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NATURAL RUBBER PRICES: FUTURE PROSPECTS

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INTRODUCTION

The Sri Lankan Natural Rubber (NR) industry is passing one of the hectic eras in its long history in this country. Although the reason for the present crisis is mainly due to the South East Asian currency turmoil and its associated factors, the fundamental root cause would be the country's continuous and heavy reliance on the global commodity markets. The price fluctuations and increasing volatility is commonly evident in other primary commodities as well. Thus, it is of vital importance to understand the price determination mechanism in the world NR market, which would help to make projections at least on the long run price movements. Since short run dynamics in the prices are largely influenced by several exogenous factors, any reliable forecasts that could be made by exploring the factors determining supply and demand would confine to long term price movements. Thus, this paper would look in to the factors influencing the long-term rubber prices in the world market at a descriptive level.

NR market

Natural rubber market mainly comprises of producers and consumers. The key players in the market with their respective percentage share of contribution are given in the following table.

Table 1. *NR production and consumption in 1998*

NR Producers	Production ('000 T)	% Share
Thailand	2198.1	32.9
Indonesia	1749.7	26.2
Malaysia	885.7	13.2
India	587	8.8
China	450	6.7
Vietnam	219	3.2
Sri Lanka	95.7	1.43
Total	6670	100
NR Consumers	**Consumption ('000 T)**	**% Share**
USA	1157.4	17.5
EU	1078	16.3
China	839	12.6
Japan	707.3	10.7
India	575	8.6
Malaysia	334.1	5
S. Korea	279	4.22
Total	6610	100

Source: IRSG Rubber Statistical Bulletin (May 1999)

By looking at the respective contribution by the various producers over a period of time, it is evident that Thailand, Indonesia, China, India and the Vietnam show an increase in production while Malaysia and Sri Lanka show a decline. However, it is also evident that with respect to the ownership of production units, the number of smallholders are on the increase compared to large estate owners through out the rubber-producing region (Samarappuli *et al.*, 1996). This suggests that there is a large number of small producers operating in the market. In contrast to this, there are relatively a few buyers operating in the market. These few buyers are comprised of multinational companies, particularly giants in the tyre manufacturing industry in the world. Thus it clearly shows that the NR market deviates from the neo-classical assumption of perfect market condition which postulates the presence of a large number of sellers and buyers. Therefore, the NR market could be identified as an oligopsonic market with large number of sellers and relatively few buyers. Although the buyers dominate the price determination mechanism, demand and supply conditions play a fundamental role in determining the long-term prices. Therefore it is important to explore the factors determining the demand and supply in the global NR market.

Outlook for demand

The demand for rubber in the world market could be considered as a function of industrial growth rates of major consuming countries, world synthetic rubber (SR) prices and the technological innovations. Therefore, in order to identify the trends in global rubber demand, it is important to explore the expected behavior of above variables. The trends in global elastomer consumption are given in figure 1.

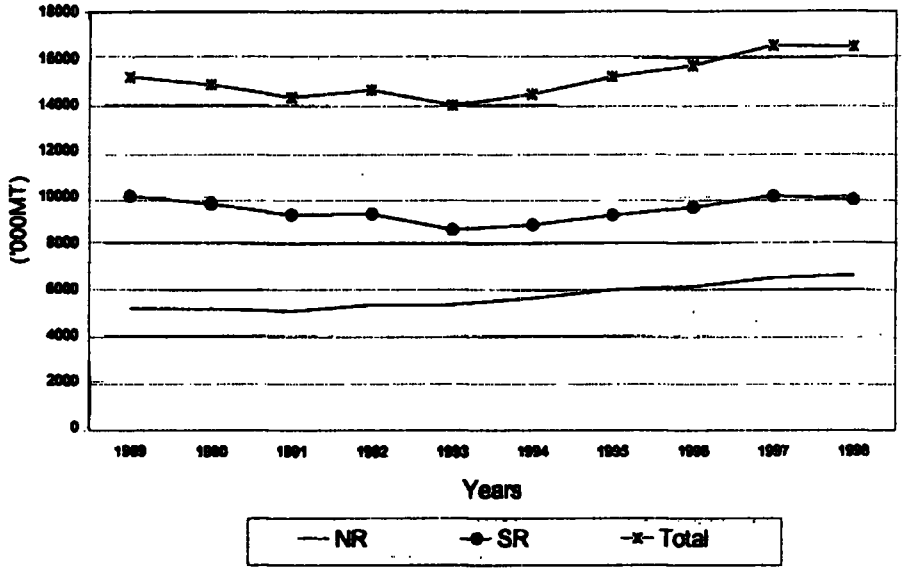

Fig. 1. Global rubber consumption

Industrial growth rates of major consumers

Starting from the East Asian Currency crisis in July 1997 the economic crisis has transmitted across the globe from Asia to Russia and then to Latin America. The detrimental impacts of this global economic crisis were seen to have felt by most of the developed as well as developing economies in the world. Thus, decline of industrial growth rates was evident for major NR consuming economies having negative impact on the growth of demand for NR. The trends in industrial growth rates of major consuming countries are given below.

