THE 1981-85 TARIFF CHANGES AND EFFECTIVE PROTECTION OF MANUFACTURING INDUSTRIES

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I. INTRODUCTION

As previous empirical studies have amply documented,[1] tariff policy in the Philippines throughout most of the postwar period had been too strongly supportive of the development of import-substituting industries producing consumer goods at the finishing stages. Inevitably, however, high tariff rates on finished products and low rates on intemediate inputs and capital goods that characterized the country's tariff structure have had the undesirable effect of inhibiting export growth and backward integration while promoting inefficiency in the use of domestic resources and slow growth of industrial employment. In the 1970's, fiscal incentives granted by the Board of Investments under the Investment Incentives Act (RA 5186) and Export Incentives Act (RA 6135) and a more flexible exchange rate policy served to provide offsetting benefits to export-oriented firms. However, this did not fully neutralize the biases in the relative incentive structure due to the existing tariff system (cf. Bautista, Power and Associates 1979).

As part of a larger program to "rationalize and restructure industry," a comprehensive review of the tariff system was undertaken by the government in 1979-80. It culminated in the issuance of executive orders calling for gradual tariff changes over the 5-year period 1981-85 that were intended to substantially reduce the distortions in the tariff structure by the end of the period. The Tariff Commission has recently published the *Tariff and Customs Code 1982* containing a consolidated schedule of the changes in tariff rates, which actually began to be implemented on 1 January 1981.

The primary objective of this paper is to assess the impact of the on-going tariff reform on "effective protection rates" in the manufacturing sector, assuming that the scheduled tariff rate changes will

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1. See, among others, Power and Sicat (1971), ILO (1974), and Bautista, Power and Associates (1979).

be fully implemented. It is well recognized that tariffs cause a divergence between domestic and international prices and hence encourage the movement of resources into import-substituting industries rather than into export industries. As a measure of relative incentives, effective protection rates (EPRs) — or rates of protection of value added, defined as the proportionate difference between domestic and foreign value added — are more meaningful than actual (or legal) tariff rates and nominal tariff rates, representing the excess of the domestic price of a product over its international price, since it is value added rather than the value of the product that is contributed by the domestic activity being protected. More specifically, EPRs include the subsidy to domestic producers from the protection of outputs and the penalty from the protection of inputs.

Section II gives a comparison of tariff levels in the Philippines vis-à-vis other ASEAN countries in the late 1970's, and describes the nature of Philippine tariff rate changes scheduled between 1980 and 1985. Section III describes the method of estimating sectoral EPRs in manufacturing for the two years while Section IV presents and evaluates estimates. Finally, the conclusion discusses trade and development issues, especially with reference to current industrial policies and plans.

II. THE TARIFF REFORM

That legal tariff rates in the Philippines were generally higher than those of other ASEAN countries in the late seventies is evident from Table 1. Based on overall simple averages, the Philippines ranked highest (44.2 percent), followed by Indonesia (33.0 percent) and Thailand (29.4 percent), with Malaysia (15.3 percent) and Singapore (5.6 percent) having much lower average tariff levels. Particularly noteworthy are the higher Philippine tariff rates, compared to those in the other ASEAN countries, for manufactured products (PSCC 5-8); this is markedly so for the commodity categories consisting largely of finished consumer products (PSSC 6 and 8).

The distribution of tariff rates in the Philippines by BTN product category is shown in Tables 2 and 3 for 1980 (before the tariff reform was started) and for 1985 (after its completion). The first point to note is that the highest tariff levels of 70 and 100 percent would no longer apply and that a new rate of 5 percent would be levied in 1985 on 30 items, mainly from the categories of animal and

TABLE 1
COMPARISON OF SIMPLE AVERAGES OF TARIFF RATES
IN ASEAN COUNTRIES BY PSCC GROUPING, 1978
(In percent)

Group (PSCC)	*Category*	*Indonesia*	*Malaysia*	*Philippines*	*Singapore*	*Thailand*	*ASEAN*
0	Food and live animals chief for food	42.9	10.7	67.2	1.3	42.6	33.0
1	Beverages and tobacco	46.0	346.8	82.5	458.2	62.4	199.2
2	Crude materials, inedible except fuels	14.2	2.8	27.4	0	18.4	12.6
3	Mineral fuels, lubricants and related materials	15.2	7.1	14.9	9.0	14.2	12.1
4	Animal and vegetable oils, fats and waxes	30.0	0.3	43.9	nil	24.7	19.8
5	Chemicals and related products, n.e.s.	26.8	19.2	41.1	37.2	28.1	30.5
6	Manufactured goods classified chiefly by materials	37.9	14.9	52.0	0.4	32.0	27.4
7	Machinery and transport equipment	18.0	10.7	23.0	1.4	18.0	14.2
8	Miscellaneous manufactured articles	49.9	19.0	68.9	3.4	37.8	35.8
9	Commodities and transaction not classified elsewhere in the PSCC	21.7	7.7	62.5	0	20.8	22.5
	Overall	33.0	15.3	44.2	5.6	29.4	25.5

Source: Tariff Commission (1979).

