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Analysis of the Natural Rubber Market in Kerala

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Big Business and Cartel Formations:
Analysis of the Natural Rubber Market in Kerala

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Abstract

Natural Rubber (NR) is an important raw material used in tyre manufacturing. NR accounts for 28 per cent of the total weight of an automotive tyre. A marginal drop in NR price leaves a substantial hike in the profit for tyre manufacturers. NR is produced by more than a million marginal and small farmers with little control over production, market and price. On the other hand, more than 70 per cent of NR produced in India is consumed by the automotive tyre sector comprising a few large tyre corporations that control more than 90 per cent of the automotive tyre market. The contrasting scenario of NR supply and demand leaves ample opportunity for the tyre manufacturers to enter into a collusive agreement to keep the price of NR low. Even though the Government of Kerala has been supporting NR farmers with a support price since 2014-15, the market price seldom touches the support price. Against the backdrop, the study examined the role of major tyre manufacturers in keeping the NR price lower than its support price. Using both primary and secondary data sources, the analysis indicated strong collusive agreements among major automotive tyre manufacturers who procure NR from Kerala. The tyre companies employ different tools such as print media, imports, product grades and the locale of NR production for price discrimination.

Keywords: Cartel; Natural Rubber; Rubber Farmer; Tapping Labour, Automotive Tyre

JEL Classifications: **L41; L65; L69**

Introduction

Cartels are formed to determine jointly the price of the commodity produced independently by a few large firms with substantial control in the market. Cartels of any form seldom exist by formal and written agreements unless wrought by formal organisations. The cartel could either be explicit or implicit or written or unwritten in operation. For the cartel to exist, the primary condition is that there has to be an imbalance in the size of players on both sides. There exists a direct association between market share and monopoly profits that facilitates market expansion. The pursuit of the strategy to maximize profit converges in the long run and further expands the market share (Kenyon, 1979). Foster et al observed that the struggle for democracy entails challenging the economic and political power of multinational corporations (Foster et al, 2011). Dowd (2009) distinguishes Monopoly Capitalism I and II. Capitalism till the 1980s is described as Monopoly Capitalism I and thereafter emerged Monopoly Capitalism II. Monopoly Capitalism II relates oligopolistic production to finance capital (financialisation) with close integration with information technology and the world market. Dowd argued that the reach and speed at which the power and practices of corporations under Monopoly Capitalism II have left devastating consequences on petty commodity producers. The production structure and concentration of economic power are closely connected, leaving their impact on output and price. It implies that oligopolistic production entails a reduced output and a higher price as compared to a competitive market structure. The oligopolistic firms adjust the quantity and fix the price by eliminating competition. In the studies on monopoly capitalism and its variants, analysis is confined to the concentration of economic power in a few large firms and its effect on volume of production and price. What has not been sufficiently explored is the extension of

the implicit collusive agreements to the input vector, where numerous and unorganised marginal and small farmers sell their agricultural raw material to few large buyers. In this case, oligopolistic production turns into oligopsony as the few large corporations are the purchasers of input from numerous petty producers where thousands of small producers sell their products in the market. The combination of industrial activity by large firms helps to fix the output price independent of the input price (Lenin, 1917). In other words, the oligopolistic production structure of the industry extends to the input market. Large corporations enter into implicit agreements to keep the price of input at its lowest ebb possible.

There exist voluminous empirical studies on factors influencing farmers' decision to allocate resources in agriculture. Schultz (1932) used the conventional marginal cost and revenue approach as the art of determinants of investment in agriculture. Narain (1965), Krishna (1962), and Tyagi (1974) held the view that change in the area under cultivation is a direct function of price. Subscribing to the Smithian school of thought, Mellor added that a price rise would demote farmers to produce less as the same income can be obtained with a lesser amount of output. Farmers respond positively to price change and economic incentives by scaling up the area under cultivation. The approaches to price determination have transformed from the local to the global market. However, the majority of farmers in India are marginal or small and they are incapable of exercising any form of control over the market price.

Natural Rubber is produced by about 1.3 million farmers in India. More than 90 per cent of NR producers (supply side) own less than two hectares of land. The production and sale of NR are distributed over 10 months, albeit at varying levels. On the buyers' side, more than 70 per cent of the quantity of NR produced in India is purchased by a few large companies that manufacture automotive

tyres. The non-tyre segment of the market is comprised of numerous firms producing more than 5000 types of products from cycle tubes to giant conveyor belts. The non-tyre sector of NR consumption has always been a price taker in the market for NR with little control over its price. In terms of market power, the non-tyre sector is incapable of forming tacit agreements of any form to influence the price of NR in the domestic market.

Framework of Analysis

Cartelisation is critiqued for its negative impacts on competitive pricing, technological advancements, and the unscrupulous exploitation of customers. Cartels are often defined as the consolidation of producers of a particular commodity who join together on a mutually agreed contract to self-impose regulations on production, input procurement, and product pricing. The agreement could be explicit (written) or implicit (unwritten). There could be formal institutions to implement the cartel agreement or each producer can informally exercise it as and when it is required. The union government promotes producers' organisations (cartels) as large-scale industrial production is viewed as synonymous with economic growth, especially under the neoliberal economic programme. Developed and developing nations equally promote export cartels primarily to establish the supremacy of their domestic industries in the international market. Formations of export cartels are historically rooted and assume prominence during the economic crisis. Such export cartels have been sufficiently explored in the context of the USA and Europe. While critiquing Sullivan and Sheffrin, Schroter identified the following characteristics of cartels, viz., (i) it is not essential to have an organisational structure or a written (explicit) agreement among partners for the formation of the cartel; and (ii) producers enter into a collusive agreement to maximise profit by minimising production to create an artificial

supply-demand gap (Schroter, 2013). It could be the reason that the Chairman of the Australian Competition and Consumer Commission described cartels as theft by well-dressed thieves (Jensen-Eriksen, 2013:1086). Export cartels are critiqued for the beggar-thy-neighbour policy of countries including the USA and European Union (ibid). The USA and European Union, while regulating rather rigidly cartelisation in the domestic market, have promoted export cartels. On the other hand, export cartels are defined as mercantilist trade tools to benefit domestic industries at the cost of other countries because such cartels are found to be efficiency-enhancing for the domestic industry (Dick, 2004). Scholarships on cartels are divided over the advantages and disadvantages of their deleterious impacts on domestic consumers. Kreps argued that there existed a closely-knit association between cartels and authoritarian regimes as evident from the experience of Hitler's Germany during the interwar period. In other words, cartelisation would endanger the democratic development of nations (Kreps, 1945). It happens because export cartels and their industrial bodies and institutions often extend the cartelisation to the domestic market as well.

The policy on cartelisation and the Monopoly Restrictive Trade Practices Act (MRTP) in India is rooted in the cartel policy of the USA and the United Kingdom. The United States policy on cartelisation bans companies if found resorting to anti-competitive pricing practices such as market sharing, price fixing and its distortion in the domestic market. On the contrary, export cartels are provided as part of the policy to promote domestic industry and capture the international market. In due course, export cartels are extended to the domestic industry, leaving profound impacts on the welfare of numerous and unorganised input suppliers to the industry. The experience of the pulp and paper industry in Finland provides a case in point (Jensen-Eriksen, 2013). In this case, the federal

government of Finland declared solidarity with the workers and peasants (ibid).

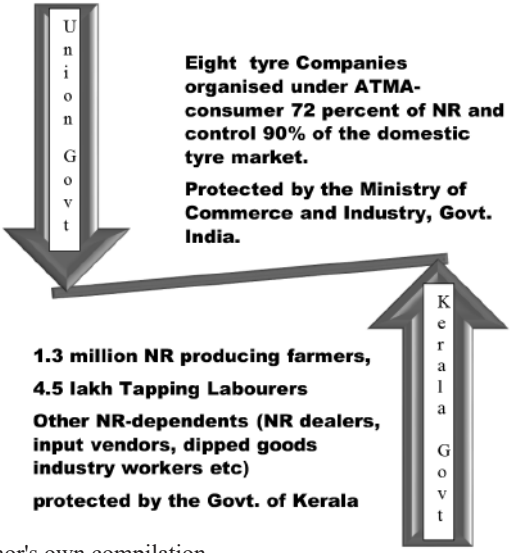
For the national government, industries are synonymous with economic growth and, therefore, unequivocally support large industries while ignoring a million farmers and wage labourers, who are the sole suppliers of inputs to the industry. The conflict of interest between industries that use the raw material produced by farmers and labourers seldom attracts state action against the unscrupulous exploitation of the industry. Export cartels often get transmitted to the domestic market and in the case of automotive tyres, cartel formations, elimination of competition and price distortions have attracted penalties from the concerned authorities in India multiple times. To secure favourable policy decisions from the bureaucracy, the Automotive Tyre Manufacturers Association (ATMA) engages in cronyism involving bureaucracy, political leadership, judiciary and intermediaries. Farmers are left hapless but sell at the price decided by the industry. Who wins the battle depends on whose interest the state pays heed to.!

The eight leading automotive tyre manufacturers are organised under the industrial body called ATMA are unable to influence the price of other major inputs that are petroleum-based or chemicals. The government facilitates cost reduction by ensuring a cheap supply of important raw materials to make the export cartels competitive in the international market. The union government, on behalf of the ATMA members, has adopted a combination of strategies to maximise the rate of their profit. The price of NR has been made volatile by resorting to `measures such as: (i) granting liberalised imports; and (ii) withdrawing from the input and output markets. More strategically, the state in association with the tyre companies, shifted the cultivation of the crop from a relatively high-wage high-productivity zone like Kerala to a low-wage zone in

the North East. More than 65 per cent of the NR is produced in the southernmost state of India, Kerala. The negative impact of the productivity decline on the cost of production will be more than offset by the positive gain from a low wage. The composition by relative share of inputs in the weight of an automotive tyre is presented in Table 1. Natural rubber constitutes 28 per cent of the total weight of a tyre.

As the government of Kerala is committed to the cause of NR farmers and tapping labourers, the state government has announced a floor price for and earmarked adequate budget allocation under the scheme called the Rubber Production Incentive Scheme (RPIS)[3] since 2014-15. Under the RPIS the difference between the market price and the support price[4] is directly passed over to the farmers. The government of Kerala has announced a floor price with a budget allocation of Rs 6000 million to compensate the farmers for the difference between the market price and the floor price (Rs 170/ kg of sheet rubber grade 4). The market price of NR prevails below its floor price for most of the months in a year. The price realised in 2023-24 was 25-30 per cent less than the market price of NR prevailed in 2011-12. Further, the decline in NR price has been consecutive during the last 13 years. NR farmers have been lamenting over the price crash of NR for more than a decade while automotive tyre manufacturers have registered positive growth in tyre production and their net profit. There is a conflict of interest between two sets of actors in the market for NR. The first set of actors includes the government of Kerala, NR-producing farmers, tapping labourers, petty NR traders and village-level input vendors to NR farmers. The government of India safeguarding the interest of the ATMA members, constitutes the second set of actors. The conflict of interest between 1.3 million NR farmers juxtaposed against eight ATMA members is described in flow Chart 1.

Flow Chart 1. The conflict between NR farmers and Tyre Companies



Source : Author's own compilation

The market for NR is often characterised as oligopsony, for a few large automotive tyre manufacturers buy the produce from a vast array of farmers with tiny patches of farmland. More than 1.32 million smallholders[5] of NR are bought by eight major automotive tyre manufacturers in India. Less than 10 per cent of the NR production is directly consumed by latex-based dipped goods-making industries (Rubber Board, 2023). The latex goods industries are micro and small industries located mostly in villages, where unskilled workers eke out their living. As a major share of NR is bought in large quantities by a handful of multinational tyre manufacturers, the possibility of a collusive agreement among those giant consumers has been floated for some time. As ATMA members account for more than 70 per cent of the consumption for NR, effective market intervention by the Kerala Government, to an extent, is nullified by collusive agreements among major tyre manufacturers in the input market. A marginal change in the price

of NR leaves a direct bearing on the net profit of tyre manufacturers in India (ATMA, 2024). Against the backdrop, this paper seeks to answer the following questions: (1) Why does the price of NR in the domestic market fail to catch up with the floor price announced by the Kerala Government? (2) What is the association between NR prices in the domestic and international markets? (3) Does there exist any form of implicit or explicit price collusion in the NR market among major tyre manufacturers in India? (4) If so, how is the collusive agreement implemented and what are its consequences on the price of NR? Given the setting, the discussion is organised into five sections. What follows the introduction is the analysis of the production structure of NR in India and its position vis a vis the major producers in the world. Section 2 gives a detailed analysis of long-term trends in NR price in the domestic and international markets. To supplement the observed trends in NR price, the foreign trade of NR and NR-based commodities are dovetailed in Section 3. Available data from secondary sources do not permit the disinterring of collusive agreements among major automotive tyre manufacturers in NR's primary and terminal markets. Case studies of rubber dealers and farmers are presented in section 4 to corroborate the empirical findings from the analysis of secondary data on a set of variables about collusion and its cumulative effect on NR price. The study is concluded in section 5.

