municipalities Act/ Panchayat Raj Act, 1994 provided the institutional background for the democratic decentralization and participative decentralized planning in Kerala. Under the provision of these Acts three tiers of Panchayats viz Grama, Block and Jilla Panchayats along with Municipal Councils for Urban areas were constituted in Palakkad district as elsewhere. There is One Jilla Panchayat, 13 Block Panchayats and 91 Grama Panchayats in the district along with Four Municipal Councils for Urban areas. The details are given here under.

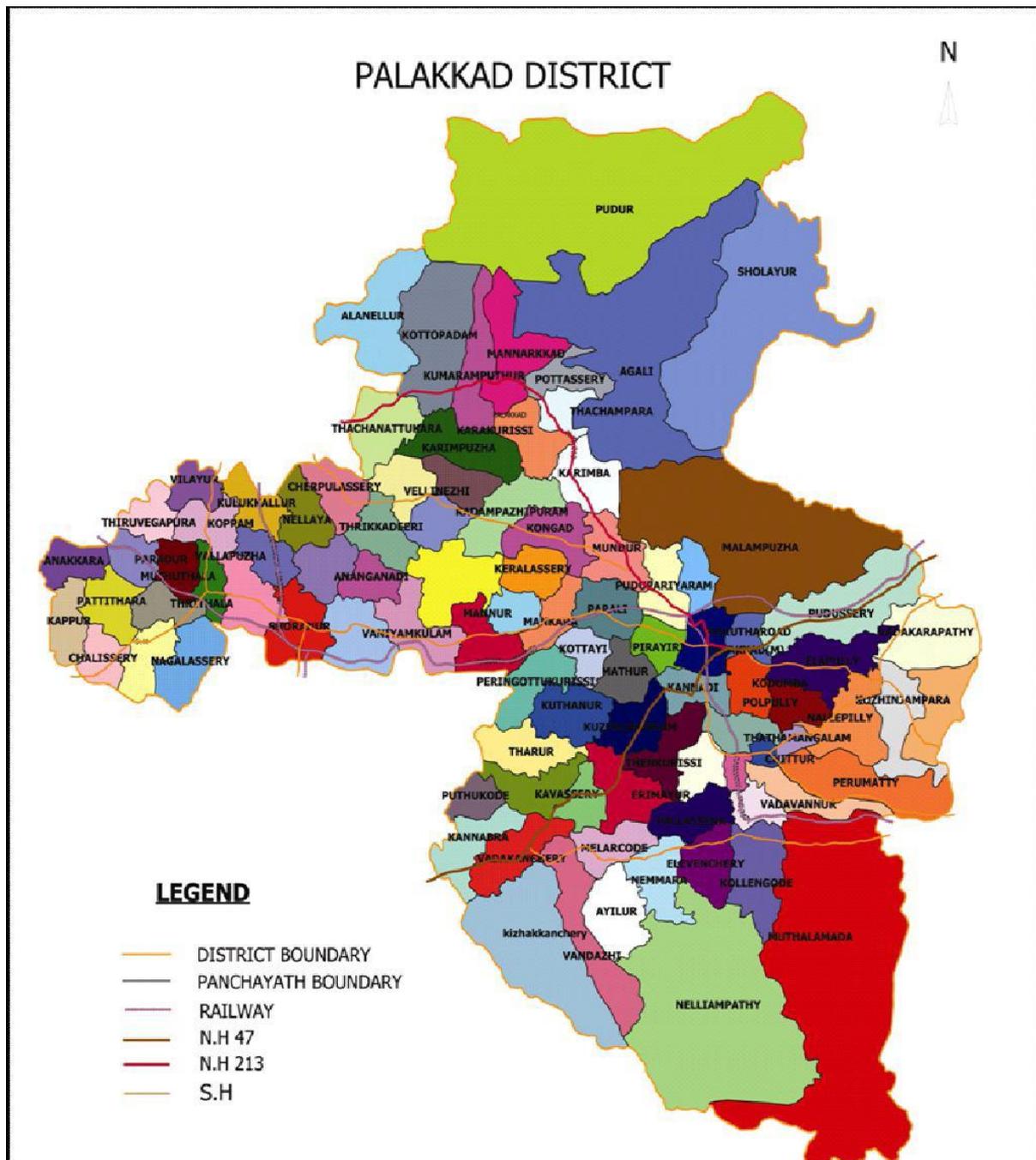
1	Revenue divisions	2
2	LS Constituencies	2
3	LA Constituencies	12
4	District Panchayat	1
5	District Panchayat Constituencies	26
6	Block Panchayats	13
7	Block Panchayat Wards	182
8	Grama Panchayats	91
9	Grama Panchayat Wards	1542
10	Revenue Villages	167
11	Municipal Councils	4
12	Municipal Wards	150

The geographical boundaries of Blocks, Municipalities and Panchayats in the district and their location can be seen in the following maps.

Map showing the Block boundaries of Palakkad district



Map showing the Panchayat boundaries



2.4 Demographic particulars

Name of Taluk	Population	Sex ratio	Population Density
Alathur	442709	1057	778
Chittur	463976	1034	402
Ottappalam	930873	1102	1101
Mannarkkad	384393	1063	324
Palakkad	587983	1048	816
DISTRICT	2809934	1067	628

Note: Population as per 2011 census

2.4.1 Block wise demographic particulars

Palakkad Municipality is the highly densely populated place in the district followed by Ottapalam Municipality. Attapady is the least densely populated Block followed by Nemmara Block. Attapady is the only Block which recorded a negative population growth during the last decade. Literacy rate and sex ratio are high in Ottapalam Taluk compared to the rest of the Taluks.

Name of Block/ Municipality	Area in sq km	Sex ratio	Literacy Rate			Decadal growth rate	Popula tion density
			Total	Female	Male		
Thrithala	172.16	1122	92.52	90.45	94.89	9.66	1167
Pattambi	224.21	1091	93.67	91.86	95.67	13.54	1352
Sreekrishnapuram	219.41	1091	93.34	91.42	95.46	10.30	814
Ottappalam	165.07	1105	92.98	91.01	95.19	9.55	915
Palakkad	205.88	1062	89.84	86.08	93.87	8.86	1039
Mannarkad	428.35	1074	91.60	89.15	94.28	10.55	664
Attappady	703.23	1008	75.07	69.96	80.24	-2.80	91
Malampuzha	468.04	1035	87.05	82.22	92.09	8.64	520
Kuzhalmannam	192.12	1062	86.71	81.36	92.44	5.17	909
Kollengode	163.32	1027	83.60	77.96	89.44	5.61	801
Chittur	261.84	1026	80.16	73.90	86.64	2.54	621
Nemmara	741.35	1045	85.41	79.73	91.37	1.76	187
Alathur	317.71	1054	87.62	82.92	92.63	5.81	844
Shoranur (M)	32.42	1097	95.19	93.42	97.15	3.58	1342
Ottappalam (M)	32.66	1121	94.62	92.90	96.58	9.24	1647
Palakkad (M)	26.56	1052	93.90	91.42	96.54	0.14	4930
Chittur- Thathamangalam (M)	15.02	1062	89.73	85.90	93.83	1.29	2150
District	2847.61	1067	89.31	85.79	93.10	7.35	987

For population details of each Taluk, refer to next chapter.

2.5 Climate

The district has a humid climate with a very hot season extending from March to June in the Western part of the district whereas it is less humid in the Eastern sector. The most important rainy season is during South West Monsoon which sets in the second week of June and extends up to September. About 75 per cent of the annual rain is received during the south west monsoon period. During the period December to May, practically no rain is received. The temperature of the district ranges from 20°C to

45°C. The district has got two types of climates. Ottappalam, Alathur and Mannarkkad are having a climate similar to that of other districts of Kerala, whereas Palakkad and Chittur are having rather dry climate similar to Tamil Nadu. However the average rainfall is good for cultivation.

2.6 Agriculture

The district is blessed with six major rivers; they are Bharathapuzha, Kannadi, Gayathripuzha, Thoothapuzha, Bhavani and Siruvani. Malampuzha, Walayar, Mangalam, Meenkara, Gayatri, Pothundi and Kanjirapuzha are the tributaries of Bharathapuzha. Except Bhavani and Siruvani all rivers are flowing towards west to Arabian sea. Bhavani and Siruvani are the tributaries of Cauvey river.

Latest statistics shows that 43% of the total geographical area in Palakkad district is used for cultivation and majority of the population in the district are engaged in agriculture or agriculture related activities. Due the extreme climate conditions in the district, 44% of annual production of rice in the district is contributed in autumn season. The district is the leading producer of rice in the State, and so it is called popularly '***the rice bowl of Kerala***'. As per 2012-13 data, about 40 percent of the total production of rice in Kerala is from Palakkad district, these amounts to 1.89 lakh tonnes.

Agriculture provides the basic building block for a variety of non-agricultural activities (non-farm sector) which forms the so called MSME sector in the district. Therefore, the history and prospects of the MSME sector are inextricably linked with the trend and progress of agricultural sector, and also the structural changes in the economy. While the basis of rural income and exports are traditional industries, the district has also nurtured a vibrant technology intensive enterprise sector over the past two decades. A combination of these traditional and growing sectors make the enterprise geography of the district what at present.

2.7 Economic scenario of the district

Economic growth is a process by which the real national income and percapita income of a State/ district increases over a period of time. Changes in state income, that is, goods and services produced over a period of time, represents the rate of economic growth. A high rate of economic growth raises the standard of living of the people, and a low growth rate lowers it. Since the service sector in the country and also in the district is

growing fast, MSME sector plays a vital role in economic development of the nation and thus the development of its citizen. The per capita income of the district is Rs.58506 (2012-13 GDP) and the State average is Rs.63491, this shows that the district is in 11th rank in the State.

The primary sector comprising agriculture has only a share of 10.8 pc in the sectoral distribution of Gross State Domestic Product at Constant Price, whereas the secondary and tertiary sectors have contributed 25.6 pc and 63.5 pc respectively.

2.8 Service sector and service industry

While the growing service sector offers significant employment opportunities, employment in this sector is rather volatile. While the enhanced hiring by the service sector leads to a push up in wage rates, and hence shortage of labour for the MSMEs, they also offer short term employment opportunities for the temporarily displaced.

India's service sector growth fell its lowest in 2008-09 period, mirroring the softness in manufacturing output and lock in step with the weakening trend across the world. The service sector in the State has nearly 67% weight in the State GDP (2012-13 estimate at constant prices) while the corresponding figure in the district is 65%. If construction and manufacturing sectors are included in service sector, the share of whole GDP in the district increases to 87% in 2012-13.

The service sector in the State and district has continued to remain the driving force for the economy with growth higher by 8 basis points in 2012-13 (quick estimate of GDP) over the previous year (provisional estimate of GDP). While considering the last 8 years, the district and the State have recorded a growth rate of 69% in whole GDP from 2004-05 to 2012-13.

2.9 Block wise profiles

2.9.1 Alathur Block

Alathur Block is situated in the south-central part of the district. It covers a geographical area of 371.17 sq km. The primary source of income of people in the Block is agriculture followed by animal husbandry. The irrigated agriculture area of this block is serviced mainly by canals. Gayathripuzha and Mangalampuzha provide the main source of irrigation.

Administrative	Total area	317.71 sq km
	No. of Panchayats	8
Demography	Total population	268098
	Literacy rate	87.62
	Decadal growth rate	5.81
	Population density	844 per sq km
	Sex ratio	1054
Agriculture	Major crops	Paddy, tapioca, turmeric, pepper, coconut, arecanut, banana, plantain, tamarind, jack, mango
Irrigation	Major rivers	Gayathripuzha, Mangalampuzha
Banking	Total service banks	42

2.9.2 Kuzhalmannam Block

Around 24 percent of the population is estimated to be scheduled caste. Agriculture is the main occupation of the people, paddy is the main crop and Malampuzha hydro project is the main source of irrigation in the Block.

Administrative	Total area	192.12
	No. of Panchayats	7
Demography	Total population	174611
	Literacy rate	86.71
	Decadal growth rate	5.17
	Population density	909 per sq km
	Sex ratio	1062
Agriculture	Major crops	Paddy, ginger, turmeric, coconut, jack mango, tamarind, plantain
Banking	Total service banks	28

2.9.3 Attapady Block

This Block covers the north-eastern part of the district, conspicuous by its hilly, high-land nature. Silent Valley, the internationally renowned EFL area is in this Block. Agriculture is the main source of occupation of the people. This Block is the concentration of tribal population in the district and as per 2011 census, 43% of the total population are scheduled tribes.

Administrative	Total area	703.23 sq km
	No. of Panchayats	3
Demography	Total population	64318
	Literacy rate	75.07
	Decadal growth rate	-2.80
	Population density	91 per sq km
	Sex ratio	1008
Agriculture	Major crops	Paddy, tapioca, turmeric, pepper, arecanut, banana, plantain, coconut, jack, mango, tamarind
Banking	Total service banks	10

2.9.4 Mannarkkad Block

This Block is situated in the northern part of the district. Agriculture is the main source of income of the people. Thuthapuzha and its tributaries provides major source of irrigation. This Block is industrially backward and wood and timber based industries and handicrafts are the main MSMEs in the Block.

Administrative	Total area	482.35 sq km
	No. of Panchayats	9
Demography	Total population	320075
	Literacy rate	91.60
	Decadal growth rate	10.55
	Population density	664 per sq km
	Sex ratio	1074
Agriculture	Major crops	Tapioca, arecanut, cashew, pepper, papaya, banana, coconut, jack, mango, tamarind, plantain
Banking	Total service banks	43

2.9.5 Chittur Block

Chittur Block is situated in the eastern part of Palakkad District. The block headquarters is at Nattukal near Kozhinjampara which is 22 km away from District headquarters. It shares its boundary with Tamil Nadu State, Malampuzha Block, Chittur Tathamangalam Municipality and Kollengode Block. It is the most industrially emerging region of the Palakkad District and the most industrially potential area in the District behind the Kanjikkode Industrial Belt. The area has become a fertile soil for the upcoming industries.

Administrative	Total area	261.84 sq km
	No. of Panchayats	7
Demography	Total population	162544
	Literacy rate	80.16
	Decadal growth rate	2.54
	Population density	621 per sq km
	Sex ratio	1026
Agriculture	Major crops	Paddy, tapioca, pulses, ginger, banana, sugarcane, tamarind, plantain, coconut, jack, mango
Banking	Total service banks	44

2.9.6 Kollengode Block

Kollengode Block Panchayath is situated in the south east side of the Palakkad district which consists of 7 Grama Panchayaths, which are Kollengode, Muthalamada, Vadavannur, Pudunagaram, Pattanchery, Peruvembu, Koduvayur.

Administrative	Total area	163.32 sq km
	No. of Panchayats	7
Demography	Total population	130862
	Literacy rate	83.60
	Decadal growth rate	5.61
	Population density	801 per sq km
	Sex ratio	1027
Agriculture	Major crops	Paddy, ginger, coconut, mango, tamarind, plantain
Banking	Total service banks	37

2.9.7 Nenmara Block

This Block is situated in the southern part of the district at an average altitude of 400 meters, covering hill ranges, dense forests, valleys and fertile plain lands. Nelliampathy reserved forests is one of major tourist destination in this Block, it is about 1500 m above the sea level.

Administrative	Total area	741.35 sq km
	No. of Panchayats	7
Demographic	Total population	138272
	Literacy rate	85.41
	Decadal growth rate	1.76
	Population density	187 per sq km
	Sex ratio	1045
Agriculture	Major crops	Paddy, ginger, coconut, jack, mango, tamarind, plantain, rubber
Banking	Total service banks	29

2.9.8 Ottapalam Block

This Block is situated at a distance of 38 kms from the west of district headquarters comprising 8 Panchayats. Agriculture and allied activities forms the main occupation.

Administrative	Total area	165.07 sq km
	No. of Panchayats	8
Demographic	Total population	151095
	Literacy rate	92.98
	Decadal growth rate	9.55
	Population density	915 per sq km
	Sex ratio	1105
Agriculture	Major crops	Paddy, cashew, pepper, Arecanut, banana, coconut, jack, mango, tamarind, plantain
Banking	Total service banks	43

2.9.9 Pattambi Block

Pattambi Block is situated in the northern bank of Bharathapuzha river, it comprises of ten Valluvanadan Villages soothed and caressed by the Nila and Thootha. This Block is still remains the culture nucleus of the district. Economically, the Block is prominently agrarian. The primary source of income of is agriculture and this filed is the main occupation. The climate is tropical with an average rainfall of 260 cms, the soil is mainly lateral and alluvial.

Administrative	Total area	224.21 sq km
	No. of Panchayats	8
Demographic	Total population	303037
	Literacy rate	93.67
	Decadal growth rate	13.54
	Population density	1352 per sq km
	Sex ratio	1091
Agriculture	Major crops	Paddy, pepper, banana, coconut, jack, mango, tamarind, plantain
Banking	Total service banks	44

2.9.10 Sreekrishnapuram Block

This Block is situated in the northern part of Ottapalam Taluk, the block lies adjacent to Mannarkkad and Karimpuzha flowing through all the seven Panchayats in the Block. These rivers contribute to the agricultural development of the Block. A major share of the population is engaged in cattle rearing and thus the production of milk is abundant, but the lack of adequate marketing facilities poses a serious problem in this front.

Administrative	Total area	219.41
	No. of Panchayats	7
Demographic	Total population	178585
	Literacy rate	93.34
	Decadal growth rate	10.30
	Population density	814 per sq km
	Sex ratio	1091
Agriculture	Major crops	Paddy, Arecanut, pepper, coconut, jack, mango, tamarind, plantain
Banking	Total service banks	31

2.9.11 Thrithala Block

This Block is situated in the eastern part of the district. The total geographical area extends to 172.16 sq kms. The main economic activity of the people is agriculture. Allied activities of Agriculture like dairying, goat rearing, fisheries etc too have marginal influence in economic activities. The industrial scenario shows that the MSME units functioning in this Block are more service oriented rather than manufacturing.

Administrative	Total area	172.16
	No. of Panchayats	7
Demographic	Total population	200831
	Literacy rate	92.52
	Decadal growth rate	9.66
	Population density	1167 per sq km
	Sex ratio	1122
Agriculture	Major crops	Paddy, Arecanut, pepper, banana, coconut, jack, mango, tamarind, plantain
Banking	Total service banks	35

2.9.12 Malampuzha Block

This is the latest formed Block in the district (in 1991). The newly developing industrial area (NIDA) at Kanjikode in Pudukkottai Panchayat is in Malampuzha Block. The main and large scale industries and a major number of medium level enterprises in the district are belonging to this Block. The industrial development in Kanjikode is going to carve an important place for Kerala in the industrial map of India.

Administrative	Total area	468.04 sq km
	No. of Panchayats	6
Demography	Total population	243155
	Literacy rate	87.05
	Decadal growth rate	8.64
	Population density	520 per sq km
	Sex ratio	1035
Agriculture	Major crops	Paddy, banana, coconut, jack, mango, tamarind, plantain
Banking	Total service banks	36

2.9.13 Palakkad Block

This Block is situated around Palakkad Municipality and extends to 205.88 sq kms covering 7 Panchayats and 20 revenue Villages. Agriculture and allied activities is the main source of livelihood of the people.

Administrative	Total area	205.88 sq km
	No. of Panchayats	7
Demographic	Total population	213873
	Literacy rate	89.84
	Decadal growth rate	8.86
	Population density	1039 per sq km
	Sex ratio	1062
Agriculture	Major crops	Paddy, banana, plantain, turmeric, coconut, jack, mango
Banking	Total service banks	29

2.9.14 Palakkad Municipality

Palakkad Municipality is situated in the headquarters of the district comprising 52 wards and 3 revenue villages. The area has a humid climate and hot season extending from March to June with a temperature ranging from 20 to 45 degrees. People are mainly depends on agriculture for living. Food processing and general engineering are the major industrial sectors in this Municipality.

Administrative	Total area	26.56 sq km
	No. of Wards	52
Demographic	Total population	130955
	Literacy rate	93.90
	Decadal growth rate	0.14
	Population density	4930 per sq km
	Sex ratio	1052
Agriculture	Total cropped area	755 hect
	Irrigated area	300 hect
	Major crops	Paddy, coconut, banana
Banking	Total service banks	39

2.9.15 Ottapalam Municipality

Ottapalam Municipality is situated in the bank of Baharathapuzha river. It has a rich cultural heritage and has hosted many historical events. Food processing and readymade garments are the major industrial sectors in this Municipality. It is well connected by road and railway networks with major other cities in the State. Palakkad- Shornur State highway passes through the town.

Administrative	Total area	32.66 sq km
	No. of Wards	36
Demographic	Total population	53792
	Literacy rate	94.62
	Decadal growth rate	9.24
	Population density	1647 per sq km
	Sex ratio	1121
Agriculture	Major crops	Paddy, coconut, banana, plantain
Banking	Total service banks	18

2.9.16 Shornur Municipality

Situated in the bank of Nila. Kerala Kalamandalam, the famous cultural heritage is in this Municipal area. It is a major transport hub hosting the 2nd largest railway station in the State. Metal industries, agricultural implements and cutlery units are the major industrial sectors in the Municipality. Shornur is also famous for pottery works.

Administrative	Total area	32.42 sq km
	No. of Wards	33
Demographic	Total population	43533
	Literacy rate	95.19
	Decadal growth rate	3.58
	Population density	1342 per sq km
	Sex ratio	1097
Agriculture	Major crops	Paddy, coconut, banana, plantain
Banking	Total service banks	10

2.9.17 Chittur- Thathamangalam Municipality

It is a small town situated in the bank of Chittur river, about 15 km south of Palakkad town. It has abundant paddy fields and coconut trees.

Administrative	Total area	15.02 sq km
	No. of Wards	
Demographic	Total population	32298
	Literacy rate	89.73
	Decadal growth rate	1.29
	Population density	2150 per sq km
	Sex ratio	1062
Agriculture	Major crops	Paddy, coconut, banana, plantain
Banking	Total service banks	13

Chapter 3

RESOURCES IN THE DISTRICT

3.1 RESOURCES AVAILABLE

Rapid MSMEs development of any district heavily depends on the availability of various resources, of which **material** as well as **human resources** plays a vital role in accelerating the process of industrial development. It is, therefore, necessary to make a realistic assessment of the availability of resources both in terms of quantity and quality.

3.2 Agriculture

The land use pattern in the district as per the data in 2012-13 agricultural year is as follows.

	Land use	Area in Hectares
1	Total geographical area	447584
2	Land put to non agricultural use	43690
3	Barren and uncultivable land	2175
4	Land under miscellaneous tree crops	716
5	Cultivable waste	25215
6	Fallow other than current fallow	14152
7	Current fallow	15380
8	Still water	15022
9	Social forestry	378
10	Net area sown (net cropped area)	194599
11	Area sown more than once	96595
12	Total cropped area	291194

Palakkad district is potential in production of paddy in the State. The total area under paddy, considering all the three seasons (autumn, winter and summer), is 79201 hectares and this accounts 27 pc of the total cropped area of the district. Palakkad is also the leading producer of rice in Kerala, and so the district is popularly known as the 'rice bowl' of Kerala. The total annual production of rice is 189229 tonnes, of which 89411 tonnes in autumn season, 94532 tonnes in winter season and 5286 tonnes in summer season.

The Block wise area (in hectares) under principal food crops in the district in 2012-13 year is given below.

	Block	Paddy	Tapioca	Coconut	Arecanut	Cashew	Pepper
1	Alathur	11716	456	4728	388	142	244
2	Attappady	8	362	9169	3370	1426	561
3	Chittur	8916	345	7967	96	22	19
4	Kollengode	11147	8	3525	71	18	19
5	Kuzhalmannam	16229	64	2253	61	114	49
6	Malampuzha	3876	42	3420	132	185	45
7	Mannarkkad	299	363	8830	2695	249	435
8	Nemmara	11254	149	2689	161	67	74
9	Ottapalam	3456	139	4216	221	244	366
10	Palakkad	4595	42	2291	331	139	107
11	Pattambi	2297	204	3872	365	146	222
12	Sreekrishnapuram	1745	138	3722	737	143	256
13	Thrithala	2008	56	4183	916	137	229
	Block Total	77547	2368	60866	9545	3032	2625
	Municipalities Total	1654	10	1647	56	102	98
	District Total	79201	2378	62513	9601	3134	2723
	% to Total cropped area	27	1	21	3	1	1

	Block	Jack	Mango	Tamarind	Pappaya	Banana	Plantain
1	Alathur	644	799	853	79	263	643
2	Attappady	434	404	71	46	7602	3357
3	Chittur	180	405	326	40	253	1025
4	Kollengode	182	1214	314	49	61	194
5	Kuzhalmannam	351	458	451	34	57	2
6	Malampuzha	215	381	246	43	225	227
7	Mannarkkad	1155	1191	265	185	2057	607
8	Nemmara	271	471	378	41	67	333
9	Ottapalam	1017	1175	504	6	1128	369
10	Palakkad	487	454	333	35	313	264
11	Pattambi	674	734	239	79	488	377
12	Sreekrishnapuram	551	579	267	64	2438	305
13	Thrithala	595	739	248	51	203	224
	Block Total	6756	9004	4495	751	15156	8112
	Municipalities Total	306	364	115	64	88	139
	District Total	7062	9368	4611	816	15243	8251
	% to Total cropped area	2.4	3.2	1.6	0.3	5.2	2.8

Besides the above, the district contains 37010 hectares of rubber plantation area, 4935 hectares of coffee and 831 hectares of tea. This accounts 13%, 2% and 0.3% respectively of the total cropped area of the district.

The Block wise production statistics as per 2012-13 data is given in the following tables. (Production in tonns)

	Block	Rice	Tapioca	Coconut*	Areca unut	Cash ew	Black pepper
1	Alathur	30818	14582	33	363	24	59
2	Attappady	20	12957	104	3186	238	237
3	Chittoor	21278	7836	61	77	3	3
4	Kollangode	23008	192	23	49	4	5
5	Kuzhalmandam	46895	1702	13	26	19	13
6	Malampuzha	8563	1170	26	51	16	9
7	Mannarkkad	629	12678	70	3141	57	218
8	Nenmara	23872	3620	20	128	15	28
9	Ottappalam	7606	3842	25	149	57	138
10	Palakkad	10983	1171	11	215	27	29
11	Pattambi	5074	4568	21	411	43	51
12	Sreekrishnapuram	3083	3643	18	441	33	66
13	Thrithala	4112	1160	25	679	36	56
	Block Total	185941	69119	450	8915	571	914
	Municipalities	3287	257	11	31	44	0
	District Total	189229	69377	461	8946	615	914

* Production of coconut is in Million nuts

	Block	Jack#	Mango	Ginger	Turmeric	Tamarind	Banana	Plantain
1	Alathur	2683	3283	141	317	1091	2164	5466
2	Attappady	1419	2439	216	228	52	79465	36068
3	Chittoor	494	2772	611	55	1987	2363	7875
4	Kollangode	609	10668	709	79	2778	309	1523
5	Kuzhalmandam	1077	1356	717	626	776	614	1466
6	Malampuzha	494	3115	66	36	240	1950	3591
7	Mannarkkad	3243	4744	57	250	111	15986	4486
8	Nenmara	807	2414	537	175	1053	576	2356
9	Ottappalam	2898	3950	35	28	135	9238	2029
10	Palakkad	1025	3090	126	66	218	2356	3104
11	Pattambi	2393	3520	23	10	97	3852	1798
12	Sreekrishnapuram	1467	2788	37	30	112	18938	1522
13	Thrithala	1410	5863	7	5	108	1565	1191
	Block Total	20018	50001	3281	1907	8757	139376	72474
	Municipalities	774	4379	29	9	103	719	662
	District Total	20793	54380	3310	1916	8860	140094	73136

Production of jack in thousand nuts

3.2.1 Productivity of principal crops in the district

Sl. No.	Crop name	Productivity
1	Rice	2389 kg/ hect
2	Tapioca	29175 kg/ hect
3	Arecanut	932 kg/ hect
4	Coconut	7374 million nuts per hect
5	Cured ginger	4485 kg/ hect
6	Cured turmeric	2903 kg/ hect
7	Banana	9191 kg/ hect
8	Plantain	8864 kg/ hect
9	Jack	2974 million nuts/ hect
10	Mango	5805 kg/ hect
11	Pineapple	5036 kg/ hect
12	Tea	2699 kg/ hect
13	Coffee	502 kg/ hect

3.3 Forest

There are three forest divisions in Palakkad district. The total area under forest in the district is 1527.35 sq km. The division wise area under reserved forest, vested forest, unclassified forest, EFL etc. under each division is given below.

3.3.1 Division wise Forest area in Sq. Km.

Category	Palakkad Division	Nenmara Division	Mannarkkad Division
Reserved forest	73.41	205.52	150.72
Vested forest	161.40	141.10	278.89
Unclassified forest	Nil		
EFL		16.44	7.20
Total	234.81	363.07	436.81

3.3.2 Major forest produces in 2013-14 FY

Item name	Palakkad Division	Nenmara Division	Mannarkkad Division	Total
Teak firewood	152.02 MT		11634.65 MT	11786.67
Teak Billets	11.35 MT			13.35
Misc firewood	28.82 MT			28.82
Total	192.19 MT	Nil	11634.65 MT	11828.84

Major Timber Depots in the district: Timber Depot, Walayar

3.4 Minerals

The mineral deposits available in the district are granite building stone, laterite building stone, brick clay/ ordinary clay, ordinary sand, lime stone etc.

