

A Note on Tariff Escalation

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### I. Introduction

1. Commodity exports are of primary importance to developing countries: in 50 of them the share of commodities in total exports averaged 89 per cent (1980). Increased domestic processing of commodities could therefore be considered prima facie as a potentially important source of domestic income, employment and foreign exchange. The expansion of these activities depends on several factors; the escalation of tariffs with the degree of processing remains an important constraint.

2. A recent study has concluded that a 50 per cent reduction in import barriers by 18 OECD countries against 99 processed and unprocessed agricultural products (mainly the former) would result in exports from 56 selected developing countries expanding by US\$3 billion annually (in 1977 values), an increase of 35 per cent<sup>1</sup>. Moreover the World Bank has stated that removal of tariffs on processed varieties of eight agricultural products in which the developing countries have a significant share of world exports would boost developing country export revenues by more than the Generalised System of Preferences (GSP) has done<sup>2</sup>. Another study has concluded that if the mineral ore output of the developing countries was processed locally up to the metal bar stage, it would bring in an additional US\$10-12 billion annually (1975 values)<sup>3</sup>.

3. During the Tokyo Round the developing countries requested (i) reductions in the degree of tariff escalation and adoption of the 'Swiss Formula' for tariff reductions (under which higher tariffs would be cut proportionately more than lower

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1. A Valdes, J. Zietz, Agricultural Protection in OECD Countries: Its Cost to Less Developed Countries, International Food Policy Research Institute, 1980.
  2. The World Bank, "World Development Report", 1981.
  3. B. Varon, "Enough of Everything for Everyone, Forever?" in Finance and Development, September 1975, p.20.

tariffs<sup>1</sup>), and (ii) the exemption from most-favoured nation (mfn) tariff reductions of products in which the developing countries enjoyed preferences, so as to maintain the margin of those preferences. These two requests were considered beneficial by the developing countries in approaching the tariff escalation issue and expanding trade in processed products. But the exclusion from the Multilateral Trade Negotiations of many processed products and other products that are of special interest to the developing countries, such as textiles and leather products, meant that the final outcome fell far short of expectations.

4. In this note an attempt will be made to examine the issues associated with tariff escalation facing the exports of developing countries.

## II. Issues Relating to Tariff Escalation

### (a) Trade in Processed Products

5. There are no systematic data on world trade in processed products with which to evaluate the incidence of tariff escalation. However, the import data of developed market economies, relating to 25 commodity chains in two selected periods (1970-72 and 1978-80), presented in Table 2.1, show several important features of the processed commodity trade. The proportion of these commodities imported in raw form by developed countries from developing countries declined marginally overall (based on value data). However, in several product groups of interest to developing countries - cocoa, oilseeds and oils, leather and iron - the proportion declined significantly. In several others - coffee, meat, rubber, manganese and phosphates - though the

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1. The Swiss Formula can be expressed algebraically as follows.  $Z = AX/A + X$ , where A is the coefficient agreed upon; X is the initial rate of import duty; and Z the reduced rate of duty. The European Economic Community, Nordic countries and Australia used a value of 16 as the coefficient A, while the United States, Japan and Switzerland used 14. If this formula had been used without exception, it would have reduced tariff escalation, since processed products are associated with relatively high tariffs; but it was not.

proportion declined, it remained over 85 per cent. Analysis of the developed countries' markets for processed products shows that for fourteen commodity groups the developing countries market share declined while in the remainder the gains appeared to be marginal, except for fish and leather products.

(b) Structure of Tariffs in Developed Countries

6. Tariff concessions granted by industrial countries at the conclusion of the Tokyo Round covered nearly 27,000 tariff lines, representing about three-quarters of all dutiable headings and sub-headings in agriculture and industry<sup>1</sup>. This was a notable achievement but the overall figure conceals considerable variations in the level of concessions granted on the commodity processing chains of interest to developing countries. Depending on the distribution and depth of tariff cuts with respect to the different stages of processing, it seems likely that the Multilateral Trade Negotiations increased rather than diminished the degree of protection in these products.

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1. See General Agreement on Tariffs and Trade, The Tokyo Round of Multilateral Trade Negotiations, II-Supplementary Report, January 1980.

