

INDIA

Rubber goods industry poised for exciting growth

A long-term planning for NR production is necessary to meet the growing demand of the manufacturing industry

K.J. Mathew



K.J. Mathew: Optimism on the rubber industry

THE rubber plantation and rubber goods manufacturing industries in India have achieved steady growth and development all through the post-independence era. India today occupies the position of the fourth biggest natural rubber producer, after Thailand, Indonesia and Malaysia. Among major NR producers India shares with China the unique

The writer is Chairman of the Rubber Board, India

position of consuming the entire domestic output of NR for its industrial purpose. Other major NR producers depend heavily on exports for marketing their NR.

Since demand has been increasing at a very rapid rate, production, although rising rapidly, has not been able to keep pace with the growing demand. In the combined use of natural and synthetic elastomers, the country occupies the fifth position after the USA,

Japan, China and Republic of Korea. However, India uses NR and SR in the proportion of 80:20 while the pattern the world over is 39:61. The consumption position is shown in Table I.

All round progress

The rubber plantation industry has achieved all-round progress in a substantial manner in the post-Independence period. The achievements of the industry which in productivity (1422 kg/ha.) and rate of growth (7.44 per cent) compare favourably with all major producers is despite relatively adverse agro-climatic and other factors. Against moderate and well distributed rainfall obtained in most of the major rubber producing countries with the exception of China, the rubber growing regions of India experience not only excessive but also highly seasonal rainfall. This results in longer immaturity period, loss of tapping days, ravages of fungal diseases and higher costs of cultivation and production.

Rubber cultivation in India is overwhelmingly smallholder oriented. They number 8,81,000 and contribute 85% of the total area. The average size of an Indian smallholding is less than 0.50 ha. The redeeming factor is the enlightened outlook of the average Indian smallholder and his diligence. The level of adoption of technology by the average grower has something to be appreciated and the average yield per hectare which is better than that of major producing countries, illustrates the higher level of adoption of modern technology. The imaginative and responsive policies and programmes of the Government of India and the Rubber Board have also gone a long way in encouraging growth and development of the rubber plantation industry.

The growth of the rubber goods manufacturing industry has been no less impressive.

Consumption of NR had shot up from less than 20,000 tonnes in 1950-51 to 525,000 tonnes in 1995-96. During 1996-97, the consumption of NR is estimated to increase to 5,78,000 tonnes showing a growth rate of 10%.

Licensed rubber goods manufacturers in India numbered 5,572 at the end of March '96. The vast majority of them are small scale operators making use of only less than 100 tonnes of NR per year. Forty-three large scale



The automobile tyres and tubes alone share 49% of the total NR consumption

Table I

Consumption of NR & SR during 1995
('000 tonnes)

NR & SR		NR	
USA	3,175.9	USA	1,003.9
Japan	1,777.0	China	732.0
China	1,537.0	Japan	692.0
Republic of Korea	687.0	India	516.5
India	649.4	Malaysia	327.4
Germany	628.0	Republic of Korea	307.0
World	15,160.0	World	5,910.0

manufacturers account for about 65% of the total consumption. Unlike NR production which is concentrated in a few states, its consumption takes place in a rather dispersed manner all over the country. Though NR is being processed into different forms, in India 73% is processed into RSS grades.

In India, synthetic rubber is produced in six factories, the major two being owned by Synthetics and Chemicals Ltd. (factory at Bareilly, UP) and Indian Petrochemicals Corporation Ltd. (factory at Vadodara, Gujarat). The licensed capacity of the Bareilly

and 68,600 tonnes (provisional) during 1995-96.

The import duty during 1995-96 was 50%. Under the Union Budget for 1996-97 there will be an additional 2% duty. Besides, there is a countervailing duty (CVD) of 20% on basic price + 52% of CVD amounting to 30.4%, i.e., if the price is Rs. 100, cost price will be Rs. 182.40.

Apart from natural and synthetic rubber, India is producing as well as consuming reclaimed rubber (RR). In fact India has become the largest pro-

ducer and user of RR in the world. There are now 38 units manufacturing RR. During 1995-96 India produced and consumed more than 65,000 tonnes of RR. The proportion of use of NR, SR and RR by the Indian manufacturing industry was 72.4; 18.5:9.1.