Section 1

1.1. Production Structure and Trends

NR cultivation has been the mainstay of village life in Kerala till its unprecedented price fall set in by 2012. In the gross cropped area of 25.16 lakh hectares in Kerala, NR accounted for 22 per cent (5.49 lakh hectares) in 2022-23. Marginal and small farmers (<2 hectares) constituted 80 per cent of the total area under NR cultivation (Rubber Board, 2016). Over the years, the proportion of

small and marginal farmers in the total has been increasing. The relative share of Kerala in the area under NR cultivation has declined from 70.42 per cent in 2013-14 to 64.68 per cent in 2022-23. However, there has been a marginal increase in the area under NR cultivation from 5.48 lakh hectares to 5.50 lakh hectares during the reference period. It amounts to distress cultivation of NR in Kerala. Although the absolute area under NR cultivation in the state has registered a marginal increase during the reference period, the observed fall in the relative share of area under NR in the state is attributable to a higher rate of area expansion in important non-traditional rubber growing states in the North East, viz., Tripura, Assam, Meghalaya, and other non-traditional areas. Table 2 shows the Compound Annual Growth Rate (CAGR) of the area under NR cultivation in major NR-growing states. Important observations from Table 2 are: (i) Area under NR cultivation in traditional NR growing states, viz., Kerala and Tamil Nadu (Kanyakumari district) registered a decline in relative share from 73 per cent to 67 per cent during 2013-14 to 2022-23. NR is a perennial crop with a life cycle of 30 years, of which 23 years are productive. Therefore farmers would not prefer to cut down or abandon the plantation unless there emerge better alternative crops to substitute NR. Moreover, the crop has an immature phase of the first seven years of planting during which a farmer invests a substantial sum to develop into a rubber plantation. Considering those factors into account, the CAGR of 0.3 per cent of the area under NR cultivation in traditional NR growing states indicates that farmers retain NR plantations under a scenario of 'No Other Alternative'; (2) area expansion of NR in North Eastern states has been significant even under a grim price scenario. Tripura and Assam, the second and the third largest states of NR productions improved their relative share in the area under cultivation from 9.17 per cent to 11.47 per cent and 6.16 per cent to 7.74 per cent

respectively with a CAGR of more than 3 per cent between 2013-14 to 2022-23. The North Eastern states together accounted for 25 per cent of the area under NR cultivation in India in 2022-23; (3) NR cultivation has been shifting from suitable land (traditional NR growing states) to less suitable land. There exist inter-district variations in the area and yield of NR in Kerala. It indicates that agro-climatic conditions in all districts in the state are not equally ideal for NR cultivation. Ideal soil type and agro-climatic conditions exist in central Kerala (Pathanamthitta, Kottayam, part of Ernakulam and Idukki). Yet, NR is widely cultivated in other districts in the state for its remunerative and stable price, a steady market coupled with daily harvesting and income, barring extreme summer during March to May attracted farmers to NR.

1.2. Trends in NR Production

Although the area under NR cultivation remained more or less unchanged in Kerala and Tamil Nadu, there has been a significant fall in NR production over the years. Table 3 explains the trend in NR production across different states in India. There has been a shift in NR production favouring North Eastern states during the last decade. The production of NR grew at CAGR of 0.90 per cent between 2013-14 and 2022-23 in India. In the total production of NR India, Kerala accounted for 83 per cent in 2013-14. The share of the state declined to 71 per cent in 2022-23. There has been an absolute decline in NR production in Kerala by 49000 metric tonnes during the reference period. However, the positive CAGR in NR production in Inda during the reference period is attributable to a doubling of production in Tripura and Assam between 2013-14 and 2022-23. The NR production registered a CAGR of 9.65 per cent in Tripura and 9.62 per cent in Assam during the period under reference. As a result, the relative share of these two North Eastern states in NR production increased from 7.65 per cent in 2013-14 to 16.03 per cent in 2022-23. The decline in NR production in Kerala is

attributable to the fall in NR productivity in the state, which is a matter of serious concern.

1.3. Fall in NR Productivity

Given the trend in NR price in the long run, yield is a function of agro-climatic conditions. Central Kerala is endowed with the ideal agro-climatic conditions for NR propagation[6]. The productivity augmentation of NR in Tripura, Assam and other non-traditional states is severely constrained by soil texture and other agro-climatic conditions (Thomas and Panikkar, 2000:1-19). There exist well-defined agro-climatic constraints in augmenting productivity in agriculture as compared to industry. The average yield of NR touched its peak of 1879 kg/ha in 2006-07 when the price of NR ruled high. The yield started declining gradually to touch its trough of 1482 kg/ha in 2022-23. The downward spiral in NR productivity continues. In other words, NR productivity in India declined at a CAGR of (-) 0.94 per cent between 2006-07 and 2022-23. To a great extent, the decline in NR productivity is attributable to the unprecedented fall in yield in Kerala (Graph 1). The average yield of NR in Kerala has been prevailing above the national average since 1990-91. It needs to be underlined that the growth rate of yield in Kerala was much higher than the national average and, to a great extent, it is attributable to supply response to price factor since 1992-93. Till 1990-91, the average yield of NR from a hectare of land in Kerala was less than the national average because the NR yield in Tamil Nadu had been much higher than in Kerala and that of Karnataka was closer to the yield rate in the state of Kerala. During the period between 1979-80 and 1989-90, yield in Kerala was less than the national average by 3 kg/hectare. The yield of NR in Kerala prevailed over the national average for the first time in 1990-91 and the average yield in the state was higher by 58 kg/hectare between 1990-91 and 2022-23. Ever since the yield gap

between Kerala and the national average has been widening (Table 4). In this context, it is worth examining the average yield of NR in different North Eastern states vis a vis Kerala for 2013-14 to 2022-23. Table 5 shows the yield gap across major NR-growing states in India. Important observations from Table 5 are: (i) Kerala has the highest NR yield in India even though the yield gap between Kerala and other states has been narrowing down over the years because of the differences in the rate of growth in NR yield; (ii) Yield of NR in all major NR producing states except Tripura and Assam has been declining; (iii) On an average, the NR yield in Kerala has declined at a rate of (-)0.76 per cent while the rate of decline in Karnataka was (-)1.41 per cent during the period between 2013-14 and 2022-23; (iv) average of yield of NR in India declined by (-)0.94 per cent per annum despite the positive rate of growth in Tripura and Assam, implying that the production and consumption gap will widen unless measures are taken to reverse the declining trend in NR productivity in traditional rubber growing regions which account for more than 70 per cent of NR production in the country. Over the years, India will turn into an import-dependent NR economy, leaving profound implications including NR being a strategic raw material. The observed changes in NR yield across traditional and non-traditional NR growing regions may be juxtaposed against the Rubber Board and ATMA's joint venture of massively propagating NR in the North Eastern region with an investment of Rs 6000 crores. The programme is known as Rubber Mitra[7].

1.4. Forms of NR production in India

NR is produced mainly in four types. viz., Ribbed Smoked Sheets (RSS), Block Rubber (ISNR 20), latex concentrates, and scrap rubber. Farmers produce RSS grades of sheet rubber in traditional and non-traditional NR growing states. In the international

market, demand for block rubber has been on the increase as automotive tyre manufacturers demand semi-processed NR more than RSS grades and other forms. In 2022-23, 64.5 per cent of NR produced in India was RSS grades, while Block Rubber (ISNR 20) constituted 20.6 per cent and 12.4 per cent of NR was latex concentrates (The Rubber Board, 2023). The production of RSS grades varied from RSS-1 to RSS-5. In addition to it, the inferior quality sheets are sold as ungraded sheets. More than 85 per cent of RSS grades of NR in Kerala and other states are sold as Grades 4, 5 and ungraded (Rubber Board, 2023). Production of RSS grades is handy for farmers as these grade sheets require minimum capital investment and can be performed at the farm level by the tapping labourers or by farmers themselves. As agricultural commodities undergo advanced stages of processing, the farmgate price that farmers receive will be non-proportionally reduced. The ISNR-20 is a mechanised form of NR production requiring heavy capital investment, which is not viable for marginal and small farmers. The production of ISNR-20 increased from 1.06 lakh tonnes in 2013-14 to 1.72 lakh tonnes in 2022-23. Meanwhile, the production of RSS grades declined from 5.6 lakh tonnes to 5.41 lakh tonnes during the period under reference. RSS grade NR is directly used by manufacturers and, therefore, farmers receive a better farm-gate price[8]. As compared to other plantation crops like tea and coffee, NR farmers receive a better farm gate price (price difference between terminal market and the price received by farmers) because they sell directly usable raw material to the end users. As the form of NR production shifts in favour of ISNR-20, the surplus generated by farmers will be divided between raw material procurement (ISNR-20) and NR-based goods manufacturers, driving farmers into further distress.

1.5. India and Other Major NR Producers

In the international market, control over the production or consumption of a commodity helps to exercise an oligopoly or oligopsony power in the domain of trade. The relative share of India in the international market for the NR does matter in this context. India has a distinction in the international market as one of the major NR producers and consumers. Most of the major NR producers do not have a substantial consumption sector like the automotive tyre manufacturing sector and therefore major NR producers, viz., Thailand (32.8%), Indonesia (21.7%), Vietnam (8.9%), and Cote d'Ivoire (8.9%) do export a major share of NR production. India and China are two countries where the consumption of NR exceeds their production. Until very recently, India was the fourth largest producer of NR in the world. The position of India in the world map of NR has been pushed to 6th position by 2010s. The yield of NR has also been pushed down from the first position while Vietnam occupied the highest productivity of 1840 kg/ha. India has been pushed to the distant second position with 1489 kg/ha in 2022.

India's share in the world's production declined from 5.81 per cent to 5.04 per cent between 2013-14 to 2022-23. To a great extent, the decline in NR production in India is attributable to the fall in NR productivity and production in Kerala. The production of NR in Thailand, Vietnam, Cote d'Ivoire, Cambodia and Brazil has increased. Against a relative share of 5.8 per cent in the world NR production in 2022, India's share in world consumption of NR is 9.3 per cent. It is indicative of the fact that the country is only a price taker in the international market. Unless domestic production is set in order by reversing the trend in production and productivity, India will soon be transformed into an NR import-dependent economy. NR is a strategic raw material with an immature phase of seven years.

Section 2
Trends in NR Price

2.1. Price Trends

The ruling price of NR is much below its estimated cost of production of Rs 214/kg in 2021-22 (Table 6). The Rubber Board has estimated the cost of NR production for different states under different tapping systems. The production cost is the highest for daily tapping in Kerala and the lowest if the farmer employs family labour for tapping. In the Kerala context, the reserve price of a farmer is much higher than in North Eastern states. Given the price scenario, it is not remunerative for marginal and small farmers to depend on the crop solely for livelihood by engaging the family labour in self-tapping. The floor price was fixed at Rs 170/kg while the estimated cost of production with daily tapping of NR in Kerala was Rs 214.07/kg in 2021-22 (Rubber Board, 2023). Farmers with more than two hectares of the NR are not covered under the RPIS of the Kerala government. As a result, it has been estimated that 40,000 hectares of tappable area of NR have been left unharvested for the reason that the price was non-remunerative to compensate for the wage and other expenses of processing the crop for sale. The economic and social life of people in major NR growing districts and their living conditions have been affected due to continuous falls in the price of the crop with no hope of an upward revision of the market price shortly. A similar situation prevailed during the 1996-2003 period when the NR farmers witnessed the first price crash after economic liberalisation (Mohanakumar and Chandy, 2005). The price fall of NR has left deep impacts on the land market in NR growing Gram Panchayats[9]. The land market for NR plantations has been reduced not only to 1/10th of the land price that prevailed a decade ago but there exist few takers of land for rubber plantations. From a policy perspective, it assumes a significant

deviation from the standardised pattern of the land market and its development over the years.

