CHAPTER-1

INTRODUCTION

1.1 Introduction

Natural Rubber (NR) belongs to *Hevea family*. It is a tough but an elastic material and constitutes the basic raw material for a variety of products such as tyres and tubes, footwears, belts and hoses, battery boxes, latex foam etc. Though different sources of rubber were found in North America and Mexico, the most popular and presently cultivated source of rubber *hevea brasiliensis tree* was found in 1751 by Charles de la Condamins in the Amazon forests. In order to procure rubber seeds, Sir Henry Wickham, conducted an expedition to the Amazon valley in 1876 with the financial support of India Office, London\(^1\). The rubber seeds so collected were brought to Kew Gardens, London, from where seedlings were sent to Sri Lanka, Malaysia and India. Now rubber is cultivated in India, Thailand, Malaysia, Indonesia, China, and Sri Lanka.

The first commercial plantation of rubber in India was started by *European* planters in 1902 at Thattekad near Alwaye in the erstwhile princely state of *Travancore*\(^2\). The plantation was popularly known as *periyar*

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\(^1\) Burger et.al, (1995), p.95

syndicate. In 1904, three plantations namely yendayar, elodorado and mundakayam estates were formed in the Central Travancore. In 1905, two Europeans, K.E. Nicoll and E.G. Windle planted over 1100 acres of land at Palappilly and Pudukad near Trichur. Some enterprising native planters took the initiative to plant rubber in Goa by 1906 but the initiative was not so progressive in later years. By this time two agencies, United Planters Association of South India (UPASI) and Malayala Manorama came forward to give emphasis for planting rubber.

As a result of the joint efforts of these two agencies, local farmers also began to cultivate rubber by 1910. The first local joint stock company to plant rubber was started in 1910 under the name Malankara Rubber Produce Co. Ltd. Two more Companies, Travancore Rubber and Produce Company and Malayalam Rubber and Produce Company also started operations in 1910. By 1910, Mundakayam had become the leading centre of rubber plantations in India with an area of about 10000 hectares which constitute about 50% of the then existing rubber cultivated area in India. In 1911, another local company, Vaniampura Rubber Company came into existence for planting rubber.

It is to be noted that the rubber plantations in India were concentrated in Kerala and the State can now claim near monopoly in the production of natural rubber by producing 93% of its total production in India and the remaining 7% from states like TamilNadu, Karnataka, Tripura, Assam, Nagaland etc. There is an inseparable relationship between rubber plantation sector and rubber manufacturing industry in India. For the high growth rate of Indian rubber manufacturing industry, it is highly indebted to the plantation sector as the latter provides adequate raw material at an affordable price to manufacturers.

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4 40 kms., to the east of Kottayam town in Kerala State
India realised the strategic importance of natural rubber even before independence and hence it was brought under Rubber Control and Production Order in 1942.

In the new millennium, the Indian economy is changing very fast as a result of economic liberalisation and globalisation policies initiated from 1991-92 onwards. Natural rubber is also subjected to various reforms under the new policies of structural adjustment programmes. The different types of protections given to natural rubber were removed one by one. The impact of liberalisation is visible on all fronts of Indian rubber market from production to consumption. The captive market of natural rubber was scrapped and open market came into existence. Consequently, a number of unprecedented problems have come up in the Indian rubber market. In the era of globalisation and liberalisation, possibilities of increased trade in the global rubber market are widened. Globalisation being a reality, Indian rubber marketing scenario should be subjected to a thorough analysis for its re-orientation and re-structuring, wherever it is necessary, to face its challenges.

Accordingly, the present study is aimed at evaluating the impact of economic liberalisation on the natural rubber marketing in India, so that a long term rubber marketing policy can be formulated to exploit the new vistas and avenues opened all over the world through the globalisation process.

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5 The government headed by shri P.V. Narasingha Rao at the centre in 1991 initiated the new economic reforms with the help of his Finance Minister, Dr. Manmohan Singh, due to the following reasons.
   a) Domestic inflation reached an unprecedented peak level of 17% in 1991.
   b) Foreign exchange reserves shrinked to 1.2 billion dollars, barely sufficient to pay for two weeks import.
   c) Fiscal deficit touched the all time high of 8.4% of GDP and
   d) The current account deficit widened to almost 8 billion dollars.
   The new economic reforms includes two programmes such as: i) a stabilisation programme in the short run and  ii) a structural adjustment programme in the medium term.