Unique situation

The link between NR producers and consuming industries is provided by licensed dealers and processors whose number was 9,533 and 149 respectively at the close of 1995-96. They include a number of growers' societies and cooperative organisations. It must be stated to the credit of the efficient dealer processor network that the growers are able to realise about 94% of the terminal market price for their produce at their farm gates. This is a unique situation quite exclusive to Indian rubber market. Rubber small-holders in most other countries are not known to get more than 70 to 85% of

Table II

Projected tappable area, yield and production			
Year	Tappable area (Ha.)	Yield (Kg/ha.)	Production (Tonnes)
1995-96 (Actual)	3,56,500	1422	5,06,910
2000-01	4,20,000	1650	6,95,000
2005-06	4,71,000	1735	8,17,000
2010-11	6,80,000	1790	9,14,000

factory is 41,000 tonnes of SBR and 7,500 tonnes of NBR. It is understood that they have plans to expand their SBR capacity to 70,000 tonnes soon and to 100,000 tonnes by the year 2001 and nitrile capacity to 15,000 tonnes by the year 2000. The capacity of Vadodara factory of IPCL is 20,000 tonnes of BR (polybutadiene rubber). It is understood that it proposes to expand the capacity to 50,000 tonnes this year. Small quantities of synthetic rubber are produced in the factories owned by Apar Ltd., Bombay and Apcotex Lattices Ltd., Bombay. Total production

Table III

Pattern of use of rubber during 1994-95				
	NR	SR	TOTAL	%
Auto tyre & tubes	2,28,219	68,490	2,96,709	48.76
Cycle tyres & tubes	62,999	10,525	73,524	12.09
Tyre retreads	29,988	5,948	35,936	5.91
Footwear	48,180	22,009	70,189	11.53
Belts & hoses	32,324	6,622	38,946	6.40
Latex foam	26,237	nil	26,237	4.31
Dipped goods	22,814	nil	22,814	3.75
Others	35,089	9,116	44,205	7.26
Total	4,85,850	1,22,710	6,08,560	100.00

of synthetic rubber during 1995-96 was 68,223 tonnes.

Besides the varieties of synthetic rubber produced in India, the rubber goods manufacturing industry also requires certain other varieties like butyl rubber, polychloroprene rubber etc. which are now met by imports. Total consumption of all varieties of SR during 1994-95 and 1995-96 was 122,710 and 134,085 tonnes respectively. The import was to the tune of 72,800 tonnes during 1994-95

the terminal market price at their farm gates.

After official readjustment of the Indian currency value in 1991, the domestic price of NR has been moving more or less in parity with the international price. The international price has been ruling at lower levels compared to Indian price since April 1996.

It may be noted that Indian price has been higher than international prices during 1995 and 1996, even though international price has scaled unprecedented peaks during these years.

However it cannot be said that the price competitiveness of the manufacturing industry in India is seriously affected by the price levels, since duty free import is possible under certain circumstances, especially to meet export purposes. Besides, rubber goods which are mainly consumed in the internal market can be priced absorbing all the costs involved. Rubber goods generally do not face competition from imports.

NR can be exported without restrictions since 1992. However, in view of local demand and generally better domestic prices export has no incentive. India remains a net importer. About 4% of requirement for the domestic industries is met through imports. The gap is expected to widen in the future, necessitating more imports. Most of the rubber imported is sheets, RSS 3 and it is used along with domestic RSS 4.

Future demand and supply

Factors relevant to NR production are: area under existing plantations, future scales of new planting & replanting, use of planting materials, age structure of trees on the ground, technological advances and price of rubber

The total area under rubber including area estimated to be planted during 1996-97 is 5,30,000 ha. Out of this 3,65,000 ha. is estimated to be under tapping. As the pre-bearing period of rubber is about 6-7 years, new planting from 2004 to 05 will not come into production till the year 2010.

The new planting and replanting targets from 1997-98 to 2001-02 are put at 60,000 and 30,000 hectares respectively. Thereafter, new planting and replanting is estimated at 10,000 ha each per year. The projected growth in tappable area, yield and production can be seen in Table II.

The demand for rubber depends on the growth in production of rubber goods for domestic use as well as for export purposes.



Rubber goods: Impressive performance by the manufacturing industry

Around 10% of the rubber consumed is for export production. The pattern of consumption during 1994-95 was as shown in Table III.

The table indicates that about 67% of the rubber consumption is now accounted for by tyre and tyre products group (including cycle tyres) and the balance by non-tyre groups. The automobile tyres & tubes alone share as much as 49% of the total rubber consumption.

Foreign tie-ups

The new industrial policy announced in 1991 is aimed at increasing international competitiveness and eliminating tiresome Government controls. Approval is now accorded without hassles for direct foreign investment upto 51% equity ownership for a wide range of products. The measures are expected to give a boost to industrial sector and facilitate the Indian industry to become an integral part of global economy. All the leading tyre companies are already having technical collaboration with well known foreign companies.

