INTRODUCTION
CHAPTER 1

INTRODUCTION

The significance of industrialisation in relation to economic growth has got wider attention as India’s industrialisation strategy, ever since the inception of planning in the country. Considering secondary sector, as a significant contributor to the national exchequer, extensive polemics have been taken place on the nature of the industrialisation strategy to be adopted for the Indian economy since independence. This is reflected in the framing up of industrial policy through various five-year plan policy resolutions. The government since the commencement of the planning and particularly in the second five year plans onwards has made stupendous efforts to industrialise the country. It is difficult to assess the performance of the industrial sector over the past decades with respect to the broad objectives of industrialisation. However, there are certain areas in which the achievements have been clearly significant.

Economic prosperity of a developing country like India is mainly dependent on the integration of agriculture with industry. After independence, the government recognised the role and importance of rural and agro-based industries in the economic upliftment of the rural people.
Plantation preceded the emergence of the modern factory industry in India. The growth of the urban industrial sector transmits a number of significant dynamic impulses to the agriculture sector. The expansion of industries accompanied by growing urbanisation provides a continuously expanding market for various agricultural products. When the stimulus, in particular, given to the expansion of certain cash crops, it helps in converting a subsistence peasant agriculture into a commercialised one.

As the forerunners of the modern factory industries, the plantations have a prominent place in the industrial development of India.

With the emergence of modern industrial sector in India, large-scale capital intensive and small scale, labour-intensive industries have come to occupy a prominent role in the industrial scenario of the country and rubber based industries occupy a pivotal role in it. This is evident from the fact that rubber-manufacturing sector is the third largest contributor to the national exchequer by way of taxes and duties.

In India, the rubber-based industry made its first appearance in the Bengal Presidency in 1921. Easy availability of natural rubber as a raw material and a vast market potential attracted foreign as well as Indian capital to this industry, which contributed to the rapid economic growth of the country.

Rubber is well known for its unique properties such as flexibility, plasticity, elasticity, adhesiveness, durability and resistance to electricity. Also
rubber is a material that can keep away hold both air and water, and can be made very soft and very tough and hard by special process. Owing to these properties, rubber was found to serve a number of quite different purposes at one and the same time, and this situation resulted in the fast development of a variety of rubber-based industries all over the world.

The most important use of rubber is in transportation. In fact, rubber is indispensable for all forms of modern transportation. The role of rubber is unique in the manufacturing of mechanical goods such as belting, packing, molding goods, hoses etc. which are very essential for running industries. Large quantities of rubber are used in making footwear, proofed fabrics, sheets, flooring mats and mattresses, which are all essential in the comfortable daily living and health of the people. Apart from these, rubber also plays a vital role in communication and transmission in the form of insulation for cables. Its use is also included in homes, farm, sports and games, medical field and above all in defense strategies. Thus the catalogue of use of rubber is endless. In view of the galaxy of uses, rubber has become today one of the world’s most important industrial raw materials used for manufacturing a variety of products useful for every day life. All these considerations emphasise the scope and potentials of rubber-based industries in the economic and social advancement of any country.
1.1. The Background

It is a well-known fact that economic development results from the utilisation of resources, both men and material. The development process is higher, if the rate of utilisation is better, other things remaining the same. When it comes to utilisation of capital, it gains tremendous importance because all the theories of economic development from Marx through Harrod-Dommer to Chenery stress the role of capital accumulation in economic development, and any under-utilisation causes accumulated capital stock retard economic development.

Economic development and welfare of the people are positively related. Basically, economic development is a means to an end, the end being the welfare of the people. In Kerala the people’s plan was introduced with a view to strengthening the positive relationship between economic development and human welfare. The strategy adopted for this is decentralised and localised development. The local resource base of the state economy is to be well exploited to achieve economic growth and welfare of the people.

In the given socio-economic, demographic and geographic conditions of Kerala, rubber-based industry is the best alternative to achieve economic growth with welfare.

Kerala is a small state in a large multi-regional economy. Its remarkable experience in development has received much attention in literature. This is not
due to Kerala’s achievement in economic growth, but interestingly, due to lack of it. The central theme implicit in Kerala’s experience and the so called Kerala model of development is the capability of a society with relatively low income to achieve high quality of living levels.