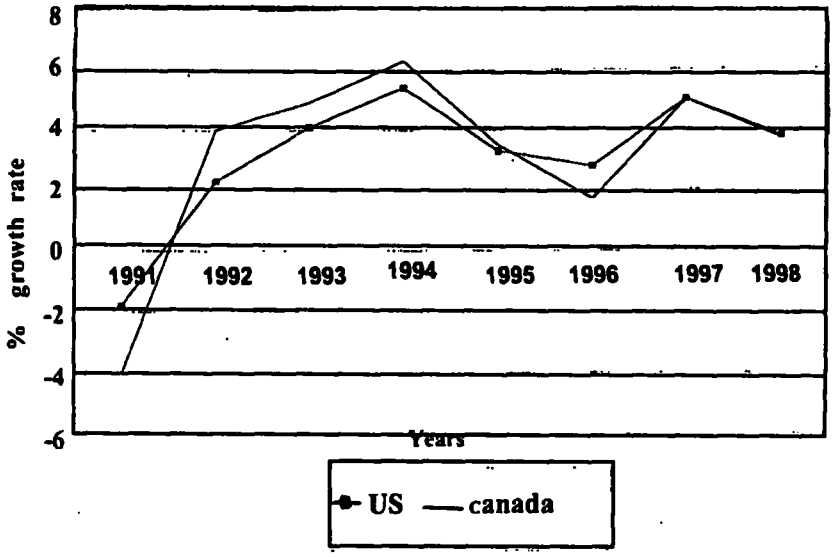

Fig. 2. Indus rial production (% increase year on year)

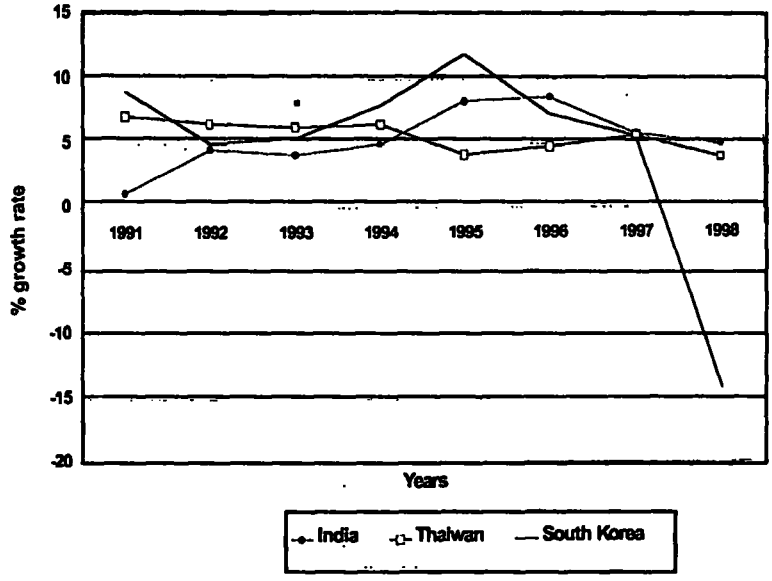

Fig. 3. Industrial production (% increase year on year)

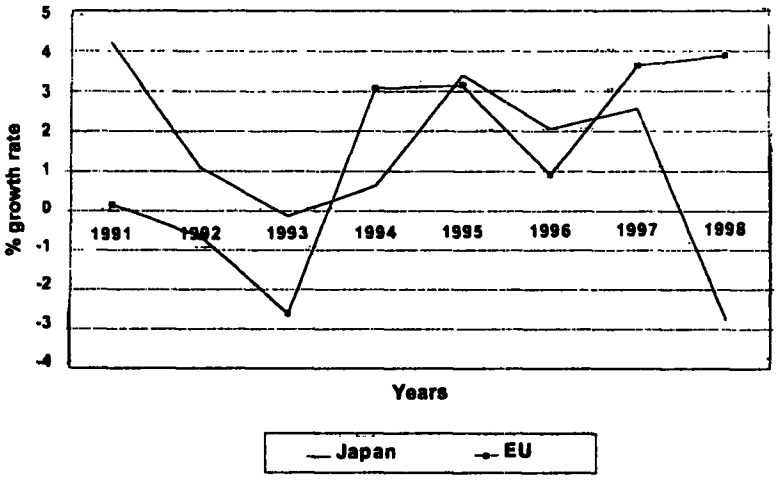

Fig. 4. Industrial production (% increase year on year)