TABLE 2
DISTRIBUTION OF TARIFF RATES, 1980

BTN	Section	Tariff rates							Number of items	Mean	Standard deviation	Coefficient of variation
		10%	20%	30%	40%	50%	70%	100%				
I	Animals and animal derivatives	7	1	3	0	7	5	17	40	64.5	35.1	.545
		(17.5)	(2.5)	(7.5)	(0.0)	(17.5)	(12.5)	(42.5)	(100.00)			
II	Plant products	3	13	6	1	11	21	18	73	59.3	30.1	.507
		(4.1)	(17.8)	(8.2)	(1.4)	(15.1)	(28.8)	(24.7)	(100.0)			
III	Fats and edible oils	2	0	6	1	6	2	2	20	49.0	26.4	.540
		(10.0)	(0.0)	(30.0)	(5.0)	(30.0)	(10.0)	(15.0)	(100.0)			
IV	Food, beverage, and tobacco	6	5	6	0	4	6	41	68	74.4	34.5	.464
		(8.8)	(7.4)	(8.8)	(0.0)	(5.9)	(8.8)	(60.3)	(100.0)			
V	Minerals and fuels	33	18	1	0	8	0	0	60	18.7	13.2	.708
		(55.0)	(30.0)	(1.7)	(0.0)	(13.3)	(0.0)	(0.0)	(100.0)			
VI	Nonorganic and organic chemicals	87	61	21	0	25	3	5	202	23.2	18.7	.808
		(43.1)	(30.2)	(10.4)	(0.0)	(12.4)	(1.5)	(2.5)	(100.0)			
VII	Plastic and rubber products	0	8	14	0	15	1	0	38	36.8	13.2	.358
		(0.0)	(21.0)	(36.8)	(0.0)	(39.5)	(2.6)	(0.0)	(100.0)			
VIII	Furs, hides, and leather products	2	1	0	0	3	8	7	21	69.1	28.6	.414
		(9.5)	(4.8)	(0.0)	(0.0)	(14.3)	(38.1)	(33.3)	(100.0)			
IX	Wood and cork products	6	4	5	0	9	5	8	37	51.1	31.7	.620
		(16.2)	(10.8)	(13.5)	(0.0)	(24.3)	(13.5)	(21.6)	(100.0)			
X	Pulp, paper and paper products	9	2	14	0	8	3	17	53	54.0	34.9	.647
		(17.0)	(3.8)	(26.4)	(0.0)	(15.1)	(5.7)	(32.1)	(100.0)			
XI	Textiles and derivatives	12	13	25	4	18	26	35	133	56.5	31.7	.561
		(9.0)	(9.8)	(18.8)	(3.0)	(13.5)	(19.6)	(26.3)	(100.0)			
XII	Footwear and miscellaneous products	0	2	0	0	3	6	13	24	79.6	25.6	.321
		(0.0)	(8.3)	(0.0)	(0.0)	(12.5)	(25.0)	(54.2)	(100.0)			

Table 2 (Continued)

BTN Section		Tariff rates							Number of items	Mean	Standard deviation	Coefficient of variation
		10%	20%	30%	40%	50%	70%	100%				
XIII	Glass and ceramic products	4	12	11	2	15	9	9	62	47.9	27.7	.579
		(6.5)	(19.4)	(17.7)	(3.2)	(24.2)	(14.5)	(14.5)	(100.0)			
XIV	Precious stones and metals	1	3	0	0	0	0	15	19	82.6	33.7	.408
		(5.3)	(15.8)	(0.0)	(0.0)	(0.0)	(0.0)	(78.9)	(100.)			
XV	Common metals and products	38	31	43	1	29	13	7	162	33.3	22.7	.682
		(23.5)	(19.1)	(26.5)	(0.6)	(17.9)	(8.0)	(4.3)	(100.)			
XVI	Machinery	59	11	32	0	27	5	8	142	30.1	24.1	.802
		(41.5)	(7.8)	(22.5)	(0.0)	(19.0)	(3.5)	(5.6)	(100.0)			
XVII	Transportation equipment	25	3	10	0	1	3	3	45	26.0	25.6	.985
		(55.5)	(6.7)	(22.2)	(0.0)	(2.2)	(6.7)	(6.7)	(100.0)			
XVIII	Precision instruments and other instruments	20	14	16	2	7	3	1	61	26.6	18.6	.701
		(32.8)	(23.0)	(26.2)	(0.0)	(11.5)	(4.9)	(1.6)	(100.0)			
XIX	Arms and munitions	0	0	0	0	0	4	3	7	82.9	14.9	.179
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(57.1)	(42.9)	(100.0)			
XX	Furniture, toys and miscellaneous products	2	4	6	0	7	3	28	50	72.8	33.0	.453
		(4.0)	(8.0)	(12.0)	(0.0)	(14.0)	(6.0)	(56.0)	(100.0)			
XXI	Arts and antiques	6	0	0	0	0	0	0	6	10.0	0.0	.000
		(100.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(100.0)			
	General Tariff Schedule	322	206	219	9	203	126	238	1323	43.11	32.20	0.747
		(24.3)	(15.6)	(16.6)	(0.7)	(15.3)	(9.5)	(18.0)	(100.0)			

Source: *Tariff and Customs Code of 1978.*
Note: Figures in parentheses are percentages of total number of items under each BTN section.