The critics of Kerala’s experience and ‘Kerala Model’ of development have highlighted the poor performance of the growth of commodity producing sectors like agriculture and industry resulting in the slow-down in the rate of growth in employment and income generation within the state. It also has reduced the rate of growth in government revenue, and thereby investment in government sectors and expenditure of welfare programs. All these have tended to threaten the sustenance of the achievements already made in health, education and other human development spheres and further efforts to improve the quality of life and capability of the people. Thus viewed, there is a development crisis in the state. And a view is gaining ground that the accelerated growth of rubber-based industry is one of the effective ways of resolving the crisis. This is due to the fact that one of the major resources bases for industrialisation in Kerala’s economy is natural rubber.

Kerala State produces almost 92 percent of the natural rubber in the country. But it consumes only around 17.7 percent of the available rubber. The issue of growth of rubber-based industries has drawn considerable attention as a key element in the industrialisation of Kerala state. Empirical evidence shows that the contribution of rubber and rubber-based industries are immense to the
development of an economy. However, the rubber-based industries are not potentially dynamic in Kerala. In this context, there is an urgent need for restructuring the development strategies of the rubber-based industries. The benefit from the industrialisation process had failed to ‘trickle’ down to the rubber-based industries in Kerala. So it is essential to reexamine the role and efficiency of rubber-based industries for the long-term development of the economy.

The rubber-based industries have got importance because,

- it generates immediate employment opportunities with relatively low investment,
- it contributes a large volume of revenue to the exchequer,
- it effectively mobilises untapped capital and human skills,
- it disperses manufacturing activities all over the economy leading to growth of villages, small towns and economically lagging regions, and
- raw material is easily available

1.2. Region of the Study

The study is concentrated on Kerala, a small state on the southwest coast of India, which is unique in many respects among the states of India. Its history and specific nature, particularly its broad-based rural, socio economic structure, make it available to a process of rural industrialisation. The agrarian structure of the society has undergone radical changes in the late sixties due to successful land reforms. It has a diffused settlement pattern
which makes it difficult to distinguish rural from urban. Villages are as large as towns in terms of population, size and density. There is much more even spread of achievement between rural and urban areas, including basic infrastructure in which its unique settlement pattern has played a facilitating role.

Kerala, often described as god’s own country, has very many things to offer–unrivalled scenic beauty, delectable cuisine, and vivid architectural style and there is more–long walls that rejuvenate gallons of fresh air with a faint aroma of spice and saps that infuse life in tired limps.

Kerala is a narrow strip of land along the western cost of India. It lies in the southwest corner of the Indian peninsula between $8^\circ$ and $18^\circ$ and $12^\circ$ 48’ north longitudes and $74^\circ52'$ and $77^\circ22'$ east longitudes. Its boundaries touch the state of Karnataka in the north and Tamil Nadu in the east and southeast, and the Arabian Sea in the west. The state can be broadly classified into three sub-divisions–the high land, mid land and low land. Western ghats along the eastern border of the state forms the high land. The high land is thickly forested. The low land stretches along the coastal plains and the soil in this plain is sandy and clay in nature. Sandwchched between the high land and the low land is the midland the soil of which is laterite in nature. This region is rich in agricultural produces like, paddy, tapioca, rubber, spices etc.
Kerala was created in 1956 by integrating the erstwhile states of Travencore-Cochin and Malabar district and the Kasaragod Taluk in the south Kanara district of erstwhile Madras State.

Kerala accounts for 1.2 percentage of the total area of the country and accommodates 3.8 Percent of its population. Skyrocketing unemployment and slow pace capital formation continue to haunt the economy of the state. Kerala fortifies the fact that proper utilisation of resources as well as adequate infrastructure facilities conduced to an equally important role in the development of the state. Being an agriculture-oriented economy, industrialisation is very backward. The state of Kerala has attained world wide acclaim for its achievements in improving the physical quality of the life of the people, and in the creation of social infrastructure, particularly in health and education systems. While this focus has led to an all round quality of life that is significantly superior to that of other Indian states, industrial growth was not commensurate with the state’s potential. Kerala witnessed the emergence of an organised industrial sector only in the middle of 18th century. It was only in the beginning of the 20th century that an attempt was made to organise industries in the state. During the 1930’s and 1940’s under the initiatives of C.P.Ramaswamy lyer, a number of factories were established in the erstwhile state of Travencore. Interestingly this period is considered as the golden age of industrialisation in the annals of Kerala’s history.
In Kerala, approximately ninety percent of the total available land is used for agricultural production. Therefore, it is impossible to increase agricultural land for increasing agricultural production. It may be reason why it has been characterised by a high incidence of rural industries, given its rich, natural resource base, and the product of which goods could be processed into industrial goods. The second half of the 80's witnessed a rapid growth of the 'modern' small-scale sector in the state located largely on rural areas.