TABLE 2.1

The Structure of Developed Countries Imports of Selected Commodities in Raw and Processed Forms from Developing Countries and the World (Averages 1970-72 and 1978-1980)

Product by Stage of Processing	Percentage Distribution of Imports by Stage of Processing				Market Share of Developing Countries	
	Average 1970-72 From LDCs	Total Imports	Average 1978-80 From LDCs	Total Imports	Average 1970-72	Average 1978-80
1. Cocoa						
Cocoa beans (0721)	83.2	53.0	73.6	46.7	98.2	97.5
Powder (0722)	1.3	3.5	2.9	7.0	22.5	26.0
Butter & Paste (0723)	14.9	18.5	17.7	20.6	51.0	53.1
Chocolate (073)	0.6	25.2	5.8	25.7	1.4	13.9
2. Coffee						
Green, roasted (0711)	97.9	94.4	96.2	92.7	97.9	95.3
Extracts, essences (0713)	2.1	5.6	3.8	7.3	35.1	48.2
3. Coconut						
Copra (2112)	59.6	55.3	24.9	23.5	98.3	99.5
Coconut oil (4223)	40.4	44.7	75.1	76.5	82.5	91.8
4. Fish						
Fresh, simply preserved (031)	86.7	78.3	87.1	83.4	29.3	37.1
Prepared (032)	13.3	21.7	12.9	16.6	16.2	27.5
5. Fruit						
Fresh (051)	86.3	76.2	77.0	72.8	41.1	39.3
Preserved (053)	13.7	23.8	23.0	27.2	20.8	31.5
6. Groundnuts						
Groundnuts (2211)	54.3	58.8	32.3	56.5	68.8	27.6
Groundnuts oil (4214)	45.7	41.2	67.7	43.5	82.6	75.1
7. Meat						
Fresh, frozen (011)	77.2	81.6	71.8	85.6	20.7	9.8
Prepared (013)	22.8	18.4	28.2	14.4	27.2	22.9
8. Palm kernel						
Palm kernel (2213)	54.5	53.6	22.4	20.0	100.0	98.3
Palm kernel oil (4224)	35.5	46.4	77.6	80.0	63.5	85.3
9. Sugar						
Raw beet & cane (0611)	54.7	50.9	50.7	45.0	64.2	59.5
Refined (0612)	45.0	41.5	48.2	40.6	64.7	62.8
Sugar preparations (062)	0.3	7.6	1.1	14.4	2.5	4.0
10. Tobacco						
Unmanufactured (121)	96.1	79.7	94.4	68.3	33.7	44.5
Manufactured (122)	3.9	20.3	5.6	31.7	5.5	5.7
11. Vegetables						
Fresh (054)	88.4	72.7	86.6	72.6	27.9	29.3
Prepared, preserved (055)	11.6	27.3	13.4	27.4	9.8	12.0
12. Cotton						
Raw Cotton (2631)	45.6	24.4	16.3	11.9	69.7	52.0
Cotton Yarn (6513)	4.0	4.2	7.6	6.2	35.3	46.4
Cotton fabrics (652)	13.6	22.2	10.8	19.0	22.8	21.5
Clothing (8411/8412)	36.8	49.2	65.3	62.9	27.8	39.4
13. Jute						
Raw Jute (264)	29.7	26.5	13.3	11.1	92.0	87.2
Fabrics (6534)	62.0	59.0	58.9	53.9	86.2	79.6
Bags & Sacks (6561)	8.3	14.5	27.8	35.0	46.7	57.7
14. Leather						
Hides & Skins (211)	27.6	20.5	9.8	14.6	24.3	15.6
Leather (611)	34.1	18.8	25.7	15.6	32.7	38.4
Leather goods (612/831/851)	38.3	60.7	64.5	69.8	11.4	21.4
15. Rubber						
Natural rubber (2311)	98.0	34.4	90.6	29.6	96.4	97.9
Rubber products (629)	2.0	65.6	9.4	70.4	1.0	4.3
16. Sisal/Henequen						
Fibres (2654)	68.4	37.9	30.9	14.7	97.1	97.5
Cordage & manufactures (6556)	31.6	62.1	69.1	85.3	27.4	37.4

TABLE 2.1 (contd.)