TABLE 3
DISTRIBUTION OF TARIFF RATES, 1985

	BTN Section	Tariff rate						Number of items	Mean	Standard deviation	Coefficient of variation
		5%	10%	20%	30%	40%	50%				
I	Animals and animal derivatives	17	11	1	3	1	32	65	29.9	20.8	.694
		(26.2)	(16.9)	(1.5)	(4.6)	(1.5)	(49.3)	(100.0)			
II	Plant products	1	8	23	12	2	63	114	37.2	15.2	.408
		(0.9)	(7.0)	(24.6)	(10.5)	(1.7)	(55.3)	(100.0)			
III	Fats and edible oils	0	4	12	6	11	3	36	29.2	11.9	.407
		(0.0)	(11.1)	(33.3)	(16.7)	(30.6)	(8.3)	(100.0)			
IV.	Food, beverage, and tobacco	2	16	10	12	6	65	111	38.0	15.9	.418
		(1.8)	(14.4)	(9.0)	(10.8)	(5.4)	(58.6)	(100.0)			
V.	Minerals and fuels	0	60	29	9	1	0	99	15.1	7.0	.466
		(0.0)	(60.6)	(29.3)	(9.1)	(1.0)	(0.0)	(100.0)			
VI.	Nonorganic and organic chemicals	0	143	81	33	5	11	273	17.6	10.1	.575
		(0.0)	(52.4)	(29.7)	(12.1)	(1.8)	(4.0)	(100.0)			
VII.	Plastic and rubber products	0	13	57	67	2	12	151	26.2	9.5	.364
		(0.0)	(8.6)	(37.7)	(44.4)	(1.3)	(8.0)	(100.0)			
VIII	Furs, hides, and leather products	0	11	1	12	1	11	36	30.00	15.81	.527
		(0.0)	(30.5)	(2.8)	(33.3)	(2.8)	(30.6)	(100.0)			
IX	Wood and cork products	0	12	10	8	6	13	49	29.6	15.4	.520
		(0.0)	(24.5)	(20.4)	(16.3)	(12.3)	(26.5)	(100.0)			
X	Pulp, paper and paper products	0	18	23	16	33	14	104	30.2	13.3	.440
		(0.0)	(17.3)	(22.1)	(15.4)	(31.7)	(13.5)	(100.0)			
XI	Textiles and derivatives	0	5	48	52	60	137	302	39.1	11.9	.303
		(0.0)	(1.7)	(15.9)	(17.2)	(19.9)	(45.3)	(100.0)			
XII	Footwear and miscellaneous products	0	0	2	1	1	20	24	46.25	9.04	.195
		(0.0)	(0.0)	(8.3)	(4.2)	(4.2)	(83.3)	(100.0)			

Table 3 (Continued)

BTN Section		Tariff rate						Number of items	Mean	Standard deviation	Coefficient of variation
		5%	10%	20%	30%	40%	50%				
XIII	Glass and ceramic products	0 (0.0)	7 (10.8)	11 (16.9)	15 (23.1)	11 (16.9)	21 (32.3)	65 (100.0)	34.3	13.7	.399
XIV	Precious stones and metals	0 (0.0)	4 (14.3)	1 (3.6)	0 (0.0)	0 (0.0)	23 (82.1)	28 (100.0)	43.2	14.6	.339
XV	Common metals and products	10 (4.0)	83 (32.9)	56 (22.2)	67 (26.6)	14 (5.6)	22 (8.7)	252 (100.0)	22.5	12.8	.568
XVI	Machinery	0 (0.0)	78 (22.0)	132 (37.2)	104 (29.3)	6 (1.7)	35 (9.8)	355 (100.0)	24.0	11.4	.475
XVII	Transportation equipment	0 (0.0)	35 (49.3)	7 (9.90)	13 (18.3)	0 (0.0)	16 (22.5)	71 (100.0)	23.7	16.0	.678
XVIII	Precision instruments and other instruments	0 (0.0)	41 (41.4)	25 (25.3)	20 (20.2)	2 (2.0)	11 (11.1)	99 (100.0)	21.6	12.9	.598
XIX	Arms and munitions	0 (0.0)	0 (0.0)	0 (0.0)	1 (11.1)	0 (0.0)	8 (88.9)	9 (100.0)	47.8	6.7	.140
XX	Furniture, toys, and miscellaneous products	0 (0.0)	2 (4.4)	6 (13.0)	8 (17.4)	3 (6.5)	27 (58.7)	46 (100.0)	40.2	12.9	.322
XXI	Arts and antiques	0 (0.0)	6 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	6 (100.0)	10.0	0.0	.000
	General Tariff Schedule	30 (1.3)	557 (24.3)	540 (23.5)	459 (20.0)	165 (7.2)	544 (23.7)	2295 (100.0)	27.9	15.0	.539

Source: *Tariff and Customs Code 1982.*
Note: Figures in parentheses are percentages of total number of items under each BTN section.

common metal products (BTN Sections I and XV). In terms of the overall average tariff rate, a much lower level would prevail in 1985 compared to 1980 (27.9 percent vs. 43.1 percent). Moreover, the degree of dispersion would also be lower, measured by either the standard deviation or the coefficient of variation.