Although Kerala is a small state-region in a large multi-regional economy, its remarkable experience in development received invidiously large space in the literature. But the poor growth performance of commodity producing sectors like agriculture and industry has resulted in the slow down in the rate of growth in employment and income generation within the state. Hence the need for accelerating industrial development in the state of Kerala can never be overemphasised.

1.3. Strengths and Weaknesses of the State

1.3.1. Strengths:

1. Kerala has educated, trained and enriched human resources. The state has the highest literacy rate among all states in the country. People with post-school education constitute a significant proportion of the unemployed youth.
2. Kerala has a wide network of physical infrastructure facilities in air ports, major and minor ports, railways, roads and inland navigation canals, post and telegraph, telephone etc.

3. Keralites, both men and women, working both within and out side Kerala have demonstrated high attitude and skill in their areas of work and adaptability to their environment and high level supervisory ability and managerial competence has been accepted even in foreign countries.

4. The state is the major producer of commercial agricultural crops. Kerala produces 92 percent of India’s rubber, 70 percent of coconuts, 60 percent of tapioca and almost 100 percent of lemon grass oil. It is also the single largest producer of banana and ginger, besides tea and coffee in abundance, over and above plentiful supply of water.

5. Keralite’s high level supervisory ability and managerial competence has been accepted even in foreign countries.

6. Good harbor and container handling facilities, and Kochi port is strategically located for international trade.

7. Kerala’s one continuum where there is no rural/urban devise as the boundaries merge with remarkable ease.

8. Significant and steady inflow of foreign exchange remittance by non-resident Keralaites.

9. Kerala has a strong background of traditional commodity exports.
10. Pollution and dust free atmosphere due to rich and thick forests.

11. Availability through excellent educational and training facilities both for technical and non-technical disciplines.

1.3.2. Weakness:

1. Locational disadvantage being the southernmost state.

2. Acute shortage of capital and lack of traditional entrepreneurial class.

3. Total dependence by hydel power ever increasing power shortage and in the power sector, there is not only enforced power cuts and load shedding but also high transmission and distribution losses.

4. Educational youth in Kerala prefer immediate employment in taking up entrepreneurship as a vocation.

5. Relatively higher wage rate introduces the risk that products manufactured in Kerala may not be competitive against those produced elsewhere.

6. The density of population is high, and, therefore large areas are not available for industrial use for fear of pollution.

7. Lack of many large industries, which could spawn smaller units.

8. Enlightened but unrealistic trade unionism resulting in labour disputes.

9. Unfavourable image and 'investor's phobia' about 'Kerala labour' and consequent reluctance on the part of outsiders to invest in the state.
1.4. The Research Question Addressed

- What is the relationship of rubber and rubber-based industries in India and Kerala?
- What is the actual capacity utilisation in rubber-based industries in Kerala?
- What is the productivity of rubber-based industries in Kerala?
- What are the functional problems affected by the rubber-based industries in Kerala?
- Do the corrective measures help in improving the productive capacity of the rubber-based industrial units?

1.5. Purpose and Scope of the Study

It is generally accepted that the rubber-based industries have an important role to play in the economic growth of the country. The subject focused on the rubber-based industries in Kerala. This is further reiterated through the survey of literature. In spite of the fact that the rubber-based industry has a long history of development and its importance in national economy is steadily growing, there is very little literature available and mostly Government reports and more often than not studies by administrators involved in formation of policies for its implementation, and this is likely to lack objectivity and impartial assessment of the role of rubber-based industries in the state. In view of the fact that the rubber-based industries have come to
occupy a pivotal role in the economic development of the state, the study may be meaningful and purposive.

Some attempts have been made in the past to study the rubber sector. Most of them based on the plantation sector, and others based on rubber-based industries are outdated. It may be necessary and desirable to study about rubber-based industries in the global scenario and conduct a survey on selected industries and evaluate the capacity utilisation, productivity, and general problems in the surveyed units. The present study is a modest attempt in this direction. The distinctive features of the present study are:

- a study of the rubber-based industries in Kerala and aggregate level is attempted.

- a comparative study of productivity trends in rubber-based industries in Kerala Tamil Nadu, Karnataka and aggregate level is attempted.

