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The Effects of the APEC Early Voluntary Sectoral Liberalization (EVSL) on the Natural and Synthetic Rubber Sector*

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Abstract

This paper examines the effects of EVSL on the natural and synthetic rubber sector, including the problems that can prevent it from benefitting fully from the proposal. Natural rubber possesses export potential and is undergoing the process of regeneration and will be vulnerable in the face of greater competition. Hence, this sector should be given temporary protection in the short-run to attract investments and perhaps to help remedy the peace and order problems. Imported synthetic rubber should however be liberalized immediately. The economic and technical cooperation measures to be advanced in APEC are also discussed.

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* The views expressed herein do not necessarily represent the official views of the Philippine government in general, and/or the WTO/AFTA Advisory Commission in particular. This industry paper was prepared to provide some basic or background information; hence, in no way it is exhaustive. The intent is to offer the initial set of information for discussion and in the process, elicit the ideas that could be helpful in formulating the appropriate strategies in the development of this industry sector.

This paper was prepared under the "APEC Early Voluntary Sectoral Liberalization" project which was jointly funded by the WTO/AFTA Commission and the Philippine APEC Study Center Network (PASCN) in furtherance of the general objective of undertaking consensus building activities and other necessary measures to promote the Philippines as a competitive player in the global economy.

The Effects of the APEC Early Voluntary Sectoral Liberalization (EVSL) on the Natural and Synthetic Rubber Sector

M.M.P.Macam, C.M. Bautista and L.A.Lanzona

The APEC Economic Leaders endorsed during their Fifth Meeting (AELM) in Canada in November 1997 the early voluntary sectoral liberalization of the fifteen (15) sectors identified to have a positive likely impact to trade, investments and economic growth in the respective economies and the whole APEC region. These are: environmental goods, services, toys, fish and fish products, forest products, gems and jewelry, oilseeds and oilseed products, chemicals, telecommunications, mutual recognition arrangement, energy sector, food sector, natural and synthetic rubber, fertilizers, automotive, medical equipment and instruments, and civil aircraft.

This paper focuses on the natural and synthetic rubber sector proposed to the EVSL. The objective of this paper is to determine the possible problems of this sector that prevent it from being able to benefit fully from the EVSL proposed by APEC. In general, sectors that are more protected, less competitive, and more inefficient are expected to experience adverse consequences from the EVSL. Given these problems, paper will submit an action plan for the proper implementation of trade liberalization to this sector.

The remaining parts of the paper consist of the following sections. Section 2 provides a brief background of the sector, particularly in terms of the EVSL. This discusses the nominations of the natural and synthetic rubber sector for the EVSL and the coverage. Section 3 provides a situationer of the sector under study. This will suggest the extent of the possible effects that EVSL will have on the sector and serve as backdrop for the measures on competitiveness that will be discussed. Section 4 features these computed measures of competitiveness, and given these measures and other available data, discusses the implications of the EVSL to the sector. Section 5 provides the conclusion and recommendations on how to make these industries more competitive and efficient in an environment of lesser protection.

Nominations of Natural and Synthetic Rubber Products for EVSL and Coverage

Natural and synthetic rubber products were nominated for EVSL by Thailand and Japan. These products are raw materials used in many related industries such as car tires and other rubber products.

The Harmonized System (HS) product codes specified in the proposal are 40.01 (natural rubber) and 40.02 (synthetic rubber).

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A linkage chart showing the current most-favored nation (MFN) rate and the ASEAN common effective preferential tariff (CEPT) of the above products are shown in Figure 1.

In the area of tariffs, the nominating economies propose to establish details for the gradual reduction and/or elimination of tariffs and non-tariff measures. For the economic and technology aspect, the proponents suggest to cooperate in the development of domestic industries in rubber producing economies through the transfer of production and manufacturing technology in order to reduce the risk of price fluctuations.

Industry Background and Performance

This section provides a backdrop for the analysis of the effects of the EVSL. The main issue is to determine the key factors which can be influenced by trade liberalization. The strengths and weaknesses of the sector, based on the discussions with the sector representatives, are also presented here.

Structure. The Philippine rubber industry covers two major groups namely: (1) rubber growers and processors, and (2) rubber product manufacturers. The starting point of the Philippine rubber industry lies in the plantation from where latex, the milk-like substance tapped from the bark is coagulated to produce coagulum and cumplumps. It extends to intermediate industries processing latex concentrates and baled rubber, down to rubber product manufacturers. It has to be noted that natural rubber and synthetic rubber are not substitutes, but are complementary products used in the production of most rubber products. For instance, a fixed ratio of natural and synthetic rubber is used in the production of car tires.