3.5 Fisheries

The major inland fishing centres in the district are Malampuzha, Chulliyar, Meenkara, Mangalam, Pothundi, Walayar and Kanjirapuzha. The total area brought under fish culture in the district is 2494.04 acres. The Block wise number of ponds, reservoirs and lakes suitable for fish culture and area brought under fish culture in the district are as follows.

Sl No.	Name of Block	No. of Ponds	No. of Reservoir/ Lake suitable for fish culture	Area (in Acres) brought under fish culture
1	Thrithala	310	-	-
2	Pattambi	244	-	54.28
3	Ottapalam	409	14	79.66
4	Sreekrishnapuram	382	2	54.09
5	Mannarkkad	571	15	32.74
6	Attapady	12	1	-
7	Palakkad	582	11	52.67
8	Kuzhalmannam	430	5	250.78
9	Chittur	588	1	381.15
10	Kollengode	523	10	820.05
11	Nenmara	584	24	300.47
12	Alathur	661	6	231.05
13	Malampuzha	418	7	237.10
14	Municipalities	359	-	-
	Total	6073	96	2494.04

The major fishes produced in the district are Catla, Rohu and Mrigal, its total production amounts to 2713.119 tons with an approximate value of Rs.2170.49 lakhs.

3.6 Dairy development

Milk production is one of the major activities under primary sector and the district is potential with a number of dairy cooperative societies. There are 308 Milk Cooperative Societies in Palakkad and the average monthly production of milk as per the latest statistics (2014 year) in the district is 74.88 lakh litres. The only dairy training centre in the district is

Vanoor in Alathur Taluk. The only dairy unit under MILMA in the district is in Kallepully, Palakkad Taluk and there are two chilling plants in the district, one at Pattambi and another at Attapady. Besides these, 33 numbers of Bulk Milk Coolers (BMC) are functioning in the district and 7 numbers of BMC units is proposed to be installed.

The Block wise number of Milk Cooperative Societies and its monthly production are given below.

Sl No.	Name of Block	No. of societies	Monthly milk produced (in Ltr)
1	Alathur	35	501914
2	Attapady	15	517681
3	Chittur	52	2685995
4	Kollengode	12	852332
5	Kuzhalmannam	27	430828
6	Malampuzha	17	549973
7	Mannarkkad	18	154898
8	Nenmara	26	432124
9	Ottapalam	23	245654
10	Palakkad	22	383425
11	Pattambi	15	124575
12	Sreekrishnapuram	23	386193
13	Thrithala	23	223074
	District Total	308	7488666

3.7 Animal Husbandry

The category wise number of animals and birds in the district and its annual production are as follows.

Cow	Buffalo	Goat	Sheep	Pig	Hen	Duck
169208	9018	114472	1167	4018	793686	28296

The annual meat production from animals (cow, buffalo, goat, sheep and pig) is 910 tons and that from poultry is 484 tones and thus the total production of meat in Palakkad district is 1394 tons.

3.8 Human resources

Palakkad is one of the low densely populated districts in Kerala. The CD Block wise Municipality wise population as per 2011 census in Palakkad district is as follows.

Name of Block/ Municipality	No. of households	Total population	Male	Female	SC population	ST population
Thrithala	43133	200831	94623	106208	35599	355
Pattambi	60611	303037	144935	158102	38930	399
Sreekrishnapuram	40359	178585	85391	93194	24884	626
Ottappalam	34080	151095	71765	79330	23910	170
Palakkad	49326	213873	103742	110131	34228	334
Mannarkad	66373	320075	154294	165781	31824	2705
Attappady	16865	64318	32035	32283	3054	27627
Malampuzha	58391	243155	119469	123686	35365	3263
Kuzhalmannam	40665	174611	84665	89946	41783	144
Kollengode	30235	130862	64545	66317	26063	5458
Chittur	40218	162544	80240	82304	22724	4411
Nemmara	32738	138272	67610	70662	23254	1793
Alathur	62172	268098	130550	137548	36122	1267
Shoranur (M)	10420	43533	20757	22776	7423	88
Ottappalam (M)	12484	53792	25359	28433	4765	89
Palakkad (M)	31176	130955	63833	67122	10068	213
Chittur- Thathamangalam (M)	7974	32298	15665	16633	3837	30
District Total	637220	2809934	1359478	1450456	403833	48972

The total Rural and Urban population in the whole district is given below. This shows that 76 percent of the total households and total population are in rural areas.

R/ U	No. of households	Total population	Male	Female	SC population	ST population
Rural	482285	2133124	1031466	1101658	322951	47023
Urban	154935	676810	328012	348798	80882	1949
Total	637220	2809934	1359478	1450456	403833	48972

Decadal Population growth rate (in %, 2001 census and 2011 census)

R/ U	Total population	Male population	Female population
Rural	-5.65	-5.67	-5.63
Urban	89.81	89.09	90.49
Total	7.35	7.30	7.40

3.8.1 Worker population in Palakkad district as per 2011 census

'Work' is defined as participation in any economically productive activity. Such participation is physical or mental in nature. Work involved not only actual work but also effective supervision and direction of work. According to this definition, the entire population has been classified into three main categories, i.e., Main workers, Marginal workers and Non-workers.

1. Main workers are those who had worked for the major part of the year preceding the date of enumeration i.e., those who were engaged in any economically productive activity for 183 days (or six months) or more during the year.
2. Marginal workers are those who worked any time at all in the year preceding the enumeration but did not work for a major part of the year, i.e., those who worked for less than 183 days (or six months).
3. Non-workers are those who had not worked any time at all in the year preceding the date of enumeration.

1. Workers, Main workers and Main cultivators

Block/ Taluk	Workers			Main workers			Main cultivators		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Thrithala	59290	46667	12623	51185	41873	9312	2714	2419	295
Pattambi	83432	69300	14132	67860	57999	9861	3873	3590	283
Sreekrishnapuram	60026	45522	14504	49618	39254	10364	4189	3721	468
Ottappalam	50409	37712	12697	42364	32744	9620	2489	2069	420
Palakkad	81846	58518	23328	68842	52243	16599	3794	3040	754
Mannarkad	100455	78315	22140	81531	66915	14616	5936	5353	583
Attappady	31294	18856	12438	22526	14668	7858	4532	3274	1258
Malampuzha	104255	69956	34299	86233	60908	25325	4225	3174	1051
Kuzhalmannam	73891	49435	24456	62665	43677	18988	5317	3972	1345
Kollengode	57251	38636	18615	50359	35211	15148	2997	2439	558
Chittur	79917	50438	29479	66515	44109	22406	7768	5692	2076
Nemmara	60149	39860	20289	52931	35962	16969	3484	2837	647
Alathur	109156	75027	34129	93303	66535	26768	7051	5551	1500
Shoranur (M)	14655	10901	3754	13009	9957	3052	153	145	8
Ottappalam (M)	17700	13125	4575	14552	11235	3317	245	208	37
Palakkad (M)	45696	34988	10708	41011	32268	8743	155	125	30
CTMC (M)	12918	8865	4053	11036	7924	3112	272	204	68
District Total	1042340	746121	296219	875540	653482	222058	59194	47813	11381

2. Main agricultural labourers, Main workers in household industries and Main other workers

Block/ Taluk	Main agricultural labourers			Main workers in household industries			Main other workers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Thrithala	5566	3719	1847	912	743	169	41993	34992	7001
Pattambi	8759	6508	2251	1385	1191	194	53843	46710	7133
Sreekrishnapuram	10574	7206	3368	1116	898	218	33739	27429	6310
Ottappalam	8190	4897	3293	952	739	213	30733	25039	5694
Palakkad	14128	7226	6902	1422	1106	316	49498	40871	8627
Mannarkad	13603	10412	3191	1556	1198	358	60436	49952	10484
Attappady	7954	4790	3164	465	259	206	9575	6345	3230
Malampuzha	15645	7130	8515	2359	1632	727	64004	48972	15032
Kuzhalmannam	20436	9253	11183	1206	886	320	35706	29566	6140
Kollengode	17299	8381	8918	1442	1022	420	28621	23369	5252
Chittur	25789	12745	13044	1333	910	423	31625	24762	6863
Nemmara	19219	8907	10312	1277	990	287	28951	23228	5723
Alathur	24469	11241	13228	2384	1751	633	59399	47992	11407
Shoranur (M)	743	507	236	373	261	112	11740	9044	2696
Ottappalam (M)	988	621	367	274	211	63	13045	10195	2850
Palakkad (M)	560	315	245	970	741	229	39326	31087	8239
CTMC (M)	1472	664	808	549	390	159	8743	6666	2077
District Total	195394	104522	90872	19975	14928	5047	600977	486219	114758

3. Marginal workers, Marginal cultivators and Marginal agricultural labourers

Block/ Taluk	Marginal workers			Marginal cultivators			Marginal agricultural labourers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Thrithala	8105	4794	3311	480	336	144	1004	567	437
Pattambi	15572	11301	4271	731	601	130	3436	2265	1171
Sreekrishnapuram	10408	6268	4140	718	459	259	3413	2002	1411
Ottappalam	8045	4968	3077	401	281	120	2528	1279	1249
Palakkad	13004	6275	6729	660	396	264	4534	1764	2770
Mannarkad	18924	11400	7524	1184	700	484	4361	2824	1537
Attappady	8768	4188	4580	632	302	330	4438	2177	2261
Malampuzha	18022	9048	8974	584	286	298	5603	2144	3459
Kuzhalmannam	11226	5758	5468	707	339	368	6023	2370	3653
Kollengode	6892	3425	3467	184	107	77	2722	1026	1696
Chittur	13402	6329	7073	858	460	398	6745	2664	4081
Nemmara	7218	3898	3320	324	197	127	2963	1183	1780
Alathur	15853	8492	7361	947	426	521	5375	1949	3426
Shoranur (M)	1646	944	702	49	29	20	190	85	105
Ottappalam (M)	3148	1890	1258	72	42	30	566	260	306
Palakkad (M)	4685	2720	1965	50	24	26	294	122	172
CTMC (M)	1882	941	941	30	11	19	360	148	212
District Total	166800	92639	74161	8611	4996	3615	54555	24829	29726

4. Marginal workers in household industries, Main other workers and Non workers

Block/ Taluk	Marginal workers in household industries			Marginal other workers			Non workers		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Thrithala	210	141	69	6411	3750	2661	141541	47956	93585
Pattambi	374	245	129	11031	8190	2841	219605	75635	143970
Sreekrishnapuram	317	197	120	5960	3610	2350	118559	39869	78690
Ottappalam	171	104	67	4945	3304	1641	100686	34053	66633
Palakkad	375	184	191	7435	3931	3504	132027	45224	86803
Mannarkad	620	376	244	12759	7500	5259	219620	75979	143641
Attappady	186	95	91	3512	1614	1898	33024	13179	19845
Malampuzha	799	412	387	11036	6206	4830	138900	49513	89387
Kuzhalmannam	167	93	74	4329	2956	1373	100720	35230	65490
Kollengode	261	132	129	3725	2160	1565	73611	25909	47702
Chittur	412	174	238	5387	3031	2356	82627	29802	52825
Nemmara	191	99	92	3740	2419	1321	78123	27750	50373
Alathur	581	309	272	8950	5808	3142	158942	55523	103419
Shoranur (M)	87	44	43	1320	786	534	28878	9856	19022
Ottappalam (M)	74	41	33	2436	1547	889	36092	12234	23858
Palakkad (M)	123	55	68	4218	2519	1699	85259	28845	56414
CTMC (M)	112	26	86	1380	756	624	19380	6800	12580
District Total	5060	2727	2333	98574	60087	38487	1767594	613357	1154237

5. Marginal workers in household industries according to the number of worked months

Block/ Taluk	Marginal workers in household industries worked for 3 months or more but less than 6 months			Marginal workers in household industries worked for less than 3 months		
	Total	Male	Female	Total	Male	Female
Thrithala	150	99	51	60	42	18
Pattambi	263	179	84	111	66	45
Sreekrishnapuram	273	176	97	44	21	23
Ottappalam	135	85	50	36	19	17
Palakkad	293	156	137	82	28	54
Mannarkad	412	245	167	208	131	77
Attappady	146	67	79	40	28	12
Malampuzha	544	241	303	255	171	84
Kuzhalmannam	145	82	63	22	11	11
Kollengode	208	107	101	53	25	28
Chittur	358	160	198	54	14	40
Nemmara	157	84	73	34	15	19
Alathur	474	257	217	107	52	55
Shoranur (M)	78	39	39	9	5	4
Ottappalam (M)	61	37	24	13	4	9
Palakkad (M)	104	45	59	19	10	9
CTMC (M)	101	20	81	11	6	5
District Total	3902	2079	1823	1158	648	510

3.8.2 SC/ST Colonies in the district

SC/ ST	No. of colonies	No. of families	Population
ST colonies	455	13782	47685
SC colonies	4237	52483	244412
Total	4692	66265	292097

3.9 General and Higher Education

There is one Navodaya Vidyalaya in the district which is in Malampuzha. The number of students and teachers in this institution is 28 and 480 respectively. The number of students and teachers in educational institutions in Palakkad district in 2014-15 is given below.

	Govt	Aided	Unaided	Total
Students	118143	204832	35107	359082
Teachers	5110	8856	1478	15244

The number of educational institutions and medical institutions in the district is given in the following tables.

3.9.1 Educational Institutions- General and Technical

Sl No.	Institution	Govt	Aided	Unaided	Total
1	LP Schools	184	348	14	553
2	UP Schools	63	159	16	239
3	High Schools	64	76	35	174
4	Special Schools	1	3	10	14
5	HSS	48	56	15	119
6	HSS and VHS	9	0	2	9
7	CBSE				47
8	ICSE				4
9	Kendriya Vidyalaya				3
10	Jawahar Navodaya				1
11	Polytechnics	3	0	0	3
12	Women Polytechnics	0	0	0	0
13	ITI	8	0	3	11
14	ITC	2	1	7	10

3.9.2 Higher Educational Institutions

Sl No.	Institution	Govt	Aided	Self financed	Total
1	Universities	0	0	0	0
2	Arts, Science & Commerce Colleges	4	8	16	28

3	Medical Colleges	1	0	2	3
4	Dental Colleges	0	0	1	1
5	Ayurveda Colleges	0	0	2	2
6	Homeopathic Colleges	0	0	0	0
7	Agriculture Colleges	0	0	0	0
8	Engineering Colleges	1	1	9	11
9	Pharmacy Colleges	0	0	3	3
10	Sidha/ Unani Colleges	0	0	0	0
11	Veterinary Colleges	0	0	0	0
12	Law Colleges	0	0	0	0
13	Fine Arts Colleges	1	1	1	3
14	Nursing Colleges	3	0	2	5

3.9.3 Medical Institutions

Sl No.	Institution	No.	No. of beds	No. of doctors
1	Govt Hospitals	10	1432	144
2	Govt Dispensaries	6	-	6
3	CHC	19	463	64
4	PHC	75	620	103
5	Govt Ayurveda Hospitals	6	150	18
6	Govt Ayurveda Dispensaries	75	-	75
7	Govt Homeopathic Hospitals	6	150	18
8	Govt Homeopathic Dispensaries	42	-	42

3.10 Unemployment Statistics

As per the latest details received from the District Employment Exchange, a total of 78907 registered unemployed persons (registrants) are in Palakkad and its distribution according to qualification is as follows.

Illiterate	<10 th std	10 th passed	+2/ PDC passed	Graduates	Post Graduates
101	22155	40250	14516	1801	84

Even though the district has good educational facilities and a good number of qualified persons, the problem of unemployment is still haunting the educated youths. There are two reasons for the growing unemployment, one is the inclination of the educated youth towards Govt. jobs which limits job opportunities while the second reason that the private sector is yet to develop fully as far as the industrial activities are concerned.

Chapter 4

EXISTING INDUSTRIAL INFRASTRUCTURE

Availability of infrastructure facilities like Power, Bank, and Industrial accommodation in the form of industrial development area, plots & sheds, Transport, Communication and Training Institutions are important for the eventual development of Industries. Infrastructure determines the pace of economic development of a region. Besides Material and Manpower Resources, Industrial Development of any region depends heavily on the available Infrastructural facilities.

4.1 Transport facilities

The district is well connected by road, rail and have proximity to airports at Coimbatore, Kozhikode and Kochi. The NH 47 runs through the industrial estate area in Kanjikode and has a length of 70 kms. The district has a total of 1646 km of PWD roads, which includes 373 km of State Highway, 794 kms of major district roads, 437 kms of other district roads and 42 kms Village roads. The total length of the railway line in the district is 102 km (broad gauge). Palakkad Junction and Shornur Jn are the main railway stations in the district connect the other major centres in the State and the country.

4.2 Telecommunication

The district has a good network of telecommunication system. Besides Postal department and BSNL, effective courier and parcel services and mobile networking facilities are provided by private service providers. P&T has two postal divisions, one at Palakkad and the other at Ottappalam, 4 head post offices, 158 sub post offices and 293 Village level post offices. BSNL has 106 telephone exchanges in Palakkad with a total capacity of 2.23 lakhs lines.

4.3 Banking

The district is having enough number of branches in both rural and urban areas. The total number of service branches available in Palakkad is 515, out of these, 249 are in Public sector, 120 in Private sector, 145 in cooperative sector and the remaining 1 is KFC. Canara Bank is the lead bank in the district.

The name of banks and its number of functioning branches in Palakkad are given below.

A. PUBLIC SECTOR BANKS

Sl No.	Name of Bank	No. of branches
	State Bank Groups	
1	State Bank of India	44
2	State Bank of Mysore	1
3	State Bank of Travancore	43
	Total- State Bank Group	88
	Nationalised Banks	
1	Allahabad Bank	1
2	Andhra Bank	2
3	Bank of Baroda	6
4	Bank of India	4
5	Canara Bank	43
6	Central Bank of India	2
7	Corporation Bank	4
8	Dena Bank	1
9	Indian Bank	8
10	Indian Overseas Bank	7
11	IDBI	1
12	Oriental Bank of Commerce	1
13	Punjab National Bank	29
14	Syndicate Bank	8
15	UCO Bank	2
16	Union Bank of India	15
17	United Bank of India	1
18	Vijaya Bank	9
	Total- Nationalised Banks	144
	Regional Rural Banks (RRB)	
	Kerala Gramin Bank	17
	Total Public Sector Banks	249

B. PRIVATE SECTOR BANKS

Sl No.	Name of Bank	No. of branches
1	Catholic Syrian Bank	16
2	City Union Bank	1
3	Dhanalakshmi Bank	18
4	Federal Bank Ltd	29
5	HDFC Bank	11
6	ICICI Bank	6
7	Indus India Bank	1
8	ING Vysya Bank	1
9	Karur Vysya Bank Ltd	1
10	Lakshmi Vilas Bank Ltd	1
11	South Indian Bank Ltd	34
12	Axis Bank Ltd	1

	Total- Private Sector Banks	120
	Total Commercial Banks (A + B)	369
C	Cooperative Banks	
1	State Cooperative Banks	97
2	PCARDB	5
3	PDC Bank	43
	Total- Cooperative Banks	145
D	Kerala Financial Institution	1
	Total- All kinds of Banks (A+B+C+D)	515

4.3.1 Block wise number of bank branches

Sl. No.	Taluk name	Block/ Municipality	No. of branches	Rural/ Urban
1	Alathur	Alathur	42	R
2		Kuzhalmannam	28	R
3	Chittur	Chittur	44	R
4		Kollengode	37	R
5		Nenmara	29	R
6		Chittur (M)	13	U
7	Mannarkkad	Attapady	10	R
8		Mannarkkad	43	R
9	Ottapalam	Ottapalam	43	R
10		Pattambi	44	R
11		Sreekrishnapuram	31	R
12		Thrithala	35	R
13		Ottapalam (M)	18	U
14		Shornur (M)	10	U
15	Palakkad	Malampuzha	36	R
16		Palakkad	29	R
17		Palakkad (M)	39	U

4.3.2 Credit flow to MSME sector

Credit flow to MSME sector (non farm sector) during the year 2013-14 from financial institutions in Palakkad district is as follows (source: District Credit Plan, Lead District Bank, Palakkad)

Sl No	Category of banks	Target in Rs Crores	Achievement in Rs. Crores	%
1	State Bank Group	78.60	86.18	110
2	Nationalised banks	148.66	59.89	40
3	Total public sector banks	236.91	150.31	63
4	Pvt sector banks	71.37	44.10	62
5	Total Commercial banks	308.29	194.41	63
4	Cooperative Banks	107.76	71.01	66
5	KFC	14.94	19.82	133
	Total Banking sector	431.00	285.24	66

4.4 Electricity

There are two electrical circles in the district- Palakkad and Shoranur and there are a total of 61 electrical sections under these circles.

4.4.1 Consumption under various categories in Lakh units (in 2014, KSEB)

Name of circle	Domestic	Agriculture	Industrial-LT	Industrial-HT	General	Others	Total
Palakkad	353.71	89.49	37.37	346.14	8.04	111.94	946.69
Shoranur	263.96	29.75	20.63	59.60	2.15	68.37	444.46
Total	617.67	119.24	58.00	405.74	10.19	180.31	1391.15

Total Consumption under LT is 956.39 lakh units and total consumption under HT is 434.76 lakh units.

4.4.2 List of electrical sections under electrical circle, Palakkad

<i>Electrical division, Palakkad</i>	<i>Electrical division, Alathur</i>	<i>Electrical division, Chittur</i>
Sulthanpet	Kuzhalmannam	Chittur
Big Bazar	Kuthannur	Kozhijampara
Melamuri	Kottayi	Velathavalam
Kalpathy	Peringottukurissi	Koduvayur
Olavakkode	Alathur	Pudunagaram
Malampuzha	Kunissery	Tattamangalam
Kanjikode	Padur	Kollengode
Elappully	Puthucode	Muthalamada
Marutha Road	Vadakkenchery	Nelliyampathy
Parli	Mudappallur	
Pathiripala	Nenmara	
Kongad	Kizhakkencherry	
Kadampazhippuram		
Mundur		

List of electrical sections under electrical circle, Shoranur

Vallapuzha	Ongallur	Sreekrishnapuram
Koottupatha	Muthuthala	Alanellur
Thiruvengappura	Cherpulassery	Thachampara
Challissery	Ambalappara	Kottathara
Peringode	Ottappalam	Agali
Padinjarangadi	Shoranur	Kanjirapuzha
Koppam	Vaniyamkulam	Kumaramputhur
Thrithala	Kothakurissi	mannarkkad
Pattambi	Panangattiri	

4.4.3 Details of substations und Transmission Circle, Palakkad

Sl No.	Name of substation	Total capacity in MVA
	220 KV substations	
1.	Shornur	200
2.	Kanjikkode	320
	110 KV substations	
1.	Kanjikkode	126
2.	Vennakkara	105
3.	Malampuzha	20
4.	Mannarkkad	52
5.	Kollengode	32
6.	Parali	52
7.	Ottappalam	22.5
8.	Cherpulassery	25
9.	Koppam	52
10.	Koottanad	41
11.	Vedakkenchery	54.5
12.	Kozhinjampara	57
13.	Kalladikode	22.5
14.	Walayar	25
15.	Pathiripala	35
	66 KV substations	
1.	Nenmara	16
2.	Kannampully	8
3.	Chittur	20
	33 KV substations	
	Maniyampara	10
2.	Alathur	10
3.	Alanallur	10
4.	Agali	10
5.	Muthalamada	10
6.	Nelliyampathy	5
7.	Koduvayur	10
8.	Plassana	5
9.	Sreekrishnapuram	10
10.	Kongad	10
11.	Pattambi	10
12.	Chalissery	10
13.	Thrithala	10
14.	Vannamada	10
15.	Meenakshipuram	10
16.	Tharur	10
17.	Chittadi	10
18.	Velanthavalam	10
19.	Thiruvengappura	5

The district is also supported by one 2.25 MVA windmill station at Kanjikkode and a 2.5 MVA mini hydel generating station at Malampuzha.

4.5 Industrial land

Availability of industrial of land remains the vital factor that holds strategic in any scheme for industrial development of a region. The developed plots are made available to needy entrepreneurs by DIC, and other development agencies such as SIDCO, KINFRA, KSIDC etc. Palakkad District Mini Industrial Estate Co-operative Society (PDMIECS) and few local self government institutions also operate facilities like industrial work sheds and make available to entrepreneurs.

4.5.1 DIC

There are four industrial development areas/plots in the district. Two development areas are in Kanjikkode and Pudussery in Palakkad Taluk and two development plots are in Shornur and Kappur in Ottapalam and Pattambi Taluk respectively. The total extent of land available in all these area is 702.93 acres, out of this about 95% is already in use by various industries. The DA/ DP wise status of the above industrial area is as follows.

4.5.1.1 The DA/ DP maintained by DIC

Name of DA/DP	Total area acquired (in acres)	Area for common amenities (in acres)	Allotable area (in acres)	Area allotted (in acres)	Total number of units	Balance (in acres)
NIDA, Kanjikkode	532.80	19.36	513.44	513.44	236	Nil
IDA, Pudussery	134.15	4.16	129.99	129.99	64	Nil
DP Kappur	18.26	1.97	16.29	15.46	25	0.83
DP Shornur	17.72	0.60	17.12	7.50	2	9.62
Total	702.93	26.09	676.84	666.39	327	10.45

4.5.2 KINFRA

The total industrial land in Wise Park KINFRA (Kerala Industrial Infrastructure Development Corporation) Kanjikode in Palakkad district is 200 acres, out of these 170.53 acres have already been allotted and the balance of land available for allotment is 29.47 acres. The infrastructure such as 4 km road, electrical lines and drainage system and shopping complex are also provided inside the Park. The Park contains water supply system of having 1 lakh litres of overhead tank, 4 lakh litres of ground water tank and 7 acres of water body for rain water harvesting and for bore well recharge.

In Kinfra, Kanjikode, an extend of 192.49 acres of industrial land are available, out of these, 161.91 acres are allottable area and 130.33 acres are allotted to various industrial units. The total investment made in Kinfra industrial estate is about 600 crores. The employment generated so far here is 1200 numbers and the expected employment after the expansion of the existing units and commencement of new units in the vacant land is 6000 numbers.

4.5.3 SIDCO

The Small Industries Development Corporation (SIDCO) has made the industrial development by forming Industrial Estates at Olavakkode and Karekkad, Mini Industrial Estates at Ottapalam, Vaniyamkulam and Pattambi and Industrial Park at Shornur in the district. The details such as extend of land available, land allotted, major industrial units etc. in each estate are the following.

	Name of SIDCO Estate	Total land	Land allotted	Balance Land available	Total no. of units
1	Industrial Estate, Olavakkode	828.512	622.76	205.752	42
2	Industrial Estate, Karekkad	737.784	737.784	Nil	46
3	Mini Industrial Estate, Ottapalam	9.88	9.88	Nil	12
4	Mini Industrial Estate, Vaniyamkulam	59.089	54.509	4.58	12
5	Mini Industrial Estate, Pattambi	18.798	18.798	Nil	12
6	Industrial Park, Shornur	390.78	309.78	Nil	35
	Total	2044.843	1753.511	210.322	159

4.5.4 Industrial Land with Local Bodies

The details of Block wise industrial land identified from Local bodies in each Taluk are given below.

Name of Block / Municipality	Name of Panchayat / Village	Survey No.	Village	Land (in Cents)	No. of Sheds	Vacancy / Availability of land
ALATHUR TALUK						
Alathur Block	Tarur	133/3	Tarur	30	2	
	Vadakkenchery		Vadakkanchery 1	10	5	Nil
	Kannambra	14/1	Kannadi I	5	6	
	Pudukode		Pudukode	56	1	
	Alathur		Alathur		2	
	Thenkurussi	212/5, 90/A, 4/40, 7/20	Thenkurussi II	65.5	13	
Kzhalmanna m Block	Kannadi	78/2	Kannadi I	100	1	
	Kuzhalmanna m	14/95, 438/4, 7	Kuzhalmanna m 1, Kuzhalmanna mII	56	11	
	Kottayi	697/2	Kottayi 1	3	1	
	Total			324.5	42	
CHITTUR TALUK						
Chittur T Municipality	Chittur Village				1	Nil

Kollengode Block	Pattanchery GP	267/5	Pattanchery I	7	1 (1539 Sq .ft)	Nil
	Koduvayur	51/3	Koduvayur I	192	2	Yes
	Total			199	3	
MANNARKKAD TALUK						
				Nil		
OTTAPPALAM TALUK						
Shornur (M)	Shornur (M)		SRR (M)	86	2	
Ottapalam (M)	Ottapalam (M)	79/7	Otp (M)	17	1	
Pattambi (B)	Ongallur		Ongallur	165	1	
Thrithala (B)	Nil	Nil	Nil	Nil	Nil	Nil
Ottapalam (B)	Ambalapara		Ambalapara-I	24	5	
	Thrikkadeeri I	27/6	Thrikkadeeri-I	27	1	
Sreekrishnapuram (B)	Sreekrishnapuram (B)	½,1/3	Thrikkadeeri-II	126		
	Sreekrishnapuram (B)	1/8A, ½,1/3, 1/4A	Thrikkadeeri-II	98		
	Sreekrishnapuram (B)	1/8A, 1/4A	Thrikkadeeri-II	80		
	Karimpuzha	441/3	Karimpuzha-I		1	
	Total			623	11	
PALAKKAD TALUK						
				Nil		
	Grand Total			1146.5	56	

Software Technology Park, Kanjikode

A Software Technology park is set up by Palakkad District Panchayath to cater the requirements of IT & ITES entrepreneurs in the district.