The long-term trends in NR prices exhibit two distinct phases. The first phase ended by the mid-1990s. With the introduction of neoliberal economic policies and trade liberalisation in India in 1991, supplemented with the signing of the WTO agreement in 1994, the domestic market has been exposed to the international market. Phase - II was started in the mid-1990s. Phase - I had the following characteristic features: (i) import of NR of any form and types were restricted with tariff and non-tariff measures; (ii) the market price of NR in India was determined largely by the supply-demand conditions in the domestic market but with the effective intervention of the union government through the buffer stock scheme; (iii) vigorous extension services of the Rubber Board with replanting and new planting subsidies, and the introduction of high productivity planting material, viz., RRII 105 instilled confidence in farmers. As the net return from the NR cultivation was significantly higher than the next best alternative crops, farmers invested in NR cultivation substituting other crops; (iv) the domestic price ruled over the international price of NR as the influence of macroeconomic variables over the domestic economy was minimal; (v) the Phase II of NR cultivation in Kerala and Tripura started by the mid-1990s, particularly with the Southeast Asian Economic crisis in 1997. As part of the price fall of primary commodities in the international market, NR price in India has also fallen and the downward price spiral continued till 2002. The sub-prime crisis that originated in the USA in 2008 drove down the global price of agricultural commodities but the downward spiral was arrested by 2009 and again the upward movement sprang up and continued till 2012. Phase II in the NR price movement is characterised by high volatility and an unsteady market. Mild changes in the international

market started influencing the market for NR in India and the domestic market price converged with the international market for NR (Table 7). An analysis of the domestic and international prices of NR revealed the following: (i) the domestic price of NR had been 1.5 times higher than the international price till 1990-91; (ii) there had been near total convergence of domestic and international market during 1991-92 to 2014-15; (iii) the domestic price prevailed over the international price since 2015-16. The floor price of Rs 160/ kg with a budget allocation of Rs 500 crores by the Government of Kerala helped push up the domestic price of NR above the international from 2016. As a result, the RPIS of the Government of Kerala helped the NR farmers in India at large to avail a price for NR in the domestic market a little higher than the international price. The effect of the RPIS leaves its price effect in the NR market in other NR-producing farmers in the country. Till December 2023, the state government has spent Rs 1950/- crores under the scheme since its inception on 28th January 2014 (Table 8).

For farmers, phase - II was unprecedented in the history of NR cultivation after independence for two reasons: (i) the price hike in Phase - II from 2003-2011 was much higher than the previous decades, even though there had been price volatility. Expecting the price hike to continue, farmers expanded the area under NR cultivation by re-planting and new-planting NR. The development cost of plantations in the first seven years (immature phase with no return) could not be realised as the price started falling sharply by 2012-13; (ii) never in the price history of NR in the post-independence period, there has been a consecutive price fall of NR for more than a decade. In response to the mounting pressure for state interventions to arrest the price fall for NR, the Government of Kerala announced the RPIS by which the state government through the office of the Rubber Board, credits to the farmers' account for the difference between the market price and the floor price declared by the government. The floor price had been Rs 170/kg till 2023-24 and

it has been pegged up to Rs 180/kg (Grade 4) since April 2024. Although the floor price of Rs 180/kg was announced by the state government, the spot price for NR failed to catch up with the floor price.

2.2. Market Structure of NR

It needs to be noted that the price of NR in India has always been influenced by the movement of macroeconomic variables in the international arena since the early 20th century. The NR cultivation in India dates back to the early 20th century at Thattekad in Mundakayam, Kottayam, Kerala in 1902. There had been a marked growth in area expansion, production and productivity of the crop from the commencement of NR cultivation until the price of NR started falling from 2013-14. However, the price of NR fell following World War 1, and to stabilise the NR price to protect the interest of British planters, Britain enacted the Stevenson Plan of 1922. However, the Stevenson Plan collapsed in 1928 because of its inherent contradictions. It was one of the first cartels of NR farmers in the major NR-producing countries. After the collapse of the Stevenson Scheme, the price for NR fell during the Great Depression in the late 1920s. In response to it, major NR-producing countries represented by the United Kingdom and the Netherlands, France and Thailand formed a cartel known as the International Rubber Regulation Agreement (IRRA), 1934. It was the second Cartel of NR producers of major countries. The accord primarily intended to ensure a stable and remunerative price for NR by restricting NR supply. Irrespective of the nature and contents of international agreements, the accord, the IRRA imposed a ban on planters from establishing new plantations and placing production restrictions on existing plantations. Eventually, the IRRA too died down.

The consumption of NR in India was 12.38 lakh tonnes against production of 8.39 lakh tonnes in 2022-23. The gap between

domestic production and consumption of NR has been widening since 2013-14 and it is attributable primarily to the decline in production rather than faster consumption growth. The market structure of NR is skewed towards automotive tyres and tubes. The sector consumes more than 72 per cent of NR in the country. The non-tyre sector is comprised of dry rubber-based products including cycle tyres (19%) and latex-based products (8%). The automotive tyre and tube sector is organised under an industrial body known as the ATMA. Although there are 28 tyre companies, only eight companies are members of ATMA. These eight companies control more than 90 per cent of the total tyre production and sales volume of tyres and tubes in India. The automotive tyre companies in India posted a turnover of Rs 90000 crores in 2022-23. The leading tyre manufacturing companies in India have a protracted history of explicit cartelisation, which has attracted fines and penalties since the 1950s (Mani, 1991). The Competition Commission of India imposed a fine of Rs 1788 crores on five major tyre manufacturers in India, viz., Apollo Tyres, MRF, CEAT, Birla Tyres, JK Tyres and their industrial body, ATMA in 2018. The charge levelled against the tyre manufacturers and ATMA was that these tyre companies entered into collusion to avoid competitive pricing and violated Section 3 of the Competition Act during 2011-2012 (Sharma, 2023). In the weight of a tyre, NR constitutes 28 per cent, next to the second most important petroleum-based input, carbon black (ATMA, 2024). A marginal drop in the price of NR amounts to substantial cost savings and rate of profit for the tyre and tube manufacturers in India. The tyre dealers association detected the implicit collusion of tyre manufacturers in the market and filed the suit in court and the documentary proof available with the tyre dealers spoke volumes on the market collusion of major tyre manufacturers in India. Tyre dealers had the accessibility to required data on cartel formation of automotive tyre manufacturers.

They used the data to file cases for the unjustifiable price hike of tyre products. Conversely, NR farmers or dealers do not have such solid proof for a jointly decided action to influence the NR price. The history of cartel formation of automotive tyre manufacturers reveals that explicit and implicit collusion of tyre companies in India is part of their history of development.

Section 3

3.1. Trends in Import and Export of NR

Large-scale imports of NR to India since the onset of trade liberalisation have flooded the domestic market converging the domestic prices with the international market (Mohanakumar, 2012). Upon the trade liberalisation and signing of the WTO agreement, the qualitative restrictions on imports of NR have been removed and replaced with quantitative tariffs. Under the WTO agreement, the bound rate of import duty for sheet rubber (solid rubber) has been fixed at a minimum of 25 per cent while the least importable item, i.e., latex form of NR has been placed with a bound rate of 70 per cent. The bound rate of import duty fixed under the WTO regime for NR indicates the influence of ATMA over the administrative apparatus of the union government. It is worth mentioning in this context that the production-consumption gap in NR was less than 10 per cent during the 1990s when the WTO rounds of discussions took place. In addition, the rubber compound has an import tariff of only 10 per cent, which the tyre manufacturers make use of when the price of solid rubber in the international market increases. The price of solid rubber (in different forms) in the international market has been ruling at 10 to 20 per cent less than the domestic market price (barring a few exceptional years) since the introduction of RPIS by the Government of Kerala. Table 8 describes the RPI Scheme of the Government of Kerala with the budget allocation. The annual budget allotted to the Rubber Board in India by the Ministry of Commerce

was Rs 263 crores while the Government of Kerala earmarked a budget provision of Rs 600 crores for NR farmers in Kerala in the same year. ATMA used the higher NR price in India than the international market price for securing permission to import NR from ASEAN countries at a lower price. It shows that the domestic price movement of NR cannot singularly be explained by the movement in the international market. It is pertinent in this context to examine the state patronage extended to major consumers of NR (Automotive tyre manufacturers) and the systemic discrimination against millions of NR farmers and their dependent population.

Table 9 explains trends in the quantity of imports and exports of NR. The quantity of NR imported to India has phenomenally increased over the years while exports have become negligible. The quantity of NR imported as a percentage of NR consumption is indicative of the dependence of the country on imports for domestic needs. There are three different phases in the dependence of the domestic NR-based industrial sector on imports. The first phase (1979-80 to 1990-91) is characterised by an import of NR to the tune of about 16 per cent of the domestic consumption. The domestic demand for NR was mostly met through domestic production in the second phase (1991-92 to 2005-06). In this phase, on average, only 6 per cent of the domestic demand was met through imports. Imports of NR to India on a massive scale started from 2006-07 to 2022-23. The quantity of NR imported as a percentage of NR consumption in India touched 40 per cent in the third phase. The price difference between domestic and international markets does not explain the magnitude of imports to India. To quell the long-term trend in NR price, tyre manufacturers started importing NR in large quantities in the mid-2000s. In response to the downslide in NR price for consecutive years since 2012, farmers curtailed NR production either leaving plantations unharvested or ignoring the

cultural practices, leaving yield to touch its trough. In either case, the productivity and production of NR declined substantially. The tyre manufacturers made use of the production-consumption gap to import large quantities of NR to India. Imports of NR are sourced mostly from Vietnam, Cote d'Ivoire and Indonesia. Such a situation emerged in a scenario under which tyre companies import NR in large quantities on paying an import duty of 25 per cent along with other expenses to avoid purchasing from the domestic market (Table 10). It has already been noticed that the international price of NR has been less than the domestic price by a margin of 5 per cent or less, which is inadequate to meet the cost of imported NR. Moreover, the quantity of NR exported to India has always been much above the quantity required to fill the production-consumption gap in India. It has been a strategy deployed to offset the upward price movement of NR in the domestic market, especially during the lean production seasons (January to May). Of 5.29 lakh tonnes of NR imported to India in 2022-23, 59 per cent of NR was imported through duty-paid channel. More than 90 per cent (4.74 lakh tonnes) of the NR imported were solid block rubber used by tyre companies. Rubber dealers allege that major tyre manufacturers book the NR from Vietnam and Cote d'Ivoire and land it at Chennai port (mostly) during the lean production season in Kerala (January to May) to ensure that the price in the domestic market does not move up during the lean production season. Barring a few exceptional years in the first half of the 2000s, the quantity of NR exported has been a tiny fraction of production despite the convergence of NR prices between domestic and international markets. India has emerged as one of the major tyre exporters in the world. During the period between 2016-17 and 2022-23, the export value of automotive tyres of major eight tyre companies in India increased from Rs 9659 crores to Rs 23125 crores. In the value of total tyre exports from India, truck and

bus tyres accounted for 54 per cent followed by passenger car tyres (14%). More than 17 per cent of the truck and bus tyres manufactured in India are exported every year. The ASEAN agreement signed with Asian Countries in 2009 has left far-reaching consequences on NR imports and NR growers in India. Even though the NR is included under the exclusion list of items under the ASEAN, there is the possibility of large-scale imports of NR-based products to India. Imports of NR-based products amount to indirect imports of NR to India, which leaves the actual demand for NR in the domestic market behind the potential demand (Harilal, 2010)

Section 4

4.1. Cartel Formation in the NR Market

As mentioned elsewhere, the market price of NR in Kerala fails to catch up with the floor price announced by the Government of Kerala since its introduction in 2014-15. There exist different types of product discrimination in the NR market, and it results in significant differences in NR prices across NR-producing districts in the state of Kerala. The product-linked price discrimination is based on the locale of production, visual grading of smoked sheets, and marketing channels. Irrespective of the type of product discrimination, gainers are end-users of the raw material and losers are farmers. Farmers allege that the NR price published in Malayalam newspapers is a major source of product discrimination and they implicate tyre manufacturers in the locale of production-based price discrimination. However, little secondary data is available in the public domain to bring the cat out of the bag.