The fast growing motor vehicle population would result in increased demand for vehicles. However, emergence of radial ply tyres in preference to conventional cross-ply tyres for automobiles, increasing use of pre-cured retreaded tyres and down sizing of tyre will exert a moderating influence on growth in production of tyres.

The demand outside the auto tyre and tube sector especially in regard to cycle tyres and tubes, conveyor and, transmission belting, footwear, surgical and examination gloves, dipped goods etc. is expected to improve steadily.

Growth in exports

Export of rubber products has recorded appreciable improvement during recent years. During the current year the automotive industry's target for export of tyres & tubes is fixed at Rs. 8,500 million. The trade policy reforms announced will provide stimulus to exports. The incentives declared for units in

Considering the various aspects explained above, the demand for rubber can be projected as shown in Table IV.

The total requirement of all varieties of rubber by the year 2000 is estimated to exceed one million tonnes distributed as 1,00,000 tonnes of RR, 2,36,000 tonnes of SR and 7,46,000 tonnes of NR and by 2010-11 to exceed 2 million tonnes distributed as 2,00,000 tonnes of RR, 6,35,000 tonnes of SR and 12,33,000 tonnes of NR.

SR production potential

As regards the future production potential of SR, the total production capacity which is currently 96,000 tonnes is estimated to increase to 2,10,000 tonnes by 2000 AD since all the 6 units are under the process of expansion of their existing capacities. However, requirement of other special purpose synthetic rubber has to be met by imports.

As far as price is concerned, various grades of local styrene butadiene rubber is costlier than NR by 11% to 40%. With the implementation of the expansion programmes and utilisation of full capacities, economies of scale could be derived and cost of SR could be kept at competitive level.

In this connection it may be worthwhile to mention the consumption figures prepared by the All India Rubber Industries Association also.

To study the demand - supply trends, project future economic scenario and to tackle the raw material problems of the Indian rubber industry, the Association has constituted a Raw Material Committee'. This committee has made the projections of rubber consumption (sectorwise) in 2000-01 as shown in Table V.

During 1991-92 a project on policy formulation and perspective for the Indian natural rubber industry in changing national and international context, was undertaken under the Indo-Dutch Programme on Alternatives in Development (IDPAD). The project was undertaken jointly by the Rubber Board of

Table IV

Projected consumption of natural and synthetic rubber ('000 tonnes)					
Year (April-March)	Consumption			Production of NR	Gap in NR production
	NR	SR	Total		
1997-98	615	163	778	579	36
1998-99	658	185	843	619	39
1999-2000	702	210	912	661	41
2000-01	746	236	982	695	51
2001-02	790	265	1055	730	60
2002-03	835	294	1129	745	90
2003-04	882	326	1208	774	108
2004-05	930	362	1292	796	134
2005-06	982	401	1383	817	165
2006-07	1036	444	1480	837	199
2007-08	1083	486	1569	855	228
2008-09	1131	432	1563	878	253
2009-10	1181	582	1763	897	284
2010-11	1233	635	1868	914	319

the export processing zones and 100% export oriented units will also help to enhance production and exports.

The pattern of use of natural and synthetic rubber is now in the ratio of 80:20. Depending on the availability of various types of rubber, the relative price of each type, the pattern of production of rubber goods and technological advances, there can be change in the above ratio in future. It is estimated that the current pattern of use of NR & SR will change in favour of SR gradually and by the turn of the century, the share of NR may decrease to around 75% from the present level of 80%. By 2011-12, the share of NR is expected to be around 65%. Further, the auto tyre and tube sector is estimated to register an average annual growth of 10% and others 6%.

India and the Economic and Social Institute, (ESI) Free University, Amsterdam. As per the IDPAD model, the sectorwise consumption of rubber in 2001 with GDP growth rate of 7% would be as shown in Table VI.

The above projections show slightly higher volumes than our present projections. But a vital factor is the state of the economy and the GDP growth realised. These days economies are not insulated islands. State of the world economy influences all countries big and small and the rubber goods industry is likely to be affected by the health of the world economy.