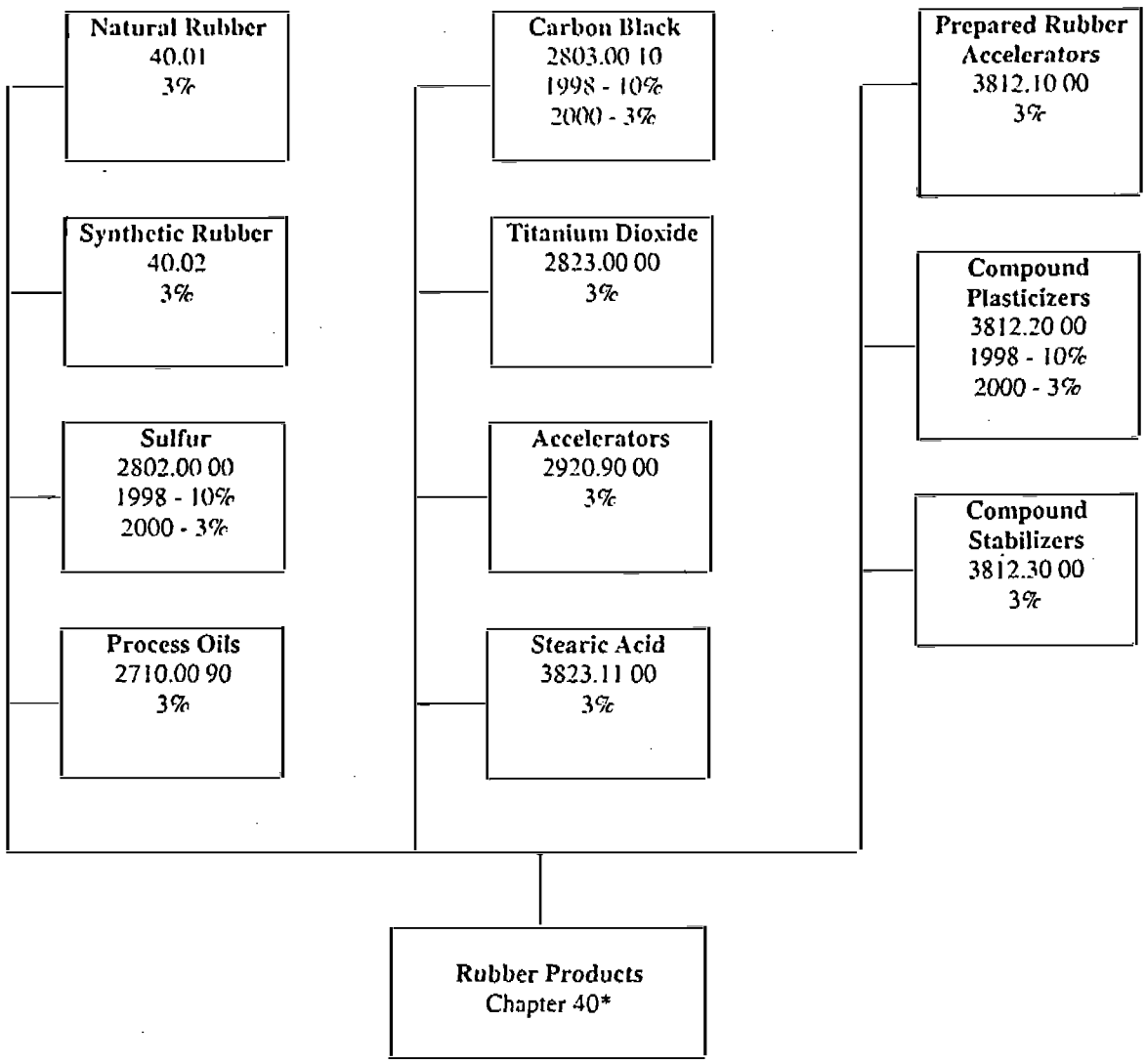
Table 1 lists the other raw materials used by rubber product manufacturers, while Figure 1 presents a linkage chart of the industry. Thus, the industry spills over from an agricultural-based sub-group of rubber growers and processors to rubber product manufacturers.

Table 1. Other Raw Materials used by Rubber Product Manufacturers

Elastomers	
Polybutadiene	Not locally-produced
Nitrile	-do-
EPDM	-do-
Polychloroprene	-do-
Butyl & Halobutyl	-do-
Carbon black	
General purpose	With local manufacturer
General purpose	-do-
Thermal black	-do-
Plasticizers and oil	
Aromatic oil	With local manufacturer
Paraffinie oil	-do-
Rubber chemicals	
Accelerators & activators	Not locally-produced
Antidegradants	-do-
Sulfur	-do-
Pigments & fillers	
Alumina Hydrate	Not locally-produced
Calcium carbonate	With local manufacturer
Clays	-do-
Silicas	Not locally-produced
Zinc Oxide	With local manufacturer
Cords & fabrics	
Aramid	Not locally-produced
Fiberglass	-do-
Nylon	-do-
Nylon Chafer	-do-
Polyester	-do-
Rayon	-do-
Steel	-do-
Bead Wire	-do-

Source: Philippine Rubber Industry Paper

Figure 1
Linkage Chart of Rubber Products



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Heading Nos.	Rates of Duty (10%)		
	1998	1999	2000
40.06; 40.07; 40.08; 40.09; 40.10; 40.13; 40.15	10	10	10
40.11	25	20	15
40.12	20	20	20
40.16	3/10	3/10	3/10

The main products of the first group in the chart include natural rubber (balata, gutt-percha, guayole, chicle, and similar gums) in primary forms, including latex, or in plates sheets or strips.

Rubber planters and processors, who owned most of the rubber plantations in Mindanao before the Comprehensive Agrarian Reform Law (CARL), were mostly tire manufacturers. With the implementation of the CARL, sizes of rubber farms ranged from one to ten hectares.

The second group, rubber product manufacturing, is subdivided into four groups: motor vehicle (including motorcycle and bicycle), tubes and recapping, footwear, industrial and automotive, latex, foam and others.

For purposes of trade classification, the four major product groups are: natural rubber, molded rubber, articles of rubber and rubber footwear. Corresponding to the agriculture-based sub-group above, natural rubber is the primary product processed from latex into air-dried sheets, crumb rubber and centrifuged latex. Molded rubber refers to materials as paste, sheets, rods, threads, tubes, and latex products. Articles of rubber are final products such as bottle nipples and other articles like conveyor belts, stoppers, plugs, gaskets, etc., which are mostly used for machines. Consumer items from rubber fall mostly under footwear.

Rubber product manufacturers mix synthetic rubber with natural rubber in their production processes, and a host of other materials most of which are not locally available.

