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GLOBAL TRADE AND TARIFF POLICY ON RUBBER AND RUBBER PRODUCTS UNDER THE WTO REGIME

A Preliminary Assessment

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Introduction

The formal launching of the WTO Agreement on January 1, 1995, marked a distinct departure from its predecessor, *viz.*, General Agreement on Tariffs and Trade (GATT) in many important respects. However, functionally, the two major changes have been: (i) a more comprehensive coverage of goods and services under the new multilateral trading system compared to the focus of GATT on the traditional agenda of tariff negotiations on industrial products during its 47 years of existence; and (ii) a concerted attempt to harmonise the basic rules, procedures and provisions on the trade for enforcement. In effect, inclusion of new disciplines such as agriculture, trade-related intellectual property rights, trade-related investment measures, trade in services, government procurement, competition policy, trade policy review, etc. and a legal framework for implementing the perceived agenda in the WTO Agreement, have far-reaching implications on all commodity and non-commodity circuits as well as national and international regulations. At a macro level, a corollary of the observed changes has been an overtly articulated attempt to harmonise the basic rules and procedures of economic, political, social and environmental protection so as to ensure market freedom and efficiency. Technically, the professed objective of the ongoing integration process is to reform a highly distorted world trade characterised by direct and indirect subsidies resulting in a deceptive comparative advantage and inefficient use of resources. However, in order to examine the net effect of the integration process on individual products and to assess the comparative status and performance of countries/regions on the same, a comprehensive understanding of the structural and sectoral compositions of global trade in concerned products and tariff policy related issues are essential pre-requisites.

Objectives

In this conceptual background, a preliminary assessment of global trade and tariff policy on rubber and rubber products falling under Chapter 40 of the Harmonised Commodity Description and Coding System (HS) is attempted with the following objectives:

- (i) To understand the structural and sectoral compositions of world exports in rubber and rubber products.
- (ii) To examine the extent of intra-natural rubber (NR) producer trade in selected rubber and rubber products among the major producing countries.
- (iii) To analyse the tariff policy on selected rubber and rubber products in the major NR producing and industrially advanced countries.
- (iv) To explore the scope for establishing a sector-specific trading bloc so as to maximise the share of NR producing countries in the net value added beyond the NR production sector under the WTO mandated trade regime based on the findings of the study.

Database and methodology

In order to capture the structural and sectoral compositions of total value of world exports of rubber and rubber products, the products are condensed into three broad groups, *viz.*, NR, synthetic and reclaimed rubber and rubber products, based on the Standard International Trade Classification (SITC) of the United Nations (UN). The reference year of the relevant trade data culled from the website of United Nations Conference on Trade and Development (UNCTAD) is 2000 as the latest available information on SITC commodity classification of the trade data at the three digit level are only up to the reference year. To understand the status of value added rubber products *vis-à-vis* various forms of rubber in the total value of world exports of rubber and rubber products, the respective values given for the three divisions of rubber products under SITC codes, *viz.*, 621,

625 and 628 are added up to represent the rubber products at the aggregate level. However, to analyse the disaggregate level composition of total value of world exports of rubber products, this composite product group is divided into two broad sub-groups, *viz.*, tyres and allied products and non-tyre products. For the analysis of intra-NR producer trade and tariff policy on rubber and rubber products, the status in the case of three major forms of processed NR and six selected rubber products in five major NR producing countries and three industrially advanced economies/groups were examined. The extent of intra-NR producer trade is assessed by estimating the combined mean share for each country which is the weighted average share of all NR producing countries in the total value of imports of the nine selected products. The analysis of the tariff policy was based on a comparative assessment of the relevant bound rates of duty and mean MFN tariffs (basic customs duty) prevailing in the eight countries. The three selected processed forms of NR are NR latex, smoked sheets and technically specified natural rubber (TSNR). The six selected rubber products are car tyres, tyres used on buses and lorries, bicycle tyres, conveyor belts and belting reinforced only with metal, sheath contraceptives and surgical gloves. The selection of the nine products was guided by their relative shares in the total value of world exports of rubber and rubber products as well as comparative/location advantages in manufacturing the same across NR producing countries and industrially advanced economies¹. For the analysis of intra-NR producer trade and tariff policy, the latest available data at the six digit level of the HS system, provided in the websites of UNCTAD and WTO, were used. The databases for all the tables contained in this report except Table 8 were UNCTAD and WTO websites. The latest data on India's MFN tariffs were accessed from the website of the Ministry of Commerce and Industry, Government of India. The five major NR producing countries selected are Thailand, Indonesia, India, Malaysia and China which together controlled 81.39 per cent of world NR production and 36.81 per cent of its consumption in the year 2002 (IRSG, 2003). The three selected NR consuming economies/groups are the United States of America (USA), European

Union (EU) and Japan with a combined share of 38.76 per cent in total world NR consumption during the year 2002. In the same year, these three industrially advanced economies accounted for 68.37 per cent of the total NR consumption outside the NR producing countries (*ibid*).

