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PHILIPPINE INTRA-ASEAN TRADE LIBERALIZATION

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ABSTRACT

The paper analyzes the implication of intra-ASEAN trade liberalization viewed from the context of the Philippine economy. As a backdrop, the first section presents the features of the Philippine intra-ASEAN trade during the postwar period. Next, we look into the pattern of Philippine imports from the ASEAN region during the period 1972-76. In the third section, the tariff structure of Philippine imports of ASEAN products in 1975 is compared with ASEAN partners' tariff rates.

The first issue on intra-ASEAN trade liberalization pertains to expansion of Philippine imports due to tariff cuts. Using partial equilibrium analysis, a formula on import expansion is derived. In general, the direct effect of ASEAN tariff reduction on a given Philippine import group depends on the level of original tariff, and on the price elasticities of import demand. Based on 1975 data, under a 10 percent tariff cut across-the-board, import expansion varies among import groups. On the whole, a 10 percent across-the-board tariff cut would have negligible expansion effects on Philippine imports from all the other ASEAN countries or even from each ASEAN partner.

Another important issue is the trade creation or diversion effects of ASEAN trade liberalization. Despite some serious difficulties, trade creation or diversion is evaluated by comparing unit values of Philippine imports from ASEAN vis-a-vis the world. Again based on 1975 data, Philippine imports from ASEAN at the least aggregated grouping are classified in terms of whether they were lower-priced, higher-priced, or equally-priced imports from ASEAN vis-a-vis the world. On the number of import groups, more ASEAN items were priced higher compared to imports from the world. In terms of import expenditures, however, a greater part was spent on competitively priced ASEAN items.

Furthermore, we determine the import expansion and trade creation effects of a tariff cut on the selected 150 Philippine items offered for preferential trading agreement. Based on 1975 data, the estimated import expansion effects varied among the selected items but, on the whole, constituted only a negligible portion of the estimated effects under a 10 percent across-the-board tariff cut. More important, on trade creation or diversion issue, higher-priced ASEAN items outnumbered lower-priced ones in the selected Philippine items. More import expenditures, however, were spent on the lower- than higher-priced items included in the Philippine commodity list for tariff concession.

We conclude that the limited and selective approach toward freer ASEAN intra-trade may turn a long way to expand markets of Philippine industries and more so, an unsafe approach to rationalize industries. In the meantime, if economic planners want to enhance the trade creating effects of the ASEAN item-by-item tariff reduction program, they should look closer at the price differentials of ASEAN vis-a-vis non-ASEAN sources not only for one or two years but on a long run perspective.

Even so, to rationalize the Philippine industries, an across-the-board tariff reduction is recommended on the principle of equal reduction in the effective protection rates. Yet a greater than 10 percent tariff reduction across-the-board, while inducing greater trade expansion, may lead to more distortionary effective protection rates as the original ASEAN tariff rates are, to start with, unequal. Thus we conclude that a gradual move towards a free trade area may appear a more logical way out of the Philippine dilemma of a limited market and inefficient industries. We finally argue that the common fear of industrial polarization has no economic basis.

To end up with, some suggestions for further research are presented. Among others, we urge that research efforts should focus on the indirect, long-run effects of alternative trade liberalization scheme.

PHILIPPINE INTRA-ASEAN TRADE LIBERALIZATION*

by

*Armando Armas, Jr.***

1. Introduction

Intra-ASEAN trade is one of the major fields for economic cooperation within the Association of Southeast Asian Nations (ASEAN). Since the first meeting of the Committee on Trade (now Committee on Trade and Tourism), several instruments for preferential trading arrangement have been considered, and at a special meeting on 24 February 1978 a trading agreement was finally signed. The agreement explicitly calls for five major instruments: 1) long-term quantity contracts, 2) purchase finance support at preferential interest rates, 3) preference in government procurement, 4) extension of tariff preferences, and 5) liberalization of nontariff measures on a preferential basis.

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Hitherto, however, the trade committee's activities center on negotiations over products eligible for tariff reduction in intra-ASEAN trade. To facilitate negotiations, the Trade Preferences Negotiating Group was created to be directly involved in the rounds of tariff negotiations on an item-by-item basis. Each member country would offer tariff reduction on specific imports from its other ASEAN partners in exchange for tariff cut on selected items. And tariff preferences approved on bilateral basis should be extended to all ASEAN members on a most-favoured-nation clause.