Product by Stage of Processing	Percentage distribution of Imports by Stage of Processing				Market Share of Developing Countries	
	Average From LDCs	1970-72 Total Imports	Average From LDCs	1978-80 Total Imports	Average 1970-72	Average 1978-80
17. Wood						
Wood in the rough (242-2421)	60.9	30.6	55.0	28.6	52.8	52.7
Wood, shaped & plywood (243/631)	36.1	62.3	40.9	62.0	15.4	18.1
Manufactures (632)	3.0	7.1	4.1	9.4	11.1	12.0
18. Aluminium						
Bauxite (2833)	41.7	12.1	33.5	8.4	73.3	71.8
Alumina (5136)	38.9	25.4	36.8	26.8	32.5	24.6
Unwrought aluminium (6841)	17.4	38.3	25.8	35.5	9.7	13.0
Wrought aluminium (6482)	2.0	24.2	3.9	29.3	1.7	2.4
19. Copper						
Ores, concentrates (2831)	15.5	13.3	29.4	17.8	55.4	68.2
Unwrought alloys (6821)	83.6	69.1	68.7	52.6	57.3	53.7
Wrought alloys (6822)	0.9	17.6	1.9	29.6	2.5	2.6
20. Iron						
Ores, concentrates (281)	81.6	23.7	67.1	19.0	46.6	44.7
Pig iron (671)	10.3	7.4	17.5	9.1	18.7	24.4
Steel ingots (672)	1.1	9.5	3.4	11.3	1.6	3.8
Rolling Mill Products (673 to 676)	6.9	56.5	11.7	57.2	1.7	2.6
Special Steel Products (677)	0.1	2.9	0.3	3.4	0.3	1.2
21. Lead						
Ores, concentrates (2834)	53.7	33.8	64.9	35.3	40.4	44.4
Unwrought alloys (6851)	45.5	63.9	34.7	62.1	18.0	13.5
Wrought alloys (6852)	0.8	2.3	0.4	2.6	9.1	4.0
22. Manganese						
Ores, concentrates (2837)	93.0	60.2	86.0	48.1	56.6	46.7
Ferromanganese (6714)	7.0	39.8	14.0	51.9	6.4	7.1
23. Phosphates						
Rock (2713)	91.9	82.5	86.2	73.5	61.1	63.2
Phosphoric acid (51335)	2.2	6.7	8.1	14.1	18.2	31.1
Phosphate fertilizers (56129)	5.9	10.8	5.7	12.4	30.2	24.6
24. Tin						
Ores, concentrates (2836)	18.7	18.3	10.3	11.0	84.5	77.9
Unwrought alloys (6871)	81.3	80.3	89.1	86.3	83.9	85.7
Wrought alloys (6872)		1.4	0.6	2.7	-	18.8
25. Zinc						
Ores, concentrates (2835)	76.1	47.9	76.4	43.7	34.7	31.2
Unwrought alloys (6861)	21.3	48.2	23.0	50.1	9.7	8.2
Wrought alloys (6862)	2.6	3.9	0.6	6.2	14.3	1.8

Source: United Nations, Commodity Trade Statistics, Series D, as quoted in UNCTAD, TD/B/C.1/PSC/23, 24 Nov. 1981.

TABLE 2.2  
Depth of Tariff Reductions and Post-MTN  
Tariff Averages

Country/Group	<u>Raw materials</u>		<u>Semi-manufactures</u>		<u>Finished manufactures</u>	
	Depth of Cut	Tariff Average	Depth of Cut	Tariff Average	Depth of Cut	Tariff Average
	per cent		per cent		per cent	
United States	77	0.2	33	3.0	29	5.7
Canada	69	0.5	30	8.3	39	8.3
Japan	67	0.5	30	4.6	52	6.0
European Economic Community	15	0.2	27	4.2	29	6.9
Austria	9	0.8	19	4.7	13	16.1
Finland	60	0.3	13	5.9	22	6.1
Norway	39	0.0	21	1.4	25	4.2
Sweden	21	0.0	38	3.3	26	4.9
Switzerland	28	0.2	25	1.2	22	3.1
Group Average	64	0.3	30	4.0	34	6.5

Source: General Agreement on Tariffs and Trade, The Tokyo Round of  
Multilateral Trade Negotiations, II - Supplementary Report,  
January 1980, p. 33

7. The average reductions in duty under the Tokyo Round and the average tariffs resulting are presented in Table 2.2 for selected OECD countries. It is clear that average tariffs escalate with the degree of processing. The duties on the selected countries averaged 0.3 per cent at the primary product stage compared with 4.0 per cent and 6.5 per cent respectively for semi-manufactures and finished manufactures. Moreover, the depth of tariff reduction was twice as much on the raw material than at the manufactured stage, thereby raising the level of effective protection.