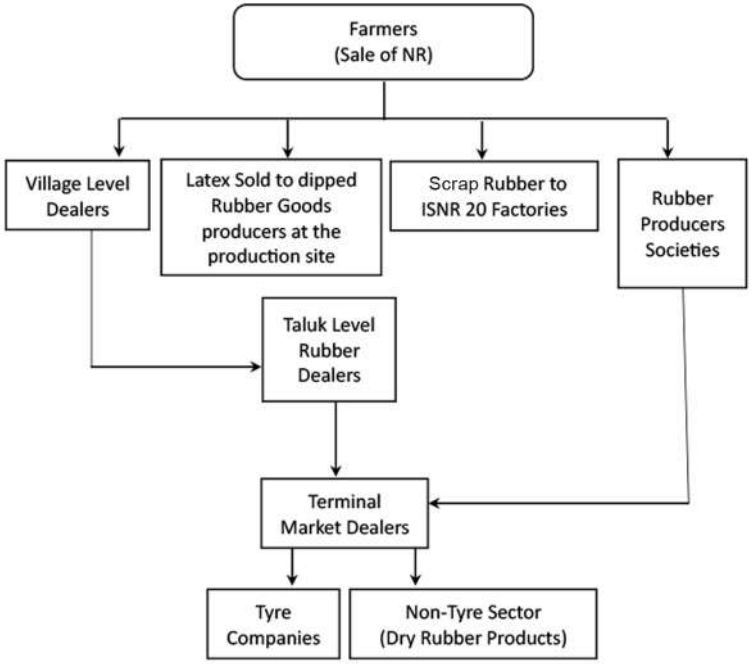
Collusive acts to reap abnormal profit have been integral in India's automotive tyre companies' history. The development of the tyre industry in India dates back to the Second World War. During the war, the government granted special assistance to the tyre companies to produce certain items required for the war. The industry grew and developed under the strong patronage of the state, which in turn facilitated them to make super-normal profits.

The tyre companies took undue advantage of the state protection and increased the tyre prices unreasonably. The Tariff Commission was appointed in 1955 to investigate tyre prices in India. The Tariff Commission observed that the tyre process was unfair and it was due to lack of competition in the industry. In December 1971, the newly formed MRTP Commission constituted an enquiry against the tyre companies in India for their involvement in preventing other companies from the fray by manipulating the existing licensing mechanism to the advantage of the existing companies (Mani, 1993: 90). The last in the series of enquiries against automotive tyre manufacturers was the enquiry Committee Report of the Competition Commission of India (CCI) in 2018. The CCI observed that major domestic tyre manufacturers colluded to keep tyre prices high during the 2011-15 period and enjoyed supernormal profits. The CCI observed further that the sharp decline in the price of natural rubber enabled the tyre companies to make supernormal profits. (Villatt, 2023).

To capture the dynamics of implicit understanding and agreement among major players in the NR market, if any, a sample survey of NR dealers from major NR-producing districts, viz., Kottayam, Ernakulam, Pathanamthitta, Thiruvananthapuram and Kannur were interviewed with a promise of anonymity. The case studies were conducted during January to April 2024. The period for the survey was purposively chosen to collect qualitative data on the conduct of NR dealers at different levels during the lean production season when the NR price is likely to increase in the domestic and international markets. The sample included NR dealers of different types. A total sample size of randomly selected 25 traders of different sizes of operations defined in terms of the level of their operations were picked up randomly from terminal market dealers who supply NR to five major NR-procuring automotive tyre manufacturers in India. The case study method was used to elicit data on the marketing strategies of NR in the terminal market. The case study method focussed on the process of supplying NR to tyre manufacturers at a time when the NR price in the domestic and international markets is

likely to move up and the involvement of tyre manufacturers in bringing the price down. A semi-structured questionnaire for interviews was administered with the assurance of total anonymity of the identity of the respondent.

Flow Chart 2. Natural Rubber Market



Source : Author's own compilation

The marketing structure of NR is presented in Flow Chart 2. To start with, farmers sell directly to the traders at the village level, known as primary dealers, who procure NR from farmers and sell it to the dealers at the taluk and district levels. Farmers sell latex directly from the site of production to the dipped goods industries located very nearby. Latex-based industries are located in villages and the raw material cost of such products constitutes more than 80 percent of the cost of production. Barring latex, all forms of dry rubber such as different grades of RSS and crump rubber are

marketed through dealers at the village level and finally sold to the terminal market dealers. From the terminal market dealers, NR is sold directly to tyre companies and other rubber products manufacturing units. There are several layers of intermediaries between NR-producing farmers and dealers at the terminal market. The Rubber Board facilitates the marketing of NR by extending assistance to develop new markets and NR-based industries, by supplying market information on the strategic raw material. The Rubber Board imparts training to traders on the marketing of NR and processing of latex into superior quality RSS grades.

4.2. Role of Malayalam Dailies in Product Discrimination and NR Price Fixation

The Automotive tyre companies engages in informal and implicit collusion to keep the price of NR low. It prevents farmers from receiving a better price under normal supply-demand conditions in the market. There exists little written and formal evidence or data on collusion in the NR material market for tyre manufacturers. In the implicit collusive understanding across major tyre companies in the market, the Malayala Manorama, a Malayalam daily, published by one of the sister concerns of MRF Tyres releases NR prices daily. The Malayala Manorama and other leading newspapers publish three different rates for the same type and quality of NR in Kerala (Table 11). The first set of NR price data appears as the Rubber Board price (official price) from the Kottayam market for RSS-4, RSS-5, ISNR 20 latex and scrap rubber. The official price of the Rubber Board published as Rubber Board Price in a Malayalam daily on April 6 (price in the previous day) was Rs 185/kg for RSS 4. On the same day, the price in the international market for comparable grades of RSS 4 of India was Rs 207/kg. Along with the Rubber Board price of Kottayam, the Malayalam dailies

publish the NR price for NR dealers. The dealers' price for RSS 4 on the same day was less by Rs 5/kg less than the Rubber Board Price (Rs 180/kg). More interestingly, the price of NR for the southern districts, particularly Thiruvananthapuram is given under the range of Rs 130-180/kg informing farmers that they are entitled to receive only Rs 130/kg which can be used by tyre manufacturers as RSS 4 or 5. The price is published under the title- The Price of Rubber Marketing Societies at Nedumangad (a prominent trading centre in Thiruvananthapuram district). Another price published by the Malayala Manorama is titled Venjaramoodu Rubber Marketing Society Price, which was Rs 169/kg for RSS 4 whereas the Rubber Board announced price of RSS 4 was Rs 185/-. It is important to note that farmers receive about 10 to 15 per cent less than the published price in the newspaper. The international price is higher by Rs 27/kg for RSS 4. The moot question is why has there been little convergence of domestic and international markets under the liberalised market regimes, when the NR price in the international market increases.

According to recent data on the profitability of two of the largest car tyre manufacturers in India, MRF and CEAT, their profit margins decreased significantly in the fourth quarter of 2023–24, compared to the profit in the same quarter in 2022-23 (Business Standard, New Delhi, Page 2, dated 03-05-2024). The CEAT Tyres' net profit for the fourth quarter of 2023–2024 decreased by 23%, from Rs 132 crore to Rs 102 crore. The final quarter of 2023–24 recorded a 7.5% decline in net profit for MRF Tyres. In 2022–23 and 2023–24, the profit decreased from Rs 410.66 crores to Rs 379.55 crores in the last quarters. Along with the decline, the share prices of CEAT and MRF fell. Citing the MRF announcement, the Chennai Bureau of Business Line claimed that decreased raw material costs, increased sales, and enhanced efficiencies contributed to the

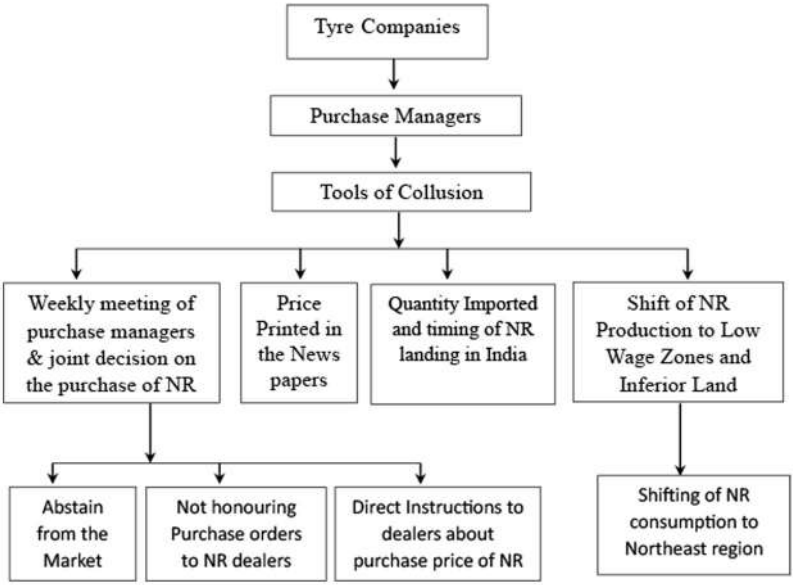
profit gain for 2023–2024 (Business Line, New Delhi, Page, dated 04-05-2024). The decline in profit during the final quarter of 2023–24 was ascribed by the CEAT and MRF to an increase in the cost of raw materials (NR) (Business Standard, New Delhi, Page 2, dated 04-05-2024). Examining the NR price trend for the final two quarters of 2022–2023 and 2023–2024 is relevant to understand how the raw material price hike has contributed to the fall in profit of tyre companies. The cost of NR in the domestic market for tyre makers increased up to Rs 170/kg for grade 4 in March 2024 while the international price was a little higher than the price in India. As compared to January-March of 2023, the cost of raw material was higher for tyre manufacturers by Rs 10-15/kg for grade 4 NR. It is worth mentioning here that a slight increase in NR price did affect the profit margin of tyre companies while the reduction in NR price from Rs 240/kg to Rs 130/kg for several years should have earned supernormal profit. It proves the hypothesis that the tyre manufacturers would act in unison to keep the price of NR at its lowest minimum.

Case Study - 1

Rubber Farmer: **Madhusoodanan Nair, Vellanand Gram Panchayat, TVPM.**

The implicit and collusive agreements among tyre manufacturers explain different strategies to keep the domestic price lower in the international market when upward price movement is expected. There exists little secondary data source to support the collusive cartelisation process of large tyre MNCs in India. However, NR dealers at different levels and farmers believe that there exists collusion among the major buyers of NR in the domestic market. Flow Chart 3 explains the operation of market collusion by major tyre manufacturers procuring NR from Kerala.

Flow Chart 3. Collusive Agreement of Tyre Companies



Source : Author's own compilation

A rubber farmer, who has been cultivating NR in the Thiruvananthapuram district for the last 40 years reports "I have a smokehouse and I sell Grade 4 rubber sheet by any standard. Last week, the published official price (Rubber Board Price) of NR for Grade 4 was Rs 174/kg and I received a price of Rs 159/kg, which was the price of ungraded NR sheet. I am sure, the trader would sell it as Grade 4 to the tyre companies. Recently, Malayala Manorama has started publishing the price of a Rubber Marketing Society located at Venjaramoodu in Thiruvananthapuram district. The reported price of the Venjaramoodu society set the upper price cap, beyond which farmers would not get a rupee more in the Thiruvananthapuram district. The Venjaramoodu price is around Rs 10-20/kg less than the Rubber Board Price. He added further that the Malayala Manorama publishes the price of RPS at Venjaramoodu (Nedumangad Taluk,

Thiruvananthapuram district) to ensure that the farmers in Thiruvananthapuram do not get the price of Grade sheets. It is a major source of margin of traders and a clear case of price discrimination based on locale of production" (Madhusudhanan Nair, Vellanad, Thiruvananthapuram)

Case Study - 2

Name of the Trader: **Mr Thomas Kurian (Name Changed), Kottayam, Kerala**

Mr Kurian has been in the NR trading business (rubber dealer) since 1975. He has warehouse facilities at Ponkunnam and Ayarkunnam in Kottayam district. He has been supplying NR to Bridgestone India Private Limited for the last 25 years. Initially, Mr Kurian had been supplying to MRF Tyres and later he stopped supplying to MRF and shifted to the Bridgestone. He opined that the MRF deploys nefarious ways of lowering the NR price during the lean production season by not offloading the quantity purchased from farmers and also delaying the payment to rubber dealers to prevent the traders from making further purchases from farmers. It would in turn increase stock available with the farmers, compelling them to sell at a lower price.