6 Important problems affecting the Indian rubber market are reduction of import duty on NR and SR, Removal of QRS, Low Bound Rate of 25% for rubber under WTO Agreement, stoppage of Buffer Stock by the STC etc. Other problems are mentioned in the Statement of Problem section.
1.2 Statement of the Problem

Natural rubber is an important perennial crop in India. The country bagged third position in the world in production of NR next to Thailand and Indonesia. The total production in 1999-2000 was 622265 tons and the area under rubber cultivation was 558584 hectares in the same year. The consumption of NR was increased from 28445 tons in 1955-56 to 591545 tons in 1998-99 and again to 628110 tons in 1999-2000. It is estimated that more than five million people are depending on NR sector for their existence as growers, processors, dealers and workers along with their families. The country is saving over Rs.2000 crores annually in foreign exchange through production of about six lakhs tons of NR, a very vital strategic raw material needed for the industrial progress.

The Indian rubber sector has witnessed a number of changes since 1991-92 as a result of liberalisation and globalisation measures introduced. Some of the new developments occurred during 1991-2001 are as follows.

1) Government decision to stop the buffer stock of rubber through the STC in 1991-92.

2) Allowing manufacturers to import rubber under Advance Licence Scheme till February 1999.

3) Permission to import new and used tyres.

4) Permission to import polyurethane.

NR is an elastomeric substance obtained from natural rubber latex provided by Hevea Brasiliensis Tree having the properties such as tensile strength and extensibility, high elasticity and low hysteresis in the important low strain region of the stress, good creep quality, good resistance to tearing, flexing and abrasion and seriously affected by the swelling action of a number of liquids such as petrol, benzene and lubricating oil.

(Theory and Practice of Engineering with Rubber-P.K.Freakley and A.R.Payne, p.9)

IRSG,(2000b)
Rubber Board,(2000)
Ibid
5) Uncontrolled production, import and consumption of synthetic rubber.

6) Reduction in import duty.

7) High import of rubber products.

8) Replacement of Value Based Advance Licence Scheme (VBALS) with Quantity Based Advance Licence Scheme (QBALS).

9) Drastic change in the government policy towards the natural rubber price.

10) Curtailment of subsidy to rubber growers.


12) Low Bound Rate of 25% for rubber as per the WTO Agreement.


14) Transfer the position of natural rubber from the Restricted List to Open General Licence list since 1st April 2001.

15) Position of NR under WTO Agreement

16) Unabated import of NR even after the cancellation of Advance Licence Scheme in February 1999.

As a result of these developments, the Indian rubber market is facing a number of problems. Some of them are specified below.

Price of NR had been increasing continuously with minor fluctuations till 1995. After that the price began to fluctuate widely. On 28th September 1998, the Union Government fixed the Bench Mark price for NR at Rs.34.05 a kilogram. But from October 1997 onwards the Indian rubber market failed to give a remunerative price, even the Bench Mark price to cultivators. The price realised since 1997 onwards was not sufficient to cover the cost of production.
Table 1.1 shows the average price of rubber and cost of production incurred by both small and estate holders for the period 1996 to 1999.

Table 1.1: Average Price and Cost of Production (Rs./Kg.)

<table>
<thead>
<tr>
<th>Year</th>
<th>Average Price of RSS4 Rubber</th>
<th>Cost of Production of Small Holders</th>
<th>Cost of Production of Estate Holders</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>51.22</td>
<td>34.05</td>
<td>40.00</td>
</tr>
<tr>
<td>1997</td>
<td>40.91</td>
<td>38.02</td>
<td>39.00</td>
</tr>
<tr>
<td>1999</td>
<td>29.44</td>
<td>40.06</td>
<td>41.03</td>
</tr>
<tr>
<td>2000</td>
<td>30.99</td>
<td>42.50</td>
<td>45.00</td>
</tr>
</tbody>
</table>


From the table, it is clear that the cost of production is increasing whereas the price is decreasing and the cultivators are not able to meet the cost of production from the price realised. It is again noticed that the purchasing power of rubber growers has been eroded considerably due to the prolonged low price. Table 1.2 shows the fluctuations in the price of rubber in relation to a few selected items such as tea, sugar, soap, diesel and cement from 1970 to 2000.