Structural dimensions of the exports

The total value of world exports of rubber and rubber products was US\$ 53.40 billion during the year 2000. Although the share of the total value of world exports of rubber and rubber products was only 0.87 per cent of the total value of world commodity exports, an analysis of the structural dimensions of the exports assumes importance from the angle of NR producing countries for two important reasons: (i) to understand the size of the export markets for rubber and rubber products and the relative shares of the major players; and (ii) to assess the progress in capitalising the resource base as a springboard for exports of value added rubber products in the era of globalisation. Table 1 depicts the structural dimensions of total value of world exports of rubber and rubber products.

The analysis of the structural dimensions of total value of world exports of rubber and rubber products revealed the following: (i) at the aggregate level, the share of the value of exports from developed countries in world exports of rubber and rubber products was 69 per cent compared to the share of developing countries (26.14%) and other countries/transition economies (4.86%); and (ii) the continued dominance of the developed countries in world exports of rubber and rubber products has been sustained by the control over the exports of rubber products (74.30%) and synthetic and reclaimed rubber (72.61%). Conversely, the developing countries (including all major NR producing countries) control 96.07 per cent of the total value of world exports of NR, 20.30 per cent of synthetic and reclaimed rubber exports and 20.72 per cent of rubber products exports (Table 1). Therefore, in spite of a historical control over the production and

Table 1. Structural dimensions of rubber and rubber products exports (2000)

Product group	Total value of world exports (US\$ '000)	Value (US\$ '000) and share (%) in world exports		
		Developed countries	Developing countries	Others
Natural rubber & gums	3,872,637 (100.00)	148,872 (3.84)	3,720,136 (96.07)	3,629 (0.09)
Synthetic & reclaimed rubber	6,010,747 (100.00)	4,364,154 (72.61)	1,220,585 (20.30)	426,008 (7.09)
Rubber products	43,518,663 (100.00)	32,333,511 (74.30)	9,018,098 (20.72)	2,167,054 (4.98)
Total	53,402,047 (100.00)	36,846,537 (69.00)	13,958,819 (26.14)	2,596,691 (4.86)

- Notes: 1. Data given are based on the three digit level SITC classification.
2. Figures in parentheses indicate respective share of each region in the total value of world exports of each product group.

exports of NR during the past one century, the developing countries could not make a serious dent on the higher value added segment of the rubber products exports. To a certain extent, the observed asymmetries in world exports of rubber and rubber products are closely related to the structure of world rubber consumption dominated by synthetic rubber since the 1960s (George, 1987). The emergence of a vertically integrated structure of world petrochemical-synthetic rubber-rubber products industries in the post-world war phase with oligopolistic features and interlocking of intra-firm commercial interests facilitated captive consumption of synthetic rubber in the developed countries (Barlow *et al.*, 1994). These developments had serious consequences not only on the prospects of NR consumption *vis-à-vis* synthetic rubber but also affected the development of an export-oriented rubber products manufacturing base in the major NR producing countries. Therefore, it would be plausible to presume that the evolutionary dynamics of world rubber economy since the

post-war phase has a strong bearing on the structural underpinnings of world rubber and rubber products exports. Nevertheless, the persistent polarisation of the concentration of less value added exports from the developing countries and value added exports from the developed countries underlines the relevance of an analysis on the sectoral composition of the exports. Table 2 shows the sectoral composition of the total value of world exports of rubber and rubber products as well as from the three regions.

Table 2. Sectoral composition of rubber and rubber products exports (2000)

Product group	Composition of the total value of exports (%)			
	World	Developed countries	Developing countries	Others
Natural rubber & gums	7.25	0.40	26.65	0.14
Synthetic & reclaimed rubber	11.26	11.84	8.74	16.41
Rubber products	81.49	87.76	64.61	83.45
Total	100.00	100.00	100.00	100.00

At the aggregate level, analysis of the sectoral composition of total value of world exports of rubber and rubber products showed the prominence of rubber products with a relative share of 81.49 per cent (Table 2) compared to synthetic and reclaimed rubber (11.26%) and NR (7.25%). Therefore, from a policy perspective the rubber products segment with a total value of exports of US\$43.52 billion represents the fulcrum of value addition and growth dynamics. However, while the share of value added rubber products segment in both developed (87.76 %) and other countries (83.45 %) was higher than the share of this product group in the total value of world exports (81.49 %), the corresponding share in the total value of exports from

developing countries was only 64.61 per cent. Moreover, the explicit dominance of the developed countries in the total value of world exports of rubber products (74.30%) over the decades underlines the stark point that efforts to tap forward linkages of the NR production sector and resource base induced locational advantages in the NR producing countries as a whole remain incomplete with the major exceptions of China and India².

The disaggregate level analysis on the composition of the total value of world exports of the dominant rubber products sub-sector during the year 2000 highlighted a high degree of concentration by the developed countries in the cases of both tyres and allied products and non-tyre products. Table 3 illustrates the structural concentration of world rubber products exports by the developed countries.