- a study on capacity utilisation of rubber-based industries in Kerala Tamil Nadu Karnataka and aggregate level is attempted and efforts are applied to identify the problem of capacity utilisation and other general problems of rubber-based industrial units in Kerala through personal survey.
1.6. Significance

One of the significant aspects of industrial development of the Kerala economy is the development of rubber-based industries. The striking feature of this is that, this sector augmented economic activity of a far-reaching magnitude and created a sense of confidence among large number of entrepreneurs about their strength and vitality. Because of its shorter gestation period, its adaptability to semi-urban and rural environment with infrastructure not so developed, and its capacity to attract small savings and direct them into productive channels, the rubber-based industries have been recognised. Apart from economic aspects, the social value of rubber-based sector justifies the role given to it in attaining the major objectives of generating large employment opportunities at comparatively low investment, removal of poverty and attainment of self-reliance, reduction in disparities in income, wealth and consumption standard and regional imbalance that the economy has set out to accomplish.

Kerala is the largest producer of natural rubber in India. Almost 92 percent of the total production of natural rubber is accounted by Kerala. The rubber-based industries in Kerala are comparatively of recent origin. The first rubber-based unit in Kerala was established in 1935. Since then more than 854 registered rubber manufacturing units were established in the state. Kerala with its industrial backwardness and mounting unemployment rate hopes to solve to some extent its problems of unemployment and poverty through the
industrial development of the state. Rubber-based industries have a vital role to play for industrial development of Kerala state. Therefore it is important to study about the growth and developmental problem of a new industry, the rubber industry, in the state of Kerala. Almost all the previous studies were concentrated on the rubber plantations sector in the state. Thus the present study attempts to analyse development, capacity utilisation, productivity and problems and prospects of rubber-based industries in Kerala.

1.7. Objectives

While the scope indicates the general nature of the study and determines the area of research, there is a need to demarcate specific objectives of the study. The object of the study is to examine various aspects of rubber-based industries in Kerala. The problems divided into two parts. The first part analyses with the help of secondary data the period covered between 1982 and 1997 (16 years), and the second part analyses with the help of a vast personal survey in the rubber-based industries in Kerala.

The broad objective of the study is to assess the economics of rubber-based industries in Kerala. It is further divided into the following:

1. To study the development of rubber-based industries in Kerala and India.

2. To attempt a competitive study of rubber-based Industries in Kerala and the aggregate level.
3. To analyse the capacity utilisation of rubber-based Industries in Kerala, Tamil Nadu, Karnataka and aggregate level.

4. To analyse the productivity of rubber-based industries in Kerala, Tamil Nadu, Karnataka and aggregate level.

5. To find out the capacity utilisation of the individual rubber manufacturing units in Kerala, and identify the functional problems of rubber-based industrial units.

1.8. Hypothesis

The following hypotheses have been tested:

- High growth of natural rubber production and the development of rubber-based industries are positively related.

- Productivity of rubber-based industries in Kerala is low.

- Capacity utilisation of rubber-based industries in Kerala is very low.

1.9. Methodology

Research methodology has an important role in any economic investigation. Unless the methodology is correct the analysis and conclusions may not be scientific. Biased exclusion has no utility for framing definite policies and programs. Thus research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically.
The present study pertaining to the economics of rubber-based industries in Kerala is based on certain objectives, the scope of the study has been delimited and technique of investigation to be adopted, tools to be used and the pattern of statistical analysis to be followed have been determined.

The data have been collected from two sources:

- Primary
- Secondary

The collection and determination of secondary data have been from different published and unpublished records, supplementing them with primary information collected through field survey. Besides the structured interviews, collection of information through discussion with industrialists, officials, etc. and correspondence was also attempted.

The data so collected were analysed with the help of computers. Keeping in view the objectives of the study, appropriate mathematical and statistical tools like Wharton Index, Value Added Single Deflation Method (VASD), Analysis of Variance (ANOVA) etc. were used for the purpose of the analysis.
1.10. Concepts

Capital: Here, the term capital has two connotations depending upon its usage. When capital intensity of technique is being measured, the term refers to gross value of plant and machinery. In all other cases the term refers to overall productive capital i.e., total of fixed and working capital.

Fixed capital: Represents the depreciated value of fixed assets owned by the factor as on the closing day of the accounting year. Fixed assets are those, which have a normal productive life of more than one year. It covers all types of assets, new production, transportation, living-recreational facilities, schools etc. for factory personnel.

Working capital: It is defined as the amount of funds, which a company must have to finance its day-to-day operations. It can also be regarded as that proportion of the company’s total capital, which is employed in current assets, which are short-term assets that are normally expected to get converted into cash within a year. It comprises stock of materials, stores, fuels, semi-finished goods, and cash in hand and at the bank, net balance of amount receivable over amount payable as at the end of the accounting year.