Table 1.2: Rubber Price and Prices of a few Selected Items

<table>
<thead>
<tr>
<th>Year</th>
<th>Rubber</th>
<th>Tea</th>
<th>Sugar</th>
<th>Soap</th>
<th>Cement</th>
<th>Diesel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rs./kg</td>
<td>Index</td>
<td>Rs./kg</td>
<td>Index</td>
<td>Rs./piece</td>
<td>Index</td>
</tr>
<tr>
<td>1970</td>
<td>4.70</td>
<td>100</td>
<td>7</td>
<td>100</td>
<td>0.70</td>
<td>100</td>
</tr>
<tr>
<td>1990</td>
<td>21.06</td>
<td>446</td>
<td>69</td>
<td>985</td>
<td>11</td>
<td>733</td>
</tr>
<tr>
<td>2000</td>
<td>28.00</td>
<td>595</td>
<td>126</td>
<td>1800</td>
<td>16</td>
<td>1067</td>
</tr>
</tbody>
</table>

Source: Rubber Mithram (2000)

From the table it can be noted that the price of rubber had increased not in the same proportion in which the price of certain selected items increased during the given period. It caused high depletion in the purchasing power of rubber cultivators in India.
The rubber cultivators are not interested in the timely caring of rubber trees because of the continuing low price. They are also hesitating to replant and new planting of rubber trees and turning to other ventures. This had its reflection in rubber production; the growth rate declined from 6.3% in 1997-98 to 3.6% in 1998-99. When the government fixed Minimum Support Price (MSP) for RSS 4 grade as Rs.32.09 a kilogram, the marketing problems of the growers only aggravated. The announcement failed to increase the market price even equal to the MSP. Therefore, dealers hesitate to purchase the rubber at the minimum price and they degraded the produce of growers into different names such as ‘off grade’, ‘milling grade’ etc., which are not approved by the Rubber Board. Growers are realising only two to seven rupees less than the MSP even for their higher grade of natural rubber.

As per the WTO norms, natural rubber is not an agricultural commodity but only an industrial raw material. Therefore, the following privileges of WTO Agreement on Agriculture (AOA) are not available to natural rubber.

a) The Green Box Domestic Support are exempted from the calculation of Aggregate measures of Support (AMS).

b) Special Safeguard Measures (SSM).

c) Concessional Tariff Reduction Commitment.

d) Protection of high bound rate fixed for agricultural products.

e) Protection of high basic import duty fixed for agricultural products.

f) Imposition of quality standards for agricultural products. Necessity to comply with the conditions of weights and measures (Packaged Commodity) Order 1977 for packaged agricultural commodity.

\[12\] In 1996, 23050 meters of budwood have been sold for new planting and re-planting of rubber trees. But it was reduced to a nominal quantity of 1754 meters in 1998. Likewise 5,27290 numbers of green budded stumps were sold in 1995 but it was only 248,238 numbers in 1998. It shows the planter’s dissents in the planting and replanting of rubber. (Rubber Board,(1999), P.74)
With the removal of QRS from April 2001, in compliance with the WTO regulations, import of natural rubber has been made free. Thus its position was transferred from Restricted List to Open General Licence (OGL) List. It is very important to note that this is the first time in the history of rubber in India its position being placed in the OGL List.

Natural rubber market in India is characterised by the following features.

a) About 85% of the NR production is contributed by small and marginal cultivators. There are nine lakh rubber cultivators, totally unorganised and unable to influence the supply side of NR by regulating their production. Estate sector contributes only 15% having no significant influence in the Indian rubber market\(^ {13}\).

b) About 65% of NR consumption belongs to a few big rubber manufacturers. They are highly organised and economically and politically powerful. Therefore, they are able to exert considerable influence on the demand side of NR in India\(^ {14}\).

c) In India, NR is produced in southern states especially in Kerala but it is consumed all over the country. It necessitates the connecting link between producers and consumers through rubber dealers and agents. The presence and influence of a few big dealers in the Indian rubber market cannot be overlooked. They are able to control the supply side of NR by adopting their profit-making strategies\(^ {15}\).