Indeed, the average tariff rates for all but one[2] of the 21 commodity categories are scheduled to decline from 1980 to 1985, implying a general lowering of tariff barriers. Some of the more significant tariff reductions, i.e., by at least 25 percentage points, would apply to: animal and animal derivatives (BTN I); food, beverages and tobacco (IV), furs, hides and leather products (VIII); footwear and miscellaneous products (XII); precious stones and metals (XIV); arms and numetiars (XIX); and furnitures, toys and miscellaneous products (XX). This is due in large part to the elimination of the peak rates (70 and 100 percent) which were levied earlier for many items under these BTN categories. Since most of these items would continue to have the highest tariff rate (50 percent) in 1985, the above-mentioned BTN categories display the highest average tariff levels both before and after the tariff reform.

III. ESTIMATING EFFECTIVE PROTECTION RATES

Actual measures of effective protection that have appeared in the empirical literature vary according to the purposes for which they are used. Differences in estimation methods and underlying assumptions imply the noncomparability of EPR estimates derived by different investigators.[3] In some studies, assessment is made of the separate influences of different policy instruments on the effective protection rate. On such basis, Tan (1979) has concluded that in 1974, the tariff system was the most important source of effective protection to domestic manufacturing industries while indirect taxes and BOI fiscal incentives were relatively minor instruments insubstantially affecting the overall pattern of sectoral effective protection rates.

In the present study, we are interested in the assessment of how the scheduled tariff changes from 1981 to 1985 would affect relative incentives for manufacturing industries, abstracting from any changes

2. BTN Section XXI (Art and antiques) would retain the uniform tariff rate of 10 percent for the six items under this product category.

3. This is well illustrated by "the lack of harmony in the results" obtained in four independent studies of effective protection of manufacturing in Peninsular Malaysia for the same years, as observed by Shepherd (1980).

that might be implemented in other policy areas. While tariffs are not the only determinant of effective protection, the fact that other policy instruments such as indirect taxes and fiscal incentives are currently being reviewed and have not yet assumed any definite shape for 1985 would seem to justify their omission in the EPR calculation for present purposes. Export taxes are also not incorporated in our EPR measure in view of the widespread exemption of industries in the past, unfavorably affected by depressed export prices (as happened to many export commodities in 1980-81). More appropriately, therefore, the effective protection measure used in this study can be called the "effective tariff protection rate" (ETPR).

The wedge between foreign (or free trade) and domestic prices created by tariffs is evident in the following representation of foreign and domestic value added per unit output (v_j and v'_j, respectively):

$$(1)\ v_j = 1 - \sum_i a_{ij},\quad v'_j = (1 + t_j) - \sum_i a_{ij}\,(1 + t_i)$$

where the product price is taken to be unity, the a_{ij}'s are the input coefficients in foreign prices, and t_i and t_j are *ad valorem* tariff rates on material input i and output j, respectively. Note that tariff protection is redundant for exportables, so that $t_j = 0$ for such commodities.

Equation (1) embodies the standard assumptions in the effective protection literature that: (1) inputs in production are not substitutable; (2) production is carried out under constant cost conditions; (3) foreign supply of importables is perfectly elastic; and (4) the general equilibrium repercussions of tariffs are negligible.[4]

By definition, the effective protection rate for the activity producing output j is given by

$$(2)\quad E_j = \frac{v'_j - v_j}{v_j}$$

Substituting (1) into (2) yields, after simplification, the familiar expression

$$(3)\ E_j = \frac{t_j - \sum_i a_{ij} t_i}{1 - \sum_i a_{ij}}$$

4. Implying no significant induced changes in technology, factor prices, final demand and related variables.

In empirical measurement of effective protection, "free trade" input coefficients are hard to come by; published input-output tables normally contain technical coefficients (a'_{ij}) expressed in domestic prices. Using the latter coefficients, we can modify (1) as follows:

$$(4)\quad v_j = \frac{1}{1+t_j} - \sum_i \frac{a'_{ij}}{1+t_i}, \quad v'_j = 1 - \sum_i a'_{ij}$$

and hence

$$(5)\quad E_j = \frac{1 - \sum_i a'_{ij}}{\left(\frac{1}{1+t_j} - \sum_i \frac{a'_{ij}}{1+t_i}\right)} - 1 \cdot$$

Some of the implications of (3) or (5) are that: (1) other things the same, a higher E_j results from a higher t_j and lower t_i's; (2) if tariff rates are uniform (i.e., $t_i = t_j$), then $E_j = t_j$; and (3) if value added is a small proportion of the product price (i.e., $\sum_i a_{ij}$ is high) a low t_j combined with lower t_i's can lead to a very high E_j.