Such selective trade liberalization scheme is far from economic integration. At best, it is only a first step towards the long-term goal of an ASEAN customs union. The item-by-item limited trade liberalization, however, has been deemed the "best" that the ASEAN can have under the present set-up. Or as a U.N. team puts it, the limited selective scheme can provide "the quickest way of expanding markets of individual countries and thus some rationalization of the productive structure of ASEAN economies " [U.N. 1974; p. 53]. After the sixth meeting of the Committee on Trade and Tourism on April 1978, however, a total of only 150 items had been offered from each member country for only a 10 percent tariff cut.

This paper analyzes the implications of Philippine intra-ASEAN trade liberalization. We wish to answer some frequently asked questions, such as, "Is the item-by-item ASEAN tariff cut on quid pro quo

basis better than across-the-board tariff slash?" The next sections discuss Philippine intra-ASEAN trade, import patterns, and tariff structure. Then, we attempt to determine the effect of the limited across-the-board vis-a-vis item-by-item 10 percent tariff cut on Philippine imports from other ASEAN countries. More important, we also analyze the trade creation or diversion impact of liberalized intra-ASEAN trade.[1/] In the concluding section, the implications of alternative intra-ASEAN liberalization approaches are evaluated in terms of Philippine industrial policies.

2. Philippine Intra-ASEAN Trade

Table 1 summarizes Philippine exports to ASEAN countries during the postwar period. The country's annual exports to the other ASEAN countries hovered at $.7 to $4.0 million during the period 1949-66. With ASEAN formation in 1967, Philippine exports abruptly rose to $22.3 million, then fluctuated from $10.2 to 75.3 million in 1968-76. During the 1950s, despite wide fluctuations, the cumulative exports were almost evenly shared among ASEAN partners. But in later years, Indonesia and Singapore absorbed the greater shares of Philippine exports.

[1/] In this paper, we did not deal with export expansion because estimates of import expansions of other ASEAN countries from the Philippines are hardly available. More important, however, trade creation or diversion impact of customs union pertains to imports rather than exports.

Table 1

PHILIPPINE EXPORTS TO ASEAN COUNTRIES
1949-76
(f.o.b. value in $1,000)

Year	ASEAN	Indonesia	Malaysia	Singapore*	Thailand
1949	3,248	2,420	584	--	244
1950	779	197	160	--	422
1951	2,067	1,435	417	--	215
1952	1,811	478	749	--	584
1953	965	328	478	--	159
1954	926	169	590	--	167
1955	1,137	111	507	--	519
1956	1,207	148	583	--	476
1957	777	20	464	--	293
1958	873	85	693	--	95
1959	718	3	502	--	213
1960	1,157	225	176	644	112
1961	1,070	69	181	602	218
1962	1,630	134	189	1,124	183
1963	1,673	43	301	692	637
1964	2,479	245	186	1,614	434
1965	2,306	376	89	1,348	493
1966	4,043	234	422	2,606	781
1967	22,296	16,804	267	3,936	1,289
1968	16,141	4,734	434	9,185	1,788
1969	10,164	864	563	4,738	3,999
1970	12,804	1,726	568	4,149	3,224
1971	22,751	3,496	1,190	16,124	1,941
1972	15,075	4,099	648	8,212	2,116
1973	39,007	14,321	5,741	14,683	4,262
1974	35,985	9,501	4,593	18,452	3,439
1975	60,509	19,631	4,752	31,693	4,433
1976	75,321	12,365	--	56,181	6,775

*Before 1960 Philippine exports to Singapore were included in Malaysia.

Source of Raw Data: Central Bank of the Philippines Statistical Bulletin, December 1976.

The Philippine exports to each ASEAN partner, except Malaysia, however, exhibited rising trend particularly after the formation of ASEAN. The country's export to Indonesia rose from $4.7 million in 1968 to $12.3 million in 1976; to Singapore, from $3.9 to $56.2 million, and the export to Thailand went up from $1.3 to $6.8 million during 1957-76.

On the import side, Table 2 reveals that the total Philippine imports from ASEAN partners waywardly expanded from $22.9 to $243.6 million during the period 1949-76. During most of the postwar years, the Philippines imported greatly from Indonesia and Malaysia, but in some years it imported greatly from Thailand. Except for some abrupt increase particularly in 1975-76, the Philippine imports from its ASEAN partners had not exhibited a noticeable upward trend. Imports from Indonesia, for instance, fluctuated between $1.6 to $111.7 million while imports from Singapore ranged from $1.8 to $27.1 million. In contrast, imports from Malaysia showed upward trends over some years, but hovered at $2.0 to $86.3 million in 1950-76. Philippine imports from Thailand had the widest fluctuations ranging from $.03 to $34.4 million during the postwar period.