8. Table 2.3 shows, for the major industrial markets, the pre- and post-Tokyo Round average tariff facing developing country exports for twelve important processing chains. In calculating these averages, care was taken to include the duty rate (mfn or GSP) actually facing developing countries. These figures show the persistence of escalation after the Tokyo Round reductions have been implemented, the nominal tariff for the final stage exceeding that for the primary stage in all cases. Moreover, for some products



TABLE 2.3

Tariff Escalation in Tropical Products of Ten Markets <sup>a</sup>

stage of processing	Product description	CCCN	Applicable tariff <sup>b</sup>		% reduction in average applicable tariff	Changes in escalation as a result of MTN <sup>c</sup>		
			before MTN	after MTN		comparison of stage	absolute difference	relative position
1	Fish, crustaceans and molluscs	0301-3	4.3	3.5	18.6			
2	Fish, crustaceans and molluscs prepared	1604-5	6.5	5.5	9.8	2 with 1	increased	increased
1	Vegetables, fresh or dried	0701, 0704-6	13.3	8.9	33.1			
2	Vegetables prepared	2001-2	18.8	12.4	34.0	2 with 1	reduced	no change
1	Fruit, fresh, dried	0801-9, 0812	6.0	4.8	20.0			
2	Fruit, provisionally prepared	0810-11, 0813	14.5	12.2	15.9	2 with 1	reduced	increased
3	Fruit, prepared	2001, 2003-7	19.5	16.6	14.9	3 with 1	reduced	increased
1	Coffee	0901	10.0	6.8	32.0			
2	Processed Coffee	2102 ex	13.3	9.4	29.3	2 with 1	reduced	increased
1	Cocoa beans	1801	4.2	2.6	38.1			
2	Processed cocoa	1803-5	6.7	4.3	35.8	2 with 1	reduced	no change
3	Chocolate products	1806	15.0	11.8	21.3	3 with 2	reduced	increased
1	Oil seeds and flour	1201-2	2.7	2.7	0.0			
2	Fixed vege. oils	1507	8.5	8.1	4.7	2 with 1	reduced	reduced
1	Unmanufactured tobacco	2401	56.1	55.8	0.5			
2	Manufactured tobacco	2402	82.2	81.8	0.5	2 with 1	no change	no change
1	Natural rubber	4001	2.8	2.3	17.9			
2	Semi-manufactured rubber (unvulcanised)	4005-6	4.6	2.9	37.0	2 with 1	reduced	reduced
3	Rubber articles	4011-14, 4016	7.9	6.7	15.2	3 with 2	reduced	increased
1	Raw hides and skins	4101	1.4	0.0	100.0			
2	Semi-manufactured leather	4102-8, 4110, 4302	4.2	4.2	0.0	2 with 1	increased	increased
3	Travel goods, handbags, etc.	4202	8.5	8.5	0.0	3 with 2	no change	no change
4	Manufactured articles of leather	4203-5	9.3	8.2	11.8	4 with 2	reduced	reduced
5	Footwear	6401-5	11.6	10.9	6.2	5 with 2	reduced	reduced
1	Vegetable textile yarns (excl. hemp)	5706-7	4.0	2.9	27.5			
2	Twine, rope and articles; sacks and bags	5904-6, 6203	5.6	4.7	16.1	2 with 1	increased	increased
3	Jute fabrics	5710	9.1	8.3	8.8	3 with 1	increased	increased
1	Silk yarn not for retail sale	5004-6	2.6	2.6	0.0			
2	Silk fabric	5009	5.0	5.3	5.4	2 with 1	reduced	reduced
1	Semi-manufactured wood	4405, 4416, 4417, 4419	2.6	1.8	30.8			
2	Wood panels	4415	10.8	9.2	14.8	2 with 1	reduced	increased
3	Wood articles	4420-25	6.9	4.1	40.6	3 with 1	reduced	reduced
4	Furniture	9401, 9403	8.1	6.6	18.5	4 with 1	reduced	increased

Notes: <sup>a</sup> The ten markets are the EEC, Japan, Australia, New Zealand, Canada, Austria, Switzerland, Finland, Norway and Sweden.