Equation (5) was used in the calculation of effective protection rates for manufacturing industries in the present study. Nontradable inputs were treated as part of value added, so the a_{ij}'s used pertain only to the tradable inputs. The technical coefficients from the 120 x 120 input-output table for 1974 prepared by the National Census and Statistics Office (NCSO) were utilized, after adjusting for relative price changes between 1974 and 1980.[5,6] Tariff rates for 1980 were drawn from the *Tariff and Customs Code 1978,* with appropriate adjustments for some changes in tariff levels during 1979-80; on the other hand, tariff rates for 1983 were extracted from the recently published *Tariff and Customs Code 1982.*

IV. SECTORAL ETPR ESTIMATES IN MANUFACTURING

Table 4 presents the estimated effective tariff protection rates for

5. A less disaggregative (63 x 63) input-output table for 1978 is available from the NCSO, but this was also derived from the 1974 input-output table with price adjustment.

6. Two Central Bank wholesale price indices were used: the home consumption WPI to adjust for input price changes and the domestic production WPI to adjust for output price changes.

TABLE 4
ESTIMATES OF EFFECTIVE TARIFF PROTECTION RATES IN PHILIPPINE MANUFACTURING, 1980 AND 1985
(In percent)

I-O No.	*Sector*	*1980*	*1975*
26	Meat products	809.5	178.4
27	Dairy products	62.3	30.4
28	Rice milling	97.8	98.0
29	Sugar milling and ref	−1.1	−0.9
30	Processed fruits and vegetables	223.0	72.4
31	Processed fish and other seafoods	872.9	215.9
32	Other grain mill products	176.7	74.9
33	Bakery products	127.1	44.2
34	Cocoa, chocolate and sugar confectionery	71.2	30.1
35	Desiccated coconut products	−3.9	−2.6
36	Other manufactured foods	94.8	36.7
37	Liquors, wines, brewery and malt products	84.7	44.3
38	Soft drinks and carbonated water	127.5	69.5
39	Tobacco products	61.8	29.7
40	Textile and knitting mill products	61.4	36.0
41	Cordage, twine and other textile products	−9.3	−7.4
42	Footwear	−3.1	−2.2
43	Other wearing apparel	−10.5	−7.8
44	Other made-up textile goods	93.3	48.0
45	Lumber	−1.8	1.0
46	Plywood and veneer plants	−18.1	−13.4
47	Furniture and fixtures	−5.2	−4.0
48	Other wood, cane and cork products	−4.6	−3.4
49	Pulp, paper and paperboard manufacturing	47.5	29.3
50	Articles of pulp, paper and paperboard	158.5	58.1
51	Newspaper, periodicals, books and pamphlets	27.7	17.5
52	Printing, bookbinding and other allied products	51.5	28.6
53	Leather and leather products except for footwear and other wearing apparel	−10.7	−8.4
54	Rubber footwear	6.0	1.7
55	Tires, tire vulcanizing and recapping	54.0	39.5
56	Other rubber products	26.2	17.9
57	Basic industrial chemicals	14.0	12.8
58	Coconut oil	−0.7	−0.6
59	Other oils and fats	64.9	33.5
60	Fertilizer and lime	23.2	16.7

Table 5 (Continued)

I-O No.	*Sector*	*1980*	*1975*
61	Paints, varnishes and related compounds	39.5	26.3
62	Plastic materials	44.3	23.2
63	Medicinal and pharmaceutical preparations	0.1	1.5
64	Soap and other washing and cleansing compounds	98.5	51.2
65	Other chemical products	47.0	34.3
66	Petroleum refineries and other petroleum products	12.4	12.6
67	Hydraulic cement	– 10.1	– 8.9
68	Structural clay and concrete products	69.4	56.7
69	Glass and glass products	54.6	41.7
70	Other nonmetallic mineral products	54.3	36.7
71	Basic ferrous metal industries	19.1	12.6
72	Basic nonferrous metal industries	15.3	16.7
73	Cutlery, handtools and general hardware	52.0	55.7
74	Fabricated structural metal products	– 10.3	– 8.2
75	Heating apparatus, lighting and plumbing fixtures	83.6	63.6
76	Other fabricated metal products	68.4	50.2
77	Tractors and other agricultural machinery and equipment	27.0	13.7
78	Special industry machinery	16.3	21.0
79	General industry machinery and equipment (excluding electrical)	17.8	25.9
80	Office, computing and accounting machines (excluding electrical)	12.7	15.4
81	Electrical industrial machinery and apparatus	38.5	35.2
82	Communication equipment excluding radio, TV	47.9	10.9
83	Batteries	84.9	13.6
84	Electric lamps, fixtures, wires and wiring devices	25.5	16.0
85	Household radio, TV receiving sets, phonos	35.5	12.0
86	Refrigeration and air-conditioning equipment	76.4	44.1
87	Other household electrical appliances and wares	77.9	34.1
88	Motor vehicles, engines, bodies and parts	31.9	26.8
89	Repair of motor vehicles (nontradable)	–	–
90	Shipbuilding and repairing	7.0	15.1
91	Other transport equipment	42.1	38.6
92	Miscellaneous manufactures	90.7	45.7
	Average	70.3	31.0
	Standard deviation	144.3	37.7
	Coefficient of variation	2.05	1.22