From Tables 1 and 2, in all years except 1973, the Philippine intra-ASEAN trade was always in the negative. During 1949-76, the annual deficit ranged from $11.8 to $168.3 million. Against each ASEAN partner, the Philippines had an annual deficit balance with

Table 2

PHILIPPINE IMPORTS FROM ASEAN COUNTRIES
1949-76
(f.o.b. value in $1,000)

Year	ASEAN	Indonesia	Malaysia	Singapore*	Thailand
1949	22,917	16,033	93	--	6,791
1950	12,549	4,435	7,199	--	915
1951	30,881	10,900	5,599	--	14,382
1952	24,679	12,244	7,475	--	4,960
1953	23,447	10,360	13,060	--	27
1954	26,540	13,037	12,160	--	1,343
1955	40,757	18,916	12,374	--	9,467
1956	38,895	22,378	14,607	--	1,910
1957	51,732	28,727	16,409	--	6,596
1958	56,342	39,328	8,763	--	8,251
1959	49,605	43,701	5,795	--	110
1960	43,966	28,985	7,732	7,205	74
1961	43,593	19,388	2,019	5,262	16,924
1962	33,648	23,878	7,265	2,362	143
1963	39,707	18,803	10,988	2,011	7,905
1964	48,916	21,620	11,483	2,599	13,214
1965	46,945	18,370	11,956	1,858	14,761
1966	46,464	22,324	12,108	4,975	7,057
1967	57,250	21,784	16,060	4,323	15,083
1968	53,653	23,143	20,804	8,682	1,024
1969	55,694	27,375	20,605	5,542	2,172
1970	57,035	26,016	26,480	4,149	390
1971	82,272	29,333	28,925	8,604	15,410
1972	58,456	8,594	17,694	7,314	24,854
1973	34,554	1,653	14,692	8,069	10,140
1974	75,420	4,503	28,019	27,117	15,781
1975	172,818	63,100	54,072	21,276	34,370
1976	243,609	111,745	86,312	20,028	25,524

*Before 1960 Philippine imports from Singapore were included in Malaysia.

Source of Raw Data: Central Bank of the Philippines, Statistical Bulletin, December 1976.

Thailand ($.10 to $29.9), Malaysia ($1.8 to $49.3), Indonesia ($4.2 to $43.7), and Singapore (S.39 to $8.7) during most of the postwar years.

3. Philippine ASEAN Import Pattern

Table 3 presents the top ten Philippine imports, at the three-digit SITC level, from the other ASEAN countries from 1972 to 1976. These ten imports accounted 78.6 to 94.0 percent of the total ASEAN imports during the period. Petroleum, crude and partly refined (SITC 312) absorbed an increasing share of 39 to 68 percent, and petroleum products (SITC 313) shared 1.6 to 27.8 percent of the annual total ASEAN imports. In contrast, rice (SITC 042) accounted a decreasing share of 34.7 percent in 1972 to merely 4.8 percent in 1976. These top three commodity groups already accounted nearly 53 to 84 percent of the total Philippine imports from the other ASEAN countries over the years 1972-76.

Among the other top ten imports, unmilled maize (SITC 044) accounted about 4 to 15 percent of the annual total imports in three years, with zero imports for the other two years. Tin imports (SITC 687) accounted another significant portion of .7 to 6.1 percent, while medicinal and pharmaceutical products (SITC 541) absorbed .3 to 2.8 percent of the total annual imports. The remaining top ten imports, namely, unmilled cereals (SITC 045), natural and manufactured gas

Table 3

TOP TEN PRINCIPAL PHILIPPINE IMPORTS FROM ASEAN COUNTRIES, 1972-76
(f.o.b. value in $1,000)