Long term planning

It is but natural that the estimates from different sources vary. But the fact remains that the Indian rubber industry is poised for growth. To meet the challenge of rapid growth of demand for rubber, a long term planning is necessary for NR production as the pre-bearing period of rubber is about 6-7 years. The modest projection of the Rubber Board indicates the demand-supply gap by 2001-02 as 60,000 tonnes and by 2011-12 as 3,49,000 tonnes. The deficit is to be bridged by imports/additional production of NR and SR. The Rubber Board is implementing various schemes, long term as well as short term, to increase production, productivity and quality of rubber produced. The development objective for the rubber plantation industry will be to increase production to the best extent possible with a view to minimising imports of NR. NR production assumes importance since

- NR is the preferred elastomer in the Indian context,
- SR production beyond a certain level is fraught with varied problems and

c) availability of NR for future imports would be difficult and accordingly prices too are likely to increase.

Expansion of cultivation to the desired extent is difficult though lands suitable for rubber cultivation is available in non-traditional areas. To achieve a level of pro-

Table V

Segmentwise projected demand of NR, SR & RR during 2000-01 ('000 tonnes)						
Segment	1995-96 (likely)	Envisaged annual growth rate (%)	NR	SR	RR	Total
Tyre sector	336.0	11 up to 97-98 & 12 thereafter	405.4 (69.7)	162.8 (28.0)	13.4 (2.3)	581.6
Cycle tyres & tubes	98.0	8	92.9 (64.5)	17.3 (12.0)	33.8 (23.5)	144.0
Footwear	81.0	8	71.4 (60.0)	35.7 (30.0)	11.9 (10.0)	119.0
Camel back	43.6	10	52.7 (75.0)	11.9 (17.0)	5.6 (8)	70.2
Belts & hoses	48.0	10	55.7 (72.0)	15.8 (20.5)	5.8 (7.5)	77.3
Latex foam	28.0	9	43.1 (100.0)	—	—	43.1
Dipped goods	24.0	9	36.9 (100.0)	—	—	36.9
Cables & wires	3.3	7	1.8 (39.0)	1.8 (39.0)	1.0 (22.0)	4.6
Battery boxes	14.5	6	2.1 (11.0)	2.9 (15.0)	14.4 (74.0)	19.4
Other misc. prod.	48.9	12	56.0 (65.0)	17.2 (20.0)	12.9 (15.0)	86.1
Total non-tyre sector	389.3	9.1	412.6 (68.7)	102.6 (17.1)	85.4 (14.2)	600.6
Grand total	725.3	10.3*	818.0 (69.2)	265.4 (22.4)	98.8 (8.4)	1182.2

* : Weighted average. Note : Figures in brackets indicate % share of NR, SR and RR usage in each segment

duction of 1.2 million tonnes by 2010, India should have a tappable area of 0.67 million ha and an average yield of 1,800 kg/ha. The goal can be attained by carrying out new planting in 0.22 million ha between now and 2003, including allowances for replanting at the rate of 10,000 ha per annum from 2003 to 2010. But this is a very difficult target to achieve.

In the industrial map of India the rubber

products manufacturing industry does not occupy a very significant position if measured in terms of its relative shares (less than 2%) in the value of fixed capital invested, value of output, net value added and employment. However, a scientific assessment of the long-term issues and potential of industry merits attention mainly due to its large and diversified industrial base and pattern of foreign trade compared to the status of the industry in other major natural rubber producing countries in the context of globalisation.

The unique feature of the Indian rubber products manufacturing industry is its inward oriented development with specific structural characteristics mainly catering to the domestic market. Today, India is ranked 5th among the leading rubber products manufacturing countries with an estimated annual turnover

industry experienced a major breakthrough in the 1950's and the first automotive tyre unit was established in Calcutta in 1936.

The subsequent growth of the industry during the pre-independent phase was contributed by various promotional factors including restrictions on exports of NR and patronising policy of the colonial Government mainly to cater to the internal industrial requirements during the inter-war years. The dynamic growth of the industry led to sustained increases in rubber consumption and since 1948 India has been a net importer to NR barring 3 years in the mid 1970's. The unique advantage of captive domestic market for NR in India is in sharp contrast to the status of NR consumption in other major 3 producing countries, viz., Thailand, Indonesia and Malaysia. The growth of the industry during

the post-independent phase characterised by a very high degree of concentration in the structure of production and market orientation.