<sup>b</sup> Unweighted average of product averages in each market (Unweighted, GSP or MFN rates, including duty-free tariff lines).

<sup>c</sup> Two indicators have been used as a rough measure of the extent of change in tariff escalation: the absolute difference in the average tariff on two successive stages of processing, and the relative position of the two averages (the tariff on the higher stage divided by that on the lower stage). reduction in either of these two indicators would demonstrate a decrease in the disparity between rates on different stages of processing, and can thus be taken as some indication of a possible reduction in tariff escalation. If both indicators have decreased, the protection afforded to higher stages of processing has most likely been reduced as a result of the post-MTN tariff.

Source: United Nation Conference on Trade and Development, "The Processing Before Export of Primary Commodities: Areas for Further International Cooperation", UNCTAD, May 1979.

indicators showed an increase in tariff escalation as a result of Tokyo Round reductions, for example in processed fish, sacks, bags and articles of twine and rope and jute fabrics. In other items, such as prepared fruits, processed coffee, chocolate products, rubber articles, wood panels and furniture, the indicators moved in opposite directions, hence the direction of change in tariff escalation was not clear. In manufactured tobacco and travel goods, there was no change in escalation, while it was marginally reduced in vegetable oils, semi-manufactured rubber, manufactured articles of leather, footwear, silk fabrics and wood articles.

9. Due to the persistence of tariff escalation and the erosion of preference margins in the Tokyo Round, it has been estimated that the potential losses of export receipts for developing countries are in the region of one billion U.S. dollars<sup>1</sup>. It appears that if 'sensitive' processed products of export interest to the developing countries, such as leather, leather products and footwear, had been subject to tariff cuts, especially if they had been accorded full tariff reductions on the basis of the 'Swiss Formula', the potential losses could have been considerably reduced. A number of semi-processed and processed products were identified by UNCTAD as having considerable potential for expansion of exports to the three major industrial markets of the EEC, the US and Japan<sup>2</sup>.

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1. Report by the Secretary-General of UNCTAD, "Assessment of the results of the Multilateral Trade Negotiations, Part II, Implications of the Tokyo Round Tariff Reductions for the Trade of Developing Countries", TD/B/778/Add.1., 26 February 1980.
  2. In the EEC the products potentially affected include semi-manufactures of pulp, leather and fur: semi-manufactures of rubber; furniture; paper pulp, paper waste, paper and paperboard; cotton fabrics; synthetic fabrics; made-up textile articles; clothing and accessories; semi-manufactures of steel; metal manufactures; chemical compounds; plastic materials; non-electrical machinery; electrical machinery and apparatus; instruments; apparatus, cameras, clocks and watches; and toys, games, etc. The corresponding list for Japan includes furniture; paper and paperboard; made-up textile articles; clothing and accessories; non-metallic mineral products; the entire chemical sector; non-electrical machinery; electrical machinery and apparatus; instruments, apparatus, cameras, clocks and watches; and toys, games, etc. In the United States the corresponding products are semi-manufactures of leather and fur; the entire rubber sector; wood-based panels; furniture; paper pulp, paper waste, paper and paperboard; non-metallic mineral products; glass and glassware; articles of precious and semi-precious stones; metal manufactures; the entire chemical sector; non-electrical machinery; electrical machinery and apparatus; motor vehicles; instruments; apparatus, cameras, clocks and watches, toys, games, etc. and miscellaneous manufactures.