SITC Code	Community	1972	1973	1974	1975	1976
042	Rice	20,270 (34.7%)	2,216 (6.4%)	13,047 (17.3%)	19,293 (11,2%)	11,807 (4.8%)
044	Maize, unmilled	- -	5,187 (15.0%)	- -	10,432 (6.0%)	9,082 (3.7%)
045	Cereals, unmilled	- -	- -	- -	1,596 (0.9%)	1,320 (0.5%)
312	Petroleum, crude & partly refined	23,061 (39.5%)	11,848 (39.5%)	19,492 (25.8%)	110,030 (63.7%)	166,294 (68.3%)
313	Petroleum Products	945 (1.6%)	4,274 (12.4%)	20,939 (27.8%)	13,837 (8.0%)	27,793 (11.4$)
314	Gas, natural & manufactured	159 (0.3%)	- -	863 (1.1%)	1,437 (0.8%)	2,268 (0.9%)
541	Medicinal & pharmaceutical products	190 (0.3%)	954 (2.8%)	2,114 (2.8%)	1,706 (1.0%)	2,890 (1.2%)
687	Tin	3,569 (6.1%)	1,859 (5.4%)	5,887 (7.8%)	1,845 (1.1%)	1,752 (0.7%)
716	Mining construction & other industrial machinery	296 (0.5%)	570 (1.6%)	1,295 (1.7%)	2,379 (1.4%)	2,338 (1.0%)
931	Electric machinery, apparatus & appliances	130 (0.2%)	253 (0.7%)	407 (0.5%)	428 (0.2%)	1,017 (0.4%)
	Total Top Ten Imports from ASEAN	48,620 (83.2%)	27,161 (78.6%)	64,044 (84.9%)	162,983 (94.0%)	226,561 (93.0%)
	Other Imports	9,836 (16.8%)	7,393 (21.4%)	11,376 (15.1%)	9,835 (6.0%)	17,048 (7.0%)
	Total Imports from ASEAN*	58,456 (100.0)	34,554 (100.0)	75,420 (100.0)	172,818 (100.0)	243,609 (100.0)

*From the Central Bank Statistical Bulletin. It should be noted that the total imports from ASEAN may not be equal to those reported in the NCSO Foreign Trade Statistics.

Source of Raw Data: National Census and Statistics Office, Foreign Trade Statistics, 1975.

(SITC 314), mining construction and other industrial machinery (SITC 716) and electrical machinery (SITC 931) absorbed small shares of the total ASEAN imports. Lastly, the minor imports not included in the top ten circle, constituted sizable share of 7 to 21 percent of total ASEAN imports of the country.

In relation to imports from the world, Table 4 calculates the share of the top ten ASEAN imports to the total Philippine imports during the period 1972-76. Among the top ten ASEAN imports, their ratios to total Philippine imports noticeably varied. For some years, rice (SITC 042), maize (SITC 044), cereals (SITC 045), gas (SITC 314), and tin (SITC 687) imports from ASEAN countries comprised a substantial portion (over 50 percent) of the total Philippine imports of such commodities. In contrast, the leading industrial imports from other ASEAN countries, namely, medicinal (SITC 541), industrial machinery (SITC 716) and electric machinery (SITC 721) comprised a very negligible share in the total imports.

Within each three-digit SITC group, the share of imports from ASEAN sources to total also varied noticeably. On rice, for instance, ASEAN import accounted 5 to 100 percent of the total value during 1972-76. Also, the share of maize imports from ASEAN sources to total imports varied from zero to 75.6 percent, while that of cereals, from zero to 71.6 percent. Indeed, a more stable and significant share was recorded by ASEAN tin imports which ranged from nearly 60 to 86 percent of the total. Gas imports from ASEAN partners, except in 1973 when no

Table 4

SHARE OF THE TOP TEN PHILIPPINE IMPORTS FROM ASEAN COUNTRIES TO PHILIPPINE TOTAL IMPORTS, 1972-76

SITC	Commodity	Total Imports from World ($1,000)	Total Imports from ASEAN ($1,000)	ASEAN to World Total (percent)
042	Rice			
	1972	34,955	20,270	57.99
	1973	44,665	2,216	4.96
	1974	39,377	13,047	33.13
	1975	37,353	19,293	51.65
	1976	11,807	11,807	100.00
044	Maize (corn) unmilled			
	1972	8,569	-	-
	1973	7,119	5,187	72.86
	1974	15,967	-	-
	1975	16,486	10,432	63.28
	1976	12,017	9,082	75.58
045	Cereals, unmilled, other than wheat, rice, barley & maize			
	1972	860	-	-
	1973	451	-	-
	1974	2,823	-	-
	1975	3,204	1,596	49.80
	1976	1,843	1,320	71.64
312	Petroleum, crude and partly refined			
	1972	137,752	23,061	16.74
	1973	167,030	11,848	7.09
	1974	573,199	19,492	3.40
	1975	709,815	110,030	15.50
	1976	801,236	166,294	20.75