Table 3. Concentration of world rubber products exports (2000)

Product group	Total value of world exports (US\$ '000)	Value (US\$ '000) and share (%) in rubber products exports		
		Developed countries	Developing countries	Others
Tyres & allied products	24,989,877 (100.00)	17,523,940 (70.12)	6,112,893 (24.46)	1,353,044 (5.42)
Non-tyre products	18,528,786 (100.00)	14,809,571 (79.93)	2,905,205 (15.68)	814,010 (4.39)
Total	43,518,663 (100.00)	32,333,511 (74.30)	9,018,098 (20.72)	2,167,054 (4.98)

Note: Figures in parentheses represent the relative share of each region in the total value of world exports of the two product groups.

As is evident from Table 3, not only the developed countries controlled 74.30 per cent of total value of world exports of rubber products but also had explicit dominance in the exports of both tyres and allied products (70.12%) and non-tyre products (79.93%).

In a comparative sense, there has been a substantial erosion in the share of the developed countries during the decade 1990-2000. The extent of decline in the shares was more pronounced in the case of tyres and allied products (13.23 percentage points) compared to non-tyre products (8.28 percentage points) during the decade. The cumulative effect of the observed decline in the relative shares of developed countries both in the exports of tyres and allied products and non-tyre products reflected in a net shrinkage in the concentration of total value of world exports of rubber products to the extent of 10.81 percentage points. From the angle of the developing countries, the comparative gains in the shares were more explicit in the case of tyres and allied products (9.33 percentage points) and less impressive in the non-tyre products segment (4.92 percentage points). While the influence of growing geographical diversification of automotive tyre manufacturing base by transnational corporations (TNCs) on the notable gains of developing countries in the tyres and allied products segment is beyond the scope of this paper, a comparatively higher share of developed countries in the total value of world exports of non-tyre products *vis-à-vis* tyres and allied products deserves further explanation. The popular policy perceptions tend to focus on the comparative advantages of NR producing countries in the manufacturing of resource-intensive non-tyre products compared to the dominant automotive tyres and allied products manufacturing controlled by a few TNCs based in the developed countries (Mohanakumar and George, 2001). Nevertheless, developed countries were also successful in sustaining the control over non-tyre products, in spite of the boom in the manufacturing of latex-based rubber products in the major NR producing countries since the mid 1980s. Apparently, the emerging scenario highlights the point that focusing on the manufacturing of latex-based rubber products is inadequate to

impart the required stimuli for exploiting the inherent locational advantages in the production of resource-intensive rubber products as world NR consumption is dominated by dry forms of NR with an estimated share of around 87 per cent (IRSG, 2003). Therefore, the dominance of developed countries is rooted in the large scale export-oriented production of not only tyres and allied products but also non-tyre products based on dry forms of NR.

Another important feature of total value of world rubber products exports is the composition of the exports from the selected regions. Table 4 summarises the composition of the rubber products exports.

Table 4. Sectoral composition of rubber products exports (2000)

Product group	Composition of the total value of exports (%)			
	World	Developed countries	Developing countries	Others
Tyres & allied products	57.42	54.20	67.78	62.44
Non-tyre products	42.58	45.80	32.22	37.56
Total	100.00	100.00	100.00	100.00

Table 4 is illustrative of the historically rooted pre-eminence of tyres and allied products sub-sector with a share of 57.42 per cent in the total value of world exports of rubber products. However, analysis of the composition of the value of rubber products exports from the three regions revealed a more balanced status of the developed countries *vis-à-vis* the developing countries and other countries as is evident from the shares of tyres and allied products (54.20 %) and non-tyre products (45.80 %) in the total value of rubber products exports from the region. The composition of the value of rubber products exports from developing countries indicates the dominance of tyres

and allied products sub-sector (67.78 %) compared to the share of non-tyre products (32.22 %). The two important developments in the composition of the total value of the exports during the decade 1990-2000 had been a marked increase in the share of non-tyre products both in the total value of world exports of rubber products (6.47 percentage points) and in the total value of rubber products exports from the developed countries (8.37 percentage points). Conversely, changes in the composition of the total value of rubber products exports from developing countries had been less pronounced in spite of a marginal increase in the share of non-tyre products.

Though apparently the observed value based composition of rubber products exports from developing countries is reflective of their growing importance in the global manufacturing and exports of the dominant tyres and allied products, the underlying factors facilitating such exports in the context of the growth in the subsidiaries of tyre TNCs in developing countries and intra-firm sales across countries deserve further enquiry. In the case of non-tyre products based on dry forms of rubber, the developed countries have an in-built advantage arising from the positive relationship between the status of general industrial development and the industrial base of the non-tyre products. As the highly advanced general industrial sector in the developed countries with a larger and wider industrial base stimulates effective demand for non-tyre industrial products, the potential for large scale production of the resource-neutral non-tyre products become imperative so as to avail the advantages of scale economies. Very often, permutations on the production and marketing strategies for such products are designed to reap the benefits of scale economies by catering to the global market.

Therefore, conceptually, the resource-neutral non-tyre products enjoy the unique advantage of having the domestic demand-driven export growth and backward linkages with the general industrial sector

in the developed countries compared to a highly focused export-oriented production of latex based products in the major NR producing countries. To surmise, the observations arising from Table 4 reinforce the inferences drawn from Table 3 on the slow progress of developing countries in capitalising the perceived locational advantages in the export-oriented production of non-tyre products.