(c) Effective Protection

10. The degree to which developed countries' nominal tariffs escalate with processing provides an insufficient explanation of the full extent of tariff protection afforded to processing activities in developed countries. In order adequately to examine the incidence of tariff escalation, it is necessary to analyse the effective rates of protection. These indicate the amount of protection which nominal tariffs provide to the value added by an industry rather than to the price of the protected industry's output<sup>1</sup>. The published data on effective protection, though dated, show that effective rates are usually several times higher than nominal rates and sometimes reach extremely high levels<sup>2</sup>. Estimates of effective protection done for a joint Commonwealth Secretariat/World Bank project on processing in respect of cocoa and coconut oil, based on post-Tokyo Round nominal tariffs and recent United Kingdom input-output coefficients (Table 2.4), show rates of

TABLE 2.4  
Nominal Tariffs and Effective Rates of  
Protection on Coconut Oil and Cocoa in the European  
Economic Community  
(per cent)

Processing Chain	MFN Rate	Effective Rate	GSP Rate	Effective Rate
(A) 1. <u>Coconut oil</u> (Technical or industrial purposes)				
(a) Crude	5		2.5	
(b) Processed	8(3)	28.0	6.5(4)	33.2
2. <u>Other Coconut oil</u> (for food uses)				
(a) Crude	10		7	
(b) Processed	15(5)	48.3	13(6)	53.0
(B) <u>Cocoa</u>				
1. Cocoa beans	3.0		0.0	
2. Cocoa liquor	15.0(12)	70.0	11.0(11)	57.0
3. Cocoa butter	12.0(9)	53.0	8.0(8) <sup>a</sup>	40.0
4. Cocoa powder	16.0(13)	75.0	9.0(11)	57.0

Notes: The figures in parenthesis represent the nominal increase in the rate of duty for processing stages over raw materials.  
a Subject to a ceiling.

Sources: (A) See J.J. McNerney, Industrial Processing of Primary Products, Coconut Oil Refining, Commonwealth Secretariat, 1981 (Mimeo); and  
(B) M.V.D.J. Karunasekera, The Economics of Industrial Processing of Cocoa, Commonwealth Secretariat, 1981 (Mimeo).

1 For a formal definition of effective protection, see Herbert G. Grubel, "Effective Tariff Protection: A Non-Specialist Introduction to the Theory, Policy Implications and Controversies", in Robert E. Baldwin and J. David Richardson (ed.), International Trade and Finance, Readings; Little, Brown and Company, 1974.

2 United Nations Conference on Trade and Development, "The Kennedy Round: Estimated Effects on Trade Barriers", TD/6/Rev.1, Appendix Table A.

effective protection to be somewhat lower than published data, yet still significant. A study on selected rubber products indicates still lower effective rates (truck tyres 6.4 per cent, bicycle tyres 4.4 per cent, condoms-6.3 per cent, rubber footwear 21 per cent, and swimming caps 11 per cent)<sup>1</sup>.

11. In the case of minerals, tariff barriers in developed countries (particularly in Japan) appear to be one of the main constraints to the development of new smelters and refineries in mineral producing countries. For example, although Japan's mfn tariff on copper concentrates is only 4.8 per cent in nominal terms, in 1980 prices the effective rate was equivalent to 32 per cent (Table 2.5). This is due to the fact that raw material inputs enter Japan duty-free and the value added in smelting and refining is low relative to the final product price. Effective rates on more highly finished copper products, such as tubes, brass shapes and wire, are considerably lower, at 5 to 6 per cent<sup>2</sup>. This would favour the export of these goods to Japan in preference to copper wirebars but for the non-tariff barriers and marketing and distribution problems which would be encountered.

TABLE 2.5  
Post-Tokyo Round Tariff Rates for  
Selected Metals in Japan

Metal	Nominal tariff MFN Rate	Effective Rate
	per cent	
1. Refined copper (concentrates)	4.8	31.6
2. Refined zinc (concentrates)	3.7	14.3
3. Refined lead	4.3	25.6

Note: According to 1980 price/cost relationships.

Source: Canada, Department of Energy Mines and Resources, Mineral Policy, December 1981.

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1. R.C. Wanigatunga, Processing of Natural Rubber in South Asian Countries for the Export Market: Tyres and Selected Rubber Products, Commonwealth Secretariat, 1981 (Mimeo).

2. Source, as for Table 2.5.

12. Another disturbing aspect of tariff escalation is that effective protection is significantly and positively correlated with labour intensity and is therefore higher in industries in which developing countries are more likely to have a comparative advantage<sup>1</sup>. The highest trade barriers imposed by developed market economy countries are to be found in industries based on fibres and hides and skins where labour intensity is high and where developing countries can most effectively utilise their labour resources.