4.5.5 Land identified for DA/DP

DIC has identified suitable private land in sy.no.113/1 in Ozhalapathy/ Vadakarapathy village in Chittur Taluk having an extent in between 50 to 100 acres (dry land), for developing into an industrial development area.

Chapter 5

REVIEW OF EXISTING INDUSTRIAL STATUS

Palakkad district is considered to be 2nd most industrialized district in the state. Agro based industries dominate the industrial scenario in the rural areas. Textile based and building materials units are growing very fast for the past few years. The concentration of SSI units, in the District, is in Alathur, Malampuzha, Palakkad and Pattambi Blocks as also in Palakkad Municipal Area. There are around 55 large and medium industries, 17488 MSME units and more than 125 KVI industries units operating in the district

The total number of working units found in the district during the MSME census conducted during 2006-07 period was 10266. This constitutes an investment of Rs.205.32 crores and the total employment generated by these 10266 MSMEs was 30798 numbers. Thereafter a total of 7222 MSME units were identified up to the year 2013-14 and thus the total number of industrial units as on 31st March 2014 in the district is 17488. The total investment in MSME sector in the district at 813.60 crores and the employment generated so far is 65284.

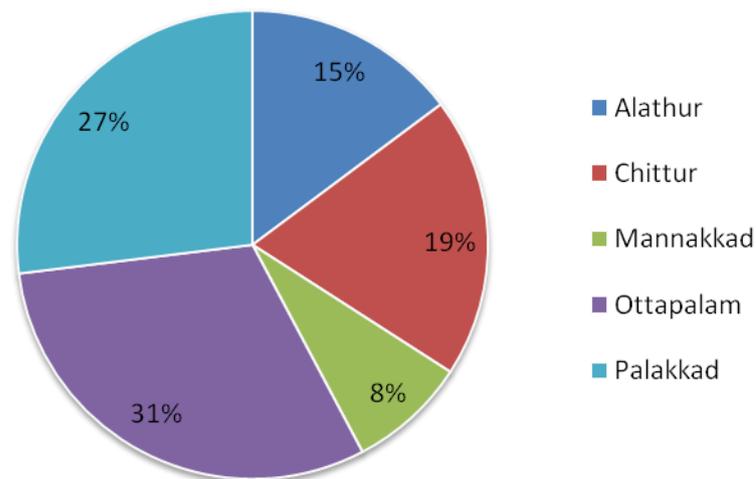
On analysis of data it is seen that 83% of MSMEs are in manufacturing sector and the remaining 17% are service sector enterprises. In manufacturing sector, largest number of units is in textile and textile product based and this comes to 16% followed by food processing enterprises with 15%. General engineering units come in 3rd position with 11%.

As the Kanjikode area remains the industrial hub of the district, Malampuzha Block dominated over all other Blocks and Municipalities in number of industries, investment and generation of employment. The second most industrial prominent Block is Alathur with an investment of 73.53 crores in 1638 units. Palakkad Municipality, Palakkad, Chittur and Kollengode Blocks are the other industrially potential areas in the district.

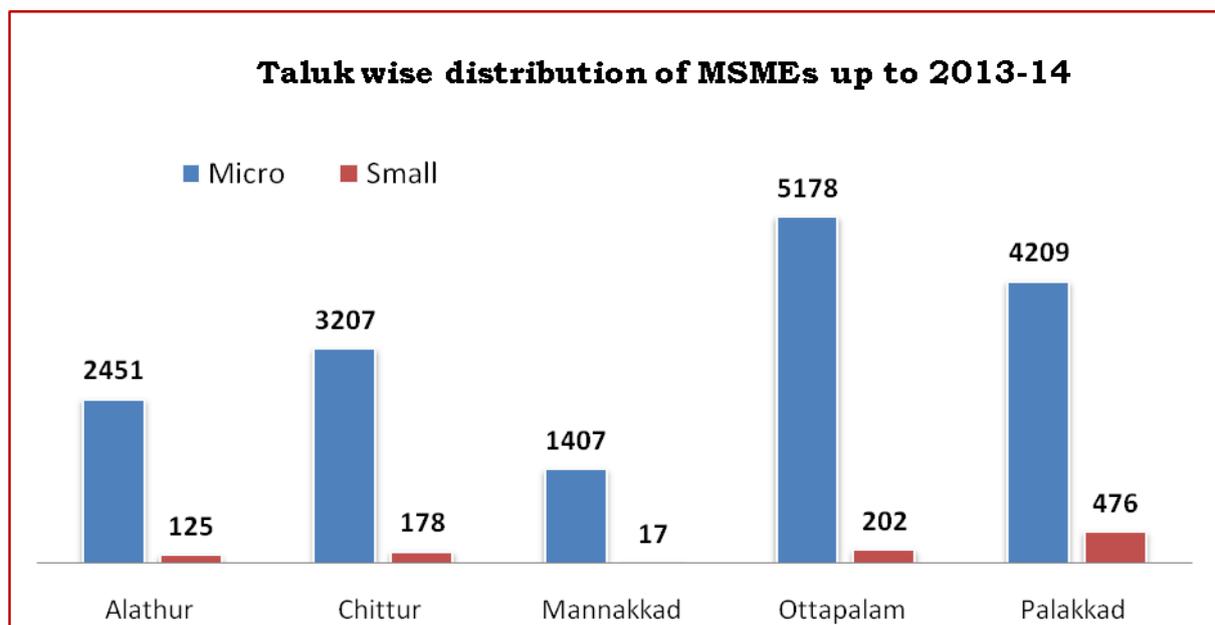
5.1 Taluk wise Classification of MSMEs with investment and employment

The Taluk wise micro, small and medium level enterprises as on 31-03-2014 according the classification of enterprises under MSMED Act 2006 in Palakkad district is shown in the following pie diagram. Ottapalam Taluk accounts 31% of enterprises followed by Palakkad with 27%. Mannarkkad Taluk has the least number of units.

Taluk wise distribution of MSME in Palakkad



The Taluk wise number of micro and small enterprises is depicted in the bar chart given below. Even though Ottapalam Taluk is leading in number of total enterprises, the number of small category of enterprises are more in Palakkad Taluk.



5.2 Classification of manufacturing and service MSMEs

	Manufacturing	Service	Total
Total	14601	2887	17488
Micro	13736	2716	16452
Small	833	165	998
Medium	32	6	38

5.3 Year wise classification of MSMEs

The year wise number of MSME units, its investment and employment up to the last financial year is indicated below.

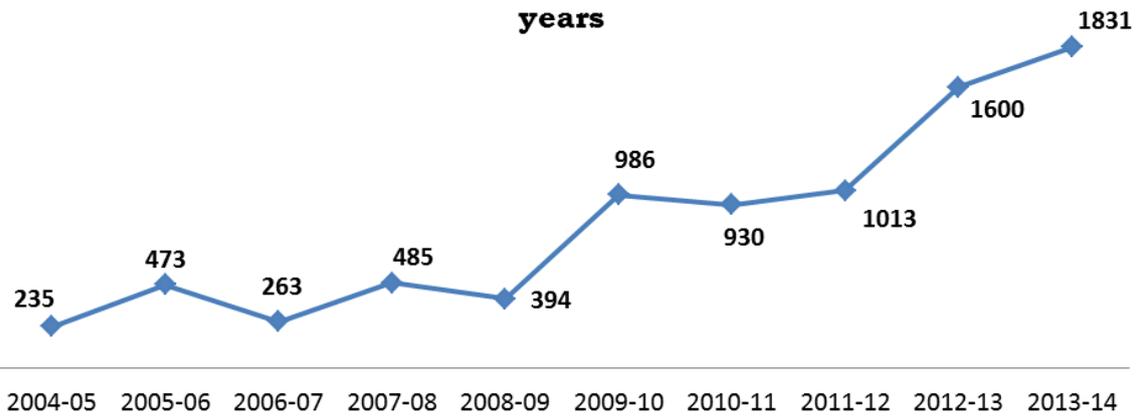
Category	Up to 2009-10	2010-11	2011-12	2012-13	2013-14	Up to 2013-14
No. of MSME	12114	930	1013	1600	1831	17488
Investment	343.57	65.43	123.96	125.09	155.54	813.59
Employment	42562	4582	5030	6392	6718	65284

The year wise break up of MSMEs started, investment and employment generated for the last 10 years in the district is given below.

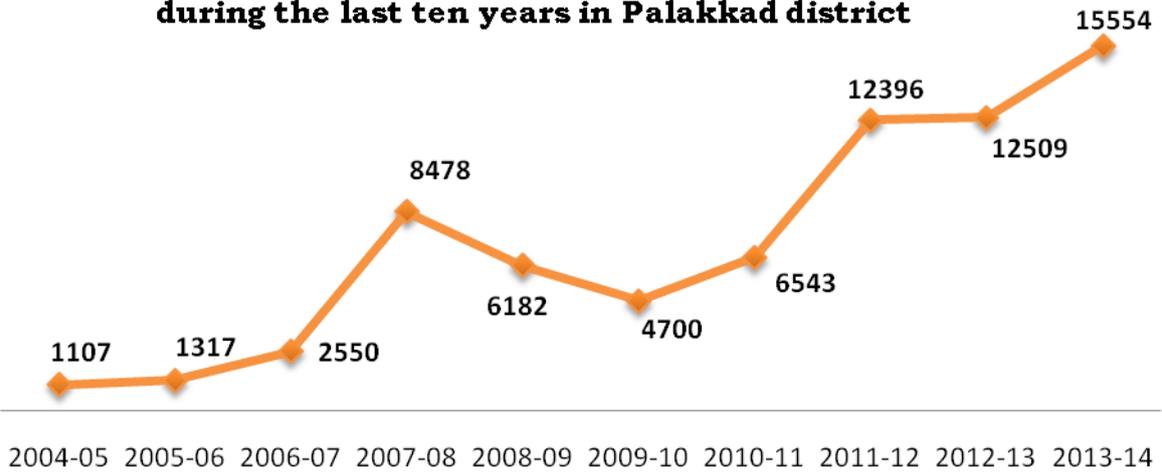
	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
No. of MSMEs	235	473	263	485	394	986	930	1013	1600	1831
Investment in Rs. crores	11.07	13.17	25.50	84.78	61.82	47.00	65.43	123.96	125.09	155.54
Employment in No.	1172	1187	839	4868	3163	4487	4582	5030	6392	6718

A consistent growth can be seen in the number of units started, investment (in lakhs) made and employment generated over the years. The following line charts depicts a growth trend over the period from 2004-05 to 2013-14.

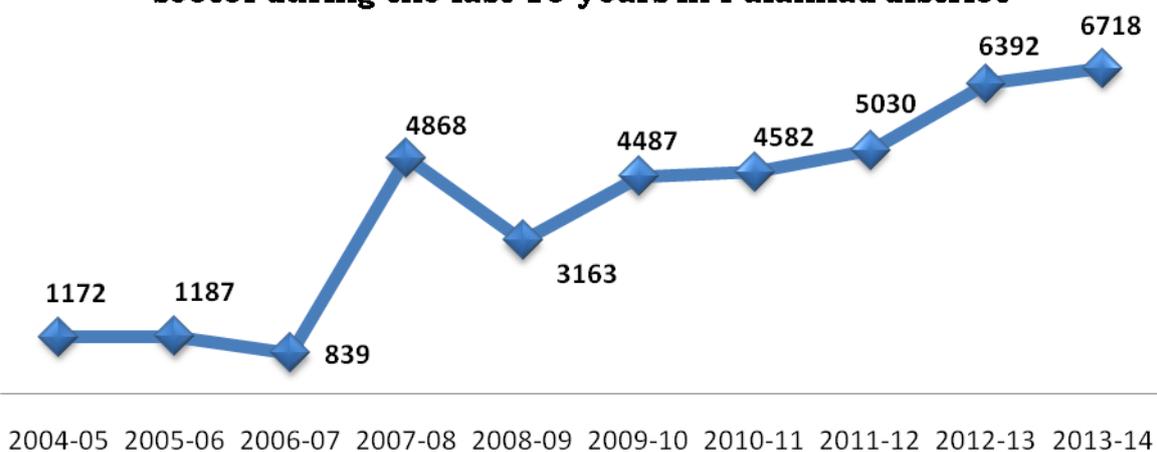
Trend in number of MSMEs strtaed during the last 10 years



Trend in investment (in Rs. Lakhs) in MSME sector during the last ten years in Palakkad district



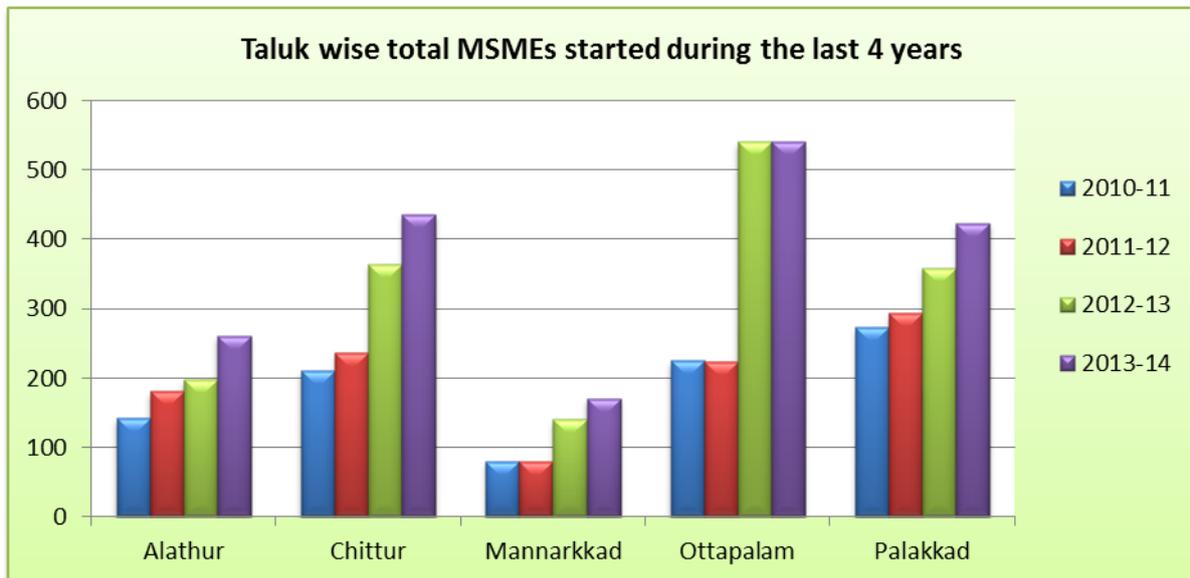
Trend in generation of employment (in No.) in MSME sector during the last 10 years in Palakkad district



5.3.1 Taluk wise year wise total MSME units in the district

	Taluk	Up to 2009-10	2010-11	2011-12	2012-13	2013-14	Up to 2013-14
1	Alathur	1799	142	181	197	261	2580
2	Chittur	2143	210	236	364	436	3389
3	Mannarkkad	954	80	79	140	171	1424
4	Ottapalam	3851	225	224	540	540	5380
5	Palakkad	3367	273	293	359	423	4715
	District Total	12114	930	1013	1600	1831	17488

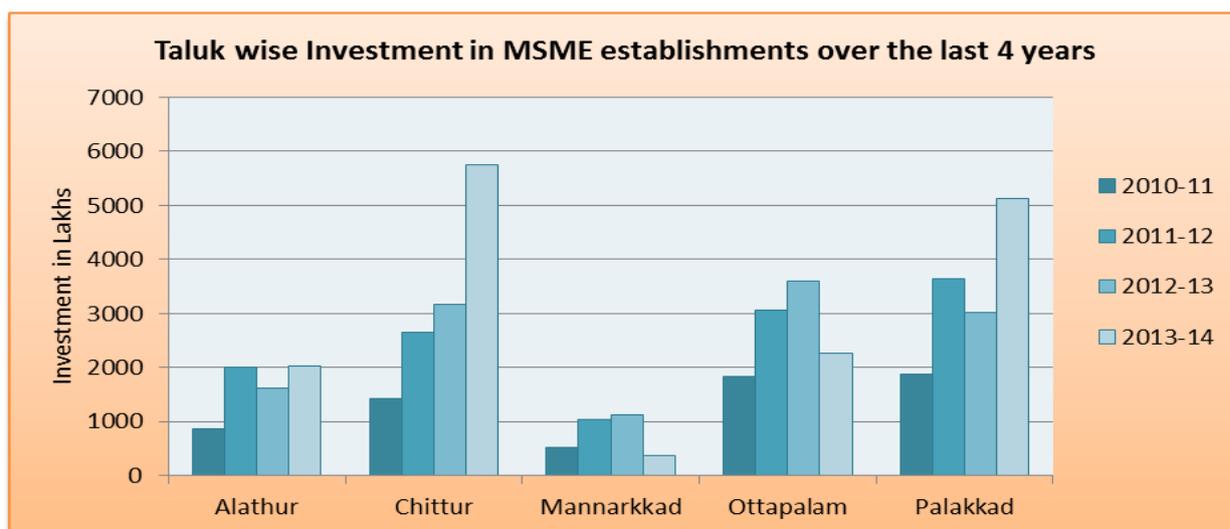
All Taluks have recorded a consistent growth in number of enterprises over the last four years. Ottapalam has recorded more than 50% increase in 2012-13 and then constant.



5.3.2 Taluk wise year wise investment in MSME units

	Taluk	Up to 2009-10	2010-11	2011-12	2012-13	2013-14	Up to 2013-14
1	Alathur	5250.66	874.15	1997.07	1610.58	2031.35	11763.81
2	Chittur	6563.73	1429.16	2650.44	3158.62	5754.54	19556.48
3	Mannarkkad	2734.05	520.33	1047.85	1118.02	375.37	5795.61
4	Ottapalam	10639.05	1839.30	3052.54	3604.26	2272.42	21407.57
5	Palakkad	9169.65	1880.11	3648.97	3017.89	5120.85	22837.47
	District Total	34357.14	6543.04	12396.87	12509.37	15554.52	81360.94

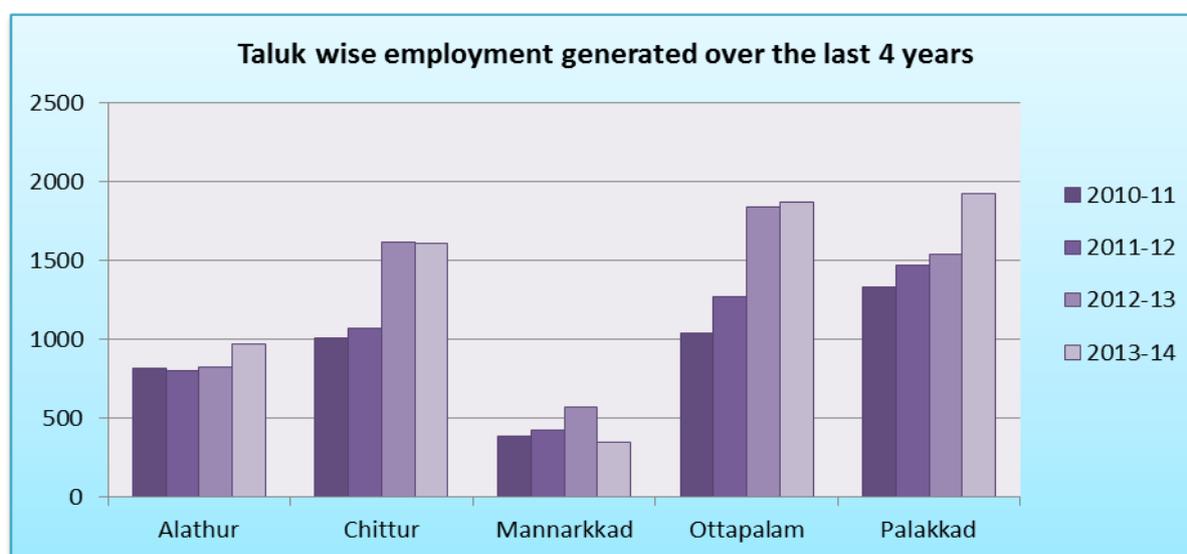
On analysis, it is seen that the investment in Mannarkkad and Ottapalam Taluks have decreased in 2013-14 even though the overall investment in the district is increased.



5.3.3 Taluk wise year wise Employment generated in MSME sector

	Taluk	Upto 2009-10	2010-11	2011-12	2012-13	2013-14	Up to 2013-14
1	Alathur	6505	815	804	823	967	9914
2	Chittur	8131	1007	1068	1614	1611	13431
3	Mannarkkad	3387	388	422	571	349	5117
4	Ottapalam	13180	1038	1266	1842	1866	19192
5	Palakkad	11359	1334	1470	1542	1925	17630
	District Total	42562	4582	5030	6392	6718	65284

All Taluks have recorded a consistent growth in employment over the last four years except Mannarkkad district in 2013-14 and Alathur in 2011-12.

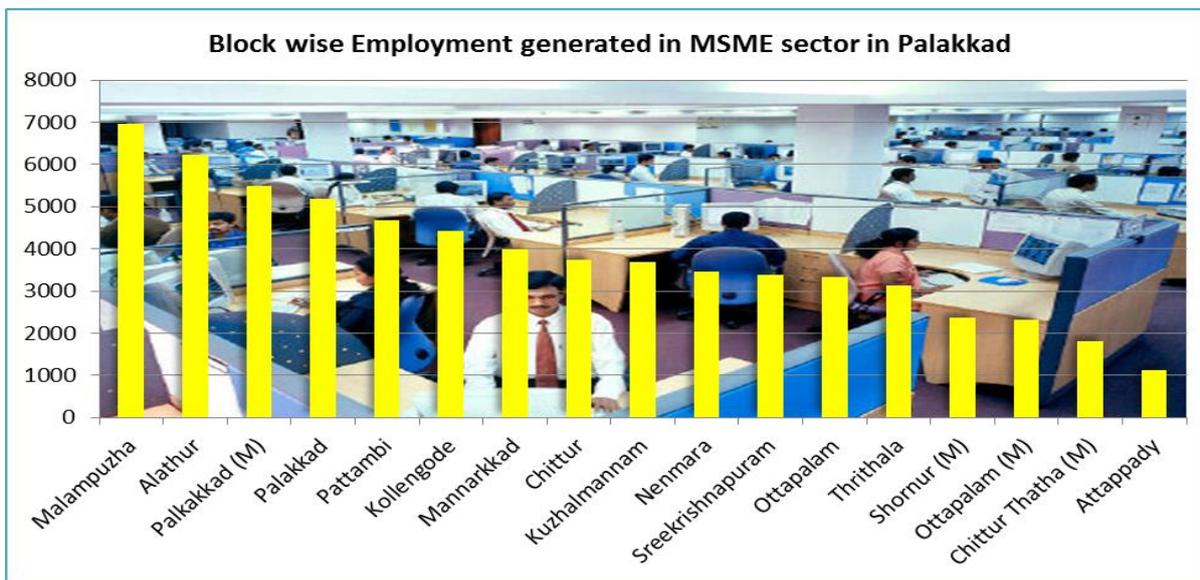
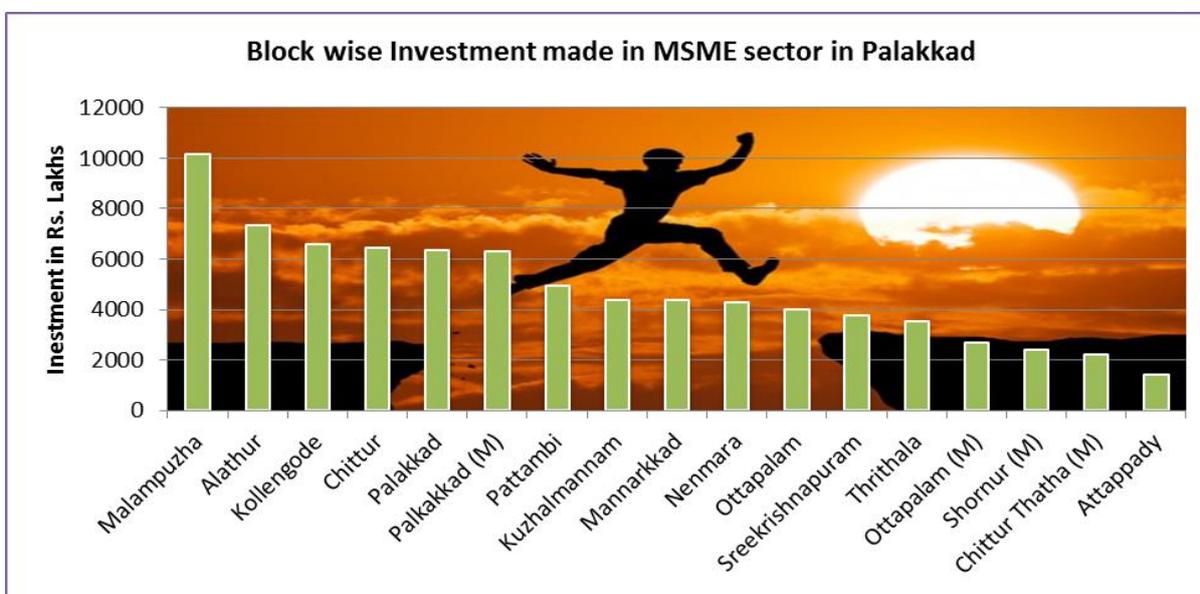
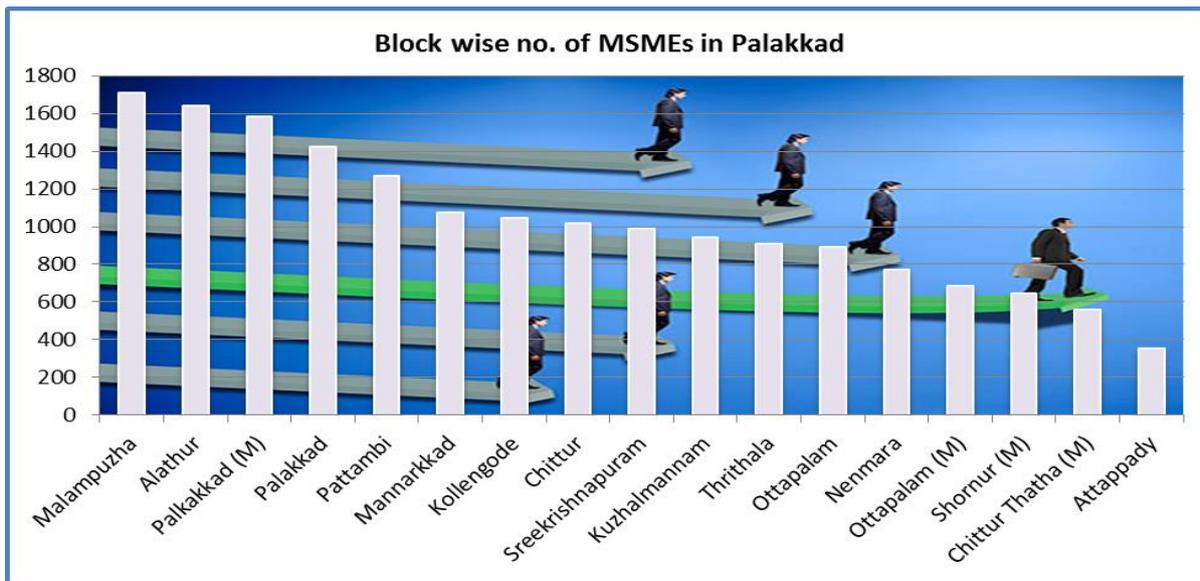


5.4 Block wise distribution of MSMEs in Palakkad district

The following table shows the Block wise micro, small and medium category of enterprises in Palakkad up to 2013-14 year and its investment (in crores) and employment generated.