In this background of a highly skewed trade structure of rubber and rubber products, an analysis of intra-NR producer trade among the five countries in the case of three selected forms of NR and six selected rubber products assumes significance for two important reasons: (i) to understand the extent of intra-NR producer trade in rubber products other than the processed forms of NR; and (ii) to provide useful indications for evolving long-term strategies so as to maximise the share of NR producing countries in the net value added beyond the NR production sector.

Intra-NR producer trade

Though the trade data provided in the UNCTAD database are updated till June, 2002, the reference years of the trade data for the five countries are different. Therefore, instead of focusing on product-wise pattern in intra-NR producer trade, results of the analysis on country-wise intra-NR producer trade for the nine selected products are provided in Table 5. The combined mean share denotes the weighted average share of all NR producing countries in the total value of imports of the selected products for each country. More precisely, the combined mean share estimated for each country is an indicator of the extent of intra-NR producer trade in the case of the nine selected products. The higher the value of combined mean share, the higher the extent of intra-NR producer trade and *vice versa*.

Table 5. Value of imports and the extent of intra-NR producer trade

HS code	Products	Thailand	Indonesia	India	Malaysia	China
4001 10	NR latex whether or not pre-vulcanised	886 (88.71)	8506 (70.30)	3991 (89.94)	146525 (100.00)	52421 (96.76)
4001 21	Smoked sheets	62 (100.00)	7146 (88.50)	3750 (78.14)	58692 (90.11)	265609 (99.34)
4001 22	Technically specified natural rubber	89 (0.00)	771 (67.44)	2519 (100.00)	33012 (99.98)	217882 (98.96)
4010 11	Conveyor belts or belting- reinforced only with metal	570 (73.15)	4484 (0.62)	3633 (0.00)	548 (2.18)	2197 (0.00)
4011 10	Tyres of a kind used on motor cars	16412 (22.72)	7290 (54.61)	3044 (15.19)	16121 (9.96)	7547 (3.63)
4011 20	Tyres of a kind used on buses & lorries	6053 (6.73)	17114 (61.16)	1527 (32.28)	11663 (40.63)	6050 (4.18)
4011 50	Tyres of a kind used on bicycles	359 (81.32)	629 (74.55)	614 (7.32)	1210 (57.59)	8224 (22.31)
4014 10	Sheath contraceptives	2932 (0.10)	1364 (98.59)	179 (20.10)	1704 (85.97)	6737 (62.31)
4015 11	Surgical gloves	618 (99.82)	662 (50.13)	216 (80.08)	981 (1.32)	658 (70.35)
	Total	27981	47966	19473	270456	567325
	Combined mean share (%)	22.57	61.35	51.15	89.09	94.69

Notes: (1) Value of imports are given in thousand US dollars

(2) Figures in parentheses refer to the combined share of all NR producing countries in the total value of imports of the individual products for each country.

(3) The reference year of trade data except for Malaysia (1997) and India (1999) is 2000.

At the aggregate level, Table 5 is illustrative of an explicit divergence among the five major NR producing countries with regard to the total value of imports of the nine selected products, composition of the value of imports and the combined mean share denoting the extent of intra-NR producer trade. China has recorded not only the highest value of imports but also the highest share of intra-NR producer trade followed by Malaysia. On the other extreme, India had the lowest value of imports with a higher share of intra-NR producer trade than that of Thailand. In order to delineate the country-specific features of the trade pattern, it is imperative to focus on the product specific aspects at the disaggregate level.

Thailand's trade pattern is characterised by the lowest level of intra-NR producer trade as the combined mean share of all the NR producing countries in the total value of imports of the nine selected products was only 22.57 per cent. *Prima facie*, the main reason for the observed pattern is that the three product groups, *viz.*, car tyres, tyres for buses and lorries and sheath contraceptives, accounted for more than 90 per cent of the total value of imports of the nine products into Thailand. And the country was primarily dependent on the developed countries for the imports of these three products during the reference year. At the disaggregate level, the most striking feature was the meagre share of NR producing countries in the import of a resource-intensive latex based product like sheath contraceptives (0.10%). During the reference year, Spain alone accounted for 94.71 per cent of the value of Thailand's import of sheath contraceptives. However, the shares of NR producing countries in the value of imports of resource-intensive products such as NR latex, smoked sheets, surgical gloves and bicycle tyres were higher. Another notable feature was a dominant share of NR producing countries in the imports of a comparatively resource-neutral product like conveyor belts and belting reinforced only with metal (73.15%).

In the case of Indonesia, both the total value of imports and the combined mean share (61.35%) of NR producing countries were higher compared to Thailand. The higher combined mean share of Indonesia is indicative of its higher intra-NR producer trade *vis-à-vis* Thailand. At the disaggregate level, a notable feature is that except in the case of conveyor belts and belting, more than 50 per cent of the value of imports of the selected products, including the two forms of automotive tyres, was accounted for by the NR producing countries.

The results of the analysis on the intra-NR producer trade of India were rather unique compared to the other countries. First of all, the total value of imports of the nine products is the lowest among the five countries. Secondly, other than the three forms of processed NR, the share of NR producing countries in India's imports was higher only in the case of surgical gloves (80.08%). Thirdly, it had the second lowest combined mean share (51.15%) which was higher only to that of Thailand. Finally, its composition of imports was more dispersed as a comparable balance was evident in the combined shares of the three forms of NR (52%) and the six rubber products (48%) in the total value of imports.