Strengths and Opportunities. On the production side, the agro-climatic endowment in Mindanao and the available land for rubber plantations are plus factors. There are roughly 500,000 hectares of agricultural lands suitable for small holder operations for rubber in Mindanao, although only 92,000 hectares of these had been cultivated in 1995. Moreover, with the implementation of the CARL, smaller parcels of land are created which are more suitable to rubber plantations. Table 2 shows that in Mindanao, 72 percent of the more than 17 million rubber trees are productive. However, most of these are nearing 25 years old, reducing their potential usefulness. Nevertheless, one opportunity faced by the industry is the increasing demand for natural rubber propelled by an increase in industrial application of this product.

Table 2. Regional distribution of rubber trees

Region	Number of Trees	No. of Productive Trees
Western Mindanao	8,185,139	6,106,614
Central Mindanao	4,987,013	3,359,315
CARAGA	1,297,089	1,051,298
Southern Mindanao	1,446,100	976,971
Northern Mindanao	1,360,123	975,749
ARMM	67,269	55,537
TOTAL	17,342,733	12,525,484

Source: Philippine Rubber Industry Paper

A well-educated managerial and technical staff coupled with technological advancement of the local rubber industry, particularly the tire manufacturers, is

another strength. Manufacturers produce high quality output comparable with the world's best.

Rubber manufacturing enjoys a degree of flexibility that allows it to create diverse product lines. Raw materials are locally available and the local value added is 50 percent. The thriving automotive, electronic, and capital goods industries serve as an opportunity for rubber manufacturers who supply the growing domestic and world demand for rubber products.

Significance to the economy. Rubber plantations cover about 0.68 percent of total agricultural lands from 1990 to 1995 with average production valued at P1,746 million, equivalent to some 0.98 percent of total agricultural production for the same period. In 1996, there were reportedly 31,215 growers and 49 processors of raw rubber who employ some 60,176 workers. In addition, there are roughly 160 rubber product manufacturers with about 14,700 employees. Total employment therefore reached at 106,091 in both agricultural and manufacturing sub-sectors of the rubber industry.

Further on the rubber manufacturing side, Table 3 presents some performance indicators. There were over 400 establishments in the industry in 1990, growing at an annual average rate of 2.6 percent from 1990 to 1993. Close to 60 percent, or over 200, of these firms were small, employing less than 10 workers. In general, employment however posted an average decline of 5.9 percent for the same period due to dampened demand brought about by the surge of tire imports. But in spite of the employment drop, real census value-added of the industry registered an average annual growth of 5.6 percent. Labor productivity, measured here by real census value-added per worker, similarly rose by an average of 10.8 percent per year.

Rubber manufacturing might have experienced some modest growth, but at the aggregate level, its contribution to the total manufacturing real gross value added had gradually been declining from 1.5 percent in 1990 to 1.3 percent in 1993 to 1.1 percent in 1996.

Table 3. Performance indicators of rubber manufacturing establishments, 1990-1993

Indicators	1990	1991	1992	1993	Average growth (%)
Establishments with less than 10 employees	240	238	257	273	4.5
Total number of establishments	419	410	443	451	2.6
Employment	30,110	27,317	30,718	24,335	- 5.9
Average employment per establishment	72	67	69	54	- 8.6
Capital expenditures during the year (P1,000)	577,963	980,876	748,775	903,034	22.3
Real capital expenditures (P1,000)	468,138	681,258	478,634	546,057	10.0
Census value added (P1,000)	3,838,234	4,239,775	6,547,615	5,558,201	16.6
Real census value added (P1,000)	3,108,889	2,944,697	4,185,384	3,353,566	5.6
Census value added per worker (P1,000)	127	155	213	208	22.1
Real census value added per worker (P1,000)	103	108	136	138	10.6

Note: Real values were obtained by deflating the original nominal data using the implicit price index for the rubber sub-sector (base year=1985) from 1990 to 1993.
Source: Annual Survey of Establishments for Manufacturing (1990-1993). National Statistics Office.

Domestic Market. Domestic consumption of natural rubber for the past ten years ending 1995 increased by an annual average of 3 percent. Consumption for 1997 was estimated at 35,000 tons, the bulk of which was used by tire manufacturers. Local consumption is heavily influenced by the performance of the Philippine tire industry. This was evident in the drop of the domestic rubber consumption as the tire industry reeled from the surge of imported brands brought about by the reduction of tariff rates on tires to 30 percent. Historical data on domestic tire market are found in Table 4. From a respectable market share of 87 percent in 1991, the tire manufacturers settled for a mere 49 percent in 1996.

Local production of tires gradually rose from 1991 to 1993, but numbers were unsteady from 1994 to1997. There was a significant drop in tire production from 1994 to 1995 as a result of the import surge and the closure of two rubber manufacturers. On average, local tire production hardly grew from 1991 to 1997, registering an average contraction of 0.2 percent per year.

Table 4. Historical data on domestic tire market. 1991 - 1997

Indicators	1991	1992	1993	1994	1995	1996	1997
Rated capacity (units in million)	2.66	2.92	3.16	3.30	3.51	3.84	4.91
Local production (units in million)	2.21	2.36	2.44	2.41	2.02	2.18	2.14
Total imports (units in million)	0.32	0.58	1.13	1.24	1.72	2.26	1.36
Market demand (units in million)	2.53	2.94	3.57	3.65	3.81	4.44	3.50
Market share of local manufacturers (%)	87.3	80.3	68.3	66.0	54.8	49.1	61.10

Source: Philippine Rubber Industry Paper

Investments. Real capital expenditures for rubber product manufacturing posted a 10 percent increase per year from 1990 to 1993 (see Table 3). Recently, a project of undisclosed amount has been reported to be jointly undertaken by the University of Southern Mindanao and the Philippine Rubber Industries Association (PRIA). Aimed at enhancing rubber plantation technology, the project would set up a three-hectare demonstration farm to showcase efficient and effective ways and practices of managing a rubber farm. The farm would likewise be used as a model for the PRIA, which intends to undertake a large rubber plantation.