Continuation of Table 4

SITC	Commodity	Total Imports from World ($1,000)	Total Imports from ASEAN ($1,000)	ASEAN to World Total (in percent)
313	Petroleum products			
334	1972	13,051	945	7.24
	1973	19,963	4,274	21.40
	1974	77,175	20,939	27.13
	1975	56,391	13,837	24.57
	1976	84,089	27,793	33.05
314	Gas, natural and manufactured			
	1972	233	159	68.19
	1973	-	-	-
	1974	900	863	95.88
	1975	1,729	1,437	83.10
	1976	3,067	2,268	73.96
541	Medicinal and pharmaceutical products			
	1972	17,178	190	1.11
	1973	21,191	954	4.50
	1974	36,299	2,114	5.82
	1975	34,554	1,706	4.94
687	T i n			
	1972	5,279	3,569	67.61
	1973	3,123	1,859	59.53
	1974	7,724	5,887	76.22
	1975	2,151	1,845	85.77
	1976	2,184	1,752	80.26
	1978	9,695,370	8,972,086	92.54
716	Mining, construction and other industrial machinery			
	1972	165,989	296	0.18
	1973	206,884	570	0.27
	1974	278,483	1,295	0.46
	1975	438,181	2,379	0.54
	1976	419,498	2,338	0.52

Continuation of Table 4

SITC	Commodity	Total Imports from World ($1,000)	Total Imports from ASEAN ($1,000)	ASEAN to World Total (in percent)
721	Electric machinery, apparatus and appliances			
	1972	59,863	130	0.22
	1973	70,761	253	0.36
	1974	105,335	407	0.39
	1975	156,920	428	0.27
	1976	187,186	1,017	0.54

Source of Raw Data: National Census and Statistics Office, Foreign Trade Statistics, 1972-1976.

gas was imported from ASEAN origin, shared 68 to 96 percent of the total gas imports of the country.

In comparison, ASEAN petroleum (SITC 312), while accounting for the biggest share in Philippine total ASEAN imports, comprised only 3.4 to 2.8 percent of the country's total petroleum imports. Petroleum products (SITC 313) from ASEAN sources accounted 7.2 to 20.8 percent of the total imports in this import group. Finally, the shares of top leading industrial imports from ASEAN partners to total imports under their respective import groups ranged from 1.1 to 5.8 percent for medicinal products (SITC 541), .18 to .54 percent for industrial machinery (SITC 716), and .22 to .54 percent for electrical machinery (SITC 721).

4. Philippine Tariff Structure on ASEAN Imports

Since the issuance of Presidential Decree No. 34 in 1973, only six rates of tariff have been levied, viz., 10, 20, 30, 50, 70, and 100 percent, although special duties are provided to protect Philippine industries against "unfair" competition such as dumping, subsidy, and subvension. On Philippine imports from the other ASEAN countries, Table 5 summarizes the tariff structure in 1975, at the seven-digit SITC import grouping, regrouped at one-digit SITC. Based on 276 import items, the mean tariff rates ranged from 18.9 to 50.5 percent; the modal rates, 10 to 70 percent; and the median at 20 to 50 percent.

Table 5

TARIFF STRUCTURE OF PHILIPPINE IMPORTS
FROM ASEAN COUNTRIES, 1975
(in percent)

SITC CODE	Commodity	Unweighted Mean Tariff Rate	Modal Tariff Rate	Median Tariff Rate	Range of Tariff Rate
0	Food	50.5	50	50	10-100
1	Beverages/Tobacco	30.0	30	30	30
2	Crude materials, inedible except fuel	21.7	10	20	10-50
3	Mineral Fuels	18.9	20	20	10-20
4	Animal and Vegetable Oil	36.7	30	30	30-50
5	Chemicals	23.0	10	20	10-100
6	Basic Manufactures	39.6	50	30	10-100
7	Machinery and Equipment	24.1	10	20	10-70
8	Miscellaneous Manufactures	33.8	10	30	10-100
9	Miscellaneous Transactions	35.1	70	35	0-70
Overall		30.4	10	30	0-100

Source of Raw Data: National Census and Statistics Office, Foreign Trade Statistics, 1975; 1972 Revised Tariff and Customs Code of the Philippines as amended by Presidential Decree 34. Executive Order Nos. 414, 423-424.

Food imports (SITC 0) had the highest mean and median tariff rate of 50 percent while miscellaneous transactions (SITC 9) registered the highest modal rate of 70 percent, but four import groups recorded the lowest modal rate of 10 percent and also four groups had the lowest median rate of 20 percent. On the whole, the Philippine imports from ASEAN were charged a mean rate of 30.4 percent, a median rate of 30 percent, and a modal rate of only 10 percent.