67 manufacturing industries' for 1980 and 1985. It would appear that the tariff reform, if implemented fully, will significantly lower the average level of effective protection to domestic industries from 69 percent in 1980 to 30 percent in 1985. At the same time, disparities in ETPRs across industries will be reduced substantially, based on a comparison of the computed values of either the standard deviation or the coefficient of variation. These general findings would conform to the declared objective of tariff reform that adjustments will be made to reduce the overall level of protection to domestic industries and to even out the spread in protection rates among industry sectors.

Examining individual sector ETPR changes between 1980 and 1985, one finds a preponderance of decreasing levels with only 8 sectors[8] showing increases in ETPR (some of which appear significant) as a result of the tariff reform.

The above pattern of sectoral ETPRs for 1980 is similar to that obtained earlier by Tan (1979) for 1974. This is not surpising in view of the dominance of tariffs vis-à-vis other policy instruments affecting relative incentives (as pointed out earlier) and the fact that there were no significant tariff rate changes between 1974 and 1980.

By end-use category, consumer goods industries on the whole continued to be highly protected in 1980 while industries producing capital goods, intermediate goods and inputs-into-construction were effectively being discriminated against, as shown in Table 5. Even after the tariff reform in 1985, however, the same direction of bias is evident from the table, notwithstanding the general reduction in the average effective protection levels for the four categories of industries. While the consumer goods sectors are seen to have the largest decline in average ETPR from 1980 to 1985, they will continue to enjoy the highest tariff protection, with an average ETPR of about 12 percentage points above the average for all manufacturing.

At the other extreme, intermediate goods industries, which already were being accorded generally low tariff protection in 1980, face substantial ETPR cuts that will reduce their average effective protection rate to about one-half its 1980 value and 17 percentage points below the average for all manufacturing. The capital goods sectors' average ETPR would also decrease, although not drastically,

7. Corresponding to the number of sectors within manufacturing distinguished in the NCSO's 120 x 120 input-output table for 1974.

8. These are I-O sectors 63, 66, 72, 73, 78, 79, 80 and 90 (cf. Table 4).

TABLE 5
AVERAGE EFFECTIVE TARIFF PROTECTION RATES
BY END-USE CATEGORY, 1980 AND 1985
(In percent)

Sectors producing	*1980*	*1985*
Consumption goods	115.0	43.2
Intermediate goods	26.8	14.0
Inputs-into-construction	31.5	24.7
Capital goods	23.9	19.6
All manufacturing	70.3	31.0

Source: Appendix Tables 1-4.

the direction of which, again, is opposite what is warranted by a more uniform ETPR structure.

Therefore, while a significant improvement of the tariff system would be achieved by 1985 in terms of reducing the overall ETPR and the dispersion of sectoral rates around the mean value, there will still be room for additional rationalization of the structure of tariff. This would generally entail a further reduction in the protection of sectors producing consumer goods and an increase in the sectors intermediate (excluding inputs-into-construction) and capital goods.

It should be noted that, within each of these industry categories, there are also disparities in the estimated effective protection rates for 1985. As shown in Appendix Tables 1-4, sectoral ETPR differences are largest among the consumer and intermediate goods sectors. This is due in large part to the composition of these two industrial groupings, which include both export-oriented industries[9] with low or negative ETPRs and import-substituting industries characterized by markedly higher ETPRs.

A final observation is that, even after the tariff reform, a number of industries would continue to be heavily protected. The extreme examples are meat products and processed fish and other seafoods

9. Export-oriented industries include footwear, other wearing apparel, furniture and fixtures, certain wood products and other leather products within the consumer goods category, and sugar milling, desiccated coconut, cordage and coconut oil within the intermediate goods category.

with estimated ETPRs of 178 percent and 216 percent respectively, for 1975. Post 1985 tariff revisions need to be directed to such industries if excessive profits and/or low levels of efficiency, which are associated with high ETPRs, are to be discouraged.

V. CONCLUDING REMARKS

As pointed out earlier, the 1981-85 tariff revisions are part of a larger effort to improve the existing policy climate and make it more conducive to the efficient development of domestic manufacturing industries. The above findings point to a relatively substantial liberalization of tariff policy by 1985, given the scheduled tariff changes, in terms of the overall reduction in effective protection and the narrowing of the disparities in sectoral rates. Of course, it remains to be seen whether the tariff changes will be fully implemented.