2.a. How do you collect NR for the supply to Bridgestone?

I have a network of more than 200 traders at different layers of the market. In addition to it, we do purchase NR directly from farmers. I supply 250 metric tonnes of NR of Grade 4 to the Bridgestone company every week. The Bridgestone sends its carriage to our warehouse located at different places in Kottayam and transports the stuff to their godown located in North India. It takes a minimum of one week to be transported to the company godown and the price of NR will be credited to our account only after the satisfactory delivery of the stuff to their godown. A minimum of seven to ten days are required for us to realise the amount,

which we have already paid to sub-dealers (Taluk level dealers). The sub-dealers cannot wait because they have already made direct payments to farmers and if their working capital is blocked, they would not be able to purchase NR from farmers.

2.b. What is the process of taking orders from the Bridgestone and fixing the price of NR?

On working days, between 11 am-12 pm, dealers receive email communication from the purchase managers of Bridgestone. The email contains the order for the quantity and the price. Bridgestone's price will always be Rs 1-2/kg less than the published dealer's price. In addition to the Rubber Board price of the Kottayam market (where the maximum production of NR takes place in Kerala and India), Malayalam dailies publish the price of NR for Tyre companies, which will be Rs 2-3/kg less than the market price announced by the Rubber Board. The Bridgestone asks the dealers of NR whether we would supply the quantity at the price offered, leaving little space for bargaining. Accordingly, we purchase NR from farmers at a price that would cover the margin for sub-dealers, terminal market dealers, and the incidental expenditure incurred by traders at different stages of processing and packing to be delivered to the tyre manufacturers.

2.c. What is the type of incidental expenditure incurred?

Dealers at the village level purchase NR from farmers by making spot payments. The village-level dealers purchase NR grades 4, 5 and ungraded NR. Some farmers, whom they have known for years, sell quality sheets (properly dried and smoked with little foreign elements in the sheet detectable for visual grading). In addition, there is ungraded sheet rubber and scrap rubber purchased from farmers, who do not have a smoke-house as the scale of operation is too small for them to maintain a smoke-house. The village dealers sort the ungraded sheet rubber into Grades 4 and

5. The price difference across different grades is Rs 10-20/kg. In the case of ungraded NR, when the market is low during the peak production season, farmers are rather compelled to sell at the price offered by NR dealers, which they store to sell in the lean season. Tyre companies use Grade 4 and Grade 3 sheet rubber. Grade 3 is often used for the manufacture of radial tyres and Grade 4 is used for cross-ply tyres. Farmers seldom receive the price of grade 3 RSS sheets. The terminal market dealers sort NR sheets into different grades.

The terminal market dealers convert Grade 4 into Grade 3 and Grade 5 into Grade 4 after drying, smoking, and shaping them by manually cutting the unshaped edges of each sheet. These sheets are bundled in 50 kg and sold to tyre manufacturers. A minimum of Rs 1.50/kg is spent to upgrade the quality of sheets and bundling. For every purchase, the village-level dealers reduce 3 kg to 5 kg from farmers for every 50 sales (depending on the quantity sold) for the assumed weight loss when the sheet is dried. Such reductions are effected when the market is bearish.

2.d. How do tyre companies fix the price and communicate to dealers?

The communication between tyre companies and NR suppliers (dealers) is mostly performed over the phone (MRF) or through emails (Bridgestone) by the godown supervisor of the concerned company. The price will be paid on off-loading it in the godown of the company.

Purchase managers of tyre manufacturers meet online or offline every Friday and make decisions on the following.

(i) What quantity of NR will be purchased for the next few weeks? If the price of NR shows an upward trend, purchase managers decide to withdraw from the market or instruct their dealers

not to procure NR for them. If the company has already placed the order with the dealers, tyre companies purposely delay clearing the stock with the dealers stating reasons such as, shortage of funds, warehouses being full, downturn in tyre sales etc. The payment is delayed for the dealer to make the next purchases. As a result, terminal marketing dealers fail to make payments to taluk or village-level sub-dealers. The delay in payment sends a red signal to the village-level dealers that the market is going to be bearish and they offer a lower price or stop buying NR. Distressed farmers sell NR at the price offered by the sub-dealer irrespective of the price printed in the newspaper. Moreover, godowns of dealers are filled with NR stocks and the lack of storage space dissuades dealers from making further purchases. This is the strategy that the tyre manufacturers often practice to bring the price down.

(ii) The purchase managers of tyre companies are responsible for ensuring that the tyre production is not affected due to the shortage of NR. To ensure adequate stock of NR for the company, the purchase manager keeps a list of potential NR stockists and NR traders cum brokers. They arrange NR to the company at a price mutually agreed upon by NR stockers and dealers. Terminal market dealers are also hapless players because they have already stocked and their working capital worth crores of rupees is blocked. After a while, tyre companies back out from their mutually agreed price and buy the NR at a lower price. The dealers incur heavy losses. The uncertainty has driven many NR dealers to stop their business and leave the NR dealership. The village and taluk-level traders either slow down the purchase from farmers or start releasing the stock they have kept to sell at a higher price

during the peak season. It resulted in a glut in the market and the price plummeted to its trough. Alongside, tyre manufacturers place orders in the international market for imports of NR months before. The imported NR would land in India during the lean season of production. The MRF company plays an important role in the whole process.

2.e. Can you give any such example of tyre manufacturers withdrawing from the market?

Yes. There are many. During August-September 2023, favourable weather conditions helped to increase NR production and market arrivals. Sensing the mood of the market, tyre manufacturers suddenly withdrew from the market creating an artificial excess supply in the market. Farmers and dealers got equally panicked and they contacted the Rubber Board. The Rubber Board convened a meeting of major tyre companies at the Kottayam office of the Rubber Board to request the tyre companies to purchase NR from the market. The tyre companies did not pay heed to the request of the Rubber Board and the price fell further.

2.f. Does the price fluctuation of NR affect the prosperity of NR dealers?

I am the office bearer of the Rubber Dealers Federation. There were 8500 rubber dealers (traders) almost a decade ago. The membership in our organisation has declined to 5500 in 2023, of which 1300 dealers are in Tripura. The number of rubber dealers in Tripura has substantially increased while in Kerala, it has declined. The NR dealers in Kerala incurred heavy losses due to the price uncertainty of NR and they stopped NR business. Some of them turned to trading activities of other agricultural products such as coffee, tea, cardamom etc. Another offshoot of the uncertain market is that young people are rather reluctant to take the NR dealership as their principal occupation.

Case Study - 3

Name of the Rubber Dealer: **Mr Sojan Joseph, Pala (Rubber Dealers Association, Kottayam).**

Mr Sojan Joseph is an NR dealer and a farmer as well. He has 7.5 hectares of NR cultivation, which he inherited. Recently, Mr Joseph bought 15 acres of matured rubber plantations for Rs 15 lakhs for an acre of land. The land price has considerably come down in the area. A decade ago (2010-13), the price of an acre of mature NR plantation in Pala cost Rs 40-50 lakhs.

I had been supplying NR to the MRF company until 2021. The MRF removed me from the dealership for buying NR at a price higher than the prescribed price of the MRF. The charge levelled against me for cancelling the NR dealership was that other NR dealers of MRF complained that they were unable to procure NR from farmers and sub-dealers because I had offered a higher price[7].

3.a. Since when have you been in Rubber dealership?

My father started the NR dealership business and I took over in 1985. My family's present economic status owes singularly to NR cultivation and NR business. I had an annual turnover of Rs 100 crore till 2019-20. After the sharp decline in NR price, the turnover has been reduced to less than Rs 50 lakhs. Now I am selling NR to CEAT Tyres. Earlier, I was one of the approved dealers of MRF.

3.b. How does MRF fix the price of NR and places order to the dealers?

The Kottayam market price is the official price reported by the Rubber Board. For dealers and farmers, it is the official price. But the tyre company price is announced separately along with the Rubber Board Price of NR, which is Rs 2-4/kg less than the Rubber Board Price. This price is printed in all Malayalam dailies, and the NR dealers pay only the 'Dealer price' printed in the newspaper.

When the price of NR shows signs of an upward trend, the MRF intervene with multiple strategies. First, tyre companies ask the dealers to procure NR at a price below the published Dealer's Price. Secondly, they refuse to clear the accumulated stock of NR with the dealers and pay only the Dealers' Prices for lame excuses such as shortage of funds, low market demand for tyres, lack of space in the warehouse and so forth. As dealers, we have to make payments to the sub-dealers at the village and taluk levels, from whom we collect NR. They procured NR and stocked in the godown as per the order I placed on behalf of the MRF. Moreover, dealers at the village level run the business with very fragile working capital and they are unable to mobilise more funds to continue with the NR purchase. Unless the stock is cleared by the MRF, NR dealers will not be able to make purchases from the market. As MRF dealers do not make purchases from the market, the price of NR crashes.

3.c. Why did you purchase NR over and above the price fixed by the MRF?

MRF wanted to purchase the RSS 4 sheet from farmers at Rs 5 per/kg less than the published Dealers Price. However, I kept buying at the published price because I knew that the price would increase in the next few weeks and it would fetch me a handsome profit. Why does the MRF purchase manager want me not to buy at the published price?

3.d. Is there any collusive agreement among the major tyre companies to bring down the price of NR?

Yes. MRF knows that dealers of other tyre companies would also follow the same if MRF as the major purchaser of NR from Kerala withdraws from the market or instructs its dealers only to procure NR at a particular price and not above it at any cost. It is the MRF company that takes the lead in dampening the NR market either by not taking the stock from dealers on time when the

market showing signs of improvement or during the peak season of production.

3.e. Is the MRF the leader in the market? Do the purchase managers of tyre companies decide the quantity to be purchased in advance ?

Tyre companies adopt the strategy of not clearing NR stock accumulated with the dealers during the peak production season (October to December) purposively to bring down the price. They report that there is no space in the warehouse to keep the raw materials. Even though the NR dealers purchase NR on the verbal assurance of tyre companies, they back out and refuses to transport to the warehouse for weeks together. All major tyre manufacturers adopt the strategy to reduce the NR price in the market by creating an artificial glut. Such betrayal happens mostly when the price of NR shows a trend to increase in the coming months.

3.f. Is there any other method of dampening the price of NR?

Yes. The tyre companies book the NR from countries like Vietnam, Cote d'Ivorie and Thailand. The Indian companies make the purchases and purposely delay the delivery in Indian ports. The tyre companies ask the foreign suppliers to transport to India during the lean production seasons or when they sense an upward movement in the price of NR in the domestic market. A large quantity of NR landed in India helped the tyre companies to withdraw from the market for months together as their warehouse had adequate stock of the raw material.

I stopped my NR dealership with MRF and started supplying NR to CEAT Tyres. There are as many as 30 dealers in Kerala who supply NR to CEAT Tyres. The number of dealerships in Agartala (Tripura) has also been on the rise and the tyre companies are managing to meet the shortage of NR production in Kerala from Tripura. There are dealers from Kerala who have

established warehouses and dealerships in Tripura[10].

Case Study - 4

Name of the Dealer: **Mr Chandy (Name Changed), Kottayam**

Mr Chandy has been in the NR dealership for more than half a century. His forefathers started the business and he has been continuing it. However, recently he has stopped supplying NR to tyre companies and transformed into an NR broker. It is another phase of NR dealers. Due to the uncertainity in the NR market, NR dealers turned to NR brokers. As an NR broker, he arranges NR to tyre companies and to the non-tyre sector through a network of local NR dealers.

4.a. Is NR brokerage more profitable than direct dealerships?

When the tyre companies want to abstain from the market, they place orders with the NR market brokers. They have a long list of dealers who have kept NR in their warehouse to sell at a higher price. We offer them a high price and ensure that the raw material is kept in one of the approved warehouses of the tyre companies (Tyre companies have specific standards to be maintained for warehouses where the NR is stocked for tyre manufacturers). It in turn helps the tyre companies to withdraw from the market when they desire to do so. Tyre companies do it under three conditions. The purchase manager's responsibility includes the continuous supply of NR to the company and under no circumstances the supply of the raw material in quality and quantity should be affected. Secondly, the purchase of NR should be made to the company at the cheapest possible price. Third, tyre companies do keep a minimum stock because keeping huge quantities involves cost and there is also the risk of price volatility. If the price goes down by Rs 5/kg, the loss can be easily transferred to NR dealers and tyre companies do not have to burn their fingers.