On the whole, the Philippine tariff rates on ASEAN were higher compared to those of Indonesia, Malaysia, and Singapore (Table 6). Indonesia, for example, had only 7 to 12 percent mean tariff rates and 5 to 10 percent modal and median rates. On the aggregate, Indonesia had only 9 percent mean, 10 percent modal and median tariff duties on its imported items from the other ASEAN countries.[2/] Also, except for the 100 percent average tariff rate on beverages and tobacco (SITC 1), Malaysia seemed to have levied lower tariff with mean rate from 2 to 35 percent; modal rate, 2 to 30 percent; and median rate, 2 to 25 percent. On the whole, Malaysia had 59 percent mean rate, 20 percent modal, and 25 median tariff rate. And Singapore, being a free trade area, levied zero to 2.8 percent mean tariff rates while its modal and median rates were all zero percent. In contrast,

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[2/] This does not necessarily mean, however, that Indonesia has a more liberal import policy compared to the other ASEAN countries since nontariff barriers may play a dominant role in Indonesia.

Table 6

TARIFF STRUCTURES OF INDONESIAN, MALAYSIAN AND THAI IMPORTS FROM ASEAN COUNTRIES, 1975
(in percent)

SITC Code	Commodity	Indonesia (1975)			Malaysia (1974)			Thailand (1975)		
		Mean Tariff Rate	Median Tariff Rate	Mode Tariff Rate	Mean Tariff Rate	Median Tariff Rate	Mode Tariff Rate	Mean Tariff Rate	Median Tariff Rate	Mode Tariff Rate
0	Food	12	10	10	27	20	20	34	30	30
1	Beverage/Tobacco	8	10	10	100	100	100	31	30	30
2	Crude Materials Inedible	11	5	5	17	15	15	26	10	10
3	Mineral Fuels	8	10	10	20	20	20	47	30	10
4	Animal and Vegetable Oil	9	10	10	10	10	10	34	30	30
5	Chemicals	8	10	10	31	25	25	49	60	60
6	Basic Manufactures	10	10	10	23	25	30	47	60	60
7	Machinery & Equipment	7	5	5	35	25	20	20	30	30
8	Miscellaneous Manufactures	10	10	10	26	25	25	22	30	30
9	Miscellaneous Transactions	10	10	10	2	2	2	38	30	30
	Overall	9	10	10	59	25	20	49	30	30

Source of Raw Data: Foreign Trade Statistics 1975 of Indonesia; Custom Tariff, Department of Finance, Republic of Indonesia 1972, Malaysia Annual Statistics of External Trade 1974, Vol. 11; Imports Trade Classification and Custom Tariff 1969, Foreign Trade Statistics of Thailand, December 1975.

Thailand registered high tariff rates on its ASEAN imports having 22 to 49 percent mean tariff, 30 to 60 percent median and modal tariff rates. Overall, Thailand had 49 percent mean, 30 percent median and modal tariff rates.

5. Import Expansion of Liberalized ASEAN Trade

To determine the import expansion effects of ASEAN trade liberalization through tariff reduction, various approaches can be used. Our approach here is based on the small country assumption that there are no significant repercussions of import changes on world prices.

The import expansion due to a tariff cut can be straightforwardly derived from an import function,

$$(1) \quad M_q = f(P_m, X)$$

where: M_q = import quantity, P_m = import price in domestic currency, X = all other factors assumed constant. Differentiating (1) with respect to t (tariff rate) would give the change in import quantity due to a tariff change:

$$(2) \quad \frac{d M_q}{dt} = \frac{\partial f}{\partial P_m} \frac{d P_m}{dt}$$

$$= \eta_q \frac{M_q}{P_m} \frac{d P_m}{dt}$$

where $\eta_q = \frac{dM_q}{dP_m} \frac{P_m}{M_q}$ is the import demand elasticity. Since $P_m = \overline{P}_m (1 + t)$, where $\overline{P}_m$ = world price, then $\frac{dP_m}{dt} = \overline{P}_m$. This assumes that the importing country is a price taker. Thus,

$$(3) \quad \frac{d M_q}{dt} = \eta_q \frac{M_q}{\overline{P}_m (1+t)} \overline{P}_m$$

or,

$$(4) \quad \frac{d M_q}{dt} = \eta_q \frac{M_q}{(1+t)}$$

after transformation

$$(5) \quad d M_q = \eta_q \frac{M_q}{(1+t)} dt$$

If the proportionate tariff cut is constant, denoted by α, then

$$(6) \quad d M_q = \eta_q \frac{M_q}{(1+t)} \alpha t$$

where $dt = \alpha t$.