The industry also reported efforts towards plant modernization as some of the major tire companies are investing in the rehabilitation of old plants, the cost of which amounts to over P80 billion. Furthermore, the tire industry has attracted another new player, which has poured in US $120 M as initial investment and is planning on an additional US $90 M to expand its Philippine operations, should business become favorable.

Weaknesses and Problems. The natural rubber sector faces positive prospects in terms of growing product demand due to widening industrial application. However, losing out to competitors becomes imminent in the absence of an enforceable planting and replanting program. On top of this, the unauthorized and improper tapping of young trees threatens natural rubber production.

Attractive world markets for rubber led to an increase in exports, causing an artificial domestic supply shortage. The decline in natural rubber supply would saddle said demand prospects and consequently shift to importation.

Furthermore, as is usually true to the agricultural sector as a whole, the natural rubber sub-sector faces inadequate quality standards and the technological support to upgrade productivity and reduce costs, specifically in the reduction of dirt adulteration in cumplumps. Long gestation periods discourage investments and the existing financial schemes are not suited for rubber growers.

High energy cost ranks among the problems that dulls rubber products manufacturers' competitiveness. Recorded as the highest in the region, energy eats about 20-30 percent of production costs of the footwear sub-sector, and up to 40 percent of tire manufacturers.

Support industries that would augment natural rubber production and soften importation of synthetic and other materials are non-existent. Thus, the local tire industry is unable to achieve scale economies unlike other manufacturers from its ASEAN neighbors. Other countries such as Indonesia, Thailand, and Malaysia source their raw materials locally; whereas, the Philippines has to import its major raw materials such as tire cord, bead wire, and steel cord.

While small-holder operations are deemed suitable to natural rubber production, rubber manufacturers likewise perceive the limited land sizes as hindrances to the development of the local rubber industry because it precludes the establishment of organized and large plantations, and has made processing more costly.

Lopsided trading practices are yet another problem faced by the Philippine rubber industry. Rubber products from China, Indonesia, and Thailand are shipped to the Philippines at prices cheaper than the material cost of their equivalent. As a result, local tire manufacturers are compelled to discount their products significantly in order to unload mounting inventories, thus hurting their profitability. In addition, automotive assemblers' preference for Japanese automotive rubber parts adversely affects the local industry.

Trade Performance. Between natural and synthetic rubbers, the former is the exportable while the latter is importable, not being produced locally.

- Natural Rubber

The growth of natural rubber exports was relatively unstable registering positive growth rates but at a decreasing pace. It grew at an average rate of 4.2 percent per year from 1992 to 1996. This is faster than a 2.7 percent average growth in imports. The sharp increase in the 1995 exports by more than a hundred percent as explained by the industry was attributed to a 540 percent expansion of the elastomer market. In 1996, the value of natural rubber exports increased but at a diminished rate of 22 percent from 105 growth rate in the previous year (Table 5). In terms of contribution to the country's total exports, natural rubber contributed an average of 0.12 percent during the 1992-1996 period (Table 6). The less than one percent contribution to the country's total exports maybe attributed to the sharp rise in the exports share of electronics and garments to the country's total exports

Table 5. Philippine exports and imports of natural rubber, 1992 - 1996.

Year	Exports (US $ FOB Value)	Growth rate (%)	Imports (US $ CIF Value)	Growth rate (%)
1992	9,345,614		798,568	-
1993	12,049,793	29	820757	3
1994	13,598,517	13	932,125	14
1995	27,817,530	105	1,019,053	9
1996	33,815,737	22	869,403	- 15
Average Annual growth rate (%)		4.2		2.7

Source: Philippine Foreign Trade Statistics, 1992-1996, National Statistics Office.

Table 6. Share of natural rubber exports and imports to total Philippine trade, 1992-1996.

Year	Rubber exports	Share to total exports (%)	Rubber imports	Share to total imports(%)
1992	9,345,614	0.09	798,568	0.00
1993	12,049,793	0.10	820,757	0.00
1994	13,598,517	0.10	932,125	0.00
1995	27,817,530	0.16	1,019,053	0.00
1996	33,815,737	0.16	869,403	0.00

Source: Philippine Foreign Trade Statistics, 1992-1996, National Statistics Office

The biggest markets for natural rubber are the APEC economies comprising an average of 97.2 percent from 1992 to 1996 (Table 7). The share of the region slowed down in 1994 but regained its strength in the following years. By 1996, it captured almost 100 percent of the country's total natural rubber exports.

Table 7. Philippine exports of natural rubber (FOB US$), 1992-1996

Year	APEC	Rest of the World	Total	% Share of APEC
1992	9,333,749	11,865	9,345,614	99.8
1993	12,046,793	3,000	12,049,793	99.9
1994	12,601,257	997,260	13,598,517	92.7
1995	26,084,953	1,732,577	27,817,530	93.8
1996	33,685,177	130,560	33,815,737	99.6

Source of basic data: National Statistics Office

Malaysia and People's Republic of China (PROC), Taiwan, Singapore and Hongkong have consistently been the biggest markets during the period. Except for Malaysia, the demand of these countries for Philippine natural rubber contracted in 1997 (Table 8). This maybe traced to the increasing competitiveness of other countries in Asia such as Thailand and Indonesia and other players in the market that have developed their niche in the market such as USA and Canada, all of which are APEC member countries (Table 9). Note that although Malaysia is an importer of natural rubber from the Philippines, it is at the same time an exporter of the same commodity in the world market.