\(^{13}\) Out of the total production of 506910 tons of NR in 1995-96, 436500 tons were contributed by small and marginal holdings and 70410 tons by estate holders. In 1999-2000 too, 544600 tons were contributed by small and marginal holders and 77665 tons by estate holders out of the total production of 622265 tons. (Rubber Board, 2000, p.16)

\(^{14}\) In 1996-97, out of 5588 rubber goods manufacturers, 49 manufacturers consumed 355862 tons of NR out of 561765 tons of total natural rubber consumption. It implies 0.88% of rubber goods manufacturers consumed about 65% of total rubber consumption. It is observed that the same proportions were repeated in 1997-98, 1998-99, 1999-00. (Rubber Board, 2000, p.51)

\(^{15}\) Rubber dealers who purchase rubber more than 1000 tons per annum were 208, out of the total number of 8295 in 1994-95 and it was only 226, out of 10117 in 1996-97. (Rubber Board, 2000, p.68)
d) Indian rubber market has been influenced by the pressure tactics of two different pressure groups of producers and manufacturers to protect their own interests.\(^{16}\)

e) The Indian rubber market has no mechanism to dispose off the accumulated stock of rubber especially during peak production periods. But when the market feels scarcity of rubber, it will be rectified through import within no time.\(^{17}\)

So following are the problems of the Indian Rubber Market during the post-liberalisation period which are analysed in the study.

i. There is high import of natural and synthetic rubber products in the post-liberalisation period.

ii. Prolonged unremunerative price of NR not even to meet its cost of production.

iii. Domestic rubber market is facing the problems of international competition.

iv. Heavy import of synthetic rubber.

The Indian rubber market possesses sufficient potentialities to withstand the onslaught of globalisation and liberalisation. But these potentialities are to be exploited cautiously, properly and timely. New marketing strategies are to

\(^{15}\) Import of NR even when the domestic production exceeds domestic consumption and the delay in declaring minimum price though the Court ordered to that effect are considered as the outcome of the pressure tactics of rubber goods manufacturers. Whereas cancellation of import under Advance License Scheme is considered as the success of rubber growers.

\(^{17}\) Though import under Advance Licence Scheme was banned in Feb.1999 by the Government 16436 tons of NR in 1999-00 and 4535 tons during April to August 2000, were imported in India. There is an excess supply of 31950,5832,42665 and 38073 tons of NR during 1995-96,1996-97,1997-98 and 1998-99 respectively. No meaningful intervention was being taken in the rubber market either by Govt. or by any Govt. sponsored agency to dispose off these accumulated stock.
be designed in such a way that the challenges of globalisation can be effectively contained to sustain the rubber market for the benefit of growers, dealers, manufacturers, labourers and customers who are directly and indirectly connected with the natural rubber sector in India.

1.3 Review of Literature

A number of studies related to NR price, marketing, liberalisation etc., have been noticed. Some of them are summarised below.

Bauer (1948) narrated a well accounted description on the earlier growth of rubber industry by analysing distribution of area under rubber cultivation, nature and character of plantation labour, establishment of International Rubber Regulations and prospects of the world rubber industry.

Schidrowitz and Dawson (1954) conducted a study on the history of the world rubber industry. They narrated the origin of the industry together with scientific and technological development in the rubber goods manufacturing industry.

The tariff board (Dey, 1951) and its successor tariff commission (Bhat, 1953) had made a number of studies in connection with the cost of production, protection and assistance to the rubber industry with a view to fixing the prices of natural rubber.

Stiefel (1975) in an analysis on the efficiency of the rubber marketing system in Thailand, was of the opinion that government should take steps to increase the producers’ bargaining power, encourage standardization of product, quality improvement and to augment transportation facilities to make competition more workable.

Bhattacharya (1976) evaluated the success of the new subsidy scheme for rubber plantations proposed by the Rubber Board in 1957. Historical development of rubber plantations in Kerala and the nature and rationale of the
scheme are also included in his study. He is of the opinion that the subsidy rate is low, notified rate prices are not realised and the impact of the scheme is different for the small and estate holdings. He concluded that an alternative subsidy scheme for the small holdings is necessary.

Dowling (1977) had made an analysis on the supply response of rubber in Thailand. He concluded that the long run response was fairly elastic and the short term response was comparatively inelastic.

Jose (1979) in his study on the economics of rubber plantation industry in Kerala was of the opinion that a planned strategy must be formulated for the development of the rubber plantation. He concluded that the stability in the NR price must be ensured by fixing a statutory minimum price.

Kanbur and Morris (1980) have analysed the short term fluctuations in the NR price of the important rubber markets of the world, with a view to measure the cycles of NR price. The study revealed the existence of price cycles of thirty months duration.