An important structural characteristics that dominated the industry from the very beginning is the pivotal position of the automotive tyre and tube manufacturing sector. Though its relative shares had declined

Table VI

Estimated consumption 2000-01 ('000 tonnes)				
	NR	SR	RR	TOTAL
Automobile tyres & tubes	382	120	19	521
Cycle tyres & tubes	79	24	27	130
Camel back	57	17	9	83
Footwear	131	80	26	237
Belts & hoses	58	15	8	81
Latex foam & dipped goods	86	—	—	86
Others	34	12	28	74
Total	827	268	117	1212

of Rs. 85 billion. An invested capital of Rs. 50 billion is spread over 100 large, 3100 medium and small scale and 2300 tiny rubber products manufacturing units which together provide employment to not less than 3,50,000 people. Also the plantation industry provides employment for nearly that many persons. The industry attained its present fairly massive structure through an evolutionary process spanning over a period of 75 years. Therefore, any attempt to focus the long term issues and prospects of the industry in the context of the process of growing market integration demands a review of its evolution and major structural characteristics.

Diversified base

India had an early start in building up a large and diversified rubber products industrial base compared to other major NR producing countries and the year 1922 marks the establishment of the first rubber products manufacturing unit in the country. The nascent

over time due to the steady expansion of the non-tyre sector, it remains as the single largest product group.

NR domination

In 1994-95, about 62% of the total rubber consumed was accounted by less than one per cent of the manufacturing units. Another unique feature of the Indian rubber products manufacturing sector vis-a-vis the world rubber products industry is the pattern of rubber consumption dominated by NR. The NR. SR ratio in India's total rubber consumption is 80:20 compared to 39:61 in the world rubber consumption.

The distribution pattern of 5500 registered rubber goods manufacturing units across 28 broad industrial products groups showed that 7 industries, viz., footwear (17.90%), moulded products (13.50%), tread rubber (9.20%), foam products (6.60%), adhesives (5.20%), cycle parts (4.56%) - and tyre and tube

(5.37%) accounted for more than 62% of the total number of manufacturing units. Over time, the sectorwise concentration in the industry remained very high as the relative share of the dry rubber products group in total rubber consumption was around 86% even in 1994-95

Regional composition of rubber consumption in India showed that in 1994-95 six major states accounted for more than 65% of total rubber consumption in the country and locational advantage in terms of resource endowment was not a major factor in the establishment of rubber based industries. Specific historical and structural factors played a pivotal role in the location of rubber based manufacturing units in India and the State of Kerala, which controls more than 94% of NR production, performed better in the case of industries with higher NR content.

Favourable balance of trade

To a large extent the composition of India's foreign trade in rubber products is a horizontal extension of its inward oriented rubber products industry. Despite an insignificant share (0.7%) in the total world exports of rubber products, India exported rubber products worth Rs. 9,429 million against an import of Rs. 2,034 million during the year 1994-95. India has been enjoying a favourable balance of trade in rubber products throughout the period from 1971-72 to 1994-95 and the surplus is showing a steady increase in recent years.

The most significant feature of India's foreign trade in rubber products is a very high degree of concentration both in imports and exports. In 1994-95, the relative share of dry rubber products in the total export earnings was more than 86% and India's fortunes in the export front are dependent on a single product group as the automotive tyres and tubes alone contribute 72% of the total value of exports. This has been the pattern in the exports of the rubber products during the last 25 years and over the years the degree of concentration has been growing. The structure of rubber products imported into India is also characterised by a high degree concentration.

Long term issues

A proper identification of the long term issues having the potential of affecting the performance of the industry in the context of globalisation has to be based on a critical evaluation of the trends in the structure of the

industry, market orientation, foreign trade and global trade in the major products groups. Two cardinal features of the Indian rubber products manufacturing industry are (1) a sustained dominance of the dry products sector built up to cater to the internal industrial requirements which emerged since the colonial era and (2) its consequent persistence as a supplementary industry group till date. The prevailing relationship between the Indian industry and its rubber products manufacturing sector is indicative of the potential implications arising from ups and downs in the industrial growth in the country. More specifically, the long term prospects of the industry is basically dependent on the absorptive capacity of the domestic market which in turn is determined by the trends in economic growth.

Feasible strategy

A feasible strategy suited to Indian conditions has to take stock of both the internal industrial potential and opportunities in the export market emerging from global trends in the major products groups and a relatively faster growth of regional markets. The prevailing relationship between the Indian industrial structure and the indigenous rubber products manufacturing sub-sector underlines the points that long term prospects of the sub-sector is closely related to the direction of industrial growth in the country unless conscious efforts are made to build up an export oriented structure based on specific advantages of the rubber products sector.

A positive long term strategy suited to the Indian rubber products manufacturing sectors will have to contain both the growing requirements of the domestic market and export potential arising from the recent trends in the global trade. The experience and confidence of the rubber products sector in India gained over the past 7 years are receptive to technological upgradation and product innovation for ensuring competitiveness and quality in the context of growing market integration. □

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