Table 8. Market destination of exported natural rubber, 1993 - 1997 (FOB Value in US $)

Country	1992	1993	1994	1995	1996
Malaysia	4,023,975	5,606,781	5,121,693	7,450,340	8,296,320
PROC	-	73,528	238,240	1,238,324	9,696,511
Taiwan	2,222,946	2,950,840	3,253,403	2,941,399	4,441,444
Singapore	813,579	1,194,351	1,073,832	8,443,230	6,665,579
Hongkong	-	266,662	1,297,521	3,226,669	2,050,908
Korea	237,427	35,456	131,612	2,666,890	1,755,913
Japan	5,965	-	4,402	57,110	340,836
USA	2,029,857	1,919,175	1,426,124	-	289,095
Germany	8,040	-	-	-	-
Pakistan	3,825	-	-	325,728	130,560
India	-	3,000	-	-	-
Indonesia	-	-	54,430	60,991	148,571
UK	-	-	997,260	1,363,573	-
Israel	-	-	-	31,104	-
Saudi Arabia	-	-	-	12,172	-
Total	9,345,614	12,049,793	13,598,517	27,817,530	33,815,737

Source : Board of Investments

Table 9. Percent share in world exports of natural rubber products of APEC economies, 1991 - 1995

Country	1991	1992	1993	1994	1995
Philippines	0.32	0.22	0.30	0.26	0.37
Indonesia	24.20	24.87	24.76	24.35	26.10
Thailand	24.34	27.18	29.15	31.83	32.86
Singapore	-	-	-	-	-
Malaysia	24.35	22.16	20.99	21.43	21.44
China	0.00	0.04	0.14	0.10	0.07
Korea, Rep. Of	0.01	0.03	0.04	0.04	0.03
USA	1.40	1.12	1.03	1.01	0.82
Mexico	0.07	0.09	0.04	0.05	0.05
Japan	0.01	0.01	0.01	0.01	0.01
Hong Kong	1.43	1.09	0.84	1.39	1.25
Australia	0.06	0.04	0.04	0.01	0.01
Papua New Guinea	0.05	0.05	0.07	0.06	0.04
Canada	0.10	0.02	0.04	0.04	0.06
Other Countries	23.66	23.07	22.55	19.41	16.89

Source of basic data: United Nations International Trade Statistics, 1996.

Thailand, Indonesia and Malaysia, considered as the country's major competitors, ranked first, second and third, respectively, in world exports of natural rubber. The Philippines ranked only the 16th in 1995.

As the Philippines has APEC as its biggest export market for natural rubber, it also has APEC as its biggest source of imports. About 93 percent of our natural rubber imports from 1992 to 1996 came from these neighboring countries (Table 10).

Table 10. Philippine imports of natural rubber, 1992-1996

Year	APEC	Rest of the World	Total	% Share of APEC
1992	677,162	121,406	798,568	84.8
1993	698,629	122,128	820,757	85.1
1994	932,125		932,125	100.0
1995	993,765	25,288	1,019,053	97.5
1996	869,403		869,403	100.0

Source of basic data: Foreign Trade Statistics (various years, National Statistics Office)

- **Synthetic Rubber**

As mentioned, synthetic rubber is not produced locally and according to the industry, there is no potential for the country to produce the product in the future. The country's imports of synthetic rubber followed an upward trend from 1992 to 1996 (Table 11). On the average, the total import value grew by 8 percent. In 1996, however, imports with synthetic rubber fell by 1 percent from US $ 35 million in 1995 to US $ 34 million in 1996.

Table 11. Annual growth rates of synthetic rubber imports value 1992 - 1996

Year	Imports (US $ CIF Value)	Growth Rate (%)
1992	26,009,176	-
1993	26,781,411	3.0
1994	29,873,962	12.0
1995	35,161,678	18.0
1996	34,719,920	- 1.0

Source of basic data: Foreign Trade Statistics (various years, National Statistics Office)

The bulk of synthetic rubber imports were sourced from APEC member countries comprising an average of 80 percent from 1992 to 1996 (Table 12). Major sources of synthetic rubber imports from APEC in descending order are Korea, Taiwan, United States of America and Japan. The rest includes Australia, Singapore, Malaysia, People's Republic of China and Indonesia. Other sources of synthetic rubber imports were European countries such as Germany, Netherlands, Switzerland and Turkey accounting for 19 percent in 1996.

Table 12. Imports value of synthetic rubber, 1992-1996.

Year	APEC	Rest of the World	Total	% Share of APEC
1992	20,905,022	5,104,154	26,009,176	80.4
1993	21,570,950	5,210,461	26,781,411	80.5
1994	24,325,366	5,548,596	29,873,962	81.4
1995	27,533,802	7,627,876	35,161,678	78.3
1996	28,548,292	6,171,628	34,719,920	82.2

Source of basic data: Foreign Trade Statistics (various years, National Statistics Office)

Net Trade. Overall, the net trade in natural rubber is positive and growing. The performance of the sector during the past five years indicates its relative potential in the export market (Table 13).

Table 13. Net trade of natural rubber

Year	Net Trade (US $)
1992	8,547,046
1993	11,229,036
1994	12,666,392
1995	26,798,477
1996	32,946,334

Source of basic data: Foreign Trade Statistics (various years, National Statistics Office)

Expected Impact of the EVSL

As shown in Table 14, average nominal tariff on natural rubber decreased from 20 percent in 1992 to 3 percent in 1998. The reduction on the tariff resulted from the Tariff Reform Program that was implemented under Executive Orders 470 (effective 24 August 1991), 264 (effective 15 January 1996) and 465 (effective 22 January 1998). Being an importable product, nominal tariff on synthetic rubber is currently at its low level of 3 percent from 28 percent in 1992.