Elsamrna (1981) in her study on the economics of rubber cultivation by small holders in Kottayam district, estimated the cost of production of Rs305/- per quintal of sheet rubber at 1980-81 prices. The study also shows a payback period of 9.51 years.

Chew (1984) had measured the rate of technological changes in Chinese rubber small holdings from the micro-economic point of view. The study revealed a rate of technological progress of 1.2% per year in the small holding sector.

Mani (1984) in his study on intra-year variations in NR prices during the 1970's found uncertainty and instability in the Indian rubber market due to the export and import policies. These policies have been influenced by the interests of both rubber growers and manufacturers. On evaluating production,
consumption and stock of NR, he concluded that more rational approach to price stabilisation through buffer stock is required.

Tansuan (1984) in a comprehensive study on the world rubber marketing structure and price stabilisation, chalked out an econometric model of the world natural and synthetic rubber markets, with a view to explain the peculiarities of NR price. He concluded that oil price is a key factor on the development of SR industry.

Jacob (1985) evaluated the performance of co-operative movement in the field of natural rubber marketing. He found that co-operative rubber marketing societies have been confronted with the problems such as over-politicalisation, less accountability, lack of professionalism, competition from dealers and visual grading. He suggested certain remedies such as professional orientation and professional representation in the Board of Directors of co-operative societies, strengthening the Apex Body and membership restrictions.

Raju (1990) analysed the development and problems of the rubber based industries in Kerala. He is of the opinion that steps should be taken to enhance the productivity of the rubber manufacturing industry in Kerala, re-orient the tax structure to reduce the tax burden and stabilise the prices of basic inputs to help the local rubber goods industries, to produce goods at competitive prices.

Sreekumar et.al (1990) conducted a study to estimate the share of the grower in the consumer's price of NR in India. Primary data collected from Kanjirappally and Changanacherry taluks of Kottayam district constitute the basic data for the study. They estimated that the rubber growers in India have realised 92% of the terminal market price for sheet rubber and 88% of the terminal market price for scrap rubber as farm-gate price.

Kuriakose (1995) in his study on the marketing channels of NR with special reference to co-operative marketing in Kerala, found that the co-operative sector handled only less than 20% of the rubber traded in the Indian
rubber market. He concluded that the Rubber Board and government should take special efforts to strengthen the co-operative marketing, to minimise the number of marketing agencies of natural rubber and to remove the problems such as indebtedness of farmers, lack of waiting capacity, lack of grading facilities and inadequate storage.

Lekshmi et al. (1996) analysed the NR price movements during a period of 26 years from 1968-69 to 1994-95 by dividing it into two phases of 1968-69 to 1984-85 and 1985-86 to 1994-95 as the first and second phases respectively. Among the different economic variables viz, production, consumption, stock, import and international price, the production of NR was found to be the most significant variable influencing the price of NR in India. They concluded that NR price in India did not show any significant pattern of consistent movement towards a particular direction in the long run.

Wijesuriya and Thattil (1997) analysed the relationship between price of NR and its production, consumption, exports, and stock to identify the nature of competition and to reveal the structure of natural rubber market in Sri Lanka. They observed that the price declines when production rises. They found the insignificant relationship between NR price and consumption and stock due to the influence of a few buyers on prices through their purchase and stock adjustment as in an oligopolistic market. They used cross correlation functions and seasonal indices for data analysis and interpretation.

Acharya (1998) analysed the structure, conduct and performance of agricultural produce market in India. He is of the opinion that the current framework of Indian Agriculture can be divided into six components such as regulatory measures, marketing infrastructure, administered price regime, direct entry of public agencies, export and import regime and macro-economic policies. He concluded that the performance of the market depends on its structure and conduct which in turn is influenced by regulatory measures, infrastructure and macro-economic policies.
Lekshmi et al. (1999) have noticed a close integration of Indian and International prices of NR since 1990. They are of the opinion that policies of the govt. have a direct bearing on the price of NR just like its production, consumption, export and import. They concluded that India needs a long-term perspective plan to increase the domestic price by enhancing the consumption of NR in the light of liberalisation and globalisation policies of the government.