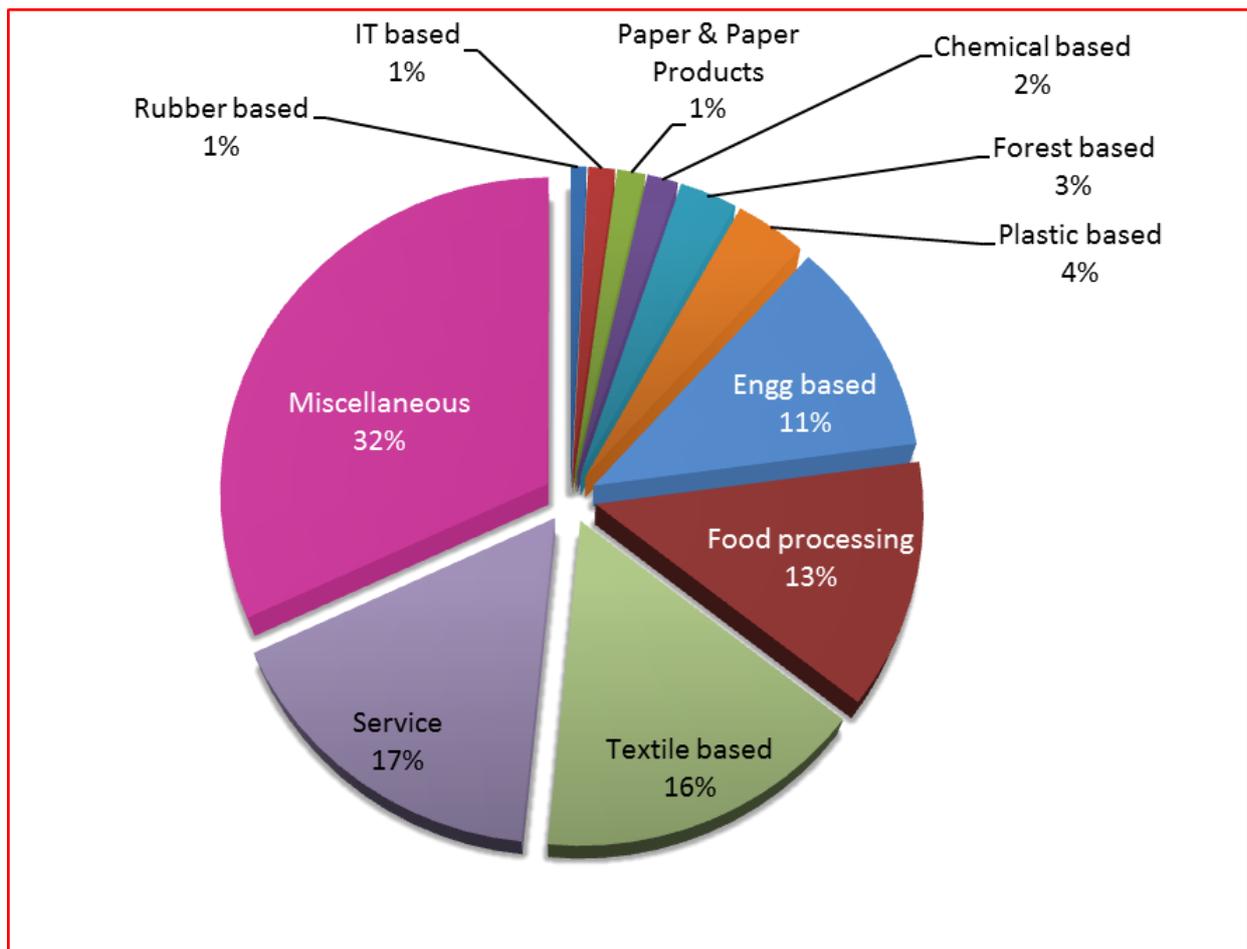
	Block/ Taluk	Micro	Small	Medium	Total	Investment (in Rs. Cr)	Employees
1	Alathur	1556	80	2	1638	73.53	6218
2	Kuzhalmannam	895	45	2	942	44.11	3696
	Alathur Taluk	2451	125	4	2580	117.64	9914
3	Chittur	959	54	2	1015	64.35	3740
4	Chittur T (M)	530	30		560	22.38	1813
5	Kollengode	993	53	1	1047	65.74	4410
6	Nenmara	725	41	1	767	43.09	3467
	Chittur Taluk	3207	178	4	3389	195.56	13431
7	Mannarkkad	1060	13	0	1073	43.71	3985
8	Attappady	347	4	0	351	14.25	1132
	Mannakkad Taluk	1407	17	0	1424	57.96	5117
9	Ottapalam	854	33	0	887	39.99	3319
10	Ottapalam (M)	657	26	0	683	26.73	2323
11	Shornur (M)	621	24	0	645	24.35	2361
12	Pattambi	1220	48	0	1268	49.60	4667
13	Sreekrishnapuram	952	37	0	989	37.92	3390
14	Thrithala	874	34	0	908	35.48	3131
	Ottapalam Taluk	5178	202	0	5380	214.08	19192
15	Palakkad	1269	144	9	1422	63.49	5173
16	Palkakkad (M)	141	159	10	1583	63.03	5499
17	Malampuzha	1526	173	11	1710	101.86	6959
	Palakkad Taluk	4209	476	30	4715	228.37	17630
	District Total	16452	998	38	17488	813.61	65284

The following three bar charts depict the Block wise number of MSMEs up to the financial year 2013-14 in Palakkad, its investment and employment in descending order of magnitude. Malampuzha and Alathur Blocks are in first and second position in number of units, investment and employment, and Attapady block is the last position in all cases. Pattambi, Kuzhalmannam, Mannarkkad, Nenmara and Ottapalam Blocks are moderate in investment.



5.5 SECTOR WISE ANALYSIS

Textile and readymade garments sector is the major manufacturing sector in Palakkad district with a share of 16% followed by agro and food processing sector with a share of 13%. General engineering constitutes the 3rd largest sector with a share of 11%. 17% of the MSMEs are based on service based activities. The following pie diagram shows a brief picture on sectoral contribution of MSMEs in Palakkad.



5.5.1 Sector wise classification of MSME up to 2013-14

The following table represents the sector wise Block wise and Taluk wise number of manufacturing and service enterprises in the district up to 31-3-2014. Manufacturing sector represents 83% and service sector 17% in number of working units.

	Block/ Taluk	Paper & Paper Products	Food processing	Rubber based	Plastic based	Forest based	Textile based	Chemical based	Engg based	IT based	Miscellaneous	Service	Total
1	Alathur	37	190	12	42	54	292	35	185	17	487	287	1638
2	Kuzhalmannam	13	114	5	38	26	169	23	104	10	299	141	942
	Alathur Taluk	50	304	17	80	80	461	58	289	27	786	428	2580
3	Chittur	10	115	6	35	47	161	19	117	16	320	169	1015
4	Chittur T (M)	3	92	4	14	9	98	12	26	13	185	104	560
5	Kollengode	6	119	10	38	21	181	19	92	11	371	179	1047
6	Nenmara	9	101	5	35	19	59	14	88	10	269	158	767
	Chittur Taluk	28	427	25	122	96	499	64	323	50	1145	610	3389
7	Mannarkkad	15	143	12	42	27	170	15	130	8	316	195	1073
8	Attappady	9	60	3	9	7	43	3	29	2	114	72	351
	Mannakkad Taluk	24	203	15	51	34	213	18	159	10	430	267	1424
9	Ottapalam	14	100	5	36	37	151	12	102	8	280	142	887
10	Ottapalam (M)	8	110	3	22	13	111	8	62	20	214	112	683
11	Shornur (M)	10	83	5	27	15	101	9	62	20	206	107	645
12	Pattambi	14	159	6	53	43	217	24	149	14	404	185	1268
13	Sreekrishnapuram	15	130	6	33	41	137	13	129	11	331	143	989
14	Thrithala	11	119	8	32	48	149	13	112	7	283	126	908
	Ottapalam Taluk	72	701	33	203	197	866	79	616	80	1718	815	5380
15	Palakkad	28	207	9	51	40	222	16	165	24	423	237	1422
16	Palkakkad (M)	27	201	16	61	26	285	21	141	32	515	258	1583
17	Malampuzha	18	186	23	70	42	246	17	255	14	567	272	1710
	Palakkad Taluk	73	594	48	182	108	753	54	561	70	1505	767	4715
	District Total	247	2229	138	638	515	2792	273	1948	237	5584	2887	17488
	Percentage	1	13	1	4	3	16	2	11	1	32	17	100

5.5.2 Year wise sector wise classification of enterprises

The year wise number of units started in each sector in the district is provided in the following table. This gives a picture in change in pattern of enterprises over the years. Food products, engineering units, textile products, paper products and service industry are showing an increasing pattern, while rubber products, plastic products, forest based products and IT sector shows a fluctuating trend.

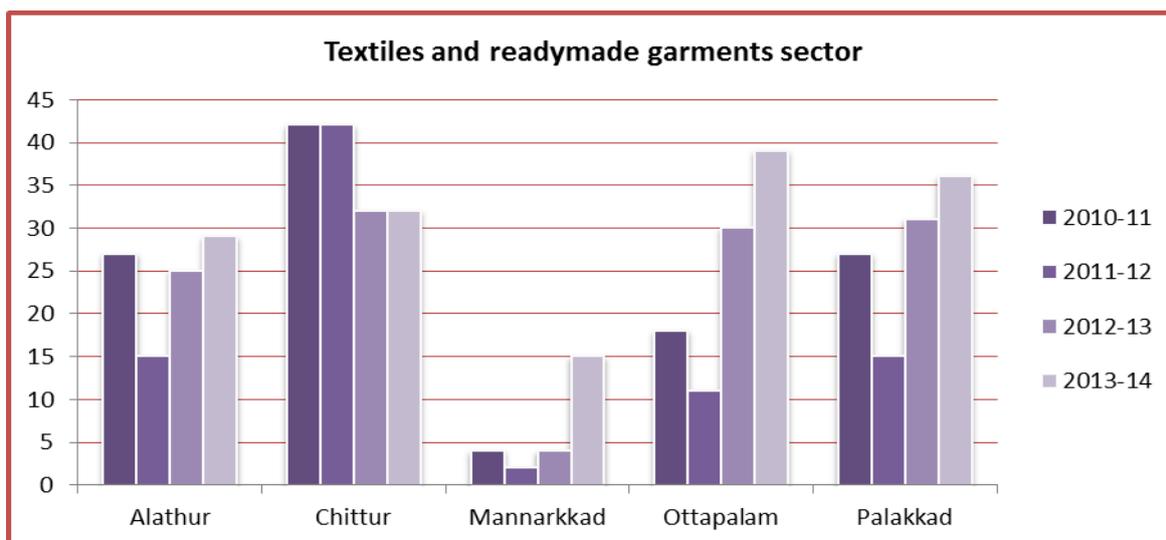
MSME sector	Upto 2009-10	2010-11	2011-12	2012-13	2013-14	Total
Paper & Paper Products	136	18	21	34	38	247
Food processing	1636	96	96	188	213	2229
Rubber based	62	27	15	19	15	138
Plastic based	608	6	4	12	8	638
Forest based	273	18	6	115	103	515
Textile based	2316	118	85	122	151	2792
Chemical based	232	6	14	11	10	273
Engg based	945	149	208	327	319	1948
IT based	153	26	14	26	18	237
Miscellaneous	4177	246	298	351	512	5584
Service	1576	220	252	395	444	2887
Total	12114	930	1013	1600	1831	17488
Investment	34357.14	6452.04	12487.87	12509.37	15554.52	81360.94
Employment	42562	4582	5030	6392	6718	65284

5.5.3 SECTOR WISE ANALYSIS OF EACH TALUK OVER THE LAST FOUR YEARS

5.5.3.1 Textiles and Readymade Garments sector

Textile and readymade garments sector is the largest manufacturing enterprise sector in Palakkad with a share of 16%. Chitter Taluk is more potential for textile industry. However, the number of units has been reduced in Chittur during the last two years.

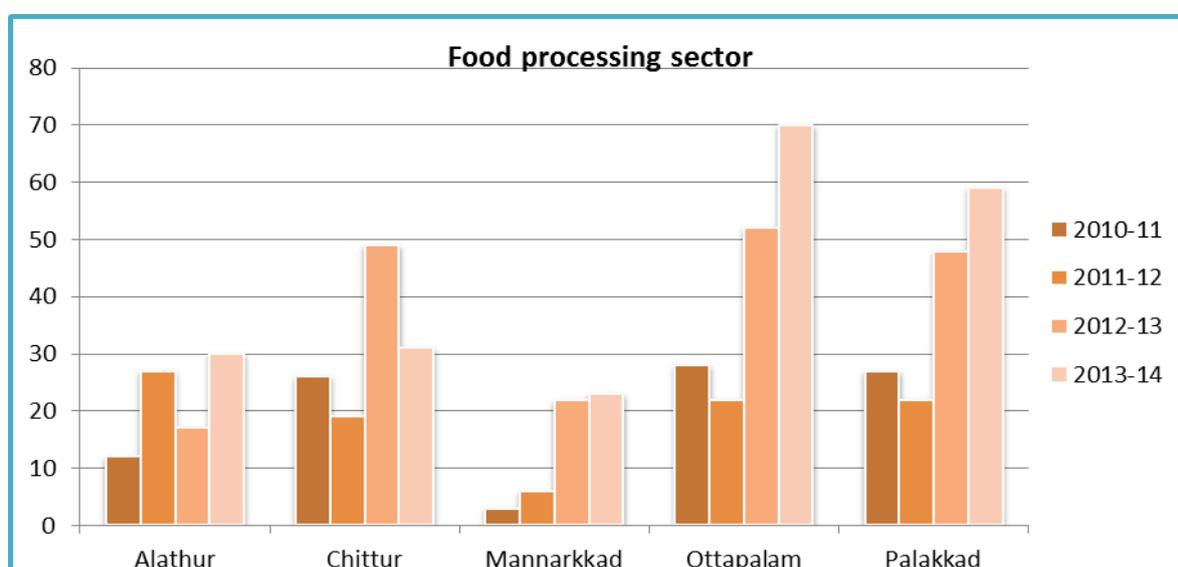
	Taluk	Upto 209-10	2010-11	2011-12	2012-13	2013-14	Up to 2013-14
1	Alathur	365	27	15	25	29	461
2	Chittur	351	42	42	32	32	499
3	Mannarkkad	188	4	2	4	15	213
4	Ottapalam	768	18	11	30	39	866
5	Palakkad	644	27	15	31	36	753
	District Total	2316	118	85	122	151	2792



5.5.3.2 Food Processing sector

Agro based and food processing is the second largest enterprise sector in Palakkad according to the data on the number of MSME units working in this sector. The Taluk wise and year wise number of food processing enterprises is shown in the following table. Ottapalam and Palakkad are more potential Taluks in food processing.

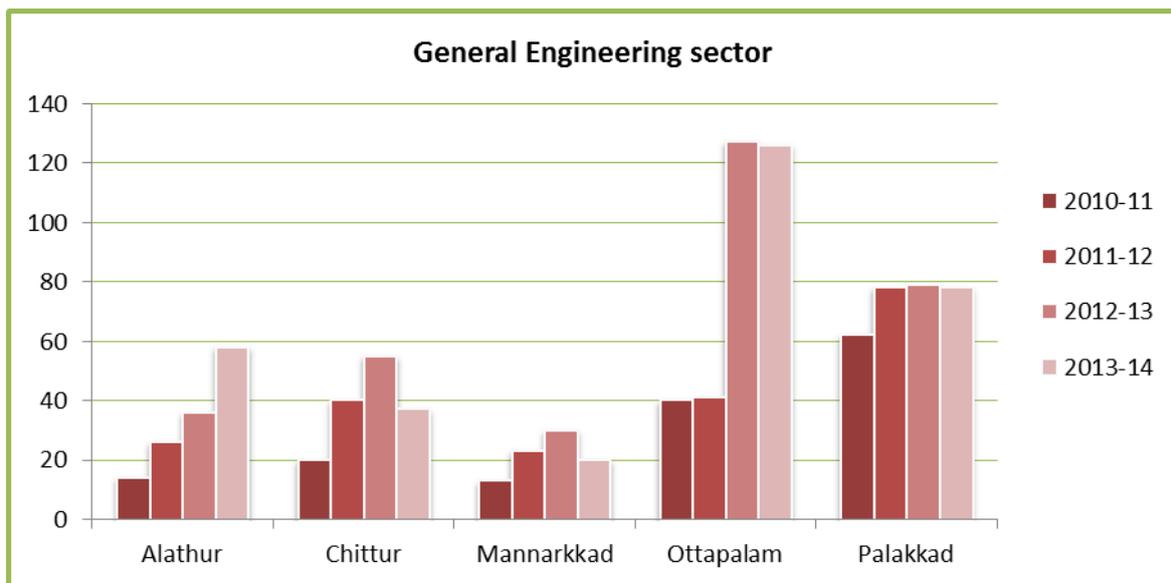
	Taluk	Upto 2009-10	2010-11	2011-12	2012-13	2013-14	Up to 2013-14
1	Alathur	218	12	27	17	30	304
2	Chittur	302	26	19	49	31	427
3	Mannarkkad	149	3	6	22	23	203
4	Ottapalam	529	28	22	52	70	701
5	Palakkad	438	27	22	48	59	594
	District Total	1636	96	96	188	213	2229



5.5.3.3 General Engineering sector

General engineering sector is the 3rd largest manufacturing sector in Palakkad, this sector contributes 11% share. The units under this category have been increased in the last two years in all Taluks except in Chittur and Mannarkkad.

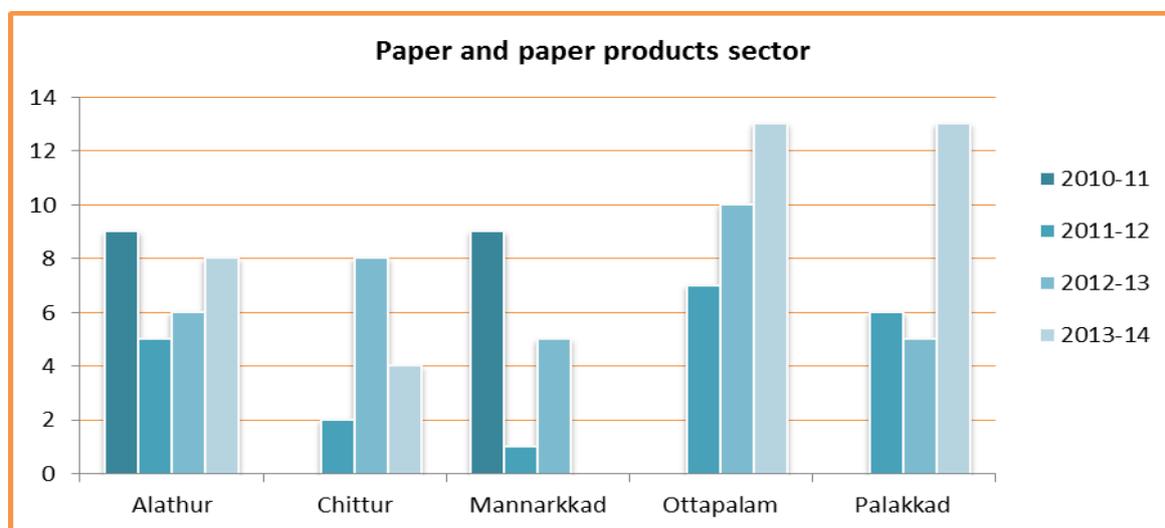
	Taluk	Upto 209-10	2010-11	2011-12	2012-13	2013-14	Up to 2013-14
1	Alathur	155	14	26	36	58	289
2	Chittur	171	20	40	55	37	323
3	Mannarkkad	73	13	23	30	20	159
4	Ottapalam	282	40	41	127	126	616
5	Palakkad	264	62	78	79	78	561
	District Total	945	149	208	327	319	1948



5.5.3.4 Paper and paper products

	Taluk	Upto 209-10	2010-11	2011-12	2012-13	2013-14	Up to 2013-14
1	Alathur	22	9	5	6	8	50
2	Chittur	14	0	2	8	4	28
3	Mannarkkad	9	9	1	5	0	24
4	Ottapalam	42	0	7	10	13	72
5	Palakkad	49	0	6	5	13	73
	District Total	136	18	21	34	38	247

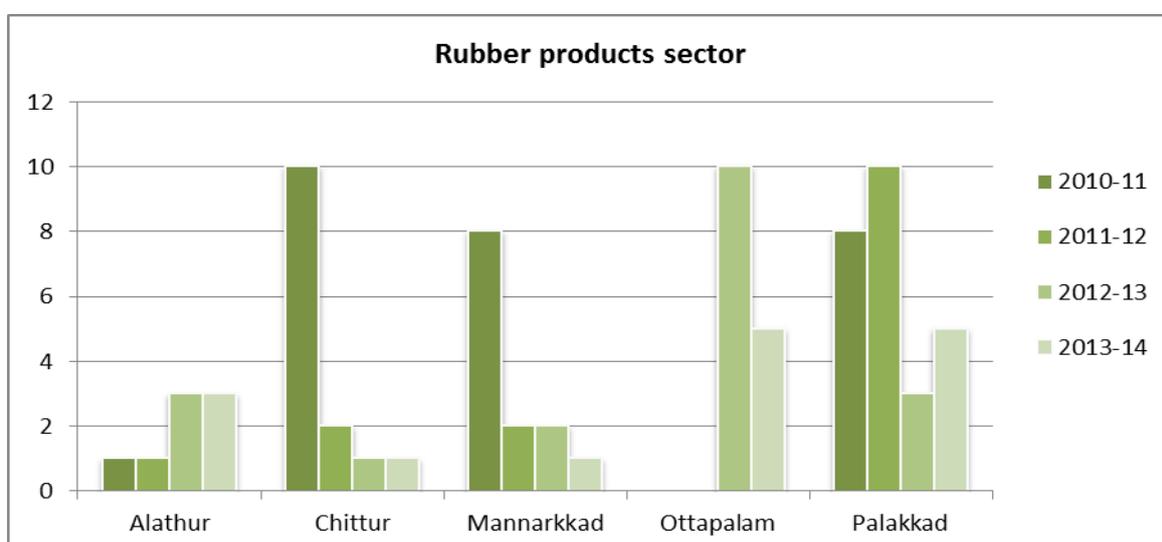
Paper based industry is the 7th largest sector with a share of 1% in total MSMEs. This sector shows a fluctuating trend in all Taluks except in Ottapalam.



5.5.3.5 Rubber and rubber products

	Taluk	Upto 209-10	2010-11	2011-12	2012-13	2013-14	Up to 2013-14
1	Alathur	9	1	1	3	3	17
2	Chittur	11	10	2	1	1	25
3	Mannarkkad	2	8	2	2	1	15
4	Ottapalam	18	0	0	10	5	33
5	Palakkad	22	8	10	3	5	48
	District Total	62	27	15	19	15	138

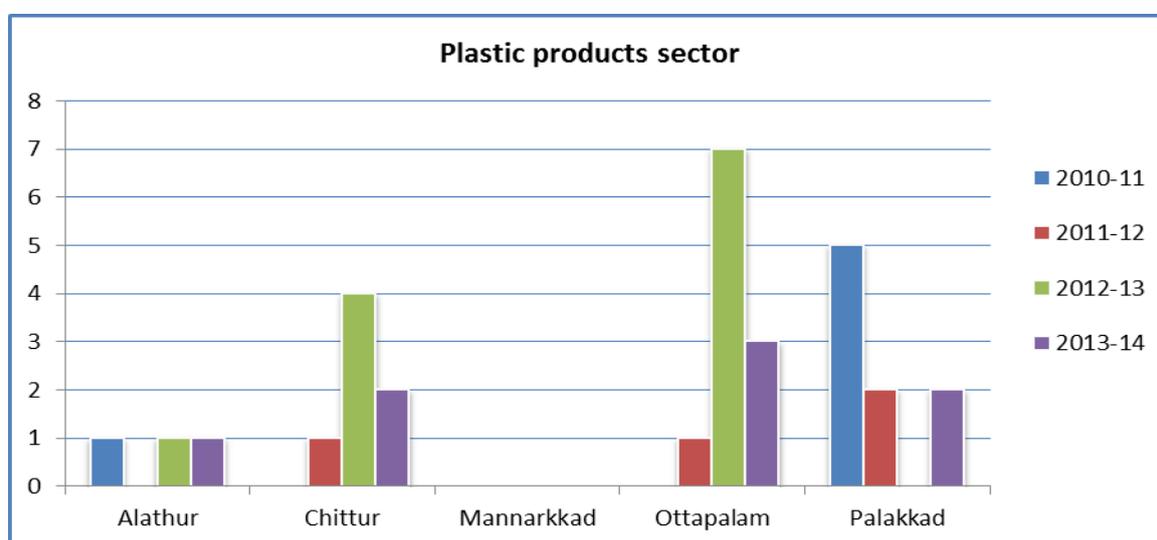
Rubber products also account a share of 1% and are gradually decreasing with an exception in Alathur Taluk.



5.5.3.6 Plastic products

	Taluk	Upto 209-10	2010-11	2011-12	2012-13	2013-14	Up to 2013-14
1	Alathur	77	1	0	1	1	80
2	Chittur	115	0	1	4	2	122
3	Mannarkkad	51	0	0	0	0	51
4	Ottapalam	192	0	1	7	3	203
5	Palakkad	173	5	2	0	2	182
	District Total	608	6	4	12	8	638

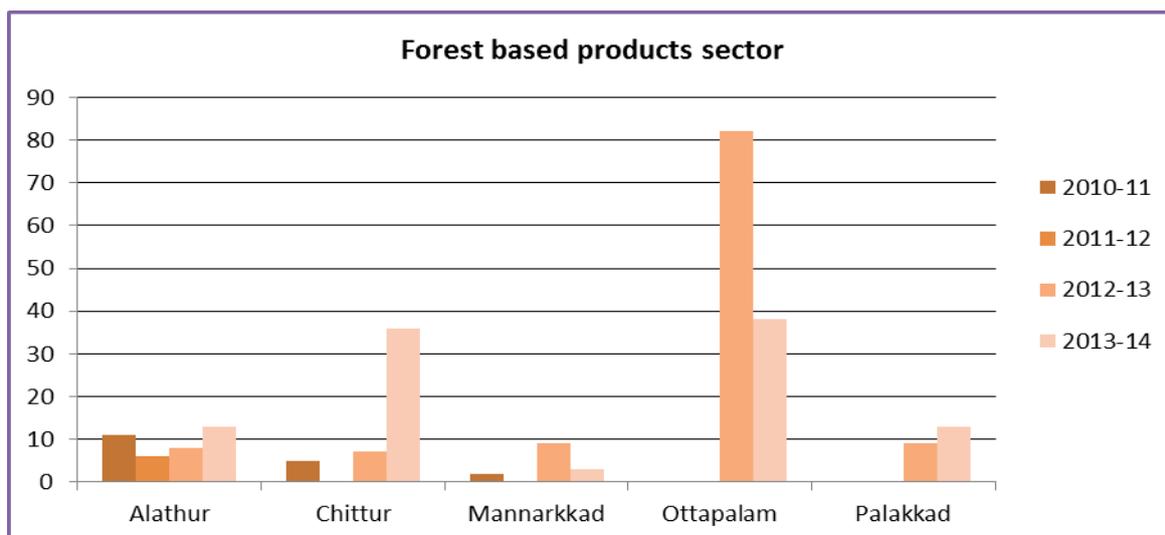
Plastic products accounts a share of 4% (4th largest sector) and this type of industry is decreasing in all Taluks.



5.5.3.7 Forest based products

	Taluk	Upto 209-10	2010-11	2011-12	2012-13	2013-14	Up to 2013-14
1	Alathur	42	11	6	8	13	80
2	Chittur	48	5	0	7	36	96
3	Mannarkkad	20	2	0	9	3	34
4	Ottapalam	77	0	0	82	38	197
5	Palakkad	86	0	0	9	13	108
	District Total	273	18	6	115	103	515

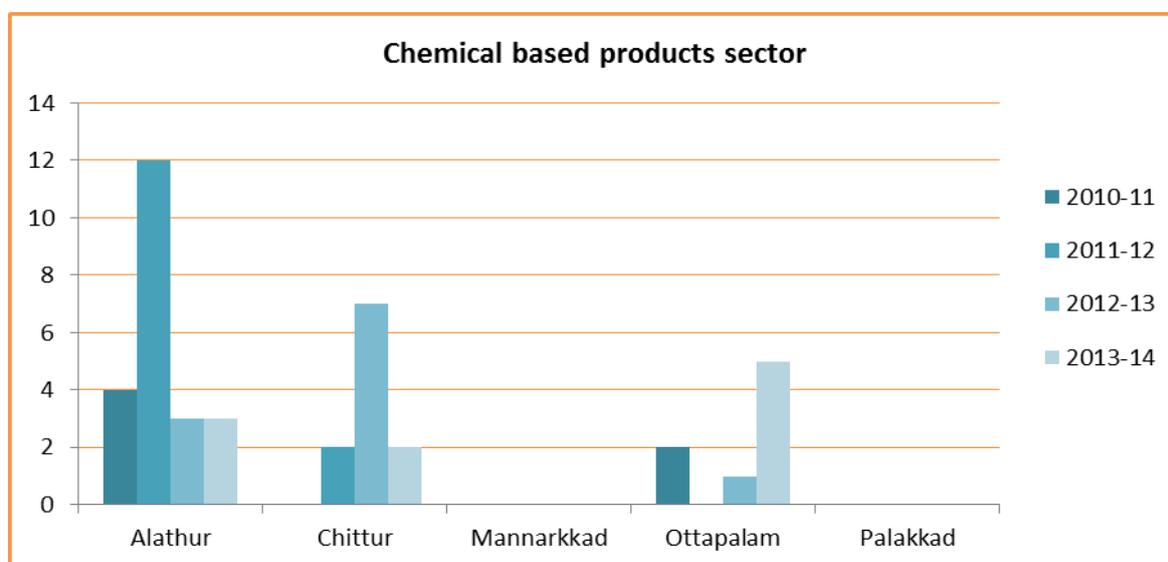
Forest based industry accounts 3% share and is the 5th largest sector in Palakkad, but this type industry is decreasing except in Alathur and Chittur Taluks.