Also, it would appear that there is room for further improvements, i.e., in lowering the protection rates on consumption goods and raising those on intermediate products and capital goods, if the objective is to move toward uniformity of effective tariff protection to manufacturing industries. Apropos this, two points may be noted: (1) equal effective tariff protection rates should ideally be sought not only for manufacturing industries but for all tradable goods-producing industries; and (2) other policy instruments need to provide offsetting subsidies to export industries to the extent of the nominal protection to domestic sales accorded by the uniform tariff structure. Protection policy (a more appropriate term is "promotion policy") in the foregoing sense is neutral in that it does not distort relative prices. No discrimination arises other than that which comes naturally out of the price system. According to standard economic theory, this would not only allocate resources to their most efficient uses but also distribute goods such that consumer welfare is maximized for any given distribution of income.

A distorted tariff structure could, of course, serve certain objectives; it could expand output in particular industries, or it could redistribute income, or it could improve the balance of payments. But even these objectives can be achieved by other means that do not have the undesirable side effects of misallocating resources and limiting consumption. Providing direct subsidies to industries could stimulate production without restricting consumption; and for

redistributing income within a country, direct taxes and transfers are superior to tariff.[10] Balance of payments problems are better tackled through exchange rate, monetary and fiscal policies. In general, it is desirable to address policy instruments to problems that can be dealt with in the most direct manner.

Producers tend to prefer tariffs to subsidies. Perhaps the latter's visibility makes them less attractive; also, direct subsidies are somehow regarded as incompatible with the ethic of private enterprise but the implicit subsidy from tariff protection apparently is not. Yet it is precisely the fact that subsidies are visible to the general public and represent a direct cost to the government which may prevent the perpetuation of a protection policy heavily biased toward certain industries.

Any kind of policy reform leads to differential gains and losses across both producing and consuming sectors. Resistance to a movement for a more neutral tariff system would come from producer interests in the affected industries, i.e., those being faced with a significant reduction in effective protection rates, which in view of the protracted nature of the country's import substitution policies (cf. Baldwin 1975) might prove to be more politically powerful than producer and consumer interests in general.

Failing to stem the tide of tariff reform, vested interests could focus their attention on nontariff barriers (especially in the area of import licensing) which also lead to a divergence between foreign and domestic prices. It is, however, a declared policy of the government that import restrictions will be liberalized as part of the "industrial structural adjustment" program.[11,12] To the extent that the program is faithfully implemented,[13] domestic industries can be expected to be reoriented "toward more efficient use of resources which will make them more competitive by international standards

10. A differential tariff structure is also not needed as a means of taxing luxury goods. A more efficient instrument would be a set of luxury consumption taxes applicable to both imported and domestically produced goods.

11. From the original list of 1,300 banned import items, 264 were removed in 1981. "Another 610 were taken off the list last month (February 1982) and the plan is to abolish the whole list by next year" (*Times Journal*, 4 March, 1982).

12. The program also includes other policy measures relating to export promotion, investment incentives and administration, and revitalization of specific industries.

13. That there is actual resistance to the scheduled implementation of some

and allow them to develop in line with the country's comparative advantage."[14]

The important point should be made that, in the above context, government is part of "producer interests." The last few years have witnessed a sharply increased participation of public corporations and their subsidiaries in manufacturing activities, and this is bound to increase with the active promotion of the so-called "eleven major industrial projects" (11 MIPs, for short). The latter represents a set of large-scale, capital-intensive projects expected to be established during 1983-87 "to provide the basic industrial infrastructure." About 12.5 percent of the 11 MIPs' total funding of $4 billion is estimated to come from direct government budgetary appropriations; equity contributions of the National Development Company are being provided to, among others, the $250 million copper smelter project (34.4 percent) and the $336 million phosphatic fertilizer plant (60 percent).

It is intended that the 11 MIPs "will produce vital commodities and intermediate inputs at internationally competitive prices."[15] Given this objective, it would seem necessary to avoid heavy protection from competing imports via increased tariffs and other import barriers;[16] indeed this consideration should be explicitly taken into account in the feasibility studies in order to establish the *true* economic viability of the projects.[17] If this is not done, the country faces the likely prospect of being presented with huge white elephants.

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aspects of the trade liberalization component of the program is clear from the reported (cf. *Times Journal* issue cited earlier) reimposition of restrictions on imports of certain durable consumer goods, mostly household appliances, two weeks after a Central Bank circular was issued removing the 24 items involved from the list of banned imports. According to the news report, "the sudden policy shift was in reaction to strong criticism from local household appliance manufacturers."

14. Quoted from the *Five-Year Philippine Development Plan, 1978-1982* (updated for 1981 and 1982); p. 12.

15. Quoted from the *Five-Year Philippine Development Plan, 1978-1982* (updated for 1981 and 1982), p. 13.

16. If, on infant industry grounds, some protection (the more appropriate term is *promotion*) is warranted, it should apply in both domestic and foreign markets, i.e., the incentives should not favor domestic sales over exporting, and only over a specified period of time.

17. It is to be noted that independent researchers do not have access to the feasibility studies of the 11 MIPs, a situation not contributing to an informed public discussion.