4.b. Why did you shift to brokerage from the dealership?

Brokerage is given to us as minimum commission for every deal. As the price of NR becomes highly volatile, it has become a risky proposition to deal in NR. Many dealers have turned into brokers of NR. As you may know, many NR dealers abandoned their business because they incurred heavy loss in the NR dealership. There were cases of suicides of NR dealers. I am safer now and I do not have to have a warehouse, no risk and ensure minimum profit from every deal I strike.

Case Study - 5

Name of the Dealer: **Mr Rajan (Name Changed), Kannur district**

Mr Rajan is a large farmer. His family owns 30 acres of land. His father started a rubber dealership in 1975 and he joined the business in 1988. He says he manages it by combining his farming activities with the rubber dealership.

5.a. To whom do you supply NR?

I supply NR to Apollo, CEAT, JK Tyres and MRF. I started supplying to different companies because tyre companies have the least concern for farmers and dealers. If farmers in Kerala stop producing NR, they may import it from abroad or buy it from Tripura. I maintain supply to four companies with smaller quantities because tyre companies are not reliable. Sometimes, they place orders in the morning and accordingly, I place orders with my sub-dealers. At times, I have a feeling that they act hand in glove with one another. When MRF delays sending its truck to my warehouse to take the stock, other companies also do the same. As I keep supplying to four companies, it gives me the option to place requests to others to clear off the warehouse and at least one among the four listens to me. Accordingly, my working capital is partially replenished.

5.b. How does the price of NR get fixed?

The tyre companies inform the price and place orders for NR daily (excluding holidays). If NR price is Rs 164/kg they would ask me to supply NR at the maximum price of Rs 163/kg. For the

last few years, tyre companies have not purchased NR at the official price published in the newspaper. The tyre company price will be less by Rs 1 to Rs 2/kg than 'Dealer's Price'. Accordingly, I place an order with the sub-dealers.

5.c. How do you fix your Price for NR?

I have more than 40 dealers in my network, from whom I collect NR. I have to collect NR from different dealers in different places. The transport cost and labour charge have to be borne by me. When the NR is delivered to my warehouse, I have to smoke it, clean it, cut it for shaping and remove foreign particles in the sheet and pack it in a polythene cover. For every 1000 kg of NR, 50 kg will be sorted out, which cannot be sold to tyre companies. These materials have to be sold out as ungraded. On average, the total cost involved in keeping the material ready for supply to tyre companies would cost me a minimum of Rs 1.50/kg. In addition to it, interest for lakhs of rupees for 15 to 20 days also has to be borne by me. In normal course, the price paid to farmers will be less by my margin plus the delivery and transport costs. You can estimate at what cost, I will be able to purchase from farmers when the price falls.

Case Study - 6

Name of the Dealer: **Mr Shaji Philip (Name Changed), Thodupuzha**

Mr Philip has been the dealer of NR for the last 27 years. He has a network of 12 sub-dealers located in villages making direct purchases from farmers. He sells NR directly to Apollo Tyres and indirectly to MRF (through another dealer). In February 2024, he sold 50 tonnes of NR each to MRF and Apollo. He also sells to the non-tyre sector.

6.a. Why do you think that the tyre companies influence the price of NR in Kerala and India?

More than 70 per cent of NR is purchased by tyre companies and therefore the decision of tyre companies determines the price of NR in the market. Further, non-tyre sector consumption is confined to around 20 per cent and individual demand of non-tyre

companies is too small to influence the price.

The margin for dealers comes mostly from the geographical branding of the NR sheet. For example, more than 90 per cent of the NR bought from the southernmost districts, viz., Thiruvananthapuram are bought as grade-5 or ungraded NR. The price difference between Grade 4 and Grade 5 is about Rs 6/kg. The ungraded NR bought by dealers and sold to tyre companies will be used as grade 4 and the companies save Rs 3/kg by way of price discrimination based on locale of production.

Case Study - 7

Name of the Dealer: **Mr Shajimon Thomas, Secretary, Chirakkadavu Rubber Producers Society, Chirakkadavu, Kottayam** (the interview was held on 16th April 2024)

7.a. Do you think the tyre manufacturing companies influence the price of NR?

Yes. For the last two weeks, the price of NR has been declining because major tyre companies have temporarily withdrawn from the market purposely to prevent NR price from rising. Otherwise, the price of NR would have crossed Rs 200/kg for RSS 4. As the tyre manufacturers withdrew from the market, the price of NR slid down by Rs 5 for the last two weeks. There is no tapping and NR production during this month and farmers do not stock rubber because the NR market has become unreliable.

Mr Shaji displaced the price of NR for the last two weeks (Table 12). It has been the strategy of tyre manufacturers for a long time. However, they are unable to bring down the price beyond a point because of the floor price (MSP) fixed by the Government of Kerala under the RPIS.

Section 5

Conclusion

There has been a continuous decline in NR prices for the last decade. The price fall is unprecedented in the history of NR in India.

The downward price spiral from 2011-12 is characterised by a sharp decline in NR production and productivity of the crop. The relative share of India in the world production of NR has also been pushed down because the price fall has affected the farmers in the traditional NR growing regions, particularly Kerala. There exist mutually conflicting interests in the NR market. Automotive tyre manufacturers' interest is represented by the industrial body called ATMA and the Union government. On the contrary, the state government of Kerala safeguarded the interest of 13 lakh farmers and 4.5 lakh tapping labourers in the country by declaring minimum support price to NR through the Rubber Production Incentive Scheme of the State Government since 2014. By implementing the RPIS, the government of Kerala protects the interests of NR farmers, tapping labourers and latex-based micro and small industries. The RPIS of the government of Kerala helps farmers in the North East to fetch a better price for NR because the price in the domestic market for NR transmits to other NR-producing states as well.

Even in the lean production season, the price of NR falls below the international price and further, the price in the domestic market seldom touches the support price announced by the Kerala government. A detailed field-level study of the unprecedented fall in the NR price revealed that there existed a form of collusive agreements among the major automotive tyre manufacturers, who consume more than 70 per cent of the total NR demanded in the country. The reason for the NR price to remain below the support price is found to be closely linked to the collusive agreements among the major tyre manufacturers procuring NR from Kerala. Different types of tools are deployed by tyre manufacturers to keep the price of NR low and the collusion among tyre manufacturers is easily implemented because farmers are unorganised. Among the tools employed as part of the collusion and cartelisation in the input market, weekly meetings of purchase managers of tyre

manufacturers decide the quantity to be bought every week and they decide to withdraw from the NR market when the market signs for NR are positive. NR price printed and published in Malayala Manorama plays an important role in determining the price of NR. Other Malayalam Newspapers do follow the same by publishing different prices for NR for the same grade from different locales of production. In addition, the newspapers publish the official price as well as the dealer's price of NR and the latter is less by 5 to 7 per cent than the Rubber Board price (official price). It helps the NR dealers to purchase NR at dealers' prices. There are other market tools such as landing NR imports to India at lean production, which was bought during the peak production season in NR-producing countries such as Vietnam, and Cote d'Ivoire. Abrupt withdrawal from the market is an important strategy adopted by tyre manufacturers to lower the price of NR. The market-distorting activities of tyre manufacturers amount to a form of cartelisation in the input market, which has not yet been adequately addressed in the Indian context.

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Table 1. Raw Material Consumption by Weight of a Truck and its Tyre (Percentage)

Raw Material	Percentage Share
Natural Rubber	28
Styrene Butadiene Rubber	8
Polybutadiene Rubber	4
Butyl Rubber	4
Carbon Black	25
Nylon Tyre Cord Fabric	5
Rubber Chemicals	3
Steel Tyre Cord	4
Bead Wire	3
Zinc Oxide	1

Source: ATMA, 2024

Table 2. Relative Share and CAGR of Area under Natural Rubber by States in India - 2013-14 to 2022-23

State	2013-14 (hectares)	Relative share	2022-23 (hectares)	Relative share	CAGR (2022-23 0ver 2013-14)
Kerala	548225	70.43	549780	64.68	0.03
Tamil Nadu	20890	2.68	21220	2.50	0.17
Total- Traditional NR growing states	**569115**	**73.11**	**571000**	**67.18**	**0.04**
Tripura	71370	9.17	97460	11.47	3.52
Assam	47945	6.16	65810	7.74	3.58
Meghalaya	13875	1.78	18975	2.23	3.54
Nagaland	11985	1.54	16570	1.95	3.66
Manipur	3755	0.48	5345	0.63	4.00
Mizoram	3150	0.40	5595	0.66	6.59
Arunachal Pradesh	3540	0.45	7665	0.90	8.96
Non-Traditional NR growing North Eastern states	**155620**	**19.99**	**217420**	**25.58**	**3.79**
Karnataka	47055	6.05	52275	6.15	1.18
A&N Islands	806	0.10	810	0.10	0.06
Goa	1163	0.15	1195	0.14	0.30
Maharashtra	2090	0.27	2735	0.32	3.03
Odisha	1141	0.15	3720	0.44	14.03
West Bengal	810	0.10	1105	0.13	3.51
Andhra Pradesh	600	0.08	740	0.09	2.36
Others	53665	6.89	61580	7.24	1.54
Total	**778400**	**100.00**	**850000**	**100.00**	**0.98**

Note: CAGR – Compound Annual Growth Rate
Source: Indian Rubber Statistics, 2023

Table 3. Relative Share and CAGR of Production of Natural Rubber by Major States in India- 2013-14 to 2022-23

State	2013-14 (Tonnes)	Relative share	2022-23 (Tonnes)	Relative share	CAGR (2022-23 0ver 2013-14)
Kerala	648220	83.75	599375	71.44	-0.87
Tamil Nadu	25000	3.23	23120	2.76	-0.86
Total- Traditional NR growing states	**673220**	**86.98**	**622495**	**74.19**	**-0.87**
Tripura	39000	5.04	89390	10.65	9.65
Assam	20240	2.61	45120	5.38	9.32
Meghalaya	7570	0.98	11425	1.36	4.68
Karnataka	35230	4.55	50330	6.00	4.04
Others	5380	0.70	20240	2.41	15.86
Total	**774000**	**100.00**	**839000**	**100.00**	**0.90**

Note: CAGR – Compound Annual Growth Rate
Source: Indian Rubber Statistics, 2023

Table 4. NR Yield in Kerala and India (Kg/ha)

Year	Kerala	India	Yield Difference (Col. 2. minus Col.3)
1	2	3	4
1979-80	764	771	-7
1980-81	780	788	-8
1981-82	770	779	-9
1982-83	828	830	-2
1983-84	864	857	7
1984-85	890	886	4
1985-86	897	898	-1
1986-87	924	926	-2
1987-88	942	944	-2
1988-89	967	974	-7
1989-90	1025	1029	-4
1990-91	1079	1029	50
1991-92	1139	1130	9
1992-93	1203	1191	12
1993-94	1304	1285	19
1994-95	1389	1362	27
1995-96	1443	1422	21
1996-97	1529	1503	26
1997-98	1583	1549	34
1998-99	1599	1569	30
1999-2000	1612	1576	36
2000-21	1612	1576	36
2001-02	1612	1576	36
2002-03	1635	1592	43
2003-04	1715	1663	52
2004-05	1765	1705	60
2005-06	1865	1796	69
2006-07	1960	1876	84
2007-08	1876	1799	77
2008-09	1948	1867	81
2009-10	1851	1775	76
2010-11	1896	1806	90
2011-12	1939	1841	98
2012-13	1903	1813	90
2013-14	1695	1629	66
2014-15	1474	1443	31
2015-16	1480	1437	43
2016-17	1629	1553	76
2017-18	1553	1458	95
2018-19	1549	1453	96
2019-20	1559	1459	100
2020-21	1534	1442	92
2021-22	1565	1472	93
2022-23	1570	1482	88

Source: Indian Rubber Statistics, various issues

Table 5. NR Yield and CAGR by Major States in India- 2013-14 to 2022-23

State	2013-14 (Kg/ha)	2022-23 (Kg/ha)	CAGR (2022-23 0ver 2013-14)
Kerala	1695	1570	-0.76
Tamil Nadu	1645	1515	-0.82
Tripura	1227	1342	0.90
Assam	1223	1240	0.14
Meghalaya	1165	1137	-0.24
Karnataka	1542	1338	-1.41
Total	1629	1482	-0.94

Note: CAGR – Compound Annual Growth Rate
Source: Indian Rubber Statistics, 2023

Table 6. Cost of Production of NR by States 2021-22

State	Daily Tapping System Rs per Kg (S2/d1)	Alternative Day Tapping System Rs per Kg (S2/D2)	Tapping once in three days (Rs /kg) (S2 / d3)
Kerala	214.07	182.60	172.89
Tamil Nadu	N.A	174.03	163.94
Karnataka	N.A	N.A	166.32
Tripura	Nil	162.67	156.27
Assam	Nil	155.33	149.48
Meghalaya	Nil	159.60	168.60
Nagaland	Nil	Nil	219.37
Odisha	Nil	Nil	157.10

Note: Rubber trees can be tapped under different systems. Tapping half of the tree circumference daily is commonly followed by marginal farmers who possess little alternative source of other income. A commonly practised system of tapping is alternative days tapping (S2/d2). In the last productive phase of the tree, marginal and small farmers often follow daily tapping (S2/d1). Tapping once in three days (S2/ d3) is rarely adopted by farmers.