5.5.3.8 Chemical based products

	Taluk	Upto 209-10	2010-11	2011-12	2012-13	2013-14	Up to 2013-14
1	Alathur	36	4	12	3	3	58
2	Chittur	53	0	2	7	2	64
3	Mannarkkad	18	0	0	0	0	18
4	Ottapalam	71	2	0	1	5	79
5	Palakkad	54	0	0	0	0	54
	District Total	232	6	14	11	10	273

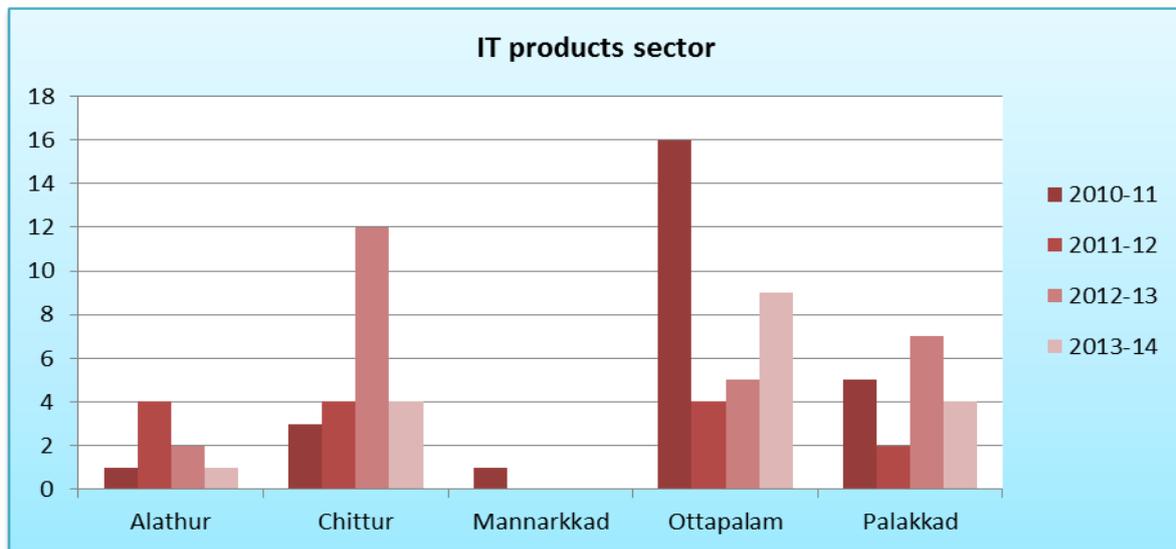
Chemical based industry accounts 2% share and is the 6th largest sector, but shows a fluctuating trend and no industry in this type is started in Mannarkkad and Palakkad during the last four years.



5.5.3.9 IT based (including software and hardware)

	Taluk	Upto 209-10	2010-11	2011-12	2012-13	2013-14	Up to 2013-14
1	Alathur	19	1	4	2	1	27
2	Chittur	27	3	4	12	4	50
3	Mannarkkad	9	1	0	0	0	10
4	Ottapalam	46	16	4	5	9	80
5	Palakkad	52	5	2	7	4	70
	District Total	153	26	14	26	18	237

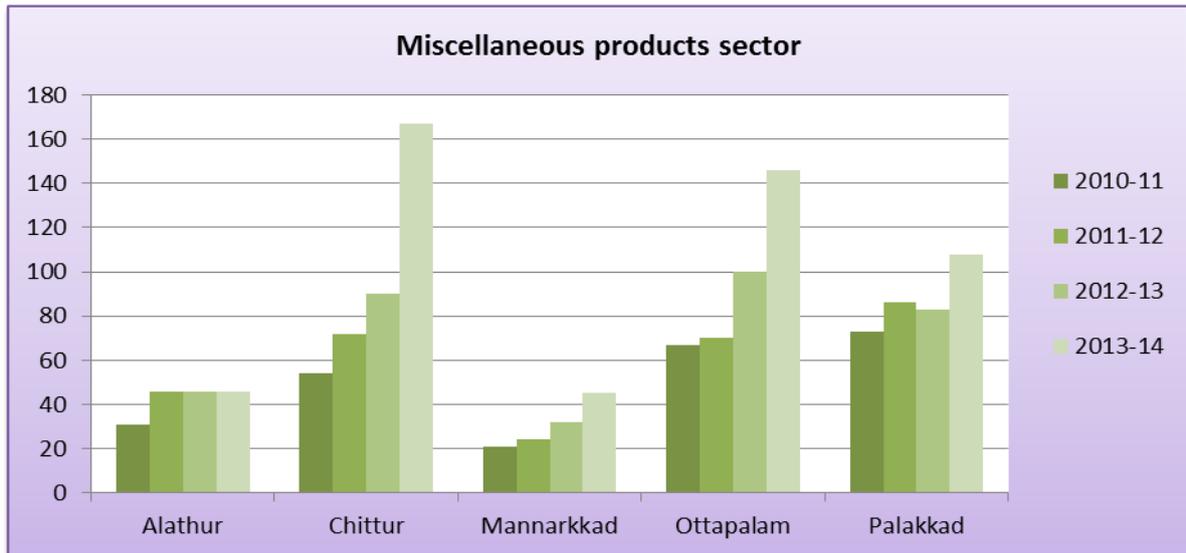
IT sector shared 1% contribution and is also in the 7th largest enterprises category. But IT units are decreasing except in Ottapalam.



5.5.3.10 Miscellaneous products

	Taluk	Upto 209-10	2010-11	2011-12	2012-13	2013-14	Up to 2013-14
1	Alathur	617	31	46	46	46	786
2	Chittur	762	54	72	90	167	1145
3	Mannarkkad	308	21	24	32	45	430
4	Ottapalam	1335	67	70	100	146	1718
5	Palakkad	1155	73	86	83	108	1505
	District Total	4177	246	298	351	512	5584

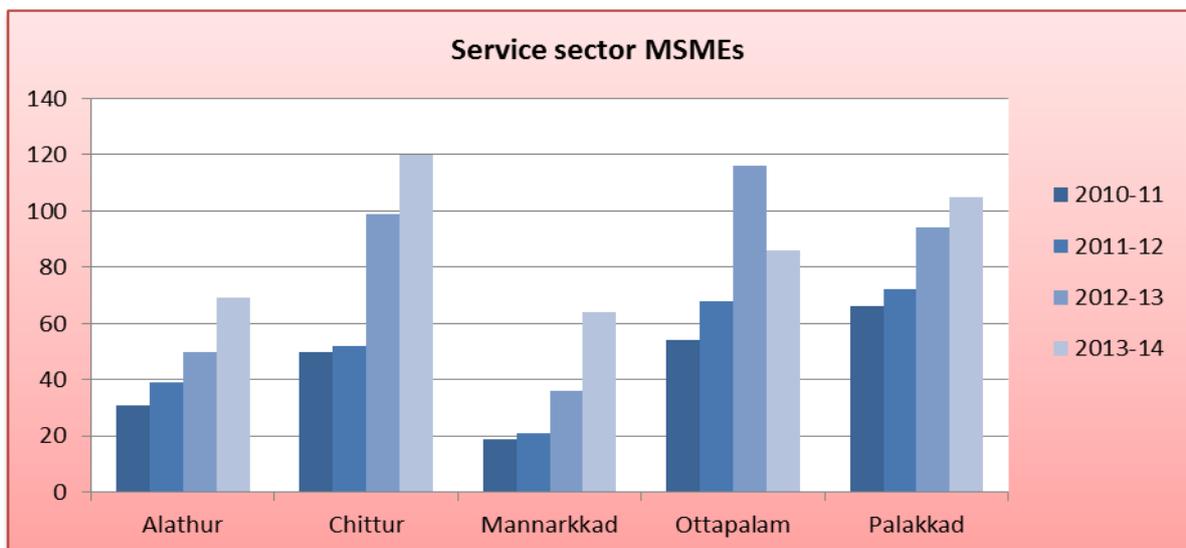
All other sectors such as wood based, glass and ceramics, electrical and electronics, Ayurveda, pharmaceuticals, cement based products, packaged drinking water etc. not mentioned above are coming under miscellaneous category and this accounts 32% share in total MSMEs. This sector shows a continuous increasing trend except in Alathur Taluk.



5.5.3.11 Service MSME units

	Taluk	Upto 209-10	2010-11	2011-12	2012-13	2013-14	Up to 2013-14
1	Alathur	239	31	39	50	69	428
2	Chittur	289	50	52	99	120	610
3	Mannarkkad	127	19	21	36	64	267
4	Ottapalam	491	54	68	116	86	815
5	Palakkad	430	66	72	94	105	767
	District Total	1576	220	252	395	444	2887

Service MSME contribute a share of 17% and service based industrial units are continuously increasing in all Taluks except in Ottapalam in 2013-14 year.



5.6 Distribution of Registered MSME units

Before the enactment of MSMED Act 2006, mandatory SSI registration was there, and as per the 4th census of MSME held in 2008-09, the total number of working enterprises (small scale industries) in the district was 10266. After 2006, filing of Entrepreneur Memorandum came into effect under MSMED Act and is not mandatory for micro and small enterprises. Thus the total number of units identified and total number of registered units will not be tallied each other.

The following table shows the Taluk wise distribution of MSMEs according to the issuance of Part II acknowledgement under IEM Filing (working units) under MSMED Act 2006 in the district up to the month of August 2014. This data does not cover the SSI registration issued up to October 2006, but gives a picture on the distribution of MSMEs in various Taluks.

Taluk	Micro	Small	Medium	Manufacturing	Service	Total
Alathur	665	34	1	582	118	700
Chittur	956	55	1	785	227	1012
Mannarkkad	506	6	0	395	117	512
Ottappalam	1282	50	0	1157	175	1332
Palakkad	1366	155	10	1261	270	1531
District Total	4775	300	12	4180	907	5087

As per the statistics of registered units, Palakkad Taluk shows the highest number of MSMEs followed by Oattapalam Taluk. Medium level of enterprises is not registered from Manarkkad and Ottappalam Taluks. 82% of the units are in manufacturing sector and only 18% are in service sector.

5.7 Large and medium level industries in Palakkad district

The list of Large (investment above Rs.10 Cr in case of manufacturing and above Rs.5 Cr in case of service) and Medium (investment above Rs.5 Cr in case of manufacturing and above Rs. 2 Cr in case of service) is given below.

Sl. No	Name and the address of the Unit	Name of Product
1	M/s. Surabhi Steels (P) Ltd., Akathethara NSS Engineering College P.O, 678 008	Mild Steel Ingots
2	M/s. Surabhi Steel Rolling Mills (P) Ltd, Akathethara NSS, Palakkad - 678008	Mild Steel Ingots

3	M/s. S.M.M. Steel Re-rolling mills (P) Ltd, IV/512-B, IDA Kanjikode, Palakkad - 678623	Mild Steel Ingots
4	M/s. United Breweries Ltd, Kanjikode west, Palakkad-678623	Beer
5	M/s. Paragon Steels (P) Ltd, IV/512-A, IDA, Kanjikode -678623	Mild Steel Ingots
6	M/s. Pre- Cot Mills, C-Unit, Chandrapuram, Walayar Dam - 678621	Cotton Yarn
7	M/s. Malabar Cements Limited, Walayar - 678624	Ordinary Portland Cement, Portland Pazzolane cement
8	M/s. Patspin India Ltd, Potadia Nagar, Kanjikode - 678621	Cotton Yarn, Knotted fabrics
9	M/s. B.P.L Telecom Limited, System House, Chandranagar, Pkd-7	Powerline Carrier communication equipments, Electronic Private Limited , Automatic Branch exchanges and Electronic push button Telephones.
10	M/s. Palakkad Rubber (P) Ltd, NIDA, Kanjikode - 678621	Crumbed Rubber(Block Rubber)
11	M/s. Marico Industries Limited, IDA, Kanjikode west-678621	Coconut Oil
12	M/s. Empee Distilleries Ltd, NIDA, Kanjikode-	Indian made Foreign Liquor
13	M/s. Instrumentation Ltd, Kanjikode, Palakkad - 678623	Control Valves, safety relief valves, Cylinders and allied items
14	M/s. Agni Steels Ltd, (Unit-C) Nattukal, Kozhinjanpara, Chittur 678554	Steel Ingots
15	M/s. Agni Re-rollers (P) Ltd, Nattukal, Kozhinjanpara-678554	Steel Ingots
16	M/s. Rubfila International Ltd, NIDA, Kanjikode-678621	Heat Resistant Latex Rubber Thread
17	M/s. Prince Rollings (P) Ltd, Mannayamkode, Karinkanadu, Koppam, Pattambi, Ottapalam -	MS Ingots
18	M/s. Prince Alloys (P) Ltd, Mannayankode, Karinkanadu, Koppam,Pattambi, Ottapalam	MS Ingots

19	M/s. Precot Mills, A-Unit, Kanjikode west - 678623	Cotton Yarn
20	M/s SEPER Universal Ltd, IDA, Kanjikode west-678623	Electrocast Refractories and fused aluminium Oxide made foreign Liquor
21	M/s. UNITED Distilleries and Allied products Ltd, K.Pudur, Kanjikode, Palakkad - 678621	Indian made Foreign Liquor
22	M/s. Kerala Alcoholic products (P) Ltd, Moolathara, Meenakshipuram	Indian made Foreign Liquor
23	M/s. Kerala Agro machinery Corporation Limited (KAMCO), NIDA, Kanjikode, Palakkad.	Power tiller
24	M/s. Elgi Rubber Products Ltd, (Unit - C) IDA, Kanjikode	Reclaimed Rubber sheet
25	M/s. Augustin Textiles Complex Ltd, Kanjikode west - 678623	Processing of fabric and yarn bleaching, Dyeing, printing Mercerizing
26	M/s. A.P. Steel Rolling Mill Ltd, NIDA, Kanjikode - 678621	M.S. Ingots, Structural steels
27	M/s. Cattle feed plant, KCYMF Ltd, Malampuzha - 678651	Cattle feed
28	M/s. Sri. Bhagavathi Textiles Ltd, KK Pathy, Chittur - 678101 (not working)	Cotton Yarn
29	M/s. Prima Industries Ltd, NIDA, Kanjikode - 678621	Vegetable Oil extraction, Refining of vegetable oils.
30	M/s. Sri. Mahalakshmi Mills Ltd, Vallanadukalam, nattukal, Kozhinjanpara - 678554	Cotton Yarn
31	M/s. Bannari Amman Steels(P) Ltd, Nattukal, Kozhinjanpara - 678554	M.S ingots CTD Rods
32	M/s. Sueera Alloys (P)Ltd, Nattukal, Kozhinjanpara	M.S ingots CTD Rods
33	M/s. Coimbatore Aryavaida Pharmacy, Factory Complex, Kanjikode - 678621	Ayurvedic Medicines
34	M/s. Indsil Electrosmelts Ltd, Pallatheri, Elapully	Silco Manganese
35	M/s. Elgi Tread (India) Ltd, Karimkode, Kottayi - 678572	Pre-cured Tread Rubber

36	M/s. ITI ltd, Kanjikode west – 678023	Telephone Exchanges and telephone components
37	M/s. Southern Ispat Ltd, Kariamkode , Kottayi	M.S ingots
38	M/s. BPL Ltd, Kootupatha, Palakkad – 7	Elelctro cardio graphs/Patient Monitory system
39	M/s. BPL Refrigeration Ltd, NH Bye pass road, Chandranagar (not working)	Auto injection moulds and Press Tools
40	M/s. SVA Steels Re-rolling mills Ltd, Nattukal, Kozhimjanpara	M.S Ingots Rounds flats, CID Bars
41	M/s. Balaji Modern Spinning Ltd, Pampampallam, Kanjikode (not working)	Cone Yarn
42	M/s. Kerala Electrical & Allied Engineering Co. Ltd(KEL), Industrial Estate, Pudupariyaram, Palakkad	Switch fuse, HRC fuse ,panel board
43	M/s. Commonwealth Tile Factory, Olavakkode	Tiles/Bricks
44	M/s. Premier Agro Products (P) Ltd, Annapuramkadu, Kinassery	Wheat Products
45	M/s. Prince Roller Flour Mills (P) Ltd, Anappuramkadu, Kinassery	Wheat Products
46	M/s. Victory Paper and Boards (India) Ltd, Mannarkkad- 678522	Uncoated Paper and Paper boards
47	M/s. Packworth Ydyog Ltd, VII/507, Elapully	Cotton Yarn
48	M/s. Metal Industries, Kulapully, Shornur	Agricultural Implements
49	M/s. Kottackal Aryavaidyasala, Kanjikode	Ayurvedic Medicines
50	M/s. Pepsi cola Ltd, Kanjikode	Soft drink, Beverages
51	M/s Hindustan Petroleum Ltd, KK Pudur, Kanjikode	LPG bottling
52	M/s Fluid Control Research Institute (FCRI), Kanjikode	Flow measurement and control, research and development, testing
53	M/s Kairali Steels, KK Pudur, Kanjikode	TMT Steel
54	M/s Sun Power Cements, Wise Park, Kanjikode	Cement
55	M/s BEML Ltd, Kanjikode	Railway coaches, defense vehicles

5.8 KSIDC

KSIDC is developing an industrial park at Palakkad in the name "KSIDC Investment Zone" in 34 acres of land at Kanalpirivu, Pudussery East village, Palakkad Taluk. KSIDC proposes to provide developed industrial plots and built up space for potential industries at this Park. KSIDC has so far invested an amount of Rs.4 Crores in the park towards supporting infrastructure like compound wall, internal road, side drain, main gate, security cabin, administrative building and water supply arrangements.

KSIDC has allotted 1.5 acres land to M/s GAIL for setting up an SV/IP station. Once the infrastructure is fully developed the park will be opened to other industrial units also. It is expected that when fully functional the park will generate an employment of approximately 5000.

5.9 KINFRA

5.9.1 Wise Park- Kinfra

There are 24 industrial units in Wise Park-KINFRA, Kanjikode. The total capital inflow investment in all these 24 units is 231.16 crores. The unit wise investment and employment generation in Wise Park are given below.

Sl. No.	Name of industrial unit	Employment	Capital inflow Investment (in Lakhs)
1.	Pepsico India Holdings (P) Ltd.	450	11000
2.	Central Warehousing Corporation	5	180
3.	World Wide Iron & Steel (P) Ltd	70	300
4.	Steel Max Rolling Mills Ltd.	80	350
5.	Kairali Cement Company	12	65
6.	Mannarkkad Steels (P) Ltd	46	180
7.	Kuttippulan Iron&Steel Company(P)Ltd.	47	410
8.	M.P.S.Steel Castings (P) Ltd.	155	7295
9.	Prince TMT Steels (P) Ltd.	81	391
10.	Sun Power Cement Company (P) Ltd.	85	2300
11.	Technomax Industries	5	80
12.	Zeba Lab Systems (P) Ltd.	32	250
13.	Hydenso Steel & Engineering.(P) Ltd	21	75
15.	Palakkad Surgical Industries Pvt Ltd	61	100
16.	Saaroco	1	10
17.	Isotech Metrology Solutions	4	10
18.	Spinnotech Tooling Solutions	8	120
	TOTAL	1163	23116

5.9.2 Kinfra

In Kinfra, Kanjikode, 21 units are working and 63 units are proposed to start and they are at various stages of setting up of their projects. The total investment in working units is 94.58 crores and the employment provided is 1190 numbers. The investment proposed in the upcoming units in Kinfra is 440.64 crores and the expected employment generation to these 63 units is about 2050 numbers.

5.10 Major industrial units in SIDCO estates

Industrial Estate, Olavakkode	1. M/s KEL 2. M/s Sayok Batteries 3. M/s Allan Associates 4. M/s Maruth Industries 5. M/s MSFEL Enterprises
Industrial Estate, Karakkad	1. M/s Lakshmi Engineering 2. M/s Variety Pharmaceuticals 3. M/s Variety Formulations 4. M/s Mayil Fittings 5. M/s Thulasi Foundries and Forgings
Mini Industrial Estate, Ottapalam	1. M/s NILA Catering service 2. M/s NILA Bakes
Mini Industrial Estate, Vaniyamkulam	1. M/s Amma Forgings 2. M/s Amitha Forgings 3. M/s Melethil Industries
Mini Industrial Estate, Pattambi	1. M/s Surya Glass Creation 2. M/ Surya Creation 3. M/s Nila Foods
Industrial Park, Shornur	1. M/s Nila Confectionaries 2. M/s Well Known Industries 3. M/s Thoy Industries

5.11 Coir Co-operative Societies in the District

There are 42 Coir Co-operative societies are registered in Palakkad district, out of these 32 are coir societies, 8 units are de-fibering societies and the remaining 2 are in coir cluster. 25 among them are currently working, 14 are not working and the remaining 3 are dormant. The district has 6 coir clusters in Chittur and Palakkad Taluks, all are not functioning. All the above societies and units contribute an investment of Rs.399,33,613. The status of coir co-operative societies in Palakkad as on August 2014 is shown below.

Sl No.	Taluk	Working	Not working	Dormant	Total	Investment
1	Alathur	3	-	-	3	260200
2	Chittur	6	7	2	15	12715290
3	Mannarkkad	5	1	-	6	4947800
4	Palakkad	11	4	1	16	16683821
	Total	25	12	3	40	34607111
	Coir cluster					
1	Chittur	-	5	-		3955036
2	Palakkad	-	1	-		1371466

5.11.1 Coir cluster

Coconut husk is the basic raw material for coir products and only 50% of the husk is used for coir production and the remaining is being used as fuel in rural areas. As per 2012-13 data, a total of 411 million nuts is the production of coconuts in the district. Hence ample scope is there for development of coir sector in the district.

5.12 Khadi and Village Industries in Palakkad

There are 237 registered co-operative societies under KVIB in the district, of which 51 are working. There are also 9 weaving units under the direct control of Panchayat, which gives an employment to 315 people.

5.13 Metal industry

The metal industry, especially brass and bronze, which has a history since 2nd century AD has been gradually declined because of the changes in the artisan base as also the changes in technology. The new generation entrepreneurs and workers in the area are few in numbers.

5.14 Handicrafts

Handicraft is a highly labour intensive cottage based industry spread over the district. Although, each craft pocket has specific problems the potential of this subsector is enormous. The experience of countries like China demonstrates that, tapping of this potential meaningfully requires a balanced view of design and skill upgradation.

5.15 Textiles and handlooms

Kerala's traditional handloom sector industry is spread over most parts of the district. The total number of handloom households in active in

the district is 745 numbers, in which 525 are under co-operative sector, 140 under Hanveev and remaining 80 are private weavers. The total number of registered handloom members in 14 working cooperatives in the district is 3673. Of all looms nearly 20% are working at present.

Handloom industry demonstrates the richness and diversity of Indian culture in fabrics. Over the centuries handloom have come to be associated with excellence of weaver artistry in fabrics. The culture and tradition of Kerala are exhibited in handloom products such as Set mundu, Thorthu, Dhothi, Sarees etc. Set mundu and Thorthu produced in Palakkad District are very popular among Kerala Handlooms.

Handloom weaving in the District is mainly isolated in areas of Elappully, Chittur, Kollengode, Ottappalam, Puthocode etc. Also, the weaving activities are concentrated under Co-operative sector under Industries Department and Hanveev.

Out of the 42 handloom co-operative societies registered, only 14 are working at present in three circles viz, Palakkad, Ottappalam and Chittur. 16 are dormant and remaining 12 are under liquidation. There are 9 numbers of factory type and 32 numbers of Cottage type handloom co-operative in the District, in which 3 numbers of factory type and 11 numbers of Cottage type only are working at present. 4 numbers of cottage type societies have common worksheets.

The circle wise and category wise details of handloom co-operative societies as on 1-4-2014 are given below.

Sl.No.	Status	Circles			Total
		Palakkad	Chittur	Ottapalam	
1	Working	4	7	3	14
2	Dormant	7	6	3	16
3	Liquidation	3	2	7	12
	Total	14	15	13	42

Sl. No	Category	SC	ST	Women	General	Total	Type*	
							Factory	Cottage
1	Registered	8	2	1	31	42	9	32
2	Working	1	-	-	13	14	3	11

* the remaining one registered unit is neither factory nor cottage but is a warping and sizing unit.

5.15.1 List of working handloom societies as on 01.04.2014

Sl.No.	Name of Society	Type	Circle
1	Elappully Weavers Co-op Production & Sales Society Ltd., Elappully	Cottage	Palakkad
2	Marlad Weavers Co-op. Production & Sales Society Ltd., Puthucode	Factory	“
3	Kotambu Handloom Weavers Co-op Production & Sales S Society Ltd.	Cottage	“
4	Pallanchathanur Weavers Co-op. Production & Sales Society Ltd.	Cottage with common work shed	“
5	Pazhambalacode Weavers Co-op. Production & Sales Society Ltd.	Cottage	Ottapalam
6	Karumanamkurussi Handloom Weavers Co-op. Production & Sales Society Ltd.	Cottage with common work shed	“
7	Palappuram Weavers Co-op. Production & Sales Society Ltd.	Cottage with common work shed	“
8	Chittur Weavers Industrial Co-operative Society Ltd., Manchira	Factory	Chittur
9	Devangapuram Handloom Weavers Co-op. Society Ltd.	Cottage (common work shed)	“
10	Kollengode (SC) Handloom Weavers Industrial Co-operative Society Ltd.,	Factory	“
11	Vadakkathara & Kadampidy Handloom Weavers Industrial Co-operative Society Ltd., Chittur	Cottage	“
12	Kizhakkethara Kaithari Neithu ICS Ltd., Kollengode	Cottage	“
13	Neelikkad Kaithari Neithu ICS Ltd., Thathamangalam	Cottage	“
14	Kollengode Kaithari Neithu Industrial Co-op. Society Ltd.,	Cottage	“

5.15.2 Details of Production and Sales for the last 5 years

Sl.No.	Year	Production in Rs.	Sales in Rs.
1	2009-10	1,78,04,616	1,66,99,284
2	2010-11	2,24,20,856	85,38,342
3	2011-12	2,54,30,282	2,39,66,598
4	2012-13	2,46,33,439	2,58,68,818
5	2013-14	2,50,73,646	2,46,03,783

5.15.3 Future of Handloom Industry in Palakkad District

Though there were more than 6500 registered weavers in the District; there is nearly 600 weaver members only are active in the working societies. The Schemes recently introduced by the Govt. such as Income Support Scheme, Production Incentive etc. have helped to reduce the downfall of Co-operative societies in the District. Being a traditional industry, handloom weaving still have scope for better development, provided the implementation of diversification of handloom fabrics and modernization of weaving activities as well. Also there is scope for getting geographical indication for the handloom products like Palakkadan Thorthu or Set Mundu. Still there are ample chances for getting export market and online market for handloom furnishing materials and other traditional handloom products.

5.16 Industrial Co-operative Societies

The total number of registered industrial cooperative societies in Palakkad district is 161, out of these, 29 are working, 77 are not working, 52 are under liquidation and the remaining 3 have not started production. These societies are functioning in three circles, viz Palakkad, Ottapalam and Chittur. The category wise distribution of these societies is given as under.

PALAKKAD CIRCLE

Category	Working	Dormant	Liquidation	Not started production	Total
General					
Women	3	11	9		23
SC	3	9	2		14
ST	1	2	1		4
Others	6	5	6	3	20
Total	13	27	18	3	61
Handicrafts					
Women			1		1
SC			2		2
ST	1	1	2		4
Others			3		3
Total	1	1	8	-	10

OTTAPALAM CIRCLE

Category	Working	Dormant	Liquidation	Not started production	Total
General					
Women	1	1	1		3
SC		8			8
ST					-
Others	2	3			5
Total	3	12	1	-	16
Handicrafts					
Women					-
SC	1	1	1		3
ST					-
Others			6		6
Total	1	1	7	-	9

CHITTUR CIRCLE

Category	Working	Dormant	Liquidation	Not started production	Total
General					
Women	2	10	2		14
SC	3	13	1		17
ST					-
Others	4	9	9		22
Total	9	32	12	-	53
Handicrafts					
Women					-
SC	1	1			2
ST					-
Others	1	3			4
Total	2	4	-	-	6

Besides the above, 6 societies in the district are directly under the control of DIC, Palakkad, and all these 6 units are under liquidation status.

5.17 Mini Industrial Estates (MIE)

Mini Industrial Estates are functioning directly under the control of District Industries Centre, Palakkad in six locations. The sheds in these MIEs are allotted to micro enterprises to encourage the investment in these categories and thus to ensure the industrial development. The details of MIEs under Palakkad MIE Cooperative Societies Ltd are given below.

Sl No.	Name of MIE	Total land (in Acres)	Details of sheds		Total units	Working units
			900 sq ft	600 sq ft		
1	Kanjikode MIE	1	4	6	10	10
2	Koduvayur MIE	1	4	6	6	6
3	Vadakkenchery MIE	1	4	6	9	8
4	Tarur MIE	1	4	6	6	4
5	Muthalamada MIE	1.28	4	6	7	6
6	Padur MIE	1	4	6	4	4
	Total	6.28	24	36	42	38

5.18 Cluster based development

The growth thrust in the MSME sector today hinges on the theory of horizontal integration and collective efficiency. As enterprises get horizontally integrated, the opportunities of tapping external economies grow up. Clustering is the horizontal integration of homogeneous industries by policy. Even though, MSME sector is highly heterogeneous, a more regional, sub-sectoral and cluster level integration of enterprises by way of policy or voluntary initiatives will help for enhanced production and marketing of products.

Chapter 6

SWOT ANALYSIS

Considering the resources available in the Taluks, the supportive industrial policies of central and state governments, the present status of industries and also the interaction with the cross section of entrepreneurs and other development agencies, an analysis of the inherent Strengths and Weaknesses of the industrial sector along with the Opportunities and Threat (SWOT) present in the system has been attempted and summarized.

6.1 ALATHUR TALUK

Strengths

- Abundant agriculture based raw materials
- Availability of cheap labour
- Proximity to Kanjikode, the major industrial area of the district.
- Good communication and power net work

Weaknesses

- Non availability of industrial land
- The agrarian culture of the people in the Taluk causes a major hurdle for rapid industrialization.
- Dependency on the sources of Coimbatore lessens the market opportunities of the local units.
- Lack of sufficient ancillary units

Opportunities

- Untapped agri-based resources
- Traditional industries like Handloom, Carpentry and Bell metal workers has good root in this Taluk
- Presence of number of crusher unit, scope for downstream industrialisation
- Being a agrarian Taluk scope for dairy industry

Threats

- Better infrastructure facilities at Coimbatore and Kanjikode.
- Legislations regarding agricultural land conversion and environmental issues.