All regions show a declining trend of industrial growth rates due to the global economic recession prevailii g at present. Forecasts for the GDP growth rates of these economies by various organizations also confirm that the situation in the year 1999 and most probably for the year 2000 would be gloomy. According to a forecast by the World Bank a slow down in growth rates in North America and Europe is expected during the above period. In contrast, a recovery is expected in Asia particularly in East Asian countries and Japan while fairly a steady growth rate is expected in China and India. Thus, according to World Bank an increase in demand for NR is predicted as the Asian region being the largest consumer of NR (Rubber Asia, 1999).

In contrast, the latest International Monetary Fund (IMF) forecast for 1999 suggested that the world economic growth rate to be around 2.2 percent. Further, the Organization for Economic co-operation and Development (OECD) forecast suggested a down turn of economic growth rate of industrialized countries from 2.2 percent in 1998 to 1.7 percent in 1999. Prediction of the Economic Intelligence Unit's (EIU) global outlook also indicates a down turn in OECD GDP growth rates towards the year 2000.

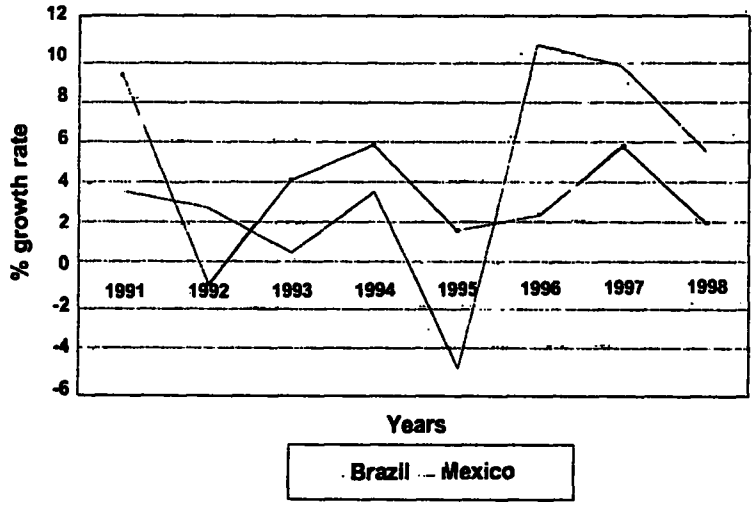

Fig. 5. Industrial production (% increase year on year)

Having considered these forecasts given by various organizations with a close examination of trends of industrial growth rates of NR consuming countries, it could suggest that any realistic increase in demand for NR can not be expected for this year. However, from year 2001 onwards an increase in global economic activities can be expected especially in the Asian region. Thus, the long run demand for NR would be increased towards the year 2005.

Synthetic rubber prices

Outlook for synthetic rubber (SR) prices is less promising. Major reasons for this would be

1. Industrial surplus of synthetic rubber in the major producing countries, particularly in Korea, Taiwan and EU the SR production has increased
2. Two new entrants to the SR production from the Asian region, *i.e.*, Thailand and Indonesia.
3. Falling oil and feedstock prices towards 1999
4. Increase in global SR stocks
5. Russian financial crisis, which occurred in 1998 as a result of a sharp depreciation of the Russian currency, had pushed the SR prices further down.

All the above factors have made the SR more competitive thus having negative impact on the NR consumption.

During the period between 1994 to 1997 an average increase of elastomer consumption in the world was approximated to be 4 %. However, the period between 1997 to 1998 the increase in consumption was only 0.7 % (Chen, 1999). According to the prediction of the International Rubber Study Group (IRSG) in October 1998, growth of world rubber consumption in 1999 is estimated to be 1.7 % with 2.1 % for NR and 1.5 percent for SR.

By examining the possible behavior of the above variables, it could expect a relatively depressed demand condition in the short run. However, with a recovery in the global economy in general and in the Asian region in particular, a gradual increase of demand for NR would be anticipated in the long run.

Outlook for supply

Supply of NR can be basically identified as a function of weather condition, technological and management innovations, area of tapable plantation and the stock level at the hands of producers and consumers. The trends in the global elastomer supply are given in figure 6.