Economic theory indicates that, for a small country, a higher tariff is inferior to a lower one. Industries that have been provided with this form of protection generally tend to be less efficient since they are able to control the domestic market. The country consequently experiences higher prices and lower output because industries are not induced to maximize their full potential production given their available resources, while remaining profitable in the domestic economy.

Nevertheless, while it is clear that protection is harmful to the economy, the present industrial sector is characterized both by the lack of understanding of the economic costs of tariff protection and the presence of powerful political-social forces that strongly oppose any change in the status quo. This system of protection creates

Table 14. Nominal tariff of natural and synthetic rubber, 1990-1998

		Rate of Duty (%)*								
HDG. No.	Description	1990	1991	1992	1993	1994	1995	1996	1997	1998
40.01	Natural rubber, balata, gutta-percha, guayule, chicle and similar natural gums, in primary forms or in plates, sheets or strip	20.00	20.00	20.00	20.00	20.00	10.00	10.00	10.00	3.00
40.02	Synthetic rubber and factice derived from oils, in primary forms or in plates, sheets or strip; mixtures of any product of heading No. 40.01 with any product of this heading, in primary forms or in plats, sheets or strip	29.64	16.00	28.43	28.43	16.00	3.00	3.00	3.00	3.00
Average tariff rate		27.11	16.91	26.21	26.21	16.91	4.84	4.84	4.84	3.00

up to EO 465
Source: Tariff Commission

substantial rents to the producers of import-competing goods, to the importers that benefit from the allocation of (non-market) import rights, to organized labor that is sharing part of the monopoly rents resulting from the protection, and to the government bureaucracy that was administering the restrictive trade policies. Because sectoral liberalization affects a wide range of these social groups, it may be necessary to identify the short-term impact of this policy. Moreover, since trade liberalization is expected to benefit the economy only in the long run, the short term adjustments required by this policy will have to be considered.

Imposing tariffs may also be advisable if society desires to be self-sufficient in the production of natural rubber given that the country is an ideal site for rubber plantation. This means that policies can be used to limit the number of exports and

imports below the optimal levels that can be attained under free trade. Since rubber plantations require a long gestation period to be productive, certain social gains can be derived from reducing both the consumption and production of natural rubber.

Trade liberalization through the EVSL increases the extent with which the whole industry can trade with other markets, providing better access to the markets particularly in the ASEAN countries. This is particularly true for such an industry sector that depends on imported raw materials like synthetic rubber. Moreover, as markets of other countries become more accessible, the probability of discovering other markets become greater. In the domestic economy, the country also benefits as the entry of imported raw materials make rubber products cheaper, thereby, providing greater access to cheaper rubber products.

However, for natural rubber, where the country possesses certain indigenous resources, increased trade can cause the decline in demand for the domestically produced goods. This can mean certain social losses if this will lead to the closure of certain rubber plantations.

Because of the differences in production processes, industrial structure and sources of input, the effects of the EVSL on the supply of natural rubber and synthetic rubber will vary. While greater trade will be favorable to the synthetic rubber industry, this may not necessarily be beneficial to natural rubber, where indigenous resources exist. Given its strong potential, the natural rubber industry can be given some protection in order to achieve some level of self-sufficiency in this product.

- **Natural Rubber**

  Weakening Export Competition due to Domestic Production Impediments. Exports of natural rubber have generally increased from 1993 to 1996 though the figures particularly in 1996 somewhat increased at a decelerating pace from more than 100 percent growth in 1995 to only 22 percent growth rate in 1996.

  Table 15 presents the revealed comparative advantage (RCA) indices of Philippine exports of natural rubber from 1992 to 1995. The RCA is a ratio of a commodity group's export share in the country's total exports to the commodity's group share in the total world exports. A country has revealed comparative advantage (disadvantage) in exporting the good if the index value is higher (lower) than unity.

Table 15. Revealed comparative advantage (RCA) indices for natural rubber, 1992 - 1995

Year	Share of Natural Rubber to Total Philippine Exports	Share of Natural Rubber to Total World Exports	RCA
1992	0.00095	0.00114	0.8309
1993	0.00106	0.00108	0.9775
1994	0.00101	0.00125	0.0000
1995	0.00159	0.00153	1.0439

Note: RCA is the ratio of natural rubber exports in the country's total exports to the commodity's group share in the total world exports.
Source of basic data: 1995 United Nations International Trade Statistical Yearbook and Philippine Foreign Trade Statistics, various years

The close to one estimated RCA indices for natural rubber (SITC 232) indicate that the Philippines has a fairly strong revealed comparative advantage to export this product, except in 1994 when the Mindanao was beset with peace and order problems. Note that with the exception of this year, the relative share of natural rubber to the country's total exports since 1992 had been progressing so appreciably such that in 1995 the country has a revealed comparative advantage to export this product in the world market. On the contrary, world exports have already continually increased during the 1992-1995 period.

However, the opening up to the world markets can mean a further weakening in the country's productive capacity as the decelerating growth rate in 1996 indicates. The central issue here is that the sector has not fully achieved its full growth potential and has not reached economies of scale in its productive capacity because of some government policies. For example, the agrarian reform program has resulted in the partition of the lands, thereby hindering the sector from a higher scale of production. While keeping the agrarian reform program intact, the government should encourage consolidation of lands to realize potential scale economies in production.

Furthermore, the peace and order problems need to be considered as another factor affecting its export performance. The continuing secessionist movement of the Abu Sayaf leads to uncertainty in the area, and a constant source of discouragement to investors.