6.2 CHITTUR TALUK

Strengths

1. Abundant availability of Paddy, Coconut, Mango, and other agricultural products offers good scope for setting agro based industries within the Taluk.
2. A good network of river, canals, and dams are available in the Taluk.
3. The Proximity to Coimbatore and Pollachi offers good interstate market to entrepreneurs.
4. Taluk is having a good network of road and Power system.
5. Cost of land is cheap compared to other parts of the state.

Weaknesses

1. The proximity to established industrial units at Coimbatore District of Tamil Nadu causes hindrance to the industrial growth for the enterprises within the Taluk, such as mass production that leads to low cost, and low cost of production.
2. Non availability of well developed industrial land within the Taluk.
3. Lack of entrepreneurial characteristics like, hard work, risk taking capacity etc.
4. Non availability of skilled workers.
5. Inadequate credit flow from financial institutions.
6. Lack of entrepreneurship.

Opportunities

1. A good number of MSMEs are being planned to setup in the Taluk.
2. The climatic conditions in the Taluk are suitable for setting up of a range of units.
3. Scope for cluster approach in the sectors like, Bamboo, Coir, Readymade garments, Handloom etc.

Threats

1. Some parts of the Taluk is classified as ecologically sensitive area, (Muthalamada Village I & II), which in turn block the further investment flow in that area.

2. Ecological problems will adversely affect the industrial growth in the Taluk like, changing the topography of land, utilization of large quantity of groundwater, air pollution and water pollution.
3. Migration of skilled people to various other states of India as well as abroad.
4. Lack of entrepreneurship ends in the early closing of industries.

6.3 MANNARKKAD TALUK

Strengths

1. The abundant supply of coconut, agricultural products etc., offers good potential for setting up agro-based industries
2. Good transportation facility
3. Availability of Gulf money
4. Professional and young entrepreneurs

Weaknesses

1. Inadequate credit flow from Financial Institutions.
2. Non availability of industrial land.
3. Non-availability of land with good infrastructure facilities
4. Lack of proper marketing support
5. Absence of modernization and diversification on traditional sector
6. Lack of skilled labours

Opportunities

1. The purchasing power is high.
2. There are good raw materials available from agriculture
3. The climatic condition is suitable for setting up of a range of units

Threats

1. Diminishing forest resources prevent the development of timber and related industries.
2. The tendency of the people to invest in neighboring areas of the Taluk because of labour issues

6.4 OTTAPPALAM/ PATTAMBI TALUK

Strengths

1. The Taluk is having all infrastructural facilities like railway, road, communication etc. favourable to the development of industries
2. Proximity of Nila (Bharathappuzha) river and well-developed ponds & canals ensure that water is available in the block anywhere.
3. The Taluk possesses all basic infrastructure facilities and potential for further growth and industrialization.
4. Wood-based activities are at a high note in the block
5. Better utilization of agriculture produce for enhancement of income of farmers

Weaknesses

1. Well-developed industrial estates with high tech facilities are yet to be developed
2. Lack of entrepreneurial quality and low capital formation, is prevailing in the block
3. High level of overdue of loans in industrial sector inhibits the credit flow from financial institutions.
4. Higher wage levels and fewer turnovers in local units make the products less price competitive.
5. Enable the local enterprises more competitive to expand the local market
6. Slow absorption of Innovation & change

Opportunities

1. The traditional industries such as agriculture implements and cutlery are having good brand equity.
2. The agrarian culture of the people causes a major hurdle for rapid industrialization
3. Development of industrial clusters
4. Both skilled and unskilled labour are available in the block

Threats

1. Ecological problems will increase and adversely affect industrial growth due to felling of trees, changing the topography of land, utilization of large quantities of ground water, pollution of air and water, sound pollution, etc.
2. The agrarian culture of the people causes a major hurdle for rapid industrialization
3. Lack of entrepreneurship & non awareness of industrial culture
4. Harassment of Trade unionism

6.5 PALAKKAD TALUK

Strengths

1. Palakkad Taluk, especially Kanjikode industrial area in Pudussery Panchayath is well connected by roads and railways. The nearby airport at Coimbatore offers facilities for air transport also.
2. A good net work of rivers and well-developed dams ensure that water is available in the Taluk anywhere.
3. The infrastructure facilities available such as communication, educational institutions, banks, insurance companies are comparable with those available in other parts of the district which is much above the state level indicators.
4. Technical institutions such as engineering colleges, polytechnic, ITI's etc., offer facilities for research and development activities in the district.
5. The block is the main entrance for Tamil Nadu, and for most part of India.
6. Central institute of Technological & Research Organisation at Coimbatore is near to Malampuzha block especially Kanjikode
7. The proximity to Coimbatore and Pollachi, offers good potential for experienced craftsman and supervisors, as also for other services.
8. The cost of land in the district is low as compared to other parts of the State.
9. Purchasing power is very high
10. Availability of raw materials
11. Education level is good
12. Climate condition is ideal

13. A good net work of rivers and well-developed ponds & canals ensure that water is available in the block anywhere.
14. The Taluk possesses all basic infrastructure facilities and potential for further growth and industrialization.
15. The agriculture-based activities are at a high note in the Taluk
16. IRTC, Mundur takes lead role for research and development activities in the Palakkad Block as well as district
17. Better utilization of agriculture produce for enhancement of income of farmers
18. Good banking network in the Taluk

Weaknesses

1. The proximity to the established industrial units in Tamil Nadu causes hindrance to the industrial growth of the block
2. Well-developed industrial estates with high tech facilities are yet to be developed.
3. The low voltage problem and power fluctuations are acute in peak hours which retards the industrial activities.
4. The tendency of the local people depends on the sources of Tamil Nadu lessens the market opportunities for the local units.
5. Lack of entrepreneurial quality and low capital formation, is prevailing in the block
6. High level of overdue of loans in industrial sector inhibits the credit flow from financial institutions.
7. The people of Malampuzha Block keep land idle even though they possess it as a matter of esteem.
8. Higher wage levels and fewer turnovers in local units make the products less price competitive.
9. Permanent exhibition centre like Coddessia of Coimbatore is yet to be started for industrial growth
10. Well developed estates has yet to be established
11. Power interruptions are main in hindrance for the growth
12. Lack of entrepreneurial quality
13. Shortage of industrial land for new industries.
14. Well-developed industrial estates with high tech facilities are yet to be developed

15. Lack of entrepreneurial quality and low capital formation is prevailing in the Taluk
16. High level of overdue of loans in industrial sector inhibits the credit flow from financial institutions.
17. Enable the local enterprises more competitive to expand the local market
18. Slow absorption of Innovation and change.
19. The agrarian culture of the people causes a major hurdle for rapid industrialization

Opportunities

1. There are good industrial infrastructure in the Taluk especially Kanjikode
2. The climatic condition of the district is suitable for setting up of a range of units.
3. The Government of Kerala has identified Palakkad Taluk suitable for setting up of Indian Institute of Technology
4. The garment units can get all their textile requirements from Coimbatore and Thiruppur that are well connected.
5. A collateral free credit facility is provided to Palakkad Taluk under the consortium of major Banks under MSME sector
6. Government of Kerala has acquired land in this Taluk for setting up of integrated railway coach factory
7. Industries department has proposed for setting up of multi storied building for development industrial ancillary units
8. Both skilled and unskilled labour are available in the Taluk
9. The traditional industries such as food processing industries having good brand equity.
10. Government of Kerala has set up a new Medical College at Yakkara area
11. The traditional industries such as agriculture implements and cutlery are having good brand equity.
12. Both skilled and unskilled labour are available in the Taluk

Threats

1. The increasing ecological issues such as felling of trees, changing the topography of land, utilization of large quantities of ground

water, pollution of air, water and sound etc. adversely affecting the industrial growth

2. The ongoing development of Cochin and Mangalore ports will attract export oriented units to those areas.
3. Lack of skilled labourers causes a major hindrance for industrial growth
4. The people of Malampuzha Block keep land idle even though they possess it as a matter of esteem which causes a major hurdle for rapid industrialization.
5. Diminishing forest resources prevent the development of timber and related industries.
6. The tendency of the people to invest in neighboring areas of the district especially in Tamil Nadu affects the growth negatively.
7. In rural areas it is not possible to operate more than one shift, as the culture and facilities do not support working outside 0900-1700 hours in a day, whereas in neighbouring Coimbatore district, the turnover is high.
8. Migration of skilled entrepreneurs to the nearby state and outside India adversely affecting the local units
9. Better infrastructure facilities at Coimbatore which is a well developed industrial attracting entrepreneurs
10. The agrarian culture of the people causes a major hurdle for rapid industrialization
11. Lack of entrepreneurship & non awareness of industrial culture
12. Harassment of Trade unionism

Based on the SWOT analysis done it can be seen that the district has got certain unique advantages. The opportunities in the District are quite good. The effect of weaknesses of the district can be minimized by careful identification of suitable projects and through strategic development

Chapter 7

PROBLEMS AND CHALLENGES FACED BY MSMEs

MSMEs in Palakkad district are confronted by various problems and challenges that hinder their sustainable growth. Interactions with prominent industrialists, entrepreneurs, agencies were conducted to identify the issues in industrial sector and to gather their valued opinions and suggestions. The major challenges faced by this sector, as identified during the course of this study, are summarised as follows.

7.1 GENERAL PROBLEMS IDENTIFIED

1. Land: Scarcity of land, as the present scenario is a matter of concern as the lands are fragmented due to individual holdings and the market value of the same has increased many folds. Poor infrastructure facilities in the existing land is another issue.

2. Skilled labour: Even though the unemployment in the Taluk like Chittur is in a rise, the people are reluctant to take up jobs demanding good physical exertion. This results in the arrangement of workforce from other states. Most of so hired people are illiterate and unskilled which in turn causes deterioration in quality.

3. Agitation by the domicile people: The industrialists are facing several problems from the neighbouring people and local administrative bodies as they are unable to utilize their resources necessary for production.

4. Under utilization of existing infrastructure: When the new entrepreneurs are craving for minimum infrastructure, there are projects not utilizing the allotted facilities judiciously. This not only affects the promoters adversely but also denies the opportunities for the inspired new entrepreneurs.

5. Entrepreneurial quality: Though Chittur Taluk is industrially forward (next to Palakkad Taluk), it is a matter of worry that many of the enterprises in the Taluk are owned and run by the industrialists from other districts and States. This statistics need a drastic change in favour of the people of Chittur Taluk or the district.

6. Environmental issues: This is one of the reasons which limit the investment in Chittur Taluk as well as District as a whole. Though it is true

that environment needs protection, the blind opposition by some of the social groups have made the Taluk to be unfriendly to the potential entrepreneurs.

7. Inadequate credit flow: Inadequate credit flow from Financial Institutions. Lack of working capital loan and high interest rate of bank loan will demotivate the new entrepreneurs.

8. Modernisation: Absence of modernization and diversification, especially in traditional sectors results in substandard production of materials.

9. Licensing: Procedural delay for issuing clearance etc. Lack of Co-ordination among Govt Departments is a main hurdle. Ultimately this causes to entrepreneur to delayed production and increase of fixed capital.

7.2 SECTOR SPECIFIC PROBLEMS

Apart from above the general issues, the sector specific issues in MSME sector are summarized as below.

7.2.1 MECHANICAL ENGINEERING SECTOR

1. **Wage rate:** High wage rate in employment
2. **Labour:** Large numbers of Micro enterprises are comes under this sector. Here it is also shortage of skilled labourers make a big problem.
3. **Environment:** due to high level norms in pollution control to be satisfied by these kinds of units, the setting up of units at preferably in less populated area and land value in such area is a major issue, which in turn affects the progress of the industries in this sector.
4. **Working capital:** Shortage of working capital for better production
5. **Power:** interrupted power cut is a hindrance to the smooth working of units in this sector. So power regulation to industrial sector announces by Govt from time to time may be exempted for the continuous production of outputs.

72.2 FOOD PROCESSING

1. **Competitive markets:** Stiff competition is faced by rice mills in marketing their rice between the branded Indian manufacturers. Availability of food products at low arte but without quality certification is a major issue and threat to the quality food products. Hence there is a high competition in markets.

2. **Waste disposal issues:** Lack of space in proper disposal of bio waste
3. **Shortage of labourers:** Rice mills are facing scarcity of licensed boiler and huller operators, IBR welders and devoted marketing executives is a reality.
4. **Land:** Land not available for further expansion of the existing rice mills. Almost all areas are thickly populated and land not available due to pollution issues
5. **Storage:** Shortage of storage and warehousing facilities. So there is a risk of damage due to short period of expiry of food products. Setting up of storage facilities for the highly perished raw materials is a major financial issue in this sector
6. **Modernisation:** Cost of modernisation is high when compared to the returns
7. **Licensing:** Lack of facility to get all licenses and sanctions through a single window often causes delay in getting licences and sanctions. Some Panchayats insist pollution certificate for getting D&O licence even for micro units.
8. **Finance:** Lack of effective refinance system. To a small extent, technology changing rapidly, funds not available to modernise the plants in line with the industrial upgradation
9. **Raw material:** Availability of raw material is seasonal, that is depending on crop seasons. Also scarcity of good quality raw materials results in the low production and low quality of fished products in this sector. Due to hike in prices of raw materials and power, the manufactures are forced to fix high prices for their products.
10. **Tax:** So many taxes like VAT, MAT service tax, property tax etc causes effective functioning of units
11. **Wage rate:** High wage rate in employment of labourers and other staffs

7.2.3 CHEMICAL PRODUCTS

1. **Waste disposal:** Lack of space in disposing waste
2. **Licensing:** Delay in obtaining clearance / NOC from POC due to which D&O license from Local Body also delayed
3. **Labour:** Scarcity of skilled workers is a major issue in chemical based MSME units

4. **Storage:** MSMEs have to invest a huge portion of money for setting up of storage facilities for chemicals
5. **Policy:** Stringent rules of pollution control is adversely affecting the expansion of the existing units

7.2.4 READY MADE GARMENTS

1. **Skilled labourers:** Availability of skilled labourers for a consistent period is a problem due to resignation of such skilled/ qualified workers.
2. **Modernisation:** Installation of electric machine is suitable for the units but due to high rate, it is not possible. Chittur Taluk is known as the centre of Readymade garments of Palakkad. New technologies for new generation garments manufacture, is to be introduced in this sector so as to increase the demand.
3. **Marketing:** Availability of textile products from other countries at low rate but with good quality causes tight competition in markets. Penetration of local/ substandard products in the markets. Loss incurred due to sudden changes of taste and preference of people. There is a shortage of Research institutions to conduct market research and to advice the skilled workers in this sector.
4. **Working capital:** Credit sales and delayed payment is a reason for shortage of working capital. Reluctance of bank in giving adequate finance to this sector.
5. **Tax:** Another issue facing in this sector is high rate of tax
6. **Raw material:** The local producers are not getting cloth items at cheap rate from Kerala. Most of the mills are located in other states.
7. **Training:** Lack of training to existing workers with regard to new designs and fashions. Fashions and designs are changing hour to hour. So the existing workers are equipped to produce the product as demand by the consumers. So it is necessary to have facility to refresh their knowledge accordingly. Otherwise they will continue the work on routine style, which will affect marketing of their product.

7.2.5 PAPER AND PAPER PRODUCTS

1. **Raw material:** Scarcity of raw materials: Delay in getting raw materials from Tamil Nadu
2. **Modernisation:** Due to high cost of machinery, adoption of modern technologies is not possible

3. **Licensing:** Delay occurring in getting Local Body license in case of renewal
4. **Wage rate:** High wage rate is a major hindrance for the existence of micro and small units in this sector
5. **Marketing:** Emergence of similar kind of plastic products comparatively at low price is a threat to paper based products like paper plates.

7.2.6 RUBBER PRODUCTS

1. **Tax:** Due to current Excise duty of 12.5%, the selling price is higher in competitive market
2. **Raw material:** The situation of availability of synthetic rubber and import of natural raw rubber at low rate from international market is a threat to the MSME units working with use of domestic natural rubber. Price fluctuations of natural rubber incurs loss in this sector

7.2.7 WOOD BASED INDUSTRIES

1. **Shortage of skilled labourers:** new generation of Traditional carpentry families are not interested to continue in this sector. This causes the shortage of skilled labourers in furniture industry
2. **Marketing:** Emergence of non-wood furniture and modular furniture including those of imported and its low price compared to wooden furniture is threat to the Kerala style traditional furniture industry
3. **Technology:** Even though the quantity of wood is large in the Taluk area, absence of new type of machines and their technologies decrease the growth in this sector.
4. **Raw material:** insufficient saw mills causes shortage of sized wood for furniture industries in some areas in the district.
5. **Local Body clearance:** difficulties in getting timely clearance from Local Bodies
6. **Tax:** Tax rate on round log is an issue in furniture units

7.2.8 ELECTRONIC INDUSTRY

1. **Marketing:** Facing competition from large Scale companies, so marketing is not easy
2. **Finance:** Govt assistance to this sector is nominal. More financial support from FIs are needed to motivate indigenous production of electronic items

3. **Training:** Training oriented to this type of industry is not available in rural areas. So the women are not able to get opportunities. They are not ready to go for training in outside state or in other districts. If they get training facilities at Taluk level, they will make use the opportunities. Lack of awareness among manufacturers about the Export –import procedures.

7.2.9 IT SECTOR

Finance: Poor support from banks and other financial institutions compared with other sector MSMEs

7.2.10 MISCELLANEOUS

1. **Wage rate:** High wage rate in getting skilled workers is a main issue in cement based manufacturing MSMEs such as paving tiles, hollow bricks etc. High rate in unloading charges is another hindrance.
2. **Raw material:** Occasionally problems in getting crusher raw materials like M sand, baby metals etc
3. **Marketing:** Many micro enterprises are coming in this sector, the existing units are facing high competition in marketing their products
4. **Finance:** Financial institutions usually not interested in giving loan to candle manufacturing MSMEs in the district

Most of the above issues, pertains to the development of industrial sector, reiterates the important role of Local Self Government in a different perspective. Local Self Government institutions (L.S.G.D) can allocate its resources for the development of basic infrastructure facilities rather than distributing the resources among individuals. While framing the policies for industrial development the L.S.G.Ds can consider the above issues.

7.3 Problems in Handloom sector

The handloom industry at present faces challenges and setbacks for various reasons. The major critical gaps in this context are summarized as follows:

1. High production cost
2. Low wages to weavers
3. Hike in the prices of Raw materials
4. Reluctance of weavers for modernization of looms
5. Lack of Technology Upgradation
6. Lack of product diversification

7. Poor marketing strategies
8. Miss management or Inability of Board of Directors
9. Availability of low cost power loom products in the market
10. Shortage of Skilled Weavers.

7.4 Problems faced by Industrial Cooperative Societies

The main problems faced by the industrial co-operative societies in the district are summarised below.

- Lack of sufficient working capital
- Shortage of labourers and raw materials
- Out of the handicrafts societies, 4 numbers are depends on bamboo based product manufacturing. Availability of bamboo is the problem faced by these societies.
- Among the other working societies, which belonging to the production of various kinds of goods and services relating to printing, photostat, canteen, seed processing, umbrella manufacturing, readymade garments, construction materials, quarry, etc. are facing working capital shortage.

Chapter 6

PROSPECTS AND POSSIBILITIES FOR INDUSTRIAL DEVELOPMENT

In order to address the various problems faced by MSMEs spread over various sectors and ensure their sustainable development, the sector wise remedial measures are suggested as explained below.

8.1 Wood based industries

- **Skilling and skill upgradation:** Suitable Schemes may be formulated by Govt for training to carpentry workers for enhancement of their skills and employability. Practical training shall be conducted through ITI (at least Taluk level mainly to access people) for the supply of skilled workers.
- **Raw material:** Availability of wood in subsidised rate from Forest depots for micro and small enterprises may be considered. More timber depot may be opened for the smooth supply of high quality wood at lower price. The forest department of Kerala has to take preference to supply woods from their timber depots to MSME, working in this sector
- **Licensing:** Single window clearance Adalaths may be conducted at Taluk level for the speedy disposal of application. Avoid micro wood based industry working below 5 hp from obtaining Forest department NOC
- **Power:** Provide 50% subsidy to the units for installing Generator sets, thereby they can avoid the loss of constant power failure
- **Marketing:** For parity in price of indigenous furniture and imported wooden goods, import tax on imported wooden articles may be enhanced.

8.2 Rubber products

- **Policy:** Govt intervention is essential to control price fluctuations in rubber. Rubber import may be regulated in par with the indigenous production to control the price of rubber products

8.3 PAPER AND PAPER PRODUCTS

- **Training:** Management awareness programme is required for effective running of these sector units. Training is also required for adoption of new and improved technologies.
- **Financing:** Since plastic waste and its management and recycling is an emerging environmental issue, thrust should be given to equivalent paper based products. Hence to promote paper based manufacturing units such as paper plate, paper carry bag, paper cup etc more financial support from govt side is required.
- **Licensing:** All clearances should be obtained through a single window system
- **Marketing:** For getting better price for paper plates and other paper based products, Consumption and sale of Plastic based similar products may be regulated as far as possible. This may reduce the environmental issues also.

8.4 READY MADE GARMENTS

- **Policy:** Policy formation such as procurement of uniforms for school and college students may be from handloom cooperative societies and MSMEs will boost the growth of this sector and its survival.

8.5 Plastics/Chemical products

- **Tax:** In the case of plastic recycling units, as the product is manufactured from waste plastic materials the present VAT at 5% to be exempted
- **Raw material:** Availability of raw materials at subsidy rate may be considered

8.6 FOOD PRODUCTS

- **Policy:** Entry of unauthorised (without BIS certification) products should be seized by the FSSAI authorities. Facilities must be provided for emergence of a strong agro based industrial sector. Govt level quality certification may be strengthened by directly visiting and inspecting food manufacturing and service MSMEs

- **Training:** training programmes for food processing and Awareness programmes for food security act and food adulteration will be of great use and to get familiarise with making of quality products and use of innovative technologies
- **Tax:** The existing high rate of tax (14.5%) should be reduced considerably

8.7 MECHANICAL ENGINEERING SECTOR

- **Training:** Small and medium scale enterprises should be trained and encouraged financially by State Govt for adoption of new technologies and move into new line of operation of the capacity of the existing ones
- **Policy:** Existing govt sector companies should show some preferences in procuring from the small and medium scale enterprises rather than sourcing it from outside, which will result in the development of the small and medium scale enterprises and also will provide job opportunities in MSME sector. Micro level small invested units may be avoided from pollution norms and getting certificates

8.8 IT sector

- **Policy:** For development of software for Govt level departments and agencies, the opportunities of MSME units in IT sector may be given priority according to their eligibility and experience

8.9 Miscellaneous products

- **Policy:** After starting the industry in remote areas, erection of residential building will affect the existence of the industrial units due to unnecessary pollution problems raised by the occupants. Regulation may be framed to avoid closing the units such as those engaged in manufacturing of cement based construction materials due to emergence of residential buildings.
- **Raw material:** Availability of paraffin wax at subsidised rates to candle manufacturing units may be considered for the existence of this industry.
- **Power:** Restoration of concessions by KSEB in respect of connection and labour charges to cement based manufacturing MSMEs

8.10 Measures for the improvement & development of handloom industry

1. Ensuring minimum wages to weavers on cost of living basis
2. Implementation partial mechanization

3. Ensuring raw material availability
4. Improvement of infrastructure facilities
5. Allowing of Rebate claims regularly without arrears
6. Adopting effective marketing strategies
7. Imparting skill development training
8. Effective implementation of Handloom marketing schemes
9. Product Diversification & Modernisation of looms
10. Amalgamation of nearby societies
11. Govt steps against selling of fake handloom products.
12. Attractive schemes for new generation entrepreneurs to handloom sector

8.11 Remedial measures suggested for revival of Industrial Co-operative sector

In order to resolve the above issues, the following things are suggested.

- Ensure the availability of sufficient working capital
- Resolve the labour issues
- Ensure the availability of raw materials
- To ensure the availability of labourers, new persons may be included as members of the society, advanced training in concerned areas may be provided and better wage package may be adopted.
- Grants given to societies may be enhanced (working capital)
- Incentives like Govt share participation may be enhanced (working capital)
- To explore the possibilities of making available sufficient raw materials in low rate

In addition to the above, the functioning of administrative bodies of these societies and official inspection by Govt are to be strengthened to motivate the societies and to give timely advice.

8.12 Road Ahead

(A road map for the industrial development of Palakkad district)

Several development projects meant for industrial and infrastructure development in the district are in the pipe line that will finally enhance the chances of Palakkad becoming the credible and most preferred investment destination and help it into an industrial development hub in the State.

It underlines the need for a new vision and strategy, which would help to fully utilise Palakkad's comparative advantage in material as well as in human resources, infrastructure facilities, existing and upcoming, policy initiatives and place greater emphasis on developing potential industrial sectors for accelerating the growth of the economy.

8.12.1 Various development projects (On going and proposed)

- 1. KSIDC Light Engineering Park:** Kerala State Industrial Development Corporation (KSIDC) proposed to setting up of light Engineering Park at Walayar industrial belt an extent of 34 acres of land has already been acquired for this purpose. It is proposed to set up 35 units of light engineering in this park providing employment opportunity to more than 500 skilled workers. It is expected to have an investment of 10.5 crores for providing infrastructure facilities to the project
- 2. Kinfra- Textile Park:** Kerala Industrial Infrastructure Development Agency (KINFRA) has proposed to set up a textile park at Kanjikode. They have acquired 350 acres of land for this purpose. This park is expected to provide employment more than 10000. This park is proposed to establish high quality testing laboratories, design centre, training centre, trade centre, display centre, warehousing facility and raw material depot.
- 3. Mega Food Park:** Govt of India has proposed to set a Mega Food Park at Kinfra, Kanjikode with a project cost of Rs.121.92 crores as an initiative under 'Make in India' campaign. The expected central assistance for this park is Rs.50 crores. The park would have two central processing facility units, one at Elappully and another at Pudussery, and 5 primary processing centres in Wayanad, Malappuram, Kozhikode, Thrissur and Ernakulam from where the raw materials such as coconut, ginger, pepper, cardamom and turmeric would be sourced.
- 4. Kinfra Industrial Estate, Ottapalam:** Kinfra is developing an industrial area in Ottapalam Taluk, near Lakidi which provide necessary infrastructure facilities for setting up of various industrial units.

5. Coimbatore- Cochin Industrial Corridor

The development of the proposed Cochin- Coimbatore Industrial Corridor (CCIC) would require a capital outlay in excess of Rs.23541 Crores. Active participation of the State Govt, Central Govt and private sector is contemplated for the prestigious project. This corridor development plan and its infrastructure components is estimated to attract industrial and social infrastructure investment to the tune of Rs.

1 lakh coreto the corridor districts over a period of the next 10 years. The corridor would comprise 12 potential industrial nodes and two tourism/ recreational nodes which are sustainable and leveraging the local resources suggested by modern infrastructure but without destabilising the State's green environment. Ernakulam and Kottayam will fall under NIMZ- I (National Industrial Manufacturing Zone) where as Thrissur and Palakkad will constitute NIMZ-II based on the identified industrial nodes along the corridor.

6. DIC-

- a) **Industrial Gala** (Multi-storeyed industrial estate) at Pudussery in Kanjikode and proposal for Shoranur and Kappur in Ottapalam Taluk
- b) **Industrial Park** at Ozhalapathy in 100 acres proposed in Chittur Taluk

5. STP-Expansion of Software Technology Park, Kanjikode owned by District Panchayat, Palakkad

6. Integral Coach Factory- proposed at Kanjikode: Kanjikode Industrial area has already become the 2nd biggest industrial concentration of the State after Cochin. The upcoming of Railway Coach Factory will accelerate light engineering industry in our district. The state government have already allotted required land at Kanjikode for the upcoming industry. This major industry accelerates more than 100 ancillary light engineering units in Kanjikode area and nearby Panchayath. This factory will bring investment of 1000 crores and also generate more than 1500 directly and 1000 semiskilled workers in directly.

7. BEML- expansion project: The said unit have already started function in Kanjikode Wise Park. The 2nd phase is in progress where LHB coaches, aluminium and stainless steel goods manufacturing. The above industries need a lot of ancillary units in respective sectors. While implementing the 2nd phase an amount of nearly 400 crores of investment and more than 500 direct employments and 1000 indirect employment will be generated.

8. Development of a web portal: for online trading (Palakkad District Panchayat Project)

9. SAGY- Sansad Adarsh Gramma Yojana, a Govt of India scheme, proposed in Pallasana Panchayat in Chittur and Puthur Panchayat in Attapady by Hon'ble MPs in Palakkad for developing model villages

8.12.2 Ongoing Programmes

1. Skill upgradation programmes on 1) light engineering, 2) Security Surveillance, 3) Fashion technology, 4) Agro food processing, 5) Handloom and 6) Power loom
2. Cluster Development Programme- Handloom and agriculture implements cluster consortium in Ottapalam Taluk
3. Entrepreneur Development Programmes (EDP) and Entrepreneur Awareness Programmes (EAP)
4. Entrepreneur Development Clubs (EDC)
5. Technology Clinics
6. Technovista, industrial and handloom expos

8.12.3 Policies, Facilities and Schemes

- Amendment of MSMED Act by Govt of India- in classification of MSMEs and exit mechanism for the entrepreneurs (proposed).
- Entrepreneur Support Scheme (ESS): for giving subsidy to MSMEs at a rate of maximum 20% of the capital investment in plant and machinery with a ceiling of 30 lakhs.
- Single Window Clearance Board (SWCB) and industrial local area SWCBs.
- Prime Minister's Employment Generation Programme (PMEGP): it is a scheme of KVIC, Govt of India for giving margin money to MSMEs
- Intensive Industrialisation Drive (IID): a special drive for identifying and starting new projects having capital investment above 25 lakhs
- Promotion of more Start-Ups and Technology Business Incubators
- Strengthening of Industry- Institution Linkages

The above policy measures, ongoing developmental projects and schemes will definitely provide the much needed ecosystem for improving the ease of doing business in Palakkad. Based on the above facts and findings a strategic roadmap is presented, recommending the various potential industry segments and verticals, products, and emerging service industry with projections on the total investments to be flowed in and employment to be generated.