The total value of imports of the selected products and the extent of intra-NR producer trade of Malaysia (89.09%) were much higher than those of Thailand, Indonesia and India. The obvious reason for the observed pattern is that Malaysia's imports are highly focused towards the three forms of processed NR accounting for more than 88 per cent in the total value of imports. However, in the case of the other two products imported, *viz.*, car tyres and tyres for buses and lorries, the country is more dependent on developed countries. Among the nine products imported, higher dependence of Malaysia on developed countries was observed in the case of the import of a resource-intensive product like surgical gloves (98.68%).

Among the five countries, the total value of imports of the nine products as well as the combined mean share were the highest in the case of China. As in the case of Malaysia, China's imports of the nine products are highly skewed towards the three forms of processed NR accounting for more than 94 per cent in the total value of imports. Except in the cases of two resource-intensive products, *viz.*, sheath contraceptives and surgical gloves, the country was highly dependent on developed countries as well as Taiwan Province for the imports ranging from 100 per cent (conveyor belts and belting) to 77.69 per cent (bicycle tyres).

In sum, the analysis of the extent of intra-NR producer trade as reflected by the combined mean share of the five countries in the case of the nine products revealed contrasting scenarios. While there was an explicit dominance of NR producing countries in the case of the three forms of processed NR with the unique exception of Thailand with regard to technically specified natural rubber, the extent of intra-NR producer trade in selected tyre and non-tyre products exhibited disparate trends. Although the extent of intra-NR producer trade of both China and Malaysia were found to be much higher than the other three countries, it was mainly due to the larger share of different forms of NR in the total value of imports and the dependence on NR producing countries for the imports of the same. Conversely, in the value added segment of rubber products, both countries showed strategic differences reflecting the pattern of rubber based industrial structure and production orientation of the two countries. In all the five countries, with the exception of Indonesia, the share of NR producing countries in the value of imports of the dominant automotive tyres was lower. The sharp differences observed among the five countries with regard to the shares of NR producing countries in the value of imports of highly resource-intensive products such as sheath contraceptives, surgical gloves and bicycle tyres contradict the

perceived locational advantages of the producing countries in the export-oriented manufacturing of these products. Though the underlying factors behind the observed contradictions are beyond the scope of this paper, apparently the control over production, technology and marketing of the resource-intensive products such as sheath contraceptives and surgical gloves by the TNCs in the NR producing countries in the context of global market integration could be one of the major explanations.

Tariff policy

In the era of WTO mandated international trade regime and multilateral trade negotiations, the analysis of tariff policy pursued by the individual countries on selected rubber and rubber products assumes paramount importance for three reasons: (i) to understand the extent of binding coverage on the selected products, (ii) to assess the market access issues as reflected in the committed bound rates of duty, mean MFN tariffs or basic customs duty; and (iii) to highlight the appropriate policy inputs from the long term perspective of the NR producing countries. Table 6 shows the bound rates of duty on the nine products in the five major NR producing countries and the three developed economies/regions.

As is evident from Table 6, only Indonesia and China have 100 per cent binding coverage on the nine products whereas Japan, EU and the USA have bound all the nine tariff lines except conveyor belts and belting for maximum flexibility in protection. The lowest binding coverage was observed in the case of both India and Thailand. India has kept the tariff lines on NR latex and all the six rubber products unbound. Conversely, the unbound tariff lines of Thailand are on three forms of processed NR, bicycle tyres, sheath contraceptives and surgical gloves. Malaysia has bound all the tariff lines except those on conveyor belts and belting, sheath contraceptives and surgical gloves.

Table 6. Bound rates of duty on the selected products

HS Code	Products	India	Indonesia	China*	Malaysia	Thailand	Japan	EU	USA
4001 10	NR-latex	UB	40.0	20.0	5.0	UB	0.0	0.0	0.0
4001 21	Smoked sheets	25.0	40.0	20.0	5.0	UB	0.0	0.0	0.0
4001 22	Technically specified natural rubber	25.0	40.0	20.0	5.0	UB	0.0	0.0	0.0
4010 11	Conveyor belts or belting-reinforced only with metal	UB	40.0	10.0	UB	UB	UB	UB	UB
4011 10	Tyres of a kind used on motor cars	UB	40.0	21.7 (final bound rate at 10.0 % by 2005)	40.0	30.0	0.0	4.5	4.0 (Radial) & 3.4 (Others)
4011 20	Tyres of a kind used on buses & lorries	UB	40.0	21.7 (final bound rate at 10.0 % by 2005)	40.0	30.0	0.0	4.5	4.0 (Radial) & 3.4 (Others)
4011 50	Tyres of a kind used on bicycles	UB	40.0	20.0	30.0	UB	0.0	4.0	0.0
4014 10	Sheath contraceptives	UB	40.0	0.0	UB	UB	0.0	0.0	0.0
4015 11	Surgical gloves	UB	40.0	8.0	UB	UB	0.0	2.0	0.0

Notes : UB - unbound

* The bound rates given for China are those at the time of its joining WTO in December 2001. The bound rates of other countries are as per the schedules of commitments given prior to the establishment of WTO in 1995

Decomposition of the bound rates of duty indicates that among the five NR producing countries Thailand tended to provide maximum flexibility in protection to the three forms NR by keeping those tariff lines unbound. In the case of six rubber products, only India has kept all the tariff lines unbound among the eight countries/groups. The bound rates of duty on the three forms of NR varied from 5 to 40 per cent as compared to 0 to 40 per cent in the case of rubber products in the five NR producing countries.