Gulati et al. (1999) depicted a clear picture of Agreement on Agriculture (AOA) in WTO. They analysed three important clauses of AOA such as market access, domestic support and export competition on Indian condition. They studied the effect of these clauses on India and the steps to be taken by the country to overcome the problems of Indian Agriculture. They concluded that Indian Agriculture has the potential to reap advantages from the emerging new world scenario. Therefore, India must demand for removing all barriers of agriculture ranging from quotas to domestic support and the country must join or support the Cairns Group of countries to protect our interests.

Kulkarni (1999) studied the challenges and opportunities of Indian Rubber Industry in the wake of liberalisation and globalisation. In his study, he clearly draws the picture of present global rubber scenario together with Indian and South East Asian rubber scenarios. He is of opinion that Rubber Industry in India has maintained a prolific growth rate with the support of easy access to major raw materials, rapidly expanding internal market, adequate government support and technically qualified and experienced man power. He concluded that the rate of growth of production in natural rubber would remain subdued with no prospect of growth in non-traditional areas of rubber production in India. He also stressed that the import of NR will become inevitable if domestic supply falls short of the demand.

Kuttaiah (1999) in his analysis on the overall development of the Indian Rubber Industry since independence, is of the opinion that the EXIM policies
during liberalisation period have adversely affected the growth performance of the industry. He concluded that the import and domestic price of NR are closely inter-related.

Gupta (2000) analysed the implications of GATT Agreement and Dunkel Report on Agriculture, Textile Industry, Pharmaceutical Industry, Trade and Service sectors and Trade Related Investment Measures of the Indian economy. He examined the gains and losses of India from GATT Agreement and suggested that India should strive for the optimisation of benefits from the GATT Agreement. He concluded that the GATT Agreement provides an opportunity to each country to work under a rule-based, multilateral and transparent trading system. Therefore, India will be a part of global market and it cannot keep aloof from other countries of the world.

1.4 Objectives of the Study

Indian rubber market is in a transition period. A number of developments have surfaced on the horizon of Indian natural rubber sector as an outcome of liberalisation. An analysis of these developments will enable the formulation of a long-term strategy for natural rubber marketing in India.

Objectives of the present study are :-

1) To evaluate the present situation of the supply side of the Indian Rubber Market, by:-

   a) studying the world production of natural and synthetic rubber,

   b) studying production of natural, synthetic and reclaimed rubber in India.

   c) assessing import of natural and synthetic rubber,

   d) comparing the production and import of NR and SR in the pre and post-liberalisation periods in India, and
e) evaluating government policies on import of NR during the pre and post-liberalisation periods in India.

2) To evaluate the present situation of the demand side of the Indian rubber market, by:-
   a) studying world consumption of natural and synthetic rubber,
   b) studying the consumption of natural, synthetic and reclaimed rubber in India.
   c) examining the export of natural rubber, and
   d) comparing the consumption of NR and SR in the pre and post-liberalisation period.

3) To understand the behavior of Indian rubber market by :-
   a) studying international rubber marketing structure,
   b) studying the Indian rubber marketing structure, marketing channels and special features of Indian rubber marketing system,
   c) evaluating the liberalisation measures adopted by the Union Government in the Indian rubber market since 1991-92, and
   d) examining the role of Rubber Board in the Indian rubber market.

4) To analyse the movements of NR price in the Indian rubber market by:-
   a) identifying government policies affecting NR price during the pre and post-liberalisation periods in India,
   b) studying the important factors affecting domestic rubber price,
   c) examining the price trend of NR in the pre and post-liberalisation periods, and
   d) comparing domestic price with international price.

5) To evaluate the impact of WTO Agreement on the Indian rubber market by:-
   a) examining the WTO Agreement on non-agricultural and agricultural commodities, and
   b) assessing the implications on the Indian rubber market on removing Quantitative Restrictions as per WTO Agreement on 1st April 2001.
6) To suggest measures for designing an appropriate marketing strategy to overcome the rubber marketing problems due to the liberalisation and globalisation policies pursued by the government.

1.5 Hypotheses of the Study

Following hypotheses have been formulated for the present study.

i) The NR production in India is dominated by small holders.

ii) The Indian Rubber Market is a buyer's market.

iii) The present marketing structure of NR is not helpful in providing a remunerative price to growers.

iv) The liberalisation and globalisation policies of the government affected the NR consumption in India.

v) The domestic price of NR has been influenced by its production, consumption, stock, import, international price and synthetic rubber price.

1.6 Methodology

The methodology adopted for the study is described under the following heads.