8.13 Potential sectors for investment

The target industries identified for the district are based on favorable factors for the industry such as availability of raw materials, Policy framework, Government initiatives etc. The performance of these industries currently in Kerala is also taken into consideration.

- Agro-Food Processing
- Engineering Industry
- IT & ITES, Electronic hardware segment
- Textile segment
- Rubber& Plastics

Chapter 9

CANDIDATE INDUSTRIES FOR INVESTMENT

Few Investment opportunities have been suggested for the district taking into consideration the viability/availability of men & material resources besides other exogenous & endogenous factors.

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9.1 PLASTIC RECYCLING UNIT

Introduction

Plastic is a chemical product containing organic and inorganic compounds. It is a wonderful product invented by man. Without plastic products we can't live in the modern age. Due to the huge number of end users for the plastic products ultimately for a period of time it creates more or less the same quantum of plastic waste on the earth. As we all are aware of that plastic products are non-biodegradable. So it will create environmental problems. The reprocessing of plastic waste in to raw materials for new plastic products will solve not only the environmental problems but also the scarcity of raw materials for plastic products manufacturing units and also re utilizes the energy dumped in the plastic waste or scrap. The plastic waste is processed and converted into granules and pallet forms and by adding required pigments the products are ready as raw material for plastic industry.

Market

Reprocessing of products like PVC, HDPE, LDPE, PET, etc is gaining more popularity due to shortage and the steep increase in the price of virgin raw material. **Reprocessed raw materials (RP)** are used alone or mixed with virgin raw materials. Thus the RP granules or pellets are used for manufacturing packaging items agro, plastics box strapping and consumer items likes buckets, mugs, soap boxes, plates, tumblers , cups, toys, bottle caps, etc. Moreover, RP granules are much cheaper than virgin materials. Since, plastic industry contributes to wide spectrum of the economy like agriculture, water management, electronics, and transport it will become more relevant with the rapid industrialization and globalization of the Indian economy. So the demand for the RP granules will become more and more in the future. Moreover, the waste management system of the various Local Self Govt. Institutions will also necessitate the reprocessing of plastic waste. There are only about 150 units working in Kerala and about nearly 2000 units in India as a whole engaged in the reprocessing field including registered and non-registered categories. At the same time there are about 15000 units working in the plastic manufacturing field.

Technical Aspects

Raw material

The raw materials for the units are:

ABS (Acryl nitrate Butadiene Styrene)

PP (Poly Propylene)

PVC (Poly Vinyl Chloride)

HDPE (High Density Poly Ethylene)

LDPE (Low Density Poly Ethylene)

PET (Poly Ethylene Terephthalate)

The above are the contents of various types of plastic waste. These raw materials can be locally purchased.

Machinery Equipment

The details of machinery and equipment are enlisted in the financial aspect section. The machinery and equipments needed for the unit are readily available in the market.

Infrastructure

As the unit is proposed to be set up in the industrial estate, water, electricity, transport and all other facilities are available with the land and building.

Manufacturing Process

The most eco friendly alternative for plastic waste disposal is the process by which we can reutilize the energy content of the polymer in an ecologically accepted way. The plastic waste/scrap collected are washed, cleaned and dried from the cleaning unit and it should be graded and sorted in the sorting yard according to the quality of plastic products (Contents of the product) and it will be agglomerated in the grinding unit. This agglomerated product is extruded through the extruder then we get the output of plastic granules or pellets. For getting different colours for the product as per demand we can add necessary pigments before agglomeration. Most naturally white granules are of more demand and price than coloured one. The plastic granules are packed in plastic bags of 25Kg each by weighing and stored for marketing.

Pollution aspects

There are no toxic components used in the unit. Water treatment plant (WTP) should be installed and the discharged water from the WTP should not have any contamination.

Assumptions

- i) Capacity : 100Kg/Hour(240 tonnes/Annuaam)
- ii) Number of working day : 300days/year

Financial Aspects

	Land and building	Rs.2000 per month on rent
	Machinery and equipments	21.23 lakhs
	Working capital	
	Raw material per month	1.84 lakhs
	Salary and wages per month	0.53 lakhs
	Utilities and overhead per month	0.49 lakhs
	Total Working capital	2.86 lakhs
	Total investment	24.09 lakhs
	Expenditure per month	41.4 lakhs
	Total income per month	47.64 lakhs
	Profit per year	6.24 lakhs
	Breakeven point	49%

Address of Machinery Suppliers

1. Europack Machine (India) Pvt. Ltd, Mumbai – 72.

9. 2 COMPUTERISED FASHION DESIGNING AND MANUFACTURING

Introduction

Fashion designing and technology occupies a significant place in the field of apparels manufacturing. Human life in the modern era is always in search of attraction and dignity in weaving suitable apparels in accordance with the necessity of the situation. It glorifies the personality, dignity and vigor of a person. Today every coming generation wears more fashion conscious, so there is huge demand for new fangled weaved designs. With these conditions designers have difficult in keeping pace with fast changing trends of the market. Sometimes they find that they are not ready to cater the market needs. It is not easy to them to remain competitive by merely depending upon traditional way of designing, because today's design becomes out of fashion tomorrow. Hence loose a share of market, so to keeping pace with fast shifting trends of market.

India which has always been a centre for the trade is also growing into centre of innovation in garment and necessary design. Fashion technology has a wide scope for industry sector. Now fashion industry has become so specialised that it encompasses a vast field of design production, quality control, opportunities in design, concept management, design production management, fashion design production fashion accessory design, fashion merchantology, color making, marketing and so on.

CAD/CAM is the contraction stands for Computer Aided Design and Computer Aided Manufacturing. This terms means different things to different involved in designing, manufacturing and mechanical engineering.

It is well known phenomenon that human being is always in search of opportunity related to saving money, time and comfort. Any textile industry will think interesting of improving offering, maximum utilization of resources and improvement in service for customer's satisfaction. Search of these elements lead towards development and use of new technologies. They have made textile designing simpler, faster, more precious and enjoyable. The designer can create his motifs with or pen. Once the design is created, further process of creating the design i.e. clipping certain parts and changing shapes distortion, re-signing, re-collection, color relation, replacing and combining as per the need can be done at minimum possible time. Also one part of design can be altered without affecting the rest.

CAD/CAM is a virtually no limit solution for textile designing and manufacturing because it has an enormous application area. It is possible to make modern design and unique color combination which can easily satisfy consumers need. Now the fabrics are more attractive and more

competitive in today's rapid changing fabric world. High quality exportable textile produced including apparels, furnishing fabrics, blankets, carpets and so on are made with the help of CAD/CAM showing higher potentiality of revenue generation export market.

In power loom sector of our country almost every composite textile mill has adopted this type of CAD/CAM tools for textile designing and manufacturing in there R&D level. The software is so efficient that it produces all the required output within a few seconds. One need not worry about the complicated drafting and peg plans and effect of supposed weave can be seen immediately actual production .

This project profile aims at manufacturing value added apparel of different varieties like handloom decorated product , synthetic and silk products with the aid of CAD/CAM. For the purpose, modern computerized fashion designing machine with 24 heads, having 11 needles each head is being used. The required fashion works can be designed in the computer with the help machinery the embroidery works can be designed and stitched in the material. Besides, thread work, seekanse work and kunthal work etc. can also be designed and decorated in the garments of various sizes and fashions such kids wear, party wear, suits and saris etc.

Technical Aspects

Raw Materials

The materials required for the project are various varieties of saris and cotton materials etc. These are available in the local markets and in the apparel markets in Ahammadabad , Surret , Thirupur and Balaramapuram.

Market Potential

There are only three units are engaged in the field of activity in Kerala. Hence there is good scope in the market. Besides hand embroidery designed products, various readymade products can also be designed, produced and marketed in the domestic and International market . 40% of the products shall be exported to Singapore in the first year indirectly.

Assumptions

1. The unit would work for 300 days on two shifts during a year. On this basis its installed capacity will be 40 full saris per one hour and it is expected to utilize 75% of the capacity.
2. Company would be 40% of the products exported and 60% in the domestic market

3. The depreciation at the rate of 15% (5% additional shift) on plant and machinery and 10% on miscellaneous fixed asset
4. This company proposes to pay dividend at 10% from 4th year onwards
5. The loan amount will be repaid within 6 years
6. From the waste materials, it is proposed to produce floor mat , door mat , cushion and the rest of the waste can be sold for making soft toys
7. Repayment holidays will be six months
8. Wages will be at piece work rate
9. The term loan will be repaid monthly installments. While calculating interest on term loan @13% per annum
10. The company more concentrated in handloom diversification
11. The unit requires 18 KW 3 phase power supply

Financial Aspects

Land and building	Rented
Machinery and equipments	76.87 lakhs
Working capital	
Raw material per month	71.10 lakhs
Salary and wages per month	0.32 lakhs
Utilities and overhead per month	6.45 lakhs
Total Working capital	77.87 lakhs
Total investment	154.74 lakhs
Expenditure per year	1051.26 lakhs
Total income per year	966.65 lakhs
Profit per year	84.61 lakhs
Breakeven point	41.36%
Rate of return	32.2%

9.3 DESICCATED COCONUT

Introduction

Desiccated coconut is used commonly in sweetmeat preparations, as toppings in desserts, ice creams, puddings, etc., as a filler in betel leaves and a variety of products. The present production of desiccated coconut is around 5600 tonnes per annum and is concentrated in Karnataka where a number of small units are located. The present production is absorbed by the food processing industries for various end uses. Market surveys have shown that desiccated coconut powder in consumer packs is widely accepted by the middle class segments in preference to raw nuts.

Market demand

The major market outlets are the “ A” and “B” class stores. The product also finds a place in self-service counters and departmental stores. Bakeries buy desiccated coconut in bulk quantities for use in different products.

Manufacturing process

Mature coconuts are taken. They are shredded and the fibre removed. The nuts are cracked into two halves manually. The kernel is grated manually into a fine mesh. The kernel gratings are blanched in hot water, milk extracted and dried in a fluidized bed drier at 50 to 55 degrees centigrade for 8 to 10 hours.

The coconut husk is used for the manufacture of ropes and is also used as a fuel. The coconut milk is concentrated in the jacketed vessel to yield coconut cream. The shell can be used for manufacture of shell powder and activated carbon.

Assumption

300 working days in a year, quantity: 27500

Financial Aspects

Land and building	Rs.6000 per month on rent
Machinery and equipments	89.90 lakhs
Working capital	
Raw material per month	2.89 lakhs

Salary and wages per month	1.52 lakhs
Utilities and overhead per month	0.17 lakhs
Total Working capital	4.59 lakhs
Total investment	108.07 lakhs
Cost of production per year	47.80 lakhs
Total income per year	58.62 lakhs
Profit per year	10.82 lakhs
Breakeven point	64.56%

Machinery suppliers

1.Sidvin Machineries Private Limited, 10, 3rd Stage, Industrial Suburb, Mysore, 570008, Karnataka.; Tel: 0821-2485822; Fax: 0821 - 2489564

9.4 BANANA FIBRE EXTRACTION AND WEAVING

Introduction

Banana fibre is eco friendly like jute fibre. The technology of banana fibre extraction has been developed in South India where in a good number of banana fibre extraction units have been running very successfully. Some firms are exporting the banana fibre products. Banana growing states of N.E. Region has adopted the technology from South and started production of banana fibre and fabric. This can create a lot of employment opportunities for almost all age groups.

Market Potential

The banana fibre is being used for weaving attractive pieces of clothes, rugs, sarees etc. Besides, it is also being used to produce a variety of items such as hats, photo frames, trinket boxes, gift bags, picture frames, hand bags, belts, baskets and sandals etc. Dresses woven out of natural fibres are in great demand inside and outside India.

Suggested Location

Attappady and Mannarkkad

Banana Fibre Processing and Weaving

The extraction of the natural fibre from the plant required certain care to avoid damage. In the present experiments, initially the banana plant sections were cut from the main stem of the plant and then rolled lightly to remove the excess moisture. Impurities in the rolled fibres such as pigments, broken fibres, coating of cellulose etc. were removed manually by means of comb, and then the fibres were cleaned and dried. This mechanical and manual extraction of banana fibres was tedious, time consuming, and caused damage to the fibre. Consequently, this type of technique cannot be recommended for industrial application. A special machine was designed and developed for the extraction of banana fibres in a mechanically automated manner. It consisted mainly of two horizontal beams whereby a

carriage with an attached and specially designed comb, could move back and forth. The fibre extraction using this technique could be performed simply by placing a cleaned part of the banana stem on the fixed platform of the machine, and clamped at the ends by jaws. This eliminated relative movement of the stem and avoided premature breakage of the fibres. This was followed by cleaning and drying of the fibres in a chamber at 20oC for three hours. This fibres were then labeled and ready for lamination process. After extraction of fibre, weaving is done in the looms as per normal process like any other material.

Assumptions

Average daily production envisaged : 10 Kg cloth.
Working days/year : 25 days in a month

Financial Aspects

	Land and building	Own
	Machinery and equipments	1.3 lakhs
	Working capital	
	Raw material per month	1.6 lakhs
	Salary and wages per month	1.5 lakhs
	Utilities and overhead per month	1.75 lakhs
	Total Working capital	4.85 lakhs
	Total investment	6.15 lakhs
	Expenditure per year	4.99 lakhs
	Total income per year	6.65 lakhs
	Profit per year	1.66 lakhs
	Breakeven point	31%

Machinery suppliers

1. Eco Green Unit, "Sugandavanam", Sethumadai, Pollachi TK, Coimbatore Dist, Tamilnadu. Pin - 642133. PH : 04253 244269, Mobile : 94433 66374

2. Krishi Vigyan Kendra
Kalavacharla,
East Godavari District
Andhra Pradesh
0883 – 2449871
3. Mother India
No.12-B.I Floor,First Street,
Rajendra Nagar,Palayamkottai- 627 002,
Tamilnadu,India.
Call : + 91- 0462- 2561 325 / 2561 354
Fax : + 91- 0462- 4000037,
Mail : business@motherindiaworld.com
Click: [welcome to mother india](#)

9.5 RUBBERISED CLOTH

Introduction

The use of rubber for water proofing of garments is high nowadays. In its original condition rubber was thermoplastic becoming soft and sticky in summer and hard in winter. It was placed between two textile fabrics to minimise these defects and from this material the water proof garments were made. Today most of the rubber spreading of fabric is carried out as a preliminary to their incorporation in the products like tyres, conveyor, sports goods etc. In addition, final products are also made from fabrics usually spread with natural or synthetic rubber on one side only and used for their water proofing quality. The main techniques for rubberising of cloth are calendering, frictioning and latex treatment.

Raw Materials

Pale crape, zinc oxide, stearic acid, blanc fix, paraffin wax, accinox S.P., accicure DHC, sulphur, white factice, titanium dioxide, fast rubber color, cloth and packing materials

Manufacturing Process

The process of manufacture consists of following operations:

- (a) Preparation of rubber compound
- (b) Preparation of dough
- (c) Spreading operation
- (d) Vulcanisation

Market potential:

There is a tremendous market of rubberised cloth in India. It is used domestically as well as industrially. It may be presumed that there is a good market prospect throughout India.

Annual Production capacity:

It is envisaged to produce goods worth Rs.1787500/-

Financial Aspects

Land and building	Rental
Machinery and equipments	2 lakhs
Working capital	
Raw material per month	1 lakh
Salary and wages per month	0.14 lakhs
Utilities and overhead per month	0.10 lkakhs

Total Working capital	1.24 lakhs
Total investment	3.24 lakhs
Expenditure per year	17.87 lakhs
Total income per year	15.58 lakhs
Profit per year	2.29 lakhs
Annual return	40.12 %

List of Plant, Machinery &equipment :

- 1 Rubber mixing mill
- 2 Z-blade type mixer
- 3 Spreading machine
- 4 Cylindrical vulcanisation chamber
- 5 Vertical boiler
- 6 Avery weighing scale
- 7 Water storage tank with pump
- 8 Testing equipment

Suppliers of Plant &Machinery:

- 1 M/s sohel Engg Co., L.B. Shastri marg, Bandup, Mumbai-78
- 2 M/s Sri Haradhan Das, Belilious road, Howrah
- 3 M/s The National Engineering & Machine Mfg. Co. 34, Sastitalla Road, Kolkotta-11
- 4 M/s Batliboi & Co. 26, R.N. Mukherjee Road, Kolkotta-1
- 5 M/s Genson Pvt Ltd., 6-West View, Dadar, Mumbai

9.6 ELECTROMECHANICAL DOOR

Introduction

In places like hotels, airline/railway reservation centres, airports, hospitals, the number of people entering into and emerging out from the door is large. Opening and closing the door every time by an attendant is a cumbersome and repetitive job. The operation can be performed using electromechanical doors. Whenever a person approaches the door, it will open automatically and close only after the person has moved away from the effective range.

Raw Material Required

Particulars

Glass doors

Electronic\ compo

Mechanical linkage

Other hardware

Manufacturing Process

The manufacturing process can be outlined as below :

- a) Design the circuit based on the door area under consideration.
- b) Construct mechanical door assembly
- c) Build the electromechanical assembly and linkages with the door assembly
- d) Test for operation
- e) Installation & commissioning

Market potential

The buyers for electromechanical doors are likely to be those establishments that use air-conditioning at public place, to ensure that the doors remain shut if no one is using it. The most significant buyer segment may be the star hotels. Due to the support available from tourism department, star hotels are coming up at many tourist centres. Electromechanical doors are at present manufactured in India by 2-3 manufactures. After-sales service is required to be given to the product to maintain its efficiency. This unit is located in major cities having large number of commercial premises. Alternatively, with a good service support network, the unit can be located at any place to obtain maximum locational benefits.

Annual Production capacity

A plant capacity of 600 doors per annum is considered

List of Plant, Machinery & equipment

1. Electronic measuring equipments
2. Lathe
3. Mechanical toolset
4. Tools, jigs and fixtures

Financial Aspects

Land and building	4.10 lakhs
Machinery and equipments	4.20 lakhs
Working capital	
Raw material per month	6.90 lakhs
Salary and wages per month	6.72 lakhs
Utilities and overhead per month	1.50 lakhs
Total Working capital	15.12 lakhs
Total investment	23.42 lakhs
Expenditure per year	75.18 lakhs
Total income per year	88.20 lakhs
Profit per year	13.02 lakhs
Breakeven point	30.92%
Annual return	57.94%

Suppliers of Plant & Machinery:

1. Asoka machine tools corporation, a/15 Mayapuri industrial area, Delhi - 100 062
2. Maneklan and sons, 115 Narayandharu street, Mumbai - 400 003
3. Sandvik Asia ltd, Bombay- Pune road, Pune - 411 012

9.7 WOODEN TOYS AND DECORATIVE PIECES

Introduction

Variety of wooden toys and decorative pieces can be made as carved out of wood. Indian toys made on sandal, teak and rose wood have wide markets globally. White cheap wood is used for manufacture of toys, high quality wood pieces are usual for manufacture of decorative pieces. The wood pieces are cut with the help of band saw and jig saw carved manually and joined the pieces where ever required with fevicol etc. The products are either polished or painted before being sent to markets.

Raw Materials

Wood pieces, fevicol, paint sand paper etc.

Manpower Requirement 4 persons

Annual Production capacity

It is envisaged to produce goods worth Rs.298000/-

List of Plant, Machinery & equipment

Band saw machine, Jig saw machine, Brunch grinder, 12mm drilling machine, Sanding machine

Financial Aspects (in Rs)

Land and building	Rented
Machinery and equipments	0.62 lakhs
Working capital	
Raw material per month	0.10 lakhs
Salary and wages per month	0.095 lakhs
Utilities and overhead per month	0.01 lakhs
Total Working capital	0.205 lakhs
Total investment	0.825 lakhs
Expenditure per year	2.98 lakhs
Total income per year	2.70 lakhs
Profit per year	0.28 lakhs
Annual return	26.425

Suppliers of Plant & Machinery

Locally available

9.8 INDUSTRIAL RUBBER GLOVES

Introduction

A wide range of rubber products are made by latex dipping process. Some of the most significant items manufactured by this process are the various types of industrial, household, electrician's, surgeon's and medical examination gloves. The function of these gloves in general is to protect the hand and fingers from heat, abrasion, electric shocks, chemical attack, contamination through direct contact as in case of medical examination gloves etc. Of these, the industrial gloves provide safety for millions of workers in various industries. The household gloves are mostly used by people in urban areas. Gloves of this type are also used by workers in food processing units and by people engaged in laboratory works. All these gloves are manufactured from natural rubber latex and require simple machinery and equipments, which are easily available within the country.

Market

The demand for industrial and household rubber gloves is rapidly increasing on account of rapid industrialisation and urbanisation of our country currently taking place. Several workers in the chemical, electrical and food processing industries use rubber gloves. Similarly, the number of people using gloves for household purposes during handling of detergents, floor polishes, pesticides and the like is also increasing especially in the urban areas. In view of all this, there is a good scope to start many small scale units to manufacture these gloves.

The no. of units in Kerala state who were exclusively engaged in the industrial production of centrifuged latex based dipped products, like rubber band, glove, finger caps etc are limited. Further there are many dealers and c&f agents who are operating in and around Kerala state, require above mentioned products in bulk as such there is very fast scope for the proposed unit

Technical Aspects

Process Outline

The manufacturing process consists of compounding creamed or centrifuged latex concentrate with necessary chemicals and dipping suitable formers into the compounded and matured latex. A thin film of rubber will be deposited on the formers. The operation of dipping is repeated till

sufficient deposit of rubber is formed on the formers. The rubber deposit is dried at 70 deg C and then vulcanized at 12-deg c. This is then stripped off from the former and inspected. Finished rubber gloves are then packed and sent for storage and despatch.

Quality Specifications: As per customer's specifications.

Production Capacity

- (a) Quantity : 1.9 lakh pairs of various sizes and types of Industrial Gloves per annum on a two shift basis.
- (b) Value : Rs. 38, 00,000/-

Approximate Motive Power: 25 KW

Pollution Control Requirements

As this type of industry uses various industrial chemicals for processing, care should be taken to see that proper pollution control measures are adopted in disposing of various hazardous chemical substances and process wastes.

Energy Conservation needs

This is not a significant factor in the present project. However basic measures such as minimisation of wastage in production, proper maintenance of machinery and equipments, proper training of labour in quality maintenance and production will go a long way in conserving energy.

Financial Aspects

Land and building	on rent
Machinery and equipments	7.26 lakhs
Working capital	
Raw material per month	1.2 lakhs
Salary and wages per month	0.70 lakhs
Utilities and overhead per month	0.24 lakhs
Total Working capital	2.14 lakhs
Total investment	9.4 lakhs
Expenditure per year	31.74 lakhs
Total income per year	41.00 lakhs
Profit per year	9.26 lakhs
Break even point	50%
Annual return	52.89%

Suppliers of Rubber Processing Machinery & Equipments

1. M/s. Modern Rubber Machinery Manufacturers Pvt. Ltd.
310, Jogani Industrial Estate
541, Senapati Bapat Marg, Dadar, Mumbai – 400 028
2. M/s. Perumacheril Castings Industries
Market Landing
Kottayam – 686 001, Kerala
3. M/s. Micromertics Engineers (P) Ltd.
298, 4th Floor, Khaleel Shiraji Estate
Fountain Plaza, Pantheon Road
Egmore, Chennai – 600 028

2. Steam Boilers

1. M/s. Thermax Ltd
610, Anna Salai, Chennai – 600 006
2. M/s. Firetech Boilers Pvt. Ltd.
No.211, 2nd Cross, 38th Main
BTM Layout, 2nd Stage,
Bangalore – 560 068

3. Weighing Machines & Balances

1. M/s. Giri Brothers Private Ltd.
P.B.No 1646, No.51, Rajaji Salai
Chennai – 600 001
2. M/s. Tamilnadu Scale Industries
166, Broadway, Chennai – 600 108

4. Testing & Measuring Instruments

1. M/s. Blue Star Ltd.
620, Anna Salai
Chennai – 600 006
2. Madras Metallurgical Services
3. Lalithapuram Street,
Royapettah, Chennai - 600014

5. Rubber Chemicals

1. M/s. Bayer India Ltd.
749, Anna Salai
Chennai – 600 002

2. M/s. National Organic Chemical industries Ltd.
8, Haddows Road
Chennai – 600 006
3. M/s. A.V.Thomas &Co(India) Ltd
22, Marshalls Road, Egmore , Chennai – 600 008

9.9 STEEL WOOL

Introduction

Steel wool has very extensive use in the rapid industrialisation in the country and abroad. This item can economies on the time and money considerably. Its main use is for cleaning, de-rusting, polishing, scouring etc. It is used for easy cleaning on metallic & non metallic surfaces.

Raw Materials

Special grade M.S. wire.

Manufacturing Process

The plant is totally automatic. Wire is fed into the machine. The different stages in manufacture are:

1. Spot welding
2. Steel wool making
3. Grinding
4. Packing etc

Manpower Requirement :4

Market potential

In the rapid industrialisation the use of steel wool as an abrasive enjoys constant demand and good market potential in the country. Being a consumable item it has great demand in commercial use, domestic use, in defence for cleaning purpose and in auto repairing shops. Very few companies manufacture this item as such it has a great market potential.

Annual Production capacity

It is envisaged to produce goods worth Rs.4750000/-

List of Plant, Machinery & equipment

- 1 Automatic steel wool making machine
- 2 Other tools

Financial Aspects

Land and building	Rental
Machinery and equipments	20.5 lakhs
Working capital	

Raw material per month	23.8 lakhs
Salary and wages per month	0.19 lakhs
Utilities and overhead per month	0.25 lakhs
Total Working capital	24.24 lakhs
Total investment	44.74 lakhs
Expenditure per year	41.32 lakhs
Total income per year	47.5 lakhs
Profit per year	6.18 lakhs
Annual return	23.6%

Suppliers of Plant & Machinery

Locally available

9.10 AYURVEDIC SPREADS & BEDS

Introduction

Stress and strain of man is increasing day by day due to his fastly changing life styles. Discomforts and diseases are become his fellow beings. Continuous headache, back pain, body pain, blood pressure, hypertension etc. are playing their roles now and then in the life span of a man. Ayurvedic apparatuses are very much power full to control these disorders. Man can build and maintain a healthy body and stress free mind with a relaxed sleep in Ayurvedic spreads or Beds.

Technical aspects

Ayurvedic Spreads & Beds are manufactured (weaved) from vertiver. Mats are made first by weaving vertiver roots binding with Nylon/Cotton threads. By covering cotton netted cloth, spreads are made. The size of the spread is 6 Ft X 4 Ft. Four sides of the spreads are also stitched by cotton/velvete laces. Average weight of a spread is 2 – 3 Kgs. Using raw cotton or foam and vertiver spreads, beds are made. For one 6 X 4 vertiver bed, not less than 8 Kg of raw cotton is needed.

Raw Material

Vertiver (*Chrysopogon zizanioides* – “Ramacham” – in Malayalam) is a perennial grass of poaceae family, native in India. It can grow 1.5 m height and form clumps as wide. Its roots grows downward up 2-4 meters in depth. It is a fragrant grass. It is widely used for high end perfumes. It is also used for traditional medicines in South Asia and West Africa. Vertiver roots is locally available with stem through Ayurvedic medicinal suppliers and directly from planters. After cleaning it, the pure roots (10%) are separated for the use.

Market

In Kerala, people are very much fond of Ayurvedic traditional medicines. Ayurvedic tourism is also flourishing in Kerala. Hence there is a wide scope for these ‘Ramacham’ spreads and beds.

Assumptions

In one shift of 8 hours per day, 25 working days in a month throughout the year.

Man power : Weavers – 2, Tailor – 1 and Helper – 1
(For weaving a vertiver mat, 2 manpower is required)

Capacity : 25 mats/month (300 mats/year)
 From which 150 spreads and 150 beds can be made.

Financial Aspects

Land and building	on rent
Machinery and equipments	0.2 lakhs
Working capital	
Raw material per month	0.86 laks
Salary and wages per month	0.15 lakhs
Utilities and overhead per month	0.04 lakhs
Total Working capital	1.05 lakhs
Total investment	1.25 lakhs
Expenditure per year	12.75 lakhs
Total income per year	15.00 lakhs
Profit per year	2.25 lakhs
Break even point	43.36%
Annual return	15%

List of Machinery Suppliers

1. M/S QRS, MG Road Thiruvananthapuram
2. M/S KC Pappu Sons, AnnaTower, MG Road, Ernakulam, Kochi

List of Raw Material Suppliers

1. K B Bhagath Singh
 Vertiver Farm,
 Vasudevanalloor
 Aeon Paper Mills Pvt. Ltd.,
 Balaji Chit Fund Buildings,
 140 Gandhikalai Mandram Road,
 Rajapalayam, Tamilnadu – 626117
2. V. Sasidharan
 Vertiver Farm,
 Karamam, Ottasekharamangalam,
 Thiruvananthapuram,
 Kerala
 Ph: 09446171871

9.11 AUTOMOBILE WATER PUMP

1. INTRODUCTION

An enormous amount of heat is generated in the engine block of the automobile during its working. It is necessary to dissipate this heat for smooth functioning of the system. Automobile water pump is used in the vehicle to circulate the cooling water through the engine block, engine head and the radiator and thus cool the engine block. The effectiveness of the cooling system is dependent on proper working of the water pump and therefore it constitutes a vital element of the cooling system of the automobile.