The binding coverage of Japan, EU and the USA is complete except for the unbound tariff line of conveyor belts and belting. The bound rates of duty on the three forms of NR are zero and the rates for the products varied from 0 to 4.5 per cent. Therefore, with a comparatively higher binding coverage and minimal bound rates of duty, the potential market access issues in these countries are absent in a theoretical sense. However, its functional validity needs to be assessed by examining the pattern of mean MFN tariffs across the nine products. Table 7 compares the mean MFN tariffs on the selected products in the eight countries.

At the aggregate level, analysis of the mean MFN tariffs or the basic rates of customs duty showed lower tariff barriers and therefore, better market access in the three developed economies compared to the five NR producing countries. Analysis of the mean MFN tariffs at the disaggregate level indicated sector-specific differences in tariff policy pursued by the selected countries. Among the five NR producing countries, India has provided maximum protection to its domestic NR production sector by levying 25 per cent customs duty each on smoked sheets and technically specified natural rubber and 70 per cent on NR latex. Next to India, China has the higher mean MFN tariffs for NR at a uniform rate of 20 per cent. Conversely, both Malaysia and Thailand have provided maximum market access to NR imports with zero rates of duty on NR while Indonesia has a uniform rate of 5 per cent. The customs duty rates on NR in the three developed countries have also been zero.

Table 7. Mean MFN tariffs on the selected products

HS Code	Products	India (2003)	Indonesia (2002)	China (2002)	Malaysia (2001)	Thailand (2000)	Japan (2001)	EU (2002)	USA (2001)
4001 10	NR-latex	70.0	5.0	20.0	0.0	0.0	0.0	0.0	0.0
4001 21	Smoked sheets	25.0	5.0	20.0	0.0	0.0	0.0	0.0	0.0
4001 22	Technically specified natural rubber	25.0	5.0	20.0	0.0	0.0	0.0	0.0	0.0
	Group average	40.0	5.0	20.0	0.0	0.0	0.0	0.0	0.0
4010 11	Conveyor belts or belting-reinforced only with metal	30.0	5.0	10.0	30.0	30.0	3.9	6.5	3.3
4011 10	Tyres of a kind used on motor cars	30.0	15.0	18.8	40.0	30.0	0.0	4.5	3.7
4011 20	Tyres of a kind used on buses & lorries	30.0	15.0	18.8	40.0	25.0	0.0	4.5	3.7
4011 50	Tyres of a kind used on bicycles	30.0	10.0	20.0	30.0	30.0	0.0	4.0	0.0
4014 10	Sheath contraceptives	30.0	5.0	0.0	30.0	30.0	0.0	0.0	0.0
4015 11	Surgical gloves	30.0	5.0	8.0	15.0	30.0	0.0	2.0	0.0
	Group average	30.0	9.2	12.6	30.8	29.2	0.7	3.6	1.8
	Total	33.3	7.8	15.1	20.6	19.4	0.4	2.4	1.2

Note: Figures in parentheses refer to the reference year of tariffs prevailed in the individual countries.

Analysis of the mean MFN tariffs on rubber products in the eight countries exhibit comparatively higher rates of duty in the five NR producing countries *vis-à-vis* the three developed economies. Among the five NR producing countries the highest average customs duty for rubber products was observed in Malaysia (30.8 %), followed by India (30.0 %) and Thailand (29.2 %). Indonesia has the lowest group average (9.2 %) while that of China was 12.6 per cent. The disaggregate level composition of the tariffs on the products show that except in the case of India, the pattern of the tariffs in the other four major NR producing countries is characterised by product-specific variations. India has been following a uniform rate of 30 per cent on the six products compared to a peak and trough observed in China (0 to 20.0 %) and in Malaysia (15.0 to 40.0 %). Nevertheless, product specific rates of duty across the five countries are rather complex as no uniform pattern could be observed. Probably, the observed phenomenon is rooted in the country-specific priorities and market orientation of the rubber based industrial structure.

The composition of mean MFN tariffs on rubber products in the three developed countries reveals the lowest group average rate in Japan (0.7 %), followed by USA (1.8 %) and EU (3.6 %). The unique position of Japan *vis-à-vis* the USA and EU is evident from its zero duty rates on all tariff lines except conveyor belts and belting. In EU, except the tariff line on sheath contraceptives (zero duty rate), all the other five tariff lines have duty rates ranging from 2 to 6.5 per cent. The USA has kept three tariff lines, *viz.*, bicycle tyres, sheath contraceptives and surgical gloves, with zero rates of duty and the remaining three tariff lines have rates of duty below 4 per cent.