Source: Extracted from the Rubber Board website, accessed on 10.02.2024

Table 7. NR Price in India and International Market- Rs/kg

Year	Domestic price Grade 4	International price Grade 3	Ratio of Indian price to international price
1979-80	10.24	10.11	1.01
1980-81	12.42	10.83	1.15
1981-82	14.23	8.72	1.63
1982-83	14.73	7.39	1.99
1983-84	16.72	10.42	1.60
1984-85	16.89	10.4	1.62
1985-86	17.32	8.9	1.95
1986-87	16.6	9.88	1.68
1987-88	17.91	12.17	1.47
1988-89	18.15	16	1.13
1989-90	21.31	14.82	1.44
1990-91	21.29	14.25	1.49
1991-92	21.41	17.96	1.19
1992-93	25.5	24.57	1.04
1993-94	25.69	25.38	1.01
1994-95	36.38	34.55	1.05
1995-96	52.04	50.3	1.03
1996-97	49.01	47.64	1.03
1997-98	35.08	36.14	0.97
1998-99	29.94	28.84	1.04
1999-2000	30.99	26.44	1.17
2000-21	30.36	30.07	1.01
2001-02	32.28	27.32	1.18
2002-03	39.19	36.96	1.06
2003-04	50.4	51.01	0.99
2004-05	55.71	58.33	0.96
2005-06	66.99	65.73	1.02
2006-07	92.04	95.1	0.97
2007-08	90.85	94.49	0.96
2008-09	101.12	112.55	0.90
2009-10	114.98	93.17	1.23
2010-11	190.03	166.94	1.14
2011-12	208.05	225.2	0.92
2012-13	176.82	181.86	0.97
2013-14	166.02	163.22	1.02
2014-15	132.57	121.56	1.09
2015-16	113.06	102	1.11
2016-17	135.49	111	1.22
2017-18	129.80	125.87	1.03
2018-19	125.95	107.17	1.18
2019-20	135.22	117.06	1.16
2020-21	141.85	129	1.10
2021-22	171.01	150.23	1.14
2022-23	156.52	145.15	1.08

Note: 1. The RSS Grade 4 in India is comparable to RSS Grade 3 in the international market.

2. The Kottayam price represents the Indian price and the Bangkok price is the international price.

Source: Indian Rubber Statistics, Relevant Issues.

Table 8. Kerala Government Interventions in the NR Market (Rubber Production Incentive Scheme)

Announcement	Budget Allocation	Month & Year	Outcome
Rs 100 crore will be spent from the Price Stabilisation Fund of the Central Government- Announced by the CM of Kerala	100 crore	28th January 2014 Announced in the Kerala State Assembly-	The Scheme was not effectively implemented.
2014 Budget-Kerala Government will purchase NR directly from farmers @ Rs 171/Kg. The market price was Rs 147/kg	10 crore	2014 February	Rubber Mark, Market FED, and RPSs were assigned the responsibility of procurement.
Increase in the support price of NR by Rs 5/kg and procure NR from farmers @ of Rs 176/kg	No amount was specified	2014 October Cabinet meeting	The scheme was not implemented.
NR will be procured from the market by paying Rs130/kg(more than the international price)	Waived Sales tax of Rs 50 crore	2014 December 18	Tyre manufacturers benefitted as the NR was exempted from the sales tax.
Price Stabilisation Fund for NR-20000 MT of NR will be procured @ of Rs 150/kg vs Rs 133/kg market price	Rs 300 crore	2015 March 13 Budget Announcement	Scheme Implemented.
Continuation of the Scheme till this date Support price Rs 160/kg	Rs 500 crore Every budget after 2016	2016 March	Effectively implemented. The difference between the market price and MSP is assured by the State Government price (Rs 170/kg).
Support price Rs 170/kg	Rs 500 crore budget allocation	2021 January 15 Budget Speech.	Scheme Implemented.
Support price Rs 180/kg	Rs 600* crore budget allocation	2024 February 5 Budget Speech. With effect from April 1 2024	The Scheme is being implemented

Note: *Kerala Budget 2023-24, Budget Speech February 3, 2023.
Source: Budget documents for relevant years

Table 9. Trends in Import and Export of NR

Year	Import (tonnes)	Export (tonnes)	Production (tonnes)	Consumption (tonnes)	Import as % of Consumption	Export as % of production
1979-80	32200	0	257500	165245	19.49	0
1980-81	9250	0	278000	173630	5.33	0
1981-82	42750	0	296000	188420	22.69	0
1982-83	33401	0	313000	195545	17.08	0
1983-84	35940	0	332600	209480	17.16	0
1984-85	37461	0	350600	217510	17.22	0
1985-86	41431	0	369400	237440	17.45	0
1986-87	45356	0	384900	257305	17.63	0
1987-88	53685	0	357000	287480	18.67	0
1988-89	59835	0	358000	313830	19.07	0
1989-90	44445	0	360000	341840	13.00	0
1990-91	49013	0	360000	364310	**(16.52%)** 13.45	0
1991-92	15070	5834	370000	380150	3.96	1.58
1992-93	17884	5999	499400	414105	4.32	1.20
1993-94	19940	186	505000	450480	4.43	0.04
1994-95	8093	1961	515600	485850	1.67	0.38
1995-96	51635	1130	524000	525465	9.83	0.22
1996-97	19770	1598	533300	561765	3.52	0.30
1997-98	32070	1415	544500	571820	5.61	0.26
1998-99	29534	1840	553000	591545	4.99	0.33
1999-2000	20213	5989	558600	628110	3.22	1.07
2000-21	8970	13356	559100	631475	1.42	2.39
2001-02	49769	6995	561600	638210	7.80	1.25
2002-03	26217	55311	523000	695425	3.77	10.58
2003-04	44199	75905	571100	719600	6.14	13.29
2004-05	72835	46150	580400	755405	9.64	7.95
2005-06	45285	73830	591100	801110	5.65	12.49
2006-07	89799	56545	605000	820305	10.95	9.35
2007-08	86394	60353	610800	861455	10.03	9.88
2008-09	77762	46926	661980	871720	**(5.88%)** 8.92	7.09
2009-10	177130	25090	686515	930565	19.03	3.65
2010-11	190692	29851	711560	947715	20.12	4.20
2011-12	214433	27145	734780	964415	22.23	3.69
2012-13	217364	30594	759000	972705	22.35	4.03
2013-14	360263	5398	774000	981520	36.70	0.70
2014-15	442130	1002	645000	1020910	43.31	0.16
2015-16	458374	865	562000	994415	46.09	0.15
2016-17	426188	20920	691000	1044075	40.82	3.03
2017-18	469760	5072	694000	1112210	42.24	0.73
2018-19	582351	4551	651000	1211940	48.05	0.70
2019-20	457223	12872	712000	1134120	40.32	1.81
2020-21	410478	11343	715000	1096410	37.44	1.59
2021-22	546369	3560	775000	1238000	44.13	0.46
2022-23	528677	3700	839000	1350000	**(35.86%)** 39.16	0.44

Note: 1. The RSS 4 in India is comparable to RSS 3 in the international market.
2. The Kottayam price represents the Indian price and the Bangkok price is the international price.
3. Figures in the parenthesis show the average for the period.

Source: Indian Rubber Statistics, Relevant Issues.

Table 10. Import Duty Structure of Raw Materials used in Tyre and tube manufacturing

Items	Customs duty (%)	GST (from July 2017) (%)	WTO Bound Rate (%)
Natural Rubber	25% or Rs 30/Kg (whichever is lower)	18	25
Poly Butadiene Rubber (PBR)	10	18	40
Styrene Butadiene Rubber (SBR)	10	18	40
Butyl Rubber	10	18	40
Nylon Tyre Cord Fabric (NTCF)	20	12	12
Steel Tyre Cord	15	18	40
Carbon Black	7.50	18	40
Reclaimed/Retarded Rubber	10	18	40
Rubber Chemicals	7.50	18	40
Bead Wire	15	18	40

Source: ATMA, 2024

Table 11. Price of NR Reported in Malayalam Newspaper, April 13, 2024

Market Rubber Board Price	NR Grade	Price Rs / 100 kg
Kottayam	RSS 4	18400
	RSS 5	18100
	ISNR 20	16000
	60% Latex	13210
Kochi	RSS 4	18400
	RSS 5	18100
	Scrap rubber	11600
Dealers Price (Kottayam)	RSS 4	17900
	RSS 5	17600
	ISS	15750 - 15800
	Scrap rubber	10200
Rubber Marketing Society, Nedumangad	Scrap rubber	12800 - 17800
		10500
Rubber Marketing Society, Venjaramoodu	Grade not specified	16900

Source: Malayala Manorama, April 13, 2024, Page 13, Edition: Thiruvananthapuram.

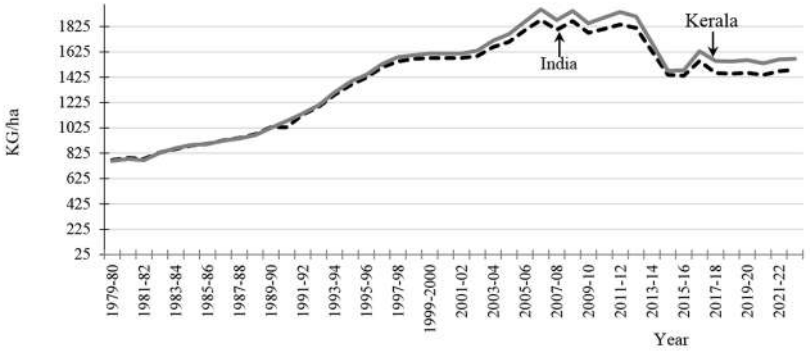
Table 12. A Comparison of Domestic Price of NR with international price, April 3 to 18, 2024 (Rs)

Grade	RSS 4			RSS 3	Derivations of Rubber board price from international price
	Dealer's Price	Kottayam (Kerala)	Agartala (Tripura)	International Market	
April 17,2024	178	183.5	176	198.62	15.12
April 16,2024	178.5	183.5	-	-	-
April 14, 2024	178.5	183.5	177	-	-
April 12,2024	179	184	-	-	-
April 11,2024	179	-	-	-	-
April 10, 2024	179	184	-	204.76	-
April 9, 2024	179	184	177	205.78	21.78
April 7, 2024	179	184	177	207.3	23.3
April 6, 2024	180	185	-	-	-
April 5, 2024	180	185	177	207.25	22.5
April 3, 2024	179	184	-	-	

Note: "-" this symbol in the table 3 denotes the price moments which is not reported

Source: Malayala Manorama Daily, Thiruvananthapuram edition- April 3, 2024 to April 17,2024

Graph 1. NR Productivity - India and Kerala



Source: Rubber Board, Kottayam - Relevant Years

Notes

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3. A variant of the present Rubber Production Incentive Schemes (RPIS) of the Government of Kerala is traceable to the Rubber Price Stabilisation Scheme (RPSS) of the Government of Kerala in 2014-15. The RPSS was introduced against the backdrop of an unprecedented fall in NR prices in the domestic and international markets from its peak in 2011. Under the RPSS, the difference between the Daily Reference Price (DRP) (Bangkok's international price) was fixed at Rs 130/kg for grade 4 NR. If the international price falls below Rs 130/kg of NR in the domestic market, the difference between the domestic and international prices would be compensated to NR dealers, who are expected to purchase NR at Rs 130/kg from farmers. The compensation to NR dealers would be paid out from the RPSF specially created by the government. However, the Scheme was in operation only from 20th December to 31st March 2015. The RPSS could not be effectively implemented for two reasons: (i) there was no special budget provision for the RPSS; (ii) there was a lack of clarity on several aspects of disbursement of the compensation announced to the NR dealers under the scheme. The RPSS was replaced with the RPIS in 2015-16 with a budget allocation of Rs 300 crores for the implementation of the scheme. Under the RPIS, the difference between the DRP, (approved daily market price by the Rubber Board) and the Market Support Price announced by the Government of Kerala, which is defined as Rs 150/kg for grade 4 of NR in the domestic market, will be credited to the bank account of the farmer upon uploading the sale bill by the president of the Rubber Producer Society (RPS) issued by the NR dealer at the village level. The uploaded sale bill has to be duly approved by the field officers of the Rubber Board and the approved bill will be forwarded to the dedicated portal of the Scheme. A farmer having up to five hectares of NR land could register under the scheme online and is entitled to avail benefits for two hectares of tappable area at the productivity rate of 1800/kg per hectare per annum. The Market Support Price for NR gradually increased from Rs 150/kg in 2015-16 to Rs 180/kg in 2024-25. Unlike the previous scheme, both grades 4 and 5 can be traded under the RPIS and the amount expended under the scheme from July 2015 to 2019-20 was estimated by the CAG as Rs 1612.49 crores and it touched Rs 2000 crores in 2023-24 (Government of Kerala, 2014; 2015; 2024; Government of India, 2021).