(d) Importance of Depth of Cuts in Assessing Effective Protection

13. The structure and depth of tariff cuts are a major concern to the developing countries, since deeper reductions on production inputs can result in higher effective rates of protection for processed goods. This can be illustrated by comparing mfn and GSP nominal and effective rates of duty on two processing chains, coconut oil and cocoa, in the EEC (see Table 2.4). The most interesting feature to emerge from these data is that effective protection of refined coconut oils is higher under the GSP rates than under the mfn in spite of lower nominal rates of duty under the former. This arises from the greater differential in the rate of duty on processed oil over crude under the GSP (an 86 per cent increase) as compared with the mfn (a 50 per cent increase) due to the deeper reduction of GSP rates for crude oil (the primary input in this chain).

14. The GSP rate has been used for purely illustrative purposes; it could be the case that deeper cuts in mfn rates have been granted to the primary rather than to the processed product. For example, under the Tokyo Round essentially unchanged US and Japanese tariffs for processed meat coupled with a reduction for

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1. See Bela A. Balassa, "The structure of protection in the industrial countries and its effects on the exports of processed goods from developing countries", The World Bank, Economic Department, Report No. EC-152.

fresh meat undoubtedly resulted in increased effective protection for processed goods, as did the European Community tariff cut for fish<sup>1</sup>.

(e) Import Demand Elasticities

15. Information on tariff escalation by itself does not take into account the way in which demand conditions change from one stage to the next. Where import demand elasticities also increase with fabrication, these accentuate the discriminatory effect of tariff structures. The overwhelming evidence from numerous studies that have empirically estimated developed countries' import demand elasticities shows that these parameters also increase with fabrication, thereby reinforcing the protection provided by escalating nominal tariffs on processed goods imports (Table 2.5).

TABLE 2.5

Increase of Import Demand Elasticities  
in Six Major Developed Country Markets

Type of Goods	United States	Canada	EEC (6)	United Kingdom	European Free Trade Association <sup>a</sup>	Japan
Crude materials	-0.39	-0.20	-0.29	-0.25	-0.22	-0.29
Semi-finished manufactures	-1.63	-0.82	-1.42	-1.06	-0.90	-1.42
Finished manufactures	-4.12	-2.06	-3.09	-2.68	-2.26	-3.09

Note: <sup>a</sup> Original members excluding United Kingdom.

Source: Bela Balassa and Mordechai Kreinin, "Trade Liberalisation under the Kennedy Round: The Static Effect", Review of Economics and Statistics, 49, p.129.

1. UNCTAD, "The Influence of Protectionism on Trade in Primary and Processed Commodities: the Results of the Multilateral Trade Negotiations and Areas for Further International Cooperative Action", TD/B/C.1/207/Add. 2, August 1980.

(f) Escalating Non-Tariff Barriers

16. The preceding discussion was framed in terms of tariffs; but non-tariff barriers also have an important effect on the level and structure of developing country exports. Non-tariff barriers include quantitative import restrictions, licensing procedures, public and quasi-public procurement, health and sanitary regulations, indirect taxes and border adjustments. Evidence suggests that the effects of these barriers are particularly severe on imports from developing countries of processed agricultural products. Several studies conclude that developing country losses from these measures may be considerable<sup>1</sup>. The application of non-tariff barriers affects exports not only from newly industrialising countries but also from smaller, poorer and less advanced developing countries where natural fibre products often make up a large share of exports. The operations of the Arrangement Regarding International Trade in Textiles (MFA) have increased protectionism for textiles and clothing. Outside the MFA sisal products are affected by voluntary export restraints. Japan uses non-tariff barriers to protect local sugar refiners. The variable levies under the European Economic Community's sugar regime thwart the import of processed fruit and chocolate with significant sugar content.

17. Non-tariff barriers of various kinds also restrict access for processed and fabricated mineral products. A common pattern involves duty-free import of ores and concentrates, tariffs and/or quantitative restrictions on imports of processed and fabricated products, public procurement policies favouring domestic suppliers, subsidies or tax incentives for exports and perhaps even direct subsidisation.