Observations

Though the comparative analysis of the tariff regime on rubber and rubber products in the selected NR producing countries and

three developed countries revealed lower tariff barriers in the latter, the observed pattern of tariff policy deserves further explanation based on the rubber based industrial structure in the individual countries and the extent of intra-NR producer trade. While the bound rates of duty are only indicators of the potential ceiling rates of customs duty on individual products, technically, it is the prevailing mean MFN tariffs that are the determinants of protection from external competition as well as tariff barriers to market access across countries. Although only Thailand has kept the three selected tariff lines on NR unbound for ensuring maximum flexibility in protection to the domestic NR production sector among the five NR producing countries, functionally, the highest rates of average customs duty was observed in the case of India (40 %), followed by China (20 %). While the rate of duty in Indonesia is only 5 per cent, both Malaysia and Thailand do not impose any basic customs duty. In order to explain the different rates of duty on NR among the five countries, it is essential to examine the extent of domestic consumption and imports of NR in these countries in relation to production. Table 8 shows the details.

Table 8. Domestic production, consumption and imports of NR (2002).

Country	Production (000'tonnes)	Domestic consumption as a percentage of production (%)	Imports as a percentage of domestic consumption (%)
Thailand	2459.1	10.6	0.2
Indonesia	1630.0	8.9	Not available
India	640.3	106.0	3.8
Malaysia	588.5	55.5	140.0
China	468.0	280.1	69.8

Sources: 1. IRSG, Rubber Statistical Bulletin, 57(9), 2003
2. The Rubber International, 5(4), 2003

Conceptually, the tariff policy on NR adopted by the five countries is in tandem with the extent of rubber based industrialisation and import intensity of domestic NR consumption in the individual countries. Though the largest producer of NR, *viz.*, Thailand, has kept the three tariff lines on NR unbound, the mean MFN tariffs are zero as the share of domestic consumption in the country's NR production was only 10.6 per cent. Being the largest exporter of NR in the world and with negligible dependence on NR imports for domestic consumption, the potential threat of imports into Thailand is rather remote. Therefore, the zero rate of duty on NR is in tandem with the salient features of country's NR sector. The minimal mean MFN tariff of Indonesia (5 %) is also borne out by comparable features with lower levels of rubber based industrialisation *vis-à-vis* its status as the second largest producer-cum exporter of NR. However, the cases of Malaysia, India and China are unique from respective national perspectives. Though Malaysia is an NR surplus country consuming only 55.5 per cent of its production, large NR imports to the extent of more than 140 per cent of its domestic consumption were guided by the objectives of re-exporting value added forms of NR (MRB, 2003). In fact, this observation is underscored by a higher volume of NR exports from Malaysia (23.35 %) compared to its combined total of net balance in domestic NR production and total volume of NR imports during the year 2002. Hence, zero rates of duty are useful in facilitating cheaper imports of NR. India's position on the border is unique as there has been concerted efforts to balance a well developed NR production sector with a large and diversified rubber products manufacturing base. Although its domestic consumption is higher than the production of NR, dependence on NR imports is rather insignificant. Therefore, a comparatively higher rate of mean MFN tariff is imposed on NR so as to protect the domestic NR sector from cheaper imports. China being the largest consumer of NR in the

world and with a higher dependence on imports for domestic consumption (69.8 %), it has imposed lower rate of duty compared to India. However, the two-tier tariff policy of an in-quota interim rate (concessional rate of 12 %) and a preferential rate of 90 per cent adopted by China till 2001 might have been prompted by the objectives to protect its domestic NR production sector as well as to ensure adequate supply of cheaper NR to its growing rubber products manufacturing sector (ICTB, 2001).

In the value added rubber products segment, the prevailing tariff policy, to a large extent, is reflective of the size and diversity of rubber based industrial sector, orientation of production and relative competitiveness in the era of market integration. The higher mean MFN tariffs of Malaysia, India and Thailand appear to be strategies to provide higher levels of protection to the six products with different intensities of inward or export-oriented production. Indonesia, with its comparatively smaller rubber products manufacturing base, is dependent on larger imports of rubber products with the lowest rates of duty as is evident from Tables 5 and 7. However, the prevailing lower rates of duty on the selected rubber products in China are basically illustrative of its competitiveness/import-intensity of domestic consumption *vis-à-vis* its NR production sector and rubber products manufacturing sectors in the other four NR producing countries.

In contrast to significant country-specific variations in the prevailing tariff policy of the five NR producing countries, there exists an explicit convergence in the policy pursued by the three developed countries. *Prima facie*, the apparent convergence in tariff policy could have been guided by at least two objectives: (i) giving maximum market access to resource-intensive products such as processed forms of NR,

latex based rubber products and bicycle tyres; and (ii) on the other extreme, to provide maximum flexibility in protection in the case of resource-neutral products on which the potential threat of competition is higher as is evident in the tariff policy on conveyor belts and belting. For instance, the mean MFN tariffs on three forms of processed NR, sheath contraceptives bicycle tyres and surgical gloves are zero in the three countries except for the tariffs on bicycle tyres and surgical gloves in EU. However, in the case of a resource-neutral product like conveyor belts and belting, the three countries have not only kept the tariff line unbound but also both EU and Japan imposed the highest rates of duty among the nine products (6.5 % and 3.9 %). The tariff policy of the three countries on the dominant automotive tyres exhibited country-specific variations in spite of the explicit control over the global production and marketing of this product group by the TNCs based in these countries.