The natural rubber industry may also be affected by inefficiency as growers have reportedly found it easier to sell their products to other countries. While the reduction in tariffs may have increased competition in the output markets, the domestic industry continues to be plagued by substantial costs. Industry representatives claim that these companies have operated at less than full capacity. In order to provide the growers more favorable terms, open trade in the inputs can be pursued, or more preferable, the modernization of these local industries can be pursued in order to achieve larger scale production and lower costs.

Increasing the Vulnerability of a Labor-Intensive Industry. As the country liberalizes its market with the APEC trading partners, greater import competition is then expected. Natural rubber appeared competitive in 1995 (as shown by greater than one RCA estimate in 1995) but will still likely to be vulnerable when faced with greater competition.

As mentioned, natural rubber is basically an exportable product and yet the country imports the same good during the past five years. Although import value slowed down to a negative 12 percent growth rate in 1996, Philippine imports of natural rubber generally followed an upward trend from 1992 to 1995. Ninety-three percent (93%) of the total natural rubber imports during the 1992-1996 period were supplied by the APEC economies. Of this, 20 percent came from the two nominating countries – Japan (7.7%) and

Thailand (12.3%). Opening up further the trading environment for the product would therefore increase the sectors' vulnerability to greater competition.

About 92,000 people depend on natural rubber growing as their means of livelihood. Hence, it will be untimely to liberalize the natural rubber sector given the lack of infrastructure, technical and financial support to prepare them to global competition.

Inhibiting Replanting Efforts. Early liberalization can place a toll on recent efforts to plant more trees at greater scale and more efficient levels. Investments in the area of rubber plantation modernization may experience low returns if policies allow the entry of cheaper foreign products. This is especially worrisome for the country where most of the trees are already twenty-five years old.

Despite the already low tariffs impose on the industry, there are substantial annual rubber deficits, especially for domestic firms. This can be remedied through increases in domestic production.

Unfortunately, the investments required for replanting has been very limited. The private sector is generally cautious in providing the funds for replanting because of the long gestation needed for the trees to be productive. Government subsidies on the other hand have hardly been adequate which the large-scale program required.

- Synthetic Rubber

Access to Cheaper Inputs. Of the two inputs to rubber manufacture, synthetic rubber will benefit more from the EVSL. Further, tariff liberalization of synthetic rubber currently taxed at 3 percent, will allow the entry of imported ones which would lower the production cost of tire manufacturers and eventually their selling price. In the end, the consumers will increase their demand for low priced tires. It was pointed out during the roundtable meeting with industry representative that early liberalization of synthetic rubber alone could not enhance the rubber industry's competitiveness. They admitted that reducing the duty to zero would result in some savings for the industry but its impact seems insignificant since synthetic rubber constitutes 7 percent of most rubber products' material cost.

Promoting Greater Economic Efficiency. Tariff affects differently the importable and exportable sectors. Exports do not benefit from tariff protection but are actually being penalized by tariffs by increasing the cost of imported and domestic inputs. Synthetic rubber sector is basically imported and used as an input to tire manufacture.

Greater competition arising from the low priced and good quality imports would induce the natural rubber growers to be more efficient in their production. The rubber manufacturers complained about unsteady supply and unstable quality of local natural rubber. Hence, with a more liberal trading environment, this would encourage the growers to improve their productivity

and come up with better quality of natural rubber needed by the industry, particularly the tire manufacturing sector.

Lowering production cost. Allowing early liberalization of synthetic rubber particularly benefits the true sellers as this further lowers production cost and thereby can channel their savings to increase efficiency.

Enhancing the Transfer of production and manufacturing technology. This will be discussed in more detail in the next section. EVSL program can facilitate the efforts of both government and industry to come up with an economic cooperation for the transfer of production and manufacturing technology to reduce the risk of price fluctuations.

Domestic Government Policies

Aside from trade policies, the government should undertake domestic policies to improve the industry, particularly the natural rubber sector. The Tariff Commission conducted consultations on 13 November 1997 regarding the proposed liberalization of seven (7) sectors including the natural and synthetic rubber. During the consultations, the Tire Manufacturing Association of the Philippines (TMAP) endorsed the early tariff liberalization of natural and synthetic rubber because these are major raw materials for the tire manufacturing. In the same light, the Philippine Rubber Industries Association interposed no objection to the early liberalization of the same products. However, it seems likely that domestic policies will be more important in enhancing the industry. Hence, the following programs should be encouraged.

(i) Domestic strategies to be implemented by the Philippine Government and the Rubber Industry:

1. Upgrading of production, extraction and processing techniques and facilities to achieve higher productivity, lower costs and greater profitability.
2. Comprehensive rubber research and development plan- The rubber industry study should identify areas of strengths and weaknesses in terms of production. The study should include research and development action plans to further improve its efficiency. This is inevitable if the industry would aim for competitiveness in the global market.
3. Create Natural Rubber Board to handle all issues and concerns of the industry.
4. Significant restructuring of production and marketing strategies.
5. Encourage direct producer-manufacturer agreements.

(ii) Domestic programs and strategies to be implemented by the government:

1. Propose to raise the Tariff Reform Program (TRP) rate of natural rubber from 3 percent to 5 percent because natural rubber has been

identified as an export winner. This will also encourage investments in the sector.

2. Massive rubber tree planting and replanting program to replenish aging treeds and expand present hectarage are planted to rubber;

    a. Encourage cooperatives to attract investments into organized plantations, which have economies of scale, access to funding and to technology. This will require identifying and adding a contiguous hectarage to the existing available land. This is particularly relevant to the farms that are subject to the Comprehensive Agrarian Reform Program (CARP). The whole process will necessitate the coordination of the DENR, the DAR and the DA.
    b. Give the existing CARP beneficiaries access to financing schemes that are suitable for long-gestation crops such as rubber.
    c. Introduce innovative schemes to attract additional investments in the natural rubber industry. For instance, the study of "securitizing" trees planted in the area should be given serious thought.