2. RAW MATERIALS

Steel round (MS and EN-8)
Castings of body ,impeller etc.
Sealed bearings, water seals, screws etc.

Total

3. MANUFACTURING PROCESS

The unit will procure castings of pump body and impeller from outside sources. It will carry out machining of body, impeller and shaft as per drawings either supplied by the buyers or prepared by the unit as per buyer's requirements. The unit will purchase items like sealed bearings, water seals, screws etc. of reputed brands from local market. The assembly and inspection will be carried out of the unit's premises and the item will be suitably packed for dispatch.

4. Market potential

Due to rapid growth of manufacture of automobile in the country by existing entrepreneurs as well as multinational OEMs, there is growing demand of ancillarisation of automobile item by OEMs in our country. As such, there is a good scope for setting up new units for ancillarisation of automobile products. The prospective entrepreneurs intending to work as ancillary unit can select the item automobile water pump for manufacture in their unit. The units yielding quality output and acquiring the confidence of the buyers may expect to get continuously increasing orders from OEMs. This item has demand as spare part in the open market as well: since its normal average life is estimated to be about 25-30 thousand kilometre travel or about 1½ years.

5. Production capacity :

Quantity :60,000 Nos per annum

6. MANPOWER REQUIREMENT: 5

7. Financial Aspects

Land and building on rent	On rent
Machinery and equipments	15.23 lakhs
Working capital	
Raw material per month	11.865 lakhs
Salary and wages per month	0.552 lakhs
Utilities and overhead per month	0.407 lakhs
Total Working capital	12.824 lakhs
Total investment	28.054 lakhs
Expenditure per year	163.94 lakhs
Total income per year	182 lakhs
Profit per year	18.06 lakhs
Break even point	46.2%

8. List of Plant, Machinery & equipment :

1. Capstan Lathe

- (i) Bar chuck capstan lathe capacity 60 mm bar with complete accessories and electricals.Motor - 7.5 H.P.
- (ii) Bar chuck capstan lathe capacity 25 mm bar with complete accessories and electricals,Motor - 2 H.P.

2. Centre Lathe

- (i) Centre lathe with complete accessories and electricals. Specn : Centre height - 165 mm Distance between centre : 1000 mm Motor - 2 H.P.

3. Drilling Machine

- (i) Pedestal drilling machine.Capacity : 25 mm dia.Motor : 1.5 H.P.
- (ii) Bench drilling machine.Capacity : 12 mm dia.Motor : 1 H.P.

4. Grinding Machine

- (i) Cylindrical grinding machine.Capacity : 200 mm dia.,60 mm length Motor : 6.5 H.P.
- (ii) DE bench grinder Capacity : 200 mm dia.Wheel size Motor : 1 H.P.

5. Press

- (i) Flypress No. 6
- (ii) Arbowe press

6. Metal Cutting Saw

- (i) Metal cutting band saw Capacity : Dia. or width 200 mmMotor : 1 H.P.
- (ii) Testing and Measuring Equipments
- (iii)Jigs, fixtures and toolings

9. Suppliers of Plant & Machinery :

- (c) M/s Channa Bros. (P) Ltd.,
Okhla Industrial Estate,
New Delhi-110020.
- (a) M/s United Machines Tools,
18-DLF Indl. Area,
Najafgarh Road,
New Delhi.
- (b) M/s Batliboi & Co.
Parliament Street,
New Delhi -110001.
- (a) M/s Ashoka Machine Tools Corpn.,
A-15, Mayapuri Industrial Area,
New Delhi.

9.12 MIXED FERTILIZER

INTRODUCTION

A fertilizer or manure is anything that will increase the yield of a crop if added to the soil, but the principle constituents (macro nutrients) are limited to three only of the elements for use on a large scale. These elements applied to the soils in commercial fertilizers are N, P & K. They are also called fertilizer elements and they often applied together in commercial fertilizer mixtures. Apart from macro nutrients, the essential elements (Micro- nutrients) exist usually in quantities more than sufficient to supply the needs of the crop. But abundant and frequent cutting of the crops, the soil is seldom exhausted of them. If the natural fertility of the soil is to be conserved, and the productivity maintained, some external addition of the food resources (fertilizers) of the plant must be added. Instead of applying N, P & K individually to the soil, these macronutrients are mixed together to manufacture mixed fertilizers to remove the deficiencies in the soil in a more assimilable form.

RAW MATERIALS

Urea, SSP, muriate of potash, stabilizers, fillers, conditioners, laminated printed HDPE sack, testing and other chemicals etc.

MANUFACTURING PROCESS

The process involves the use of the Swift reactor for ammoniation & granulation. The reactor as described, is a continuous rotary drum 5 1/2 ft. diameter and 38 ft. long. The first 5 ft. of the drum are equipped with spiral flights to advance the dry materials into the lifting flight zone, which extends to within 5 ft of the outlet. The lifting flights are staggered and designed to shower the dry material through the gas steam Ammonia or ammoniating solution or both are injected through a nozzle mounted in the seal plate of the feed end. Sulphuric or phosphoric acid is injected through an annules around the ammonia nozzle. The reaction of acid and ammonia generate steam, which served as a carrier gas. The excess of ammonia over that required for reaction with the acid is absorbed by the showering custom of super phosphate in the flight section. The steam discharges through a vapour hood to a stack at the exit end of the reactor. The product leaving the reactor contain 1-3 % moisture & is well granulated Swift Reactor may go to a cooler, or to a dryer then to a cooler facilities for screening, crushing, oversize & recycling may follow standard practice.

Market potential:

There is a very good demand for this product. To save labour costs the more usual method is to apply a complete fertilizer that is one containing varying proportions of the three essential elements, which differ according to the needs of the crop and soil as determined by the conditions. It seems that

some grades have very good market potential and liked by the farmers. There is ample scope for setting up of new units in this area.

Annual Production capacity:

It is envisaged to produce goods worth Rs.1,66,00,000/-

MANPOWER REQUIREMENT: 16

Financial Aspects

Land and building	On rent
Machinery and equipments	23 lakhs
Working capital	
Raw material per month	10 lakhs
Salary and wages per month	0.54 lakhs
Utilities and overhead per month	0.62 lakhs
Total Working capital	11.16 lakhs
Total investment	34.16 lakhs
Expenditure per year	133.37 lakhs
Total income per year	166 lakhs
Profit per year	32.63 lakhs
Break even point	47.44 %

List of Plant, Machinery & equipment:

- 1 Rotary driven ammoniator
- 2 Storage tanks
- 3 Granulator
- 4 Boiler
- 5 Conveyor systems
- 6 Cyclone type dust collector
- 7 Tractor
- 8 Reactor cap
- 9 Bagging equipments
- 10 Lathe, bench grinder, drill press etc
- 11 Testing equipments

Suppliers of Plant & Machinery:

- 1 M/s Batliboi & co P. Ltd., Forbes Street, Mumbai-400001
- 2 M/s Est Ariatic Co P Ltd., Wavell House, Grahan Road, Mumbai
- 3 M/s Voltas Limited, Saran Chambers, 5, Parle Road, P.B.No. 190, Lucknow, regd Office, 19, J.N. Herdia Marg, Balalrd Estate, Mumbai-38

9.13 DIGITAL PANEL METERS

1. INTRODUCTION

Digital panel meter is basically a voltage measuring device. It consists of analog switches, integrator, comparator, control circuitry with display unit. With the modern technique of production in the field of chemical refineries and fertilizers, it is expected that yearly requirement is high. The requirement of the country for this item at present is being met through imports. It has a very good export market.

2. RAW MATERIALS

Hole printed circuit boards, chips, electrolytic capacitors, poly carbonate capacitors, metal film resistors, low leakage transistors, switching transistors, zenor diodes, transformers etc.

3. MANUFACTURING PROCESS

Various electronic components such as resistors, capacitors, chips and transistors are soldered on printed circuit board. Sub-assemblies of power supply, switching circuit, integrator, comparator circuit and counter are assembled and tested for resolution, accuracy, drift, operational amplifier characteristics, input impedance, common mode rejection etc. The output is checked on a jig fitted with nixie tubes. The standard voltages are fed to the input circuit and it is again calibrated and tested.

4. MANPOWER REQUIREMENT: 3

Financial Aspects

Land and building on rent	On rent
Machinery and equipments	2 lakhs
Working capital	
Raw material per month	0.437 lakhs
Salary and wages per month	0.12 lakhs
Utilities and overhead per month	0.15 lakhs
Total Working capital	0.707 lakhs
Expenditure per year	8.9 lakhs
Total income per year	10.5 lakhs
Profit per year	1.6 lakhs
Break even point	39 %

Annual Production capacity:

It is envisaged to produce goods worth Rs.10,50,000/-

List of Plant, Machinery & equipment:

- 1 Digital voltage standard
- 2 Drilling machine
- 3 Shearing machine
- 4 Bending machine
- 5 Instrument lathe painting unit
- 6 Oscilloscope
- 7 Signal generator
- 8 Multimeter
- 9 LCR bridge
- 10 PCB

9.14 CAFFEINE FROM TEA WASTE

1. INTRODUCTION

Caffeine is manufactured from tea waste by solvent extraction process. Normally processing of tea generates a lot of waste in the form of fluff, stalks and leaf sweeps. This is usually dumped as waste or destroyed, but this waste can be bountiful source of caffeine. Caffeine is a well known drug chiefly used by the pharmaceutical industry. It is also added to common coke beverages and there is immense potential for such a unit in the state as raw material is available in plenty in Kerala.

2. RAW MATERIALS

Tea waste, solvent (benzene), lime, activated carbon, polythene bags, packing materials.

3. MANUFACTURING PROCESS

Teas waste is mixed with lime and passed through a mixing machine. Small quantities are added to the mixture which reacts with the lime and heats the mixture. Thereafter, the mixture is heated in a kettle like apparatus along with the solvent benzene. Care should be taken to keep the temperature below the boiling point of benzene (70°C). The liqueur that is generated is then passed a heat exchanger and extractor. Benzene is evaporated off and is recycled and the caffeine is dissolved in the water. This solution is centrifuged and the settled caffeine crystals are extracted from the mother solution. The crystals which are green in color is decoloured with the aid of activated carbon. Then the crystalline caffeine is dried and pulverised before packing in polythene bags.

4. MANPOWER REQUIREMENT: 10

5. Market potential :

Caffeine is a well known drug widely used in pharmaceutical preparation. It is mainly used as stimulant of the nervous system and as a diuretic. Another use of caffeine is in popular coke beverage. There is good potential to set up units to manufacture caffeine from tea waste as large quantities of the same are available from tea gardens.

6. Annual Production capacity :

It is envisaged to produce goods worth Rs.14600000/-

7. Financial Aspects

Land and building	On rent
Machinery and equipments	35 lakhs
Working capital	
Raw material per month	8 lakhs
Salary and wages per month	0.40 lakhs
Utilities and overhead per month	0.95 lakhs
Total Working capital	9.35 lakhs
Expenditure per year	123.3 lakhs
Total income per year	146.00 lakhs
Profit per year	22.70 lakhs
Break even point	36%

8. List of Plant, Machinery & equipment :

- 1 Mixer
- 2 Hydro extractor
- 3 Kettles for extraction
- 4 Solvent recovery system
- 5 Heat exchanger
- 6 Troughs for sedimentation
- 7 Basket centrifuge
- 8 Stainless steel packetted kettle purification of caffeine
- 9 Steam heated tray dryer
- 10 Micropulveriser
- 11 Boiler
- 12 Weighing balance

9. Suppliers of Plant & Machinery :

- 1 M/s Steel Worth, Kakum Road, Tinsukia, Assam
- 2 M/s M.B. Industries, Tinsukia, Assam

9.15 NON-STICK COOKWARE

1. INTRODUCTION

The proposed unit is for manufacturing non-stick cookware such as tawa, frying pan, casseroles etc. made out of aluminium sheets and coated with Poly Tetra Fluoro Ethylene. The coated cookware/utensils are very popular now a days due to their non-sticking property, which has advantages such as less edible oil consumption and less chances of food burning. The utensils are also having better aesthetic look.

2. RAW MATERIALS

Aluminium circles
PTFE coating liquid
Bakelite handles
Brackets/handle
S.S. Screw
Aluminium rivets
Wooden spatula
Packing material

3. MANUFACTURING PROCESS

- (a) Aluminium Circle into Utensil
- (b) Spinning Process
- (c) Sand Blasting
- (d) Base coat Painting
- (e) Top Coat Painting
- (f) Finishing and Rivetting
- (g) Testing of the Utensil
- (h) Stamping
- (i) Packing

4. MANPOWER REQUIREMENT: 28

5. Market potential

The modern day kitchen needs invariably non-stick cookware. Most of the cookery which are being demonstrated on television are recommending non-stick cookware. the health aspect is also one of the major factors, which favours non-stick cookware, for which less oil is sufficient. There are only five to six major manufacturers in the market, whose brands are very popular. However, the growing market can easily accommodate more brands, which are to be promoted by means of catchy advertisements and innovations.

6. Annual Production capacity:

1,20,000 Nos. of utensils per annum

7. Financial Aspects

Land and building on rent	20 lakhs
Machinery and equipments	26 lakhs
Working capital	
Raw material per month	15.05 lakhs
Salary and wages per month	0.96 lakhs
Utilities and overhead per month	1.25 lakhs
Total Working capital	17.26 lakhs
Expenditure per year	221.31 lakhs
Total income per year	276 lakhs
Profit per year	54.69 lakhs
Break even point	31.9%

8. List of Plant, Machinery & equipments

- 1 Double column power press with electric motor 400 V, 3 phase, starter
(a) (50 T capacity) 4 HP motor
(b) (100 T capacity) 7.5 HP motor
- 2 Spinning (Motorised) (1 HP each) lathe machine
- 3 Sand blasting machine (fabricated) (2 m x 2 m x 2 m) size with spray gun
- 4 Continuous baking oven for base coat with digital temp .control up to 150 degree centigrade (6 m x 6 m x 4 m) size
- 5 Continuous baking oven for top coat with digital temp .control up to 500 degree centigrade (6 m x 6 m x 4 m) size
- 6 Buffing machine with CI stand, electric motor 440V, 3 phase, 1 HP, 1500 rpm
- 7 Drilling machine, bench type, up to 13 mm capacity, with electric motor and round tray
- 8 Air compressor, 2 cylinders, with spray gun and accessories, electric motor and starter 400 V, 3 phase, 5 HP, 100 PSI working pressure and accessories
- 9 Testing equipments
(a) Corrosion cabinet for salt spray
(b) Thickness micrometer
(c) Scrubbing tester
(d) Bending barrel for adhesion test
10. Hand tools (riveting machine etc.)
11. Jigs and fixtures
12. Dies and tools

9. Suppliers of Plant & Machinery :

1. M/s Therelek Furnaces Pvt. Ltd., A-131, Road No. 123, Wagle Indl.Estate, Plot No.4, Thane-400604.
2. M/s Hightemp Furnaces Ltd., IC, 2nd Phase, Peenya Indl, Estate, P.B.No.5809, Bangalore-560058.
- 3.M/sJomindFurnacesPvt.Ltd.,248,3rdCross,8thMain,3rdPhase,PeenyaIndl. Estate, Bangalore-560058.

ANNEXURES

ANNEXURE 1

Block wise sector wise details of MSME units started in Palakkad district up to the year 2009-10

	Block	Paper & Paper Products	Food processing	Rubber based	Plastic based	Forest based	Textile based	Chemical based	Engg based	IT based	Miscellaneous	Service	Total	Investment	Employment
1	Alathur	17	123	7	39	25	217	21	92	13	385	141	1080	3105.51	3847
2	Kuzhalmannam	5	95	2	38	17	148	15	63	6	232	98	719	2145.15	2657
	Alathur	22	218	9	77	42	365	36	155	19	617	239	1799	5250.66	6505
3	Chittur	4	78	3	31	14	118	13	52	9	228	81	631	1771.05	2194
4	Chittur Thatha (M)	1	74	1	14	7	65	12	23	7	124	46	374	850.84	1054
5	Kollengode	3	88	3	37	16	141	16	51	6	243	95	699	2152.28	2666
6	Nenmara	6	62	4	33	11	27	12	45	5	167	67	439	1789.56	2217
	Chittur	14	302	11	115	48	351	53	171	27	762	289	2143	6563.73	8131
7	Mannarkkad	5	103	1	42	16	156	15	61	7	235	102	743	2229.09	2761
8	Attappady	4	46	1	9	4	32	3	12	2	73	25	211	504.96	626
	Mannarkkad	9	149	2	51	20	188	18	73	9	308	127	954	2734.05	3387
9	Ottapalam	6	75	2	33	14	132	11	33	5	221	81	613	1768.39	2191
10	Ottapalam (M)	3	89	3	21	10	89	8	36	12	156	56	483	1190.43	1475
11	Shornur (M)	4	58	4	26	9	92	9	39	8	164	62	475	1352.78	1676
12	Pattambi	9	127	2	51	17	197	21	73	9	342	127	975	2875.01	3562
13	Sreekrishnapuram	11	98	3	32	12	124	10	52	7	235	84	668	1749.73	2168
14	Thrithala	9	82	4	29	15	134	12	49	5	217	81	637	1702.71	2109
	Ottapalam	42	529	18	192	77	768	71	282	46	1335	491	3851	10639.05	13180
15	Palakkad	23	135	5	48	21	185	16	76	19	341	126	995	2697.03	3341
16	Palkakkad (M)	12	147	6	60	26	245	21	85	23	393	143	1161	2940.14	3642
17	Malampuzha	14	156	11	65	39	214	17	103	10	421	161	1211	3532.48	4376
	Palakkad	49	438	22	173	86	644	54	264	52	1155	430	3367	9169.65	11359
	District Total	136	1636	62	608	273	2316	232	945	153	4177	1576	12114	34357.14	42562

ANNEXURE 2

Block wise sector wise details of MSME units started in Palakkad district in 2010-11

	Block	Paper & Paper Products	Food processing	Rubber based	Plastic based	Forest based	Textile based	Chemical based	Engg based	IT based	Miscellaneous	Service	Total	Investment	Employment
1	Alathur	7	10	1	1	11	22	2	4		19	20	97	561.95	602
2	Kuzhalmannam	2	2				5	2	10	1	12	11	45	312.20	213
	Alathur	9	12	1	1	11	27	4	14	1	31	31	142	874.15	815
3	Chittur		5	2		3	8		9	2	15	13	57	374.63	281
4	Chittur Thatha (M)		6	2			9				8	7	32	208.13	154
5	Kollengode		7	6			18		6	1	17	18	73	499.51	425
6	Nenmara		8			2	7		5	0	14	12	48	346.88	147
	Chittur	0	26	10	0	5	42	0	20	3	54	50	210	1429.16	1007
7	Mannarkkad	6	2	6		2	3		11	1	13	12	56	326.07	268
8	Attappady	3	1	2			1		2		8	7	24	194.25	120
	Mannarkkad	9	3	8	0	2	4	0	13	1	21	19	80	520.33	388
9	Ottapalam		3				6		9		13	12	43	360.76	238
10	Ottapalam (M)		6				6		1	2	8	7	30	215.07	158
11	Shornur (M)		7							10	7	6	30	173.44	136
12	Pattambi		4				3		5	2	13	9	36	333.01	109
13	Sreekrishnapuram		4				3	2	11	2	13	12	47	424.01	225
14	Thrithala		4						14		13	8	39	333.01	172
	Ottapalam	0	28	0	0	0	18	2	40	16	67	54	225	1839.30	1038
15	Palakkad		10	1	1		14		4	3	20	18	71	520.33	382
16	Palkakkad (M)		12	5	1		6		23	1	22	20	90	561.95	356
17	Malampuzha		5	2	3		7		35	1	31	28	112	797.83	596
	Palakkad	0	27	8	5	0	27	0	62	5	73	66	273	1880.11	1334
	District Total	18	96	27	6	18	118	6	149	26	246	220	930	6543.04	4582

ANNEXURE 3

Block wise sector wise details of MSME units started in Palakkad district in 2011-12

	Block	Paper & Paper Products	Food processing	Rubber based	Plastic based	Forest based	Textile based	Chemical based	Engg based	IT based	Miscellaneous	Service	Total	Investment	Employment
1	Alathur	3	25			4	13	8	21	2	37	32	145	1627.24	655
2	Kuzhalmannam	2	2	1		2	2	4	5	2	9	7	36	369.83	149
	Alathur	5	27	1	0	6	15	12	26	4	46	39	181	1997.07	804
3	Chittur	1	2		1		9	2	23		16	9	63	456.12	184
4	Chittur Thatha (M)	1	5	1			13		1	3	11	9	44	443.79	179
5	Kollengode		6	1			8		9		27	18	69	924.57	372
6	Nenmara		6				12		7	1	18	16	60	825.95	333
	Chittur	2	19	2	1	0	42	2	40	4	72	52	236	2650.44	1068
7	Mannarkkad		4	2			2		16		17	15	56	739.66	298
8	Attappady	1	2						7		7	6	23	308.19	124
	Mannarkkad	1	6	2	0	0	2	0	23	0	24	21	79	1047.85	422
9	Ottapalam	3	5				2		9	1	16	13	49	665.69	268
10	Ottapalam (M)	2	3		1		5		3	2	11	16	43	468.45	189
11	Shornur (M)	2	2						2		6	5	17	271.21	109
12	Pattambi		2				2		9		11	12	36	591.73	238
13	Sreekrishnapuram		7				2		12	1	19	15	56	685.64	313
14	Thrithala		3						6		7	7	23	369.83	149
	Ottapalam	7	22	0	1	0	11	0	41	4	70	68	224	3052.54	1266
15	Palakkad	1	10	1	1		2		20		21	19	75	961.55	387
16	Palkakkad (M)	5	8	4			10		12	2	27	22	90	1109.48	447
17	Malampuzha		4	5	1		3		46		38	31	128	1577.93	636
	Palakkad	6	22	10	2	0	15	0	78	2	86	72	293	3648.97	1470
	District Total	21	96	15	4	6	85	14	208	14	298	252	1013	12396.87	5030

ANNEXURE 4

Block wise sector wise details of MSME units started in Palakkad district in 2012-13

	Block	paper & paper products	Food processing	Rubber based	Plastic based	Forest based	Textile based	Chemical based	Engg based	IT based	Miscellaneous	Service	Total	Investment	Employment
1	Alathur	4	14	2	1	5	15	2	26	1	29	32	131	1024	523
2	Kuzhalmannam	2	3	1	0	3	10	1	10	1	17	18	66	586	300
	Alathur	6	17	3	1	8	25	3	36	2	46	50	197	1611	823
3	Chittur	3	15	1	2	3	10	3	20	4	28	31	120	977	499
4	Chittur Thatha (M)	1	4	0	0	0	4	0	2	2	13	14	40	446	228
5	Kollengode	2	17	0	1	2	10	2	19	3	26	29	111	923	471
6	Nenmara	2	13	0	1	2	8	2	14	3	23	25	93	813	415
	Chittur	8	49	1	4	7	32	7	55	12	90	99	364	3159	1614
7	Mannarkkad	4	15	2	0	7	3		26		22	25	104	782	400
8	Attappady	1	7	0	0	2	1		4		10	11	36	336	172
	Mannarkkad	5	22	2	0	9	4	0	30	0	32	36	140	1118	571
9	Ottapalam	2	6	2	2	19	5		22	1	19	21	99	657	336
10	Ottapalam (M)	1	5	0	0	3	4		11	1	13	16	54	477	244
11	Shornur (M)	1	8	0	0	5	4		15	1	12	15	61	469	240
12	Pattambi	3	9	3	2	20	6	1	29	2	20	23	118	704	360
13	Sreekrishnapuram	2	11	2	1	19	5	0	27		19	21	107	672	344
14	Thrithala	1	13	3	2	16	6	0	23		17	20	101	625	320
	Ottapalam	10	52	10	7	82	30	1	127	5	100	116	540	3604	1842
15	Palakkad	3	23	2	0	9	8		26	1	25	30	127	977	499
16	Palkakkad (M)	2	18	1	0	0	13		11	4	28	31	108	985	503
17	Malampuzha	0	7	0	0	0	10		42	2	30	33	124	1055	539
	Palakkad	5	48	3	0	9	31	0	79	7	83	94	359	3018	1542
	District Total	34	188	19	12	115	122	11	327	26	351	395	1600	12509	6392

ANNEXURE 5

Block wise sector wise details of MSME units started in Palakkad district in 2013-14

	Block	Paper & Paper Products	Food processing	Rubber based	Plastic based	Forest based	Textile based	Chemical based	Engg based	IT based	Miscellaneous	Service	Total	Investment	Employment
1	Alathur	6	18	2	1	9	25	2	42	1	17	62	185	1034.17	590
2	Kuzhalmannam	2	12	1	0	4	4	1	16		29	7	76	997.18	377
	Alathur	8	30	3	1	13	29	3	58	1	46	69	261	2031.35	967
3	Chittur	2	15	0	1	27	16	1	13	1	33	35	144	2856.17	582
4	Chittur Thatha (M)	0	3	0		2	7		0	1	29	28	70	289.80	199
5	Kollengode	1	1	0	0	3	4	1	7	1	58	19	95	2074.86	475
6	Nenmara	1	12	1	1	4	5		17	1	47	38	127	533.71	355
	Chittur	4	31	1	2	36	32	2	37	4	167	120	436	5754.54	1611
7	Mannarkkad	0	19	1		2	6		16		29	41	114	293.85	258
8	Attappady	0	4			1	9		4		16	23	57	81.52	91
	Mannarkkad	0	23	1	0	3	15	0	20	0	45	64	171	375.37	349
9	Ottapalam	3	11	1	1	4	6	1	29	1	11	15	83	547.50	287
10	Ottapalam (M)	2	7		0		7		11	3	26	17	73	322.00	258
11	Shornur (M)	3	8	1	1	1	5		6	1	17	19	62	168.34	200
12	Pattambi	2	17	1		6	9	2	33	1	18	14	103	456.63	399
13	Sreekrishnapuram	2	10	1	0	10	3	1	27	1	45	11	111	260.74	341
14	Thrithala	1	17	1	1	17	9	1	20	2	29	10	108	517.21	381
	Ottapalam	13	70	5	3	38	39	5	126	9	146	86	540	2272.42	1866
15	Palakkad	1	29	0	1	10	13		39	1	16	44	154	1192.39	563
16	Palkakkad (M)	8	16	0		0	11		10	2	45	42	134	706.48	550
17	Malampuzha	4	14	5	1	3	12		29	1	47	19	135	3221.97	812
	Palakkad	13	59	5	2	13	36	0	78	4	108	105	423	5120.85	1925
	District Total	38	213	15	8	103	151	10	319	18	512	444	1831	15554.52	6718

ANNEXURE 6

Block wise sector wise details of MSME units started in Palakkad district up to the year 2013-14

	Block	Paper & Paper Products	Food processing	Rubber based	Plastic based	Forest based	Textile based	Chemical based	Engg based	IT based	Miscellaneous	Service	Total	Investment	Employment
1	Alathur	37	190	12	42	54	292	35	185	17	487	287	1638	7353.08	6218
2	Kuzhalmannam	13	114	5	38	26	169	23	104	10	299	141	942	4410.73	3696
	Alathur	50	304	17	80	80	461	58	289	27	786	428	2580	11763.81	9914
3	Chittur	10	115	6	35	47	161	19	117	16	320	169	1015	6435.26	3740
4	Chittur Thatha (M)	3	92	4	14	9	98	12	26	13	185	104	560	2238.21	1813
5	Kollengode	6	119	10	38	21	181	19	92	11	371	179	1047	6573.80	4410
6	Nenmara	9	101	5	35	19	59	14	88	10	269	158	767	4309.21	3467
	Chittur	28	427	25	122	96	499	64	323	50	1145	610	3389	19556.48	13431
7	Mannarkkad	15	143	12	42	27	170	15	130	8	316	195	1073	4370.51	3985
8	Attappady	9	60	3	9	7	43	3	29	2	114	72	351	1425.11	1132
	Mannarkkad	24	203	15	51	34	213	18	159	10	430	267	1424	5795.61	5117
9	Ottapalam	14	100	5	36	37	151	12	102	8	280	142	887	3999.09	3319
10	Ottapalam (M)	8	110	3	22	13	111	8	62	20	214	112	683	2672.86	2323
11	Shornur (M)	10	83	5	27	15	101	9	62	20	206	107	645	2434.87	2361
12	Pattambi	14	159	6	53	43	217	24	149	14	404	185	1268	4960.03	4667
13	Sreekrishnapuram	15	130	6	33	41	137	13	129	11	331	143	989	3792.49	3390
14	Thrithala	11	119	8	32	48	149	13	112	7	283	126	908	3548.22	3131
	Ottapalam	72	701	33	203	197	866	79	616	80	1718	815	5380	21407.57	19192
15	Palakkad	28	207	9	51	40	222	16	165	24	423	237	1422	6348.60	5173
16	Palkakkad (M)	27	201	16	61	26	285	21	141	32	515	258	1583	6303.17	5499
17	Malampuzha	18	186	23	70	42	246	17	255	14	567	272	1710	10185.70	6959
	Palakkad	73	594	48	182	108	753	54	561	70	1505	767	4715	22837.47	17630
	District Total	247	2229	138	638	515	2792	273	1948	237	5584	2887	17488	81360.94	65284



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