1.6.1 Nature of the study

The study is descriptive cum analytical

1.6.2 Data Required

Though the study is primarily based on secondary data, it uses primary data too to bridge the gap of information and to substantiate the credibility of secondary data.

1.6.2(a) Primary data

Primary data were collected from rubber growers, rubber dealers and rubber goods manufacturers.
From the rubber growers, data such as cost of production, product mix, marketing channels used, marketing problems, price obtained, their response to minimum price and benchmark price and challenges of liberalisation and globalisation faced by them were collected.

Data such as purchasing and selling strategies, different grades of NR traded in the market, competition from the co-operative sector and new trends in the rubber market since the introduction of liberalisation policies of the government in 1991-92 were collected from rubber dealers.

Data collected from rubber goods manufacturers include their mechanism of rubber purchase, consumption of natural and synthetic rubber, impact of structural adjustment programme and WTO Agreement on the Indian rubber-manufacturing sector, their stock policy on natural rubber and import of NR in the light of removal of quantitative restrictions.

1.6.2(b) Secondary Data

Following are the secondary data used for the study.


ii) Area under rubber cultivation and yield per hectare from 1955-56 to 1999-2000.


iv) Production, consumption and import of Synthetic and Reclaimed rubber since 1955-56.

v) Details of statutory prices since 1942.

vi) Average annual price since 1942.

vii) World production and consumption of both NR and SR.
viii) Number of dealers and their divisions into small, medium and large scales.

ix) Number of manufacturers and their divisions into small, medium and large scales.

x) Details of WTO Agreement affecting natural rubber.

xi) Liberalisation measures in the Indian Rubber Market.

xii) Structure of Indian and International Rubber Markets

xiii) Import of NR since 1957.

xiv) Subsidy to growers since 1957.

xv) Government policies towards production, consumption and price of NR.

xvi) Data relating to the role of Rubber Board in the Indian Rubber Market.

1.6.3 Sources of Secondary Data

The following are the main sources from which the secondary data required for the present study were collected.

Indian Rubber Statistics, Rubber Board Bulletin and Rubber Statistical News (Rubber Board, Kottayam), Planter’s Chronicle (UPASI, Conoor), Rubber News (Polymer Publication, Mumbai), Parliamentary Digest (Business Information Bureau, New Delhi), Rubber Statistical Bulletin (International Rubber Study Group, Bangkok), Hand Book of Rubber Statistics (All India Rubber Industries Association, Mumbai) and Rubber Asia (Dhanam Publications, Cochin).

Further, newspapers such as The New Indian Express, Malayala Manorama, Deshabhimani and journals like Rubber Mithram, Economic and
Political Weekly, Southern Economist were the other sources of secondary data collected for the present study.

1.6.4 Sampling

For collecting primary data, separate sample surveys were conducted among growers, dealers and manufacturers.

The study is mainly focused on Kerala State as it enjoys a near monopoly in the production and marketing of NR in India. In the state itself, there is a regional concentration of production of NR in Kottayam District by producing 23% of the total production of the state, followed by Ernakulam 12% and Pathanamthitta 10%. Though all the 14 districts in Kerala produce NR, Kottayam and Pathanamthitta districts are selected as the sample area to represent the state.

In Kottayam district there are 213178 (approx.) rubber cultivators in 1999-2000. Out of this, 250 cultivators hailing from five panchayats of high and low NR producing areas, were selected for field survey. Five panchayats viz, Kanjirappally, Mundakayam, Ramapuram, Bharanaganam and Pampady were selected randomly. Fifty cultivators from each panchayat were chosen under non-probability sampling method.

From Pathanamthitta district too, out of the total 83124 (approx.) small and marginal cultivators 250 growers were selected for field survey. Five panchayats, viz, Konny, Ranny, Pazzhavangady, Ezhumattoor and Vadasserikkara were selected randomly and fifty growers from each panchayat were chosen under non-probability sampling method for field study. Thus a total of 500 growers were selected from 10 panchayats of two districts in Kerala State for the sample survey.

One of the largest and oldest rubber estates in Kerala, Vaniambara Rubber Company has been selected as a sample for collecting primary data required from estate holders.
In order to collect the required primary data from the rubber dealers another field survey has been conducted. Kottayam and Pathanamthitta districts were selected for collecting required primary data. Kottayam district ranked first in rubber trade with a share of 28% of the total rubber dealers and Pathanamthitta district the third with a share of 12% of the total rubber dealers in the state. As on 31st March 2000 there were 2536 big and small rubber dealers in Kottayam and 1148 in Pathanamthitta districts.