The observations outlined on the tariff policy of the selected countries and tentative explanations for the same may have to be viewed in the backdrop of the ongoing globalisation process characterised by growth in concentration of both production and marketing processes in all spheres of economic activity by the TNCs. Another discernible trend has been a growing detachment of the TNCs from geographical or national identities consequent to the growth in networking of both production and marketing processes on a subcontracting basis. These developments have important implications for the major NR producing countries for two important reasons: (i) irrelevance of national priorities in a fast emerging borderless world; and (ii) well defined limitations for the unilateral initiatives to stabilise world NR prices at remunerative levels from a long-term policy perspective. Therefore, the basic challenge confronting the major NR producing

countries in the era of globalisation is the conception of an appropriate platform and guidelines for maximising the share in net value added beyond the NR production sector rather than singularly focusing on the NR price stabilisation schemes.

Roadblocks or roadhogs? The way forward

To recapitulate, the efficacy of projecting NR price stabilisation schemes as the panacea for the perils of the NR producing countries had been amply demonstrated by the efforts initiated and results obtained during the post-colonial phase spanning more than the past five decades. If the achievements of the desired goals from the two NR price stabilisation schemes during the colonial era, *viz.*, (i) Stevenson Scheme (1922-28); and (ii) International Rubber Regulation Agreement (1934-44), were primarily due to the patronage of the erstwhile colonial powers, the termination of International Natural Rubber Agreement in 1999 marked the unceremonious demise of the last victim of the post-colonial commodity price stabilisation schemes due to lack of active support from developed countries. Hence, the post-colonial history provides the right signals on the nuances and intricacies of bypassing the identification of basic issues and priorities. The solace germinated from the buoyant world NR prices may ultimately prove to be short-term gains through isolated efforts in the context of the current upswings in world NR prices. Therefore, at least conceptually, it is imperative to unmask the critical factors hindering the acquisition of due share in the value added segment of rubber products exports and to underline the potential policy initiatives for debate and critical assessment from the angle of NR producing countries.

As the global resource utilisation across all the internationally traded products and services has been primarily guided by the WTO mandated trade regime after 1995, it is proposed to initiate a detailed

study on the trends and current status of global trade in rubber and rubber products contained in 72 tariff lines at the six digit level of the HS system of commodity classification. The International Rubber Research and Development Board (IRRDB) or other international organisations concerned with the promotion of value added rubber products exports from NR producing countries may initiate the proposed study from a multi-disciplinary perspective. The multi-disciplinary orientation of the study assumes importance as the primary objectives of the study shall be to assess: (i) the inherent technical capabilities of the producing countries both in the production and marketing of NR and rubber products; (ii) feasibility of pooling inherent capabilities in spheres with specific locational advantages; (iii) the extent of intra-NR producer trade across the 72 tariff lines; and (iv) preferential tariff arrangements as an option for enhancing the intra-NR producer trade so as to maximise the gains from the trade. The potential policy options emerging from the study have to be screened for the formation of a sector-specific trading bloc with the concurrence of concerned national governments. It is true that the growing dominance of TNCs even in the resource-intensive rubber products will create roadblocks or even roadhogs in the process of formulating a producers' consortium with a well defined long-term goal of acquiring the due share in the value chain. Nevertheless, the numerous challenges and limited options emerging in the process of globalisation highlight the primary need for defining the issues and designing the strategies for the sustenance of an eco-friendly industrial raw material with strategic commercial importance, as is evident from the results of this preliminary assessment.

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NOTES

1. The total volume and value of world NR exports have been dominated by the three forms of processed NR selected for the study. The combined share of the three forms in the total volume of NR exports from Thailand, Indonesia and Malaysia (which together control about 83 % of world NR exports) was around 97 per cent during the year 2002 (ANRPC, 2003; IRSG, 2003). Although the extent of intra-NR producer trade in the three forms of processed NR are expected to be very high, the main objective of including these three major forms of NR for the analysis was to understand their combined share in the total value of imports of the nine selected products in the five major NR producing countries. The selection of tyres used on cars, buses and lorries represents products embedded to scale economies with very high degree of control over production, technology and markets by transnational corporations based in developed countries. The share of this product group in the total value of world exports of rubber products was more than 57 per cent during the year 2000. On the other extreme, sheath contraceptives, surgical gloves and bicycle tyres are cases of resource-intensive products with higher NR content and have the potential for export-oriented production from NR producing countries due to inherent locational advantages. Conveyor belts and belting reinforced only with metal represents a comparatively resource-neutral product so as to assess the status of rubber based industrialisation in the major NR producing countries *vis-à-vis* the developed countries.
2. While China's domestic consumption of NR as a percentage of its production was 280.1 per cent, the respective share for India was 106 per cent during the year 2002. Among the major NR producing countries, India's case has been unique for its dependence on imports of NR for domestic consumption since 1947.

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