On the other hand, import value is defined as $M_v = \overline{P}_m M_q$ and to get the change in M_v assuming no change in border price of imports,

$$(7) \quad d M_v = \overline{P}_m d M_q$$

which after substitution of (6) and (7) yields

$$(8)\quad d M_v = \bar{P}_m \eta_q \frac{M_q}{(1+t)} \alpha t$$

and since $M_v = \bar{P}_m M_q$ then

$$(9)\quad d M_v = \eta_q \frac{M_v}{(1+t)} \alpha t$$

Thus the direct effect of ASEAN tariff reduction on each commodity import group depends on the level of original tariff and also on the price elasticity of import demand. Under partial equilibrium and price taker assumption, a tariff cut will lead to an import price decline faced by private importers. And expansion of imports from the other ASEAN countries in each commodity group can be estimated by:

$$(10)\quad d M_{v_i} = \eta_{q_i} \frac{\alpha t_i}{(1+t_i)} M_{v_i}$$

where subscript i refers to the import group.

Data on Philippine imports from ASEAN countries (M_v) are readily available from the NCSO Foreign Trade Statistics; the tariff rates (t_i), from the Tariff and Customs Code of the Philippines as amended by Presidential Decree No. 34. Import values and tariff rates are available up to the seven-digit SITC level, and we can easily add

the import values at a more aggregated level up to the one-digit SITC. Because of data constraint, however, we use the import values in 1975 only.

With regard to η_q, the available estimates pertain to a limited number of import groups at the two- or three-digit SITC level (Sicat 1969) or to more number of groups but referring to the one-digit SITC level (Bautista 1977). The Sicat estimates are based on 1953-63 observations while Bautista's refer to longer and more recent observations based on 1952-72. Moreover, the Bautista import elasticity estimates, though fewer, are broader in scope in the sense that they deal with one-digit SITC import groups compared to Sicat's earlier estimates which pertain to several (but less comprehensive) import groups at more disaggregative levels. Thus, with seven-digit SITC level import values, we use import elasticity estimates at the one-digit level (Bautista's) to determine the effect of tariff reduction across-the-board, and estimates at two- or three-digit levels (Sicat's) to determine the effect of tariff cut on an item-by-item basis.

Table 7 presents the estimated expansion of Philippine ASEAN imports in 1975 on the assumption of a 10 percent ASEAN tariff cut across-the-board. As expected, the import groups with higher elasticities will experience greater import expansion effects, other things being the same. Also, items with high original tariff rates will experience higher trade expansion. From Table 7 we can see that, since

Table 7

ESTIMATED EXPANSION EFFECT OF A 10% ASEAN TARIFF CUT ON PHILIPPINE IMPORTS FROM ASEAN COUNTRIES, 1975

SITC Code	Commodity	Elasticity	Original Tariff Rate	Expansion Effect (in percent)
0	Food	-1.236	10%	1.1
			20%	2.0
			50%	4.1
			70%	5.0
			100%	6.2
1	Beverages Tobacco	-0.462	30%	1.1
2	Crude material, inedible, except fuel	-3.64*	10%	3.3
			20	5.8
			30%	8.4
			50%	12.0
3	Mineral Fuel	-1.206	10%	1.1
			20%	2.0
4.	Animal and Vegetable Oil	-0.015	30%	0.035
			50%	0.050
5	Chemical	-0.383	10%	0.3
			20%	0.6
			30%	0.9
			50%	1.3
			100%	1.9
6	Basic Manufactures	-4.260	10%	3.9
			20%	7.1
			30%	9.8
			50%	14.2
			70%	17.5
			100%	21.3

Continuation of Table 7

SITC Code	Commodity	Elasticity	Original Tariff Rate	Expansion Effect (in percent)
7	Machinery and Equipment Equipment	-0.703	10%	0.6
			20%	1.2
			30%	1.6
			50%	2.3
			70%	2.9
8	Miscellaneous	-0.422	10%	0.4
			20%	0.7
			30%	1.4
			50%	1.7
			100%	2.1

*Mean elasticity estimate based on Sicat (1969) estimates on crude fertilizers and crude minerals (excluding coal, petroleum), precious stone, animal and vegetable, crude materials, inedible, n.e.c.

Source of Raw Data:

National Census and Statistics Office Foreign Trade Statistics, 1975; Tariff and Custom Code of the Philippines as amended by Presidential Decree No. 34.

Bautista, R.M. (1977) "Effects of Major Currency Realignment on Philippine Merchandise Trade," Review of Economics and Statistics (May).

Sicat, G.P. (1969) "Import Demand and Import Substitution in the Philippines, 1953-63," Discussion Paper No. 69-2, IEDR-U.P., School of Economics, January.

elasticities vary among groups, the trade expansion effects also differ among them.