APPENDIX TABLE 1
ETPR ESTIMATES FOR CONSUMPTION GOODS SECTORS IN MANUFACTURING
(In percent)

I-O No.	*Sector*	*1980*	*1985*
26	Meat products	809.48	178.45
27	Dairy products	62.32	30.38
28	Rice milling	97.85	97.96
30	Processed fruits and vegetables	223.03	72.41
31	Processed fish and other seafoods	872.89	215.89
32	Other grain mill products	176.72	74.89
33	Bakery products	127.09	44.17
34	Cocoa, chocolate and sugar confectionery	71.18	30.13
36	Other manufactured foods	94.75	36.66
37	Liquors, wines, brewery and malt products	84.73	44.33
38	Soft drinks and carbonated water	127.52	69.50
39	Tobacco products	61.78	29.67
40	Textile and knitting mill products	61.37	36.03
42	Footwear	− 3.13	− 2.20
43	Other wearing apparel	− 10.49	− 7.80
44	Other made-up textile goods	93.28	48.00
47	Furniture and fixtures	− 5.19	− 4.04
48	Other wood, cane and cork products	− 4.62	− 3.37
50	Articles of pulp, paper and paperboard	158.49	58.14
51	Newspaper, periodicals, books and pamphlets	27.70	17.53
52	Printing, bookbinding and other allied industries	51.51	28.55
53	Leather and leather products except footwear and other wearing apparel	− 10.70	− 8.40
54	Rubber footwear	6.00	1.69
55	Tires, tire vulcanizing and recapping	53.97	39.53
63	Medicinal and pharmaceutical preparations	0.06	1.52
64	Soap and other washing and cleansing compounds	98.48	51.22
85	Household radio, TV receiving sets, phonos	35.48	11.96
86	Refrigeration and air-conditioning equipment	76.38	44.12
87	Other household electrical appliances and wares	77.86	34.11
88	Motor vehicles, engines, bodies and parts	31.93	26.85
91	Other transport equipment	42.07	38.63
92	Miscellaneous manufactures	90.74	45.69
	Average	115.01	43.19
	Standard deviation	195.52	47.44
	Coefficient of variation	1.70	1.10

APPENDIX TABLE 2
ETPR ESTIMATES FOR INTERMEDIATE GOODS SECTORS IN MANUFACTURING (In percent)

I-O No.	*Sector*	*1980*	*1985*
29	Sugar milling and refining	− 1.12	− 0.92
35	Desiccated coconut products	− 3.86	− 2.63
41	Cordage, twine and other textile products	− 9.26	− 7.40
49	Pulp, paper and paperboard manufacturing	47.49	29.29
56	Other rubber products	26.20	17.89
57	Basic industrial chemicals	13.97	12.82
58	Coconut oil	− 0.73	− 0.64
59	Other oils and fats	64.88	33.47
60	Fertilizer and lime	23.20	16.68
62	Plastic materials	44.28	23.15
65	Other chemical products	47.05	34.34
66	Petroleum refineries and other petroleum products	12.36	12.61
83	Batteries	83.91	13.64
	Average	26.80	14.02
	Standard deviation	27.76	13.32
	Coefficient of variation	1.04	0.95

APPENDIX TABLE 3
ETPR ESTIMATES FOR INPUTS-INTO-CONSTRUCTION SECTORS IN MANUFACTURING (In percent)

I-O No.	*Sector*	*1980*	*1985*
45	Lumber	− 1.76	1.02
46	Plywood and veneer plants	−18.07	−13.43
61	Paints, varnishes and related compounds	39.54	26.29
67	Hydraulic cement	− 10.08	− 8.92
68	Structural clay and concrete products	69.40	56.67
69	Glass and glass products	54.57	41.68
70	Other nonmetallic mineral products	54.33	36.70
71	Basic ferrous metal industries	19.07	12.56
72	Basic nonferrous metal industries	15.28	16.66
73	Cutlery, handtools and general hardware	52.01	55.69
74	Fabricated structural metal products	− 10.31	− 8.24
75	Heating apparatus, lighting and plumbing fixtures	83.61	63.55
76	Other fabricated metal products	68.42	50.20
84	Electric lamps, fixtures, wires and wiring devices	25.53	15.98
	Average	31.54	24.74
	Standard deviation	32.23	25.49
	Coefficient of variation	1.02	1.03

APPENDIX TABLE 4
ETPR ESTIMATES FOR CAPITAL GOODS
SECTORS IN MANUFACTURING (In percent)

I-O No.	*Sector*	*1980*	*1985*
77	Tractors and other agricultural machinery and equipment	26.96	13.67
78	Special industry machinery	16.33	21.03
79	General industry machinery and equipment (excluding electrical)	17.79	25.94
80	Office, computing and accounting machines (excluding electrical)	12.70	15.45
81	Electrical industrial machinery and apparatus	38.48	35.18
82	Communication equipment excluding radio, TV	47.91	10.86
90	Shipbuilding	7.02	15.14
	Average	23.88	19.61
	Standard deviation	13.65	7.87
	Coefficient of variation	0.57	0.40

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