TABLE XVI

POTENTIAL RATES OF PROTECTION
NON-MANUFACTURING
(per cent)

Description	Z	t
Agriculture		
Coconut	-16	-08
Fiber crops	-12	-08
Tobacco	-11	-08
Palay	06	11
Livestock and poultry	12	12
Corn	24	23
Sugar cane	52	38
Coffee and cacao	55	41
Fruits and nuts	56	46
Vegetables	62	55
Root crops	78	75
Fisheries	00	00
Forestry and logging	-20	-08
Mining		
Copper, chromite, iron mining	-30	-08
Non-metallic mining and quarrying	21	22

to making plywood and veneer can earn or save a dollars worth of world primary inputs at the cost of the peso equivalent of only about sixty-seven cents. In contrast, primary inputs applied to making batteries appear to cost roughly double their saving in foreign exchange, while those assembling automobiles appear to cost six times their foreign exchange saving. These calculations are made at the existing exchange rate, of course, and to the extent that we would estimate the peso to be overvalued, the necessary adjustment would improve the apparent efficiency of all three, but keep them in roughly the same relative positions. (The question of overvaluation is discussed in a later section.)

The most extreme cases of inefficiency, however, are represented by those industries with negative value added in world prices. Again, correction for overvaluation would improve their apparent performance and some would appear with positive V's. But the more extreme cases would no doubt remain as examples of industries that are apparently absolutely wasting resources, since it would appear to be cheaper to import the finished product than to import the material inputs.

These "apparent" results indicating absolute waste of resources should be considered with some skepticism, however. It is quite possible that in some of these cases the bias against domestic products mentioned earlier requires a level of protection such as to produce this anomalous result. Or, owing to widespread evasion, the actual level of protection may be considerably lower than the apparent level; and the effects of evasion may not be registered completely in price comparisons.

Having made these disclaimers, we should note, however, that there are several reasons why negative value added in world prices, for the production techniques employed under extremely high protection, might in fact be a real phenomenon. First is the possibility of sheer inefficiency of a variety of kinds, ranging from a higher incidence of breakage, theft, and below standard product to a failure to produce the range of by-products that is possible, with a resultant higher proportion of waste and scrap. Second is the possibility of exorbitant prices for imported inputs owing to the monopoly power of the foreign supplier, especially where the local investment is foreign-owned and the activity is largely assembling. Finally, there is the possibility of higher costs of non-traded inputs. A combination of these could easily produce a situation of absolute waste of resources, as is apparently indicated for a number of Philippine manufacturing industries.

The values for t given in the tables represent the proportion by which the price of the product can be (in the case of potential t), or is (in the case of effective t), higher than the free trade price as a result of the tariff plus the element of discrimination in the percentage sales tax system, described above. Where effective t's differ from potential, direct price comparisons were used to estimate the former.

*Except for those industries with very low estimates for Z, the estimates for t generally fall considerably below the estimates for Z. This indicates the so-called "cascading" of tariff rates -- i.e., lower rates on

inputs than on the finished product. The effect is to give rates of protection of value added sometimes much in excess of apparent rates of protection on products.

Table XVII shows average rates (with free trade value added weights) for the manufacturing groups represented in Tables XIII through XV. Nine exports (excluding sugar) have an average effective Z of minus 19 per cent (Corden measure), in contrast with an average of 74 per cent for all non-exports. This indicates a powerful bias in the system against export of manufactures in favor of sale in the domestic market. Non-competing industries generally had extremely high potential rates, and even after very substantial downward adjustments based on price comparisons, this group had the highest average effective (Corden) Z. This reflects the strong negative correlation between protection and proportion of total supply imported.

The downward adjustment to "effective rates" was qualified in some cases by an arbitrary but modest margin of protection for quality differential, as was explained above. This was based on the existence generally of a premium in the Philippine market on imported versions of similar products. It should be noted, however, that Philippine manufacturers generally attribute this premium to an irrational prejudice on the part of Philippine buyers.