18. The pattern of mineral protection in Japan is of particular concern to other mineral producing countries efforts to upgrade export towards refined metals and semi-fabricates. The Japanese system of protection for copper metal, for example, is understood to consist of tolerance by the Japanese Government of a cartelised producer price

1. See particularly Alberto Valdes and Joachin Zietz, Agricultural Protection in OECD countries: Its cost to less developed countries, International Food Policy Research Institute, Research Report 21, December 1980; and A.J. Yeats, Trade Barriers Facing Developing Countries, Macmillan, 1979.

for refined copper which ranges from 5 to 11 per cent above the London Metal Exchange price; added protection by administrative controls, such as direct regulation of imports; and subsidisation of processing, for example by refunding of turnover tax to smelters. The system makes market penetration for refined and semi-fabricated copper exports most difficult and makes it possible for the Japanese smelters to pay a premium to exporters of ores and concentrates, so providing a disincentive to establishing smelters and refineries in copper producing countries.

19. A recent study by UNCTAD also demonstrates that the frequency of application of these non-tariff barriers increases as one moves along processing chains<sup>1</sup>. Moreover the use of non-tariff barriers suggests that they are applied most frequently to the products in which the poor countries are developing a comparative advantage.

(g) Tariff Escalation and Transport Costs

20. The developing countries have contended that a wide variety of shipping conference practices, such as adoption of deferred rebates and various surcharges and the levying of higher charges on high valued goods, are designed to maintain monopoly control over their trade. These practices, it is argued, result in developing countries paying higher prices, receiving a lower quality of service and facing higher effective trade barriers than would be the case under alternative institutional arrangements.

21. Economists examining these arguments have concluded that it is a common practice of Conference operators to charge "what the traffic will bear" in formulating freight rates<sup>2</sup>. The principle is based on assessing the purchasing power of each commodity exporter for buying the transport service.

22. Empirical investigations show that freight rates are often more important barriers to developing countries' exports than are

1. UNCTAD, The Processing Before Export of Primary Commodities; Areas For Further International Co-operation, UNCTAD, May 1979.
2. See J.J. Evans, "Liner Freight Rates, Discrimination and Cross-subsidisation", Mark. Pol. Mgmt, 1977, 227-233; H.B. Desai, "Liner Freight Rates", prepared for Jamaican Shippers Council (Mimeo); Jan Jansson and Jan Shneerson, "The Effective Protection Implicit in Liner Rate Shipping", Review of Economics and Statistics, 60, 1978; and Ingrid Bryan, "Regression Analysis of Ocean Liner Freight Rates on some Canadian Export Routes", Journal of Transport Economics and Policy, May 1974.



tariffs and that transport costs usually (though not always) rise with fabrication<sup>1</sup>. However, the estimates relating to the commodity chains of coconut and bauxite indicated lower freight rates for the processed products. In products such as coffee and sugar the escalating freight rates appear to accentuate tariff structures of developed countries. The current practice of imposing nominal duties on the basis of cost, insurance and freight (cif) in importing countries, increases the import unit values (ceteris paribus) of exports of processors located in distant countries, due to higher freight costs, thereby reducing their competitiveness. This disadvantage can be minimised if nominal duties are imposed on the basis of free on board (fob) values in the exporting countries.

### III. Conclusions

23. The escalating tariff structures of developed countries still persist in spite of Tokyo Round tariff reductions and seem to be of considerable importance in sectors such as textiles, agriculture (for example, sugar, coffee, oilseeds, etc), leather and other light manufactures where the developing countries have the advantage of relatively low-cost labour resources. In such sectors increased developing country export receipts will depend in large measure on co-operative international action to secure liberalisation of these government imposed barriers. However, escalation appears to be far less pronounced in some agricultural raw materials such as wood and rubber, and in metal processing, although escalation of tariffs and non-tariff barriers virtually prohibits the import of refined copper, lead and zinc into Japan.

24. To sum up, a wide variety of trade and commercial barriers influence the level and composition of developing countries' exports. Although escalation of trade barriers is by no means the sole factor inhibiting the expansion of developing country processing, the need to overcome it must be recognised in any valid policy proposals aimed at encouraging industrialisation in developing countries.

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1. The following commodities have displayed escalating transport costs - cocoa, leather, rubber, wood and copper, according to A.J. Yeats, "Do International Transport Costs Increase with Fabrication? Some Empirical Evidence", Oxford Economic Paper Vol. 29, No.3, November, 1977.