4. The Support Price under the RPIS is defined as the maximum price that the Government of Kerala offered to NR farmers in Kerala. The support price is different from the Minimum Support Price of the Ministry of Agriculture and Farmers Welfare, Government of India.

5. Natural Rubber plantations are classified into holdings and estates. A rubber area with an area of less than 10 hectares of land is classified as holdings or small holdings. The area could be either contiguous or non-contiguous (Rubber Board, 2023). Natural Rubber Plantation having an area of 10 hectares or above is categorised as Estate or Estate Sector. Till 2013-14, the Rubber Board furnished disaggregated data of units and areas with less than 2 hectares and above under the small holdings sector. The size class-wise data were sourced from the Census of Rubber Holdings conducted by the Rubber Board. As the staff strength of commodity boards was cut down, the data-gathering system has also been affected. For the last decade, the availability of several important data published in the annual publication of the Rubber Board, Indian Rubber Statistics, has been stopped.

6. It may be noted that the Kerala and Kanyakumari districts of Tamil Nadu have the ideal agro-climatic conditions for NR cultivation in India. The ideal agro-climatic conditions for NR cultivation require an average annual rainfall of 2000 to 3000 mm, evenly distributed without any marked dry season. The number of rainy days required for the ideal growth of rubber trees is 125 to 150 days per annum. Evenly distributed rain with a maximum temperature between 29°C and 34°C is another requirement. The minimum temperature should not be below 20°C and a monthly mean of 25 - 28°C. High atmospheric humidity of the order of 80% with bright sunshine amounting to about 2000 h per annum at the rate of 6 h per day throughout the year are essential requisite climatic conditions for the ideal growth of NR. Rubber trees are characterised by thick and wide canopy density and therefore strong winds would fall the trees. The absence of a strong wind is another required characteristic

for NR cultivation. Further, in the North Eastern states, the drought period extends up to five months in a year. In the traditional tract for NR cultivation, the ideal soil characteristics require a minimum depth of one metre without any intervening hardpan or impenetrable layer. The water table should also be well below one metre so that at least one metre of soil with good aeration, essential for root penetration is available. The soil type in the traditional track is the most ideal for NR cultivation as it consists of laterite and lateritic types. On the contrary, soil types in the North Eastern tract are sedimentary and non-lateritic red and alluvial (Rubber Grower's Companion, 2013, The Rubber Board). Such agro-climatic conditions exist only in the traditional rubber track (Kerala and Tamil Nadu) and not in the North East. In the traditional rubber tract, annual rainfall varies from about 2000-4500 mm. The southwest and North East monsoons almost equally while the northern states receive only southwest monsoons.

7. The Government of India (Ministry of Commerce and Industry) and ATMA have been jointly implementing a massive programme to extend the area under NR cultivation in the North East under the title Rubber Mitra with an investment from ATMA and the Ministry of Commerce. The Rubber Mitra scheme intends to expand NR cultivation in the North Eastern states to an extent of five lakh hectares by 2025. The total investment envisaged for the NR in the non-traditional area is Rs 6000 crores, of which Rs 1100 is invested by ATMA on behalf of major tyre companies in the country. The programme aims at expanding NR cultivation in the North Eastern States. The purpose of area expansion of NR in the North East region is intended to shift NR cultivation from a high-wage zone like Kerala to a low-wage zone like Tripura. The cost of production of NR under a comparable tapping system in Tripura is significantly lower than in Kerala (Table 6).

8. Farm gate price is the price received by farmers from the terminal market of the product.

9. In a recent survey (April 2024) conducted in the heartland of NR cultivation in Kottayam district (Chirakkadavu Gram Panchayat), the Secretary of the Chirakkadavu Model Rubber Producers Society reported that an acre of NR plantation could be sold for Rs 35-50 lakhs during 2009-12 period in the Grampanchayat. The present scenario is deplorable because there has been no buyer for the NR plantation or plain land in the Gram Panchayat. The maximum price of an acre of land with road connectivity is Rs 15-20 lakhs. For this reason, farmers have kept their land uncultivated and it has become a safe shelter for wild animals.

10. Letter from MRF

MRF Limited, Rubber Purchase Depot, Stadium Road, Kottayam 686 001
Tel : 0481 - 2562846 / 2565808
CIN : L25111TN1960PLC004306
GSTIN : 32AAACM4154G1ZW

1122/60/39

21.07.2022

M/s.Sojan Rubbers
Pravithanam P.O
Pala
Pin:686651

Dear Mr. Sojan,

Sub: Cancellation of dealership

This is with reference to our letter dated 4th July 2022 and several discussions we have had over phone and in person.

It may be noted that you were not able to complete supplies against our order within the stipulated time. The deliveries were not completed within the deadline of 6th July 2022.
Also it was observed that you were continuing to manipulate the NR market using the name of MRF which cannot be tolerated under any circumstances as communicated earlier. This has spoiled our reputation in the market.

Hence we are now forced to cancel your dealership with immediate effect.

Thanking you,

Yours faithfully,
For MRF Limited

Anoop John Thomas
Deputy Manager Purchase

Registered Office : No. 114, Greams Road, Chennai - 600 006.
Website: www.mrftyres.com

References

Amin, S. (2018). Modern Imperialism, Monopoly Finance Capital, and Marx's Law of Value. Monthly Review Press.

ATMA. (2024). *Indian Tyre Industry: An Overview.* Automotive Tyre Manufacturers' Association.

Ceat profit falls to ₹109 crore over higher costs. (2024, May 3). *Business Standard*, Edition: New Delhi. p:2.

Dick, A. R. (2004). If Cartels Were Legal, When Would Firms Fix Prices? In P. Z. Grossman (Ed.), *How Cartels Endure and How They Fail: Studies of Industrial Collusion.* Edward Elgar.

Dowd, D. (2009). *Inequality and the Global Economic Crisis.* Pluto Press.
Foster, J. B., McChesney, R. W., & Jonna, R. J. (2011). Monopoly and Competition in Twenty-First Century Capitalism. *Monthly Review*, 62(11).

Government of India (2021). Report of the Comptroller and Auditor General of India for the year ended March 2020, Report No. 16 of 2021, Union Government (Economic & Service Ministries-Civil).

Government of Kerala (2024). Rubber Production Incentive Scheme - Enhancement of Support Price of Rubber - Orders issued, G.O.(P) No. 20/2024/Fin, dated: 15-03-2024, Finance Department.

-- (2015). Implementation of Rubber Production Incentive Scheme for providing support to Rubber Farmers Announced in Budget Speech 2015-16 – Guidelines - Orders issued, G.O.(P) No. 269/2015/Fin, dated: 25-07-2015, Finance Department.

-- (2014). Formulation of Rubber Price Stabilization Scheme - Procedure for the implementation of the Scheme - Prescribed-Orders issued, G.O.(P) No. 207/2014/TD, dated: 22-12-2014, Taxes Department.

-- . Budget Documents for various years. Department of Finance.

Harilal, K.N. (2010). ASEAN-India Free Trade Area: Noises of Dissent from Deep South. *Occasional Paper No. 2010:01*, Kerala State Planning Board.

Jensen-Eriksen, N. (2013). A Potentially Crucial Advantage: Export Cartels as a Source of Power for Weak Nations. *Revue Économique*, 64(6), 1085–1104.

Kenyon, P. (1979). Pricing. In A. S. Eichner (Ed.), *A Guide to Post-Keynesian Economics* (pp. 34–45). M. E. Sharpe, Inc.

Kreps, T. J. (1945). Cartels, a Phase of Business Haute Politique. The American Economic Review, 35(2), 297–311.

Krishna, R. (1962). A Note on the Elasticity of the Marketable Surplus of a Subsistence Crop. *Indian Journal of Agricultural Economics*, 17(3), 79–84.

Lenin, V. I. (1917). *Imperialism, the Highest Stage of Capitalism.* Petrograd.

Mani, S. (1993). *Industrial Concentration and Economic Behaviour: Case of Indian Tyre Industry.* Centre for Development Studies.

Mellor, J. W. (1966). *The Economics of Agricultural Development.* Cornell University Press.

Mohanakumar, S. (2012). Plantation Crops under Trade Liberalisation Analysis in the Context of Indo-ASEAN FTA. *Indian Journal of Agricultural Economics,* 67(1), 1–18.

Mohanakumar, S., & Chandy, B. (2005). Investment and Employment in Rubber Smallholdings: Impact of Market Uncertainty in the Reforms Phase. *Economic & Political Weekly,* 40(46), 4850–4856.

MRF Profit drops as rubber price jump. (2024, May 4). *Business Standard*, Edition: New Delhi. p:2.

MRF's FY24 net vaults 170 % to cross 2,000 cr on higher sales, low input costs. (2024, May 4). *Business Line*, Edition: New Delhi. p:2.

Narain, D. (1965). *The Impact of Price Movements on Areas under Selected Crops in India 1900-1939.* Cambridge University Press.

Schroter, H. G. (2013). Cartels Revisited: An Overview on Fresh Questions, New Methods, and Surprising Results. *Revue Économique,* 64(6), 989–1010.

Schultz, T. W. (1932). Diminishing Returns in View of Progress in Agricultural Production. *Journal of Farm Economics,* 14(4), 640–649.

Sharma, K. D. (2023). The story of a Rs 1,788 crore fine: Tyre makers, cartelisation and calculation errors. The Economic Times. https://economictimes.indiatimes.com/industry/auto/tyres/the-story-of-a-rs-1788-crore-fine-tyre-makers-cartelisation-and-calculation-errors/articleshow/104011105.cms?from=mdr

The Rubber Board. (2023). *Indian Rubber Statistics, Vol 44.*

Thomas, K. K., & Panikkar, A. O. N. (2000). Indian Rubber Plantation Industry: Genesis and Development. In P. J. George & C. K. Jacob (Eds.), Natural Rubber: Agromanagement and crop processing (pp. 1–19). Rubber Research Institute of India.

Tyagi, D. S. (1974). *Farmer's Response to Agricultural Prices in India: A Study in Decision Making.* Heritage Publishers.

Trade Data. (2024, April 3 to April 17). *Malayala Manorama,*. Edition: Thiruvananthapuram.

The Rubber Board. (n.d.). Retrieved February 10, 2024, from http://rubberboard.org.in/public

Villatt, N. J. (2023). Leeching on the Farmers, Squeezing the Consumers & Ruling the Industry: A Case Study of Tyre Cartels by Monopoly Capital. National Seminar on the Crisis of Natural Rubber Sector in India. September 7-8, Organised by Public Policy Research Institute, Thiruvananthapuram & P. Sundarayya Memorial Trust, New Delhi.