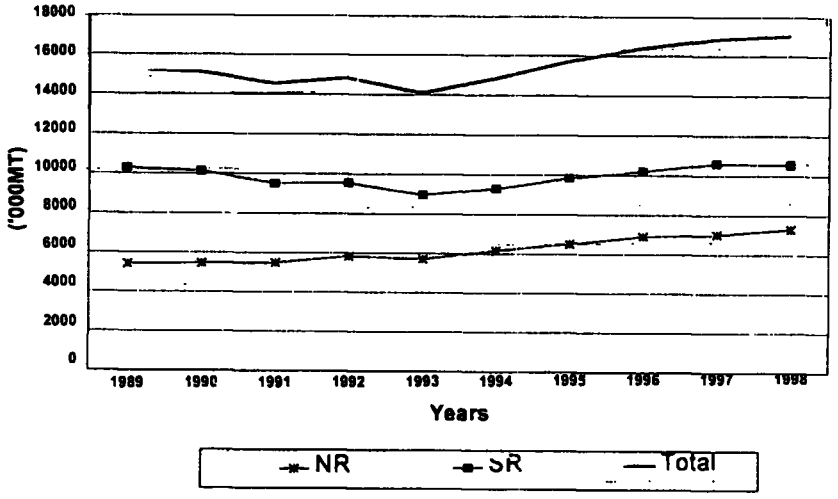

Fig. 6. Global rubber production

NR supply situation in Indonesia

It is revealed that the sharp depreciation of their currency had enabled the exporters to sell their rubber at low prices in the world market, which are quoted in US currency. As a result, they have managed to obtain an attractive price in terms of domestic currency. Similarly, due to the high inflation prevailing in the economy, the farmers have been exploiting the plantations, which increases the supply in the short run. However, this over exploitation situation would damage the plantations in the

long run. Further, due to low level of long term investment (replanting and new planting) and the political instability would create a decline in supply in the long run. The trends in NR exports and production are given in figure 7.

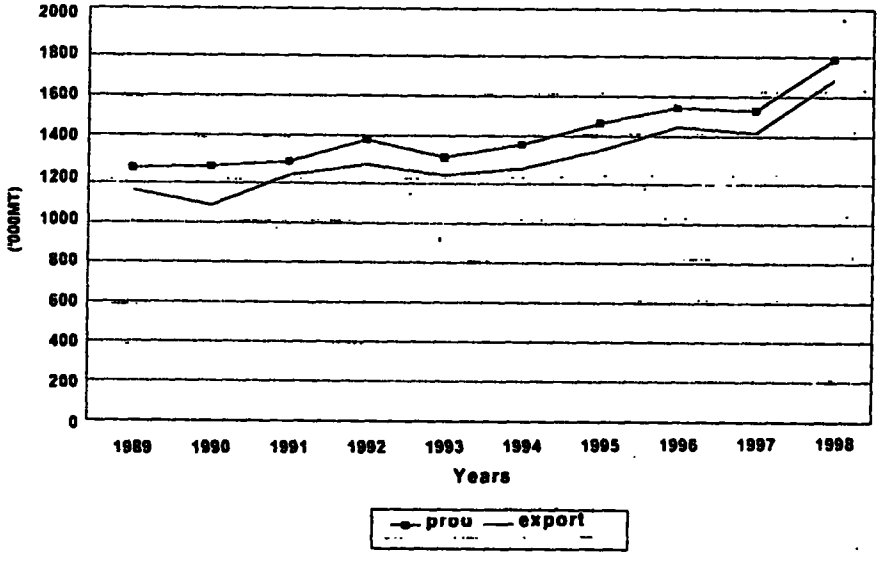

Fig. 7. Indonesian NR production and exports

NR supply situation in Thailand

Outlook for NR supply in Thailand reveals a steady increase in the short run. The devaluation of the Thai currency and the planned domestic market intervention by the government (after their withdrawal from the INRO) have been promoting the supply in the short run. However, lack of replanting and new planting with shifting of resources from rubber to oil palm would act as disincentives for supply in the long run. The trends in NR exports and production are given in figure 8.