Basic manufactured imports (SITC 6) would experience the highest trade expansion because they have the highest import elasticity estimate of -4.26. Import expansion would range from nearly 4 to 21 percent of import values at the pre-tariff cut of 10 percent. Next, the food import value (SITC 0) would have 1 to 6 percent increase due to a 10 percent ASEAN tariff reduction, and mineral fuel imports (SITC 3) would rise by 1 to 2 percent. While most other imports would register negligible increases, say, .03 percent (animal and vegetable oil, SITC 4) to about 3 percent (machinery and equipment, SITC 7), the imports of basic manufactures (SITC 6) would experience the largest import expansion by about 4 to 21 percent of their original values.

On the whole, the import expansion effects of a 10 percent cut of Philippine tariff rates on ASEAN imports would be placed at $4.43 million or only about 3.4 percent of the total $128.7 million.[3/]

[3/] It should be noted that the total imports in 1975 as reported in the Central Bank Statistical Bulletin was $172.8 million (see Table 2). We cannot say, however, that the import expansion of $4.4 is merely 2.5 percent because had we used the Central Bank import data the absolute import expansion may also increased proportionately.

Philippine imports from the other ASEAN countries in 1975.[4/] In terms of imports from individual countries, Philippine imports from Indonesia would expand by around 2 percent; Thailand, 5 percent; Singapore, 2 percent; and Malaysia, 3 percent.

6. Trade Creation or Diversion

Perhaps because of the negligible trade expansion estimates, it has been proposed that across-the-board tariff cut supplant the step by step negotiations on an item-by-item ASEAN tariff cut. In either trade liberalization scheme, however, an important economic issue deals with the trade-creating or diverting effects of such scheme [Lipsey 1957, Viner 1950]. To be sure, the estimates of trade expansion (or contraction) done in the previous section do not really pertain to the issue on whether the ASEAN trade liberalization would shift trade toward a cheaper or dearer source.

Of course it is difficult to find out whether the ASEAN trade liberalization would have a trade creating or diverting effect on the

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[4/] The aggregate import expansion effect of 3.45 percent would be greater than the estimate on Thailand. On record, using the same estimation method, the estimated import expansion of Thailand imports due to 10 percent ASEAN tariff cut was placed at 50 percent (Smutrakalin and Setthawang 1976). After rechecking the computation, however, the estimated import expansion for Thailand using the same formula (and data) is only .5 percent. A simple mechanical error slips in the application of the formula in the Thailand estimates.

Philippines. For one, it is at present nearly impossible to ascertain the dynamic, long-run effects of the ASEAN limited trade liberalization. Also, it is not easy to determine the substitution effects in consumption [Meade 1955, Gehrels 1956-57, and Lipsey 1957]. Despite these serious hurdles, we can nevertheless evaluate whether the intra-ASEAN trade liberalization would tend toward short-run trade "creation" or "diversion" by simply looking into the price differentials of imports from the ASEAN vis-a-vis the world. This heroically assumed that the Philippine prices are not competitive compared to ASEAN or world prices.

The partial equilibrium analysis seems less objectionable when applied to the ASEAN free trade area and to the 10 percent tariff slash among ASEAN countries. The Philippine trade with ASEAN partners seems very insignificant to have general equilibrium implications on the economic variables. Moreover, the proposed 10 percent tariff reduction can be reasonably analyzed under the ceteris paribus assumption since the trade expansion effects, on the whole, are negligible (see previous section).

A common problem in price differential analysis, however, pertains to product homogeneity. In pure theory, "identical" products are considered different if consumers sense them as such. There is even a formal argument to consider "identical" products different if they have different prices [Stigler 1956, p. 49]. With this problem, our criterion is to consider products as identical if reported under

the most disaggregated statistical grouping available. Such statistical identification is not only expedient but also more suitable for policy making than product identification based on subjective values of the consumer.

A more serious problem, moreover, arises from the limited availability of price data on imports. Because it is difficult to obtain reliable price data, we use unit values instead. The use of unit values, though popular, has been objected to on the ground that they may not truly represent prices, particularly in world trade [Kravis and Lipsey 1971]. A serious problem here pertains to the differences of commodity mix within a very broad grouping. Imports, particularly capital or intermediate goods, vary in quality and/or in kind. In short, an import cohort may not reasonably reflect homogeneous items. And the import composition in homogeneous cohorts may change over time.

To lessen the above objections, we use unit values of imports of the least aggregated grouping, namely, at the seven-digit SITC level. This import cohort, while still remaining broad, is more specific compared to the broader classifications used in other studies [Junz and Rhomberg 1973, Kravis and Lipsey 1971]. We can, therefore, proceed with unit value comparison but keeping in mind that some items are not identical as indicated by too "unreasonable" price differentials.