Fifty rubber dealers each from Kottayam and Pathanamthitta districts, were selected under simple random sampling method for the field survey. Thus a total of 100 rubber dealers from the two districts were selected for conducting the field survey among the dealers. Further, President of Indian Rubber Dealers Federation has been chosen as the representative for collecting required primary data.

MRF, a leading tyre manufacturing company in India, has been selected as a representative among 36 large Rubber Goods Manufacturers to collect required primary data from natural rubber consumers and to check the dependability of secondary data published by ATMA. The company has been selected on the ground of its proximity to the two large Indian terminal rubber markets of Kottayam and Kochi in Kerala and its presence by starting one of the units at Vadavathoor in Kottayam, the main rubber producing centre.

1.6.5 Tools for Data Collection

Following are the tools used for the purpose of obtaining primary data.

Pre-tested questionnaire was used for collecting primary data from small and medium cultivators (Appendix-1). In order to collect data from estate holders one structured interview was conducted (Appendix-2). Informal interviews and discussions with medium and large-scale estate holders were also conducted to collect required primary data.
Pre-tested questionnaire was used for collecting primary data from rubber dealers (Appendix-3). One structured interview with the President of Indian Rubber Dealers Federation was also conducted for the collection of required primary data from the dealers (Appendix-4).

Structured interviews were conducted with senior General manager and Purchase Manager of MRF (Appendix-5 and 6) to obtain the required information from the manufacturers point of view of rubber goods manufacturers.

Informal discussions with officials of medium and large rubber manufacturing units in Kerala were also conducted to collect primary data from rubber goods manufacturers.

Another structured interview with the Deputy Director, Economics Division, Rubber Board was conducted to collect required data (Appendix-7). Besides that, some informal discussions with the Deputy Directors of Marketing and Planning and Statistics Divisions of Rubber Board were also done.

Informal interviews with purchase managers of Rubco and Co-operative Rubber Marketing Federations were carried out to collect primary data from the co-operative rubber-marketing sector.

1.6.6 Analysis of Data

For data analysis tables and diagrams are being used extensively which facilitate the calculations of averages, percentages, standard deviation and coefficient of variations where they are necessary. In order to study the relationship between domestic price of NR and the variables such as production, consumption, international price, import and export, multiple regression analysis has been used. The second hypothesis, the adverse effect of high import of rubber goods on its domestic consumption has been tested by T-test. The other hypotheses were tested descriptively.
1.7 Limitations

The present study is primarily based upon the secondary data collected from the various issues of Indian Rubber Statistics published by the Rubber Board. Two sample surveys were conducted among rubber dealers and small growers to collect required primary data. Some of the respondents in the surveys were reluctant to state true and fair information related to their respective field of activity. But all efforts have been taken to draw up the actual state of affairs of the rubber market in the study.

Primary data were collected from the state of Kerala only. Other states have not been considered for collecting primary data on the belief that it will not affect the quality of the study in any way. This is justified on the ground that more than 93% of the NR is produced in Kerala.

Though the study covers the period from the independence of the country data have been taken only from 1955-56 onwards except on price of NR, due to the absence of reliable information.

The aspects of rubber cultivation and its manufacturing have not been considered in detail as the study is mainly concentrated on the marketing aspect of NR.

1.8 Chapter Scheme

The report of the study consists of seven chapters. The first chapter gives an introduction to the study as well as statement of the problem, review of literature, objectives and methodology.

The second chapter depicts the measures of liberalisation initiated in to the Indian rubber market.

The third chapter explains in detail the features of the supply side of the Indian rubber market during the pre and post- liberalisation period in the light of world supply of natural rubber.
The fourth chapter exhibits the various aspects of the demand side of the Indian rubber market together with international demand for NR.

Features of Indian rubber marketing structure and its analysis are included in the fifth chapter together with the international rubber marketing system.

The sixth chapter analyses the impact of WTO Agreement on natural rubber in India and the WTO Agreement on Agriculture.

The seventh chapter analyses the domestic price movement since 1942 with the help of price policies pursued by the government from time to time together with the factors influencing the Indian price during pre and post-liberalisation periods.

The eighth chapter contains findings, suggestions and conclusion.