2. Improve productivity and quality of natural rubber.

    a. Intensive information campaign to educate farmers on the importance of quality and productivity; to train farmers on good farming practices; and, to introduce new techniques for harvesting and processing of rubber.
    b. Increase seed accessibility to Rubber Testing Centers through the creation of satellite centers to service plantations and processors in far- flung areas.
    c. Create Rubber Price Monitoring Center similar to Malaysia to determine the actual market price of raw rubber.

3. Improve economic viability of natural rubber plantations by:

    a. Creating a natural rubber valuation method based on the local demand and supply situation.
    b. Facilitating exemption of natural rubber from the coverage of VAT. It was mentioned during the roundtable that the Board of Investments expressed its support on this matter and its position paper has already been filed to the Bureau of Internal Revenue.

Conclusion and Recommendations

The paper discusses the extent to which tariffs can be further reduced for natural and synthetic rubber taking into account the current state of the industry and the likely impact the EVSL initiative may give to the industry. As a summary, this section also identifies the possible specific measures or programs that will maximize the country's

participation in the EVSL initiative and hence enable the industry to compete in a more open trading environment.

(i) Tariff Program

Since natural rubber shows export potential and is undergoing the process of regeneration, it would not be beneficial for the sector to accept the EVSL tariff reduction schedule as originally proposed, i.e., elimination of tariffs. The details of the tariff reduction program are yet to be discussed further among the APEC economies. The proposed tariff reduction schedule deemed beneficial to the industry is as follows:

- **Natural Rubber** (HS 40.01). Increase the tariff rate to 5 percent since this is locally produced and an exportable product. This move basically accelerates the tariff rates that will be in place in 2004. However, by imposing higher rates as soon as possible, two goals may be achieved. First, the added protection provides a strong indication of support given to this industry, providing some confidence to investors in extending funds to the sector. Second, the additional support at this time can also help remedy the peace and order problems in the area.

- **Synthetic Rubber** (HS 40.02). This can be liberalized earlier than natural rubber. Zero rate of duty is acceptable because there are no local producers of this raw material needed by the tire industry (Table 16).

(ii) Economic and technical cooperation measures

1. Production and manufacturing technology transfer to assist the local rubber industry in increasing its productivity and efficiency.
2. Research and development on the current state of the art on production of different rubber products.
3. Establishment of facilities for standard testing and training of personnel for standards testing and implementation.
4. Creation of a pool of internationally well-known experts in rubber processing and technology to assist APEC developing countries like the Philippines develop their rubber industry.

Table 16
EVSL Tariff Reduction Schedule
Sector: Natural and Synthetic Rubber

HS NO.	HS HDG. NO.	DESCRIPTION	RATE OF DUTY(%) 1998	1999	2000	REMARKS/COMMENTS
40.01		Natural rubber, balata, gutta-percha, guayule, chicle and similar natural gums, in primary forms or in plates, sheets or strip.				
	4001.10 00	- Natural rubber latex, whether or not pre-vulcanised	3	3	3	Tariff rate should be adjusted to 5 percent beginning 1993 since this is locally produced and is an exportable product
		- Natural rubber in other forms:				
	4001.21 00	- - Smoked sheets	3	3	3	
	4001.22 00	- - Technically specified Natural rubber (TSNR)	3	3	3	
	4001.29 00	- - Other	3	3	3	
	4001.30 00	- Balata, gutta-percha, guayule, chicle and similar Natural gums	3	3	3	
40.02		Synthetic rubber and factice derived from oils, in primary forms or in plates, sheets or strip; mixtures of any pro- duct of heading No. 40.01 with any product of this heading, in primary forms or in plates, sheets or strip.				
		- Styrene-butadiene rubber (SBR); carboxyllated styrene-butadiene rubber (XSBR):				
	4002.11 00	- - Latex	3	3	3	Zero rate of duty is acceptable beginning 1998 as there is no potential for the industry to produce this item even in the near future. Not locally produced.]

HS NO.	HS HDG. NO.	DESCRIPTION	RATE OF DUTY(%) 1998	1999	2000	REMARKS/COMMENTS
	4002.20 00	- Butadiene rubber (BR)	3	3	3	]]
		- Isobutene-isoprene (butyl) rubber (IIR); halo-isobutene-isoprene rubber (CIIR or BIIR):				]
	4002.31 00	- - Isobutene-isoprene (butyl) rubber (IIR)	3	3	3	Zero rate of duty is acceptable beginning 1998 as there is no potential for the industry to produce this item even in the near future. Not locally produced.]
	4002.39 00	- - Other	3	3	3	]]
		- Chloroprene (chlorobutadiene) rubber (CR):				]
	4002.41 00	- - Latex	3	3	3	]]
	4002.49 00	- - Other	3	3	3	]]
		- Acrylonitrile-butadiene rubber (NBR):				]
	4002.51 00	- - Latex	3	3	3	Zero rate of duty is acceptable beginning 1998 as there is no potential for the industry to produce this item even in the near future. Not locally produced.]
	4002.59 00	- - Other	3	3	3	]]
	4002.60 00	- Isoprene rubber (IR)	3	3	3	]]

HS NO.	HS HDG. NO.	DESCRIPTION	RATE OF DUTY(%) 1998	1999	2000	REMARKS/COMMENTS
	4002.80 00	- Mixtures of any product of heading No. 40.01 with any product of this heading	3	3	3	Zero rate of duty is acceptable beginning 1998 as there is no potential for the industry to produce this item even in the near future. Not locally produced.]
		- Other:				]
	4002.91 00	- - Latex	3	3	3	]
						]
	4002.99 00	- - Other	3	3	3	]

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