TABLE XVII

AVERAGE* RATES OF PROTECTION
IN MANUFACTURING
(per cent)

	Effective Z		
	Balassa	Corden	t
Exports (excluding sugar)	-20	-19	-08
Import-competing	68	65	25
Import-non-competing	90	83	17
Sugar	186	183	35
All Manufacturing	52	49	12
Except Exports	89	85	22

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* Weights are free trade value added.

On the other hand, the discrepancy between potential and effective rates suggests the possibility that similar downward adjustments might well be made in some of the import-competing industries. There exists a general belief that evasion of the protection system is widespread so that domestic output must compete with imports at a lower effective rate of protection. Unfortunately, there exists no quantitative estimate of the importance of evasion. It is possible, nevertheless, that evasion undermines the presumption that when imports and domestic products are competing in significant volume, the nominal protection system is fully effective in permitting higher prices or lower qualities, or both.

Finally, it is possible that the non-import-competing group, having been given more protection and having proceeded further in the direction of fully substituting for imports, has by now achieved a greater relative efficiency than the group that has less of a margin of protection against foreign competition. If this were true, protection would be truly redundant and there should be little objection to the reduction or removal of tariffs. My guess is that this test would not be met in most cases.

In Table XVIII average rates are shown for manufacturing industires grouped into five end-use categories: exports, capital goods, intermediate goods, inputs into construction, and consumption goods. Here the bias of the system not only against exports, but also against capital goods

TABLE XVIII

AVERAGE* RATES IN MANUFACTURING
BY END-USE CATEGORY
(per cent)

	Effective Z		t
	Balassa	Corden	
Exports (excluding sugar)	-20	-19	-08
Capital Goods	82	80	28
(machinery only)	35	34	27
Intermediate Goods	67	65	26
Inputs into construction	67	64	29
Consumption Goods	95	94	31

* Weights are free trade value added.

and intermediate goods in favor of finished consumption goods is clearly evident. This latter bias comes, of course, from the "cascading" of tariff protection, rates tending to rise from earlier to later stages in the production process (counting finished capital goods production as an early stage in the production of consumption goods). The bias against capital goods is more striking when we focus on six machinery industries, eliminating trucks and buses and industrial refrigeration equipment, the Corden Z for the machinery group averaging 34 per cent. Moreover, eliminating Rice Milling Machinery yields an average of only six per cent for the remaining five. This last rate probably gives a more accurate picture of the disincentives to invest in the whole range of potential capital goods industries.

* The whole of capital goods production includes construction, a non-traded output whose rate of protection has been assumed to be zero because of the lack of any world market constraint on its ability to pass on to the consumer any costs from protection of its inputs.* But, assuming some positive elasticity of demand for construction, these costs will nevertheless inhibit the growth of the industry.* The relatively high average Z for inputs into construction indicates, then, another bias against the production of capital goods.

Finally, in Table XIX average rates in the other major sectors are compared with that in manufacturing. Despite high potential protection,

TABLE XIX

AVERAGE RATES* OF PROTECTION BY MAJOR SECTORS

Description	Average Z
Fisheries	00
Manufacturing	52
Agriculture	17
Mining	-17
Forestry and Logging	-26

* Effective rate for manufacturing, potential rates for the other sectors.

Fisheries is treated as a non-traded good industry with a rate of protection of zero. While a world market price for fresh fish is not available, my impression is that fresh seafood is relatively cheap in the Philippines. The same could be said of some of the agricultural sub-sectors (like Fruits and Nuts, and Vegetables) that account for the positive (though small) value of Z for agriculture. The degree of aggregation makes direct price comparisons impractical in these cases. However, for three sub-sectors--Palay, Corn, and Sugar Cane -- comparisons of domestic with world prices were used to estimate protection. In the cases of Palay and Corn, this was necessary because imports and exports of rice and corn are government-controlled. In the case of sugar cane, the growers return is a percentage of the value of the manufactured sugar; hence, they share in the protection accorded the latter.