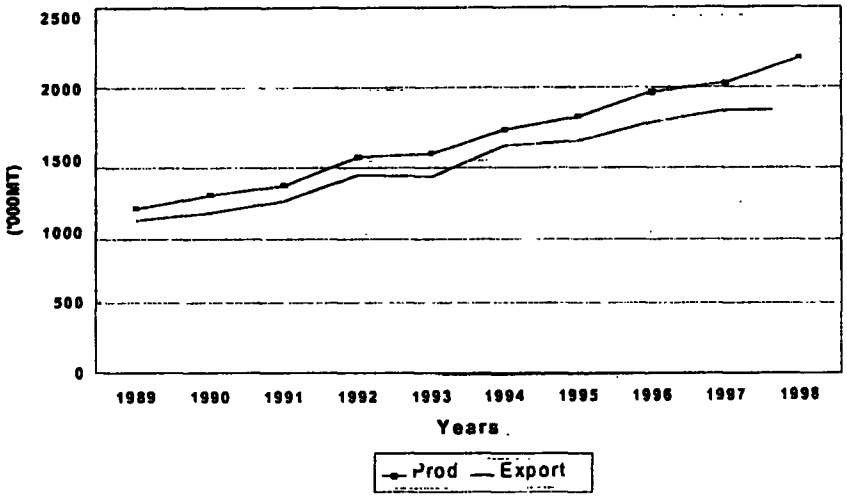

Fig. 8. NR exports and production in Thailand

NR supply situation in Malaysia and Vietnam

Situation in Malaysia seems less promising with respect to NR supply as more labor and resources are being shifted to oil palm industry. Similarly, due to the rapid industrialization process, a shortage of agricultural labor is also evident. Thus, the outlook for rubber supply would be gloomy in the long run. The trends in NR exports and production are given in figure 9. However, Vietnam is increasing its NR production as new plantations are coming into bearing.

When we look at the NR stock position, we could expect fairly a higher level of stocks accumulated at the hands of consumers due to the current depressed prices. Similarly, the INRO agreement is on the verge of collapse after the withdrawal of two major producing countries, *i.e.*, Malaysia and Thailand. Further, since 1993 for the first time in the history the INRO buffer stock manager has intervened the market in August 1999 by purchasing NR. Therefore, if this agreement is going to be terminated, their buffer stock has to be disposed within three years. Thus, by considering above factors it could suggest that there would be excess supply of rubber in the short run. However, taking into consideration of the supply situation in major producers a decline in production would be expected in the long run.

NR prices

Natural rubber prices manifested an extremely volatile situation during the period between 1994 and 1999. Basically the prices are determined by the supply and demand situation in the market. By considering the outlook for supply and demand in the NR market, it is quit unlikely to expect an excess demand situation in the short

run. Thus, the prices would not be attractive in the short run. However, with an increase in demand for NR in the long run with a rather depressed supply situation, a shortage would be expected. Thus, the long run prices would be more attractive.

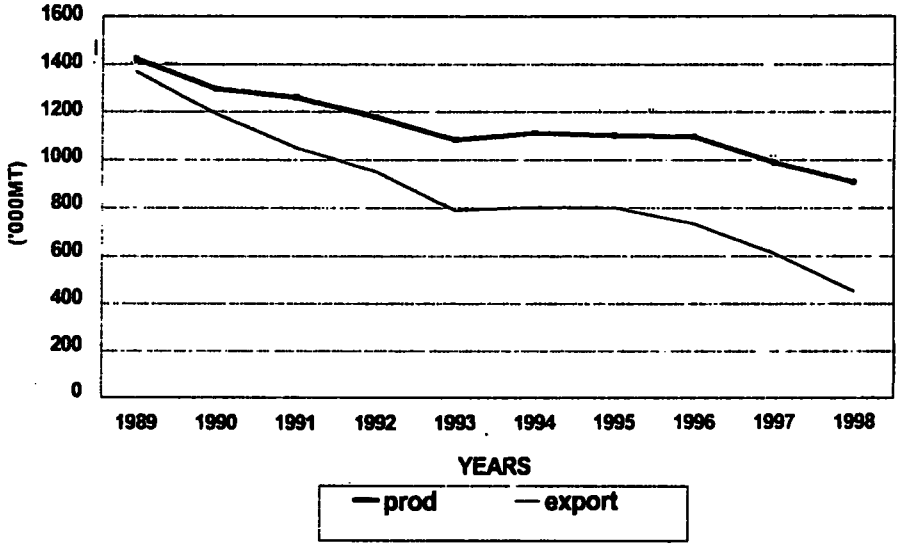

Fig. 9. Malaysian NR production and exports

Concluding remarks

Although, the NR prices are fundamentally determined by the demand and supply forces, due to the oligopsonic nature of the market, the buyers would dominate the market. Thus, an increase in volatility in prices will have to be expected in the future too. By looking at the possible behavior of the variables, which affect the demand and supply, it could suggest that the current trend in prices would prevail in the short run while the prices would start to pick up in the long run. Sri Lanka being a small producer in the world market can not influence the global NR demand as well as supply. Thus, we act only as a price taker. Hence, some drastic policy shift would be inevitable in the commodity export industry in order to insulate the industry as well as the country's economy from possible external commodity price shocks. One of such prudent policy shifts would be to increase the domestic consumption of rubber while concentrating on export oriented rubber products manufacturing industry.

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