Employment: It refers to all the employees in number. It relates to all persons engaged by the factory in work connected directly with the manufacturing process. It includes all the administrative staff and labour engaged in the production process.
**Labour:** Labour is the number of man-days worked by the factory during the accounting period. This is obtained by summing up the number of persons of all categories attending in each shift over all the shifts worked on all days.

**Output:** It comprises all the manufacturing cost of the factory. It includes costs of materials and fuel consumed, office supplies, stationery, technical magazines, periodicals, etc.

**Input:** It is the value added by manufacturer and provides a measure of the contribution made by labour and capital in producing the output of an activity. It is obtained by deducting the inputs and depreciation from the total value of output.

**Production:** The total ex-factory value of products / byproducts manufactured / assembled and / or services sold like job work, repairing and servicing by the unit are taken as production.

**Capacity:** It is the maximum level of production of the items that can be attained in a year on single shift basis (or two/three shift basis of continuous process depending on the technologies involved) with the available machinery and equipment and/or labor.

**Capacity Utilisation:** The part of capacity, which is utilised by the unit during the year of production, utilisation, expressed in terms of percentage.
**Productivity:** The term productivity is the ratio between the production of a given commodity measured by volume and one or more of the corresponding input factors also measured by volume.

1.11. Need for the Survey

1. To know the capacity utilisation of individual rubber-based industries in Kerala.

2. To request entrepreneurs for useful database.

3. To know the general problems faced by the rubber-based industries in Kerala.

4. To receive valuable suggestions from the entrepreneurs for finalising the study.

1.12. Coverage of the Study

The area covered for the study is the rubber-manufacturing sector in Kerala State.

For analysing the problem of capacity utilisation and other general functional problems the study need selected survey. In order to find out the problems, the survey undertook the industrial units located in the 14 districts of Kerala state. The units are selected by using stratified random sampling method.
1.13. Layout of the Study

The study has been organised into seven chapters in all.

Chapter I (the present chapter) introduces the problem. It represents the statement of the problem, the need for the study and the objectives, the hypotheses and the methodology adopted.

In the 2nd chapter, a brief review of the existing literature in the field is presented. This section is organised into four areas. The first part of this chapter reviews the literature on studies on rubber and rubber-based industries, the second part reviews the available literature on capacity utilisation. The third part reviews literature on productivity and the Fourth part reviews the literature on small-scale industries.

The 3rd chapter attempts an overview of the evolution, importance and growth of rubber-based industries in general and specifically in Kerala.

The 4th chapter is devoted to measure the capacity utilisation of rubber-based industries in Kerala, and made comparative study with Tamil Nadu, Karnataka and national level.

The 5th chapter is an attempt to analyse the capacity utilisation and general problems of rubber-based industries in Kerala through a vast survey of these industries Kerala.
The 6th chapter attempts to measure the productivity of rubber-based industries in Kerala and made comparative study with Tamil Nadu, Karnataka and national level.

The 7th chapter is devoted to present a summary of the findings in the foregoing chapters, conclusions arrived at and suggestions based on the findings and conclusion of the study.

1.14. Limitations

The study facilitates understanding the productive performance of rubber-based industries in Kerala. However, there are some limitations, which need to be taken into account in interpreting results as well as in carrying out further studies.

- The survey is inadequate for the assessment of industrial performance of rubber-based industries in Kerala. Since the study was forced to consider 64 percent of the firms only, i.e., 'moribund' (firms existing in the earlier period that subsequently withered during the period studied) firms were left out of the analysis. This may underestimate the performance of rubber-based industries in Kerala.

- Correctness and accuracy of data from survey suffer from doubts, as the owner-manager has not maintained records properly and systematically in many cases. In the absence of such written records, the information supplied by the proprietors has been mostly from their memory. The
general tendencies among the proprietors have been to deflate production figures and inflate the cost of items. All attempts, however, have been made to extract the correct information through informal discussion with them. In a few cases, the entrepreneurs took a negative approach in their response to the interview schedule.

- The study considers only a selected periods of 1982-83 to 1997-98. This is because, the Annual Survey of Industries (ASI) classification codes for rubber-based industries up to 1997–98, were 310, 311 and 312. But after 1997-98, all the three groups are clubbed together and the classification code has been changed into 251. Owing to this reason, it is not possible to get a time series data for the entire period. If we include the ASI classified code of 251 for the analysis, the result going to be in the wrong direction, and so the analysis is limited up to 1997-98.