Mining and Forestry are dominated by export industries, having zero protection for their outputs and being unable to pass on the costs arising from protection of their inputs. Accordingly, rates of protection of value added in those two sectors are negative. Tobacco is a similar case, though it is complicated by a subsidy accorded to Virginia-type tobacco. Despite the subsidy, surprisingly, the unit value received by growers was no higher than the CIF import price of what is alleged to be comparable quality. The estimate for tobacco may be too low, however, if the judgement about quality is incorrect.

Overall, then, it appears that manufacturing is far more heavily protected than the other major sectors. The predominantly exporting Mining and Forestry sectors are, in contrast, heavily taxed by the system, while Agriculture stands in between. Table XVI shows, however, a wide range of values for the eleven agricultural subsectors, exports again having negative rates, while vegetables, root crops, and fruit and nuts have fairly high rates. Probably, most products of the latter groups should not be considered as internationally traded to any considerable degree, so that their potential rates may not be significant.

Finally, it should be noted that sugar has been omitted from the tables above despite its importance in production and in exports. The reason is that all of its export goes under a quota to the protected U.S. market, while its domestic price is controlled. Import restrictions are prohibitive. Consequently, a direct comparison of both protected export price and domestic price with an international price had to be made. As was explained above, the international price was an average of CIF import prices of importing countries in the region. The result is an effective Z of 186 and 183 percent for the Balassa and Corden measures, respectively.

5. Rates of Protection Using Standardized Input-Output Table

For the purpose of comparison with other countries estimates of rates of protection have been calculated also on the basis of input coefficients derived from a standardized input-output table. The latter, based mainly on Belgian and Netherlands data, is that used by Balassa in his study of protection

structures in industrialized countries.[6] Tariffs are averaged for the various sectors at international trade weights which again enhances the comparability of the estimates.

The results of these estimates for the 57 sectors of the standardized input-output table are shown in Table XX, while averages for product groups are shown in Table XXI.

Wherever possible, direct price comparisons were used to get effective rates, though the degree of aggregation in the standardized table made this more difficult than in the case of Philippines input-output data. In any case, what is of interest here is the comparison of established systems of protection among countries, rather than of specific results of those systems. Hence, a standardized input-output table is employed instead of the actual set of interindustry relationships and international trade weights are used instead of value added.

This results in a few striking differences in the results. For example, fats and oils would be largely an export industry when Philippine weights are used (because of the importance of copra and coconut oil); but these Philippine exports have a relatively small importance in the international trade weights for this group. Hence, the resulting rate of protection for fats

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6/ Bela Balassa, "Tariff Protection in Industrial Countries: An Evaluation," Journal of Political Economy, December 1965, pp. 573-594.

TABLE XX

EFFECTIVE RATES OF PROTECTION USING STANDARDIZED INPUT-OUTPUT TABLE
(per cent)

Code	Description	Balassa z	Corden z	Corden t
06	Non-Ferrous Metals	-40	-37	-08
05	Iron Mining	-24	-21	-08
28	Sawn Wood	-22	-19	-08
07	Petroleum and Natural Gas	-21	-20	08
03	Solid Fuels	-15	-13	01
60	Ships	-04	-03	16
61	Railway Vehicles	-03	-03	13
26	Shoes	18	16	8
29	Wood products, including furniture	24	22	10
02	Fishing	0	0	0
24	Clothing	31	28	11
23	Hosiery	33	29	11
22	Textile Fabrics	107	90	30
17	Beverages	0	0	0
19	Tobacco	42	37	15
57	Agricultural Machinery	01	01	14
65	Airplanes	02	02	13
04	Gas	07	06	08
51	Other Steel Products	08	06	20
64	Bicycles and Motorcycles	12	10	50
58	Non-electrical Machinery	14	12	21
44	Petroleum Products	15	12	13
33	Printed Matter	20	18	26
48	Pig Iron and Ferromanganese	21	11	05
66	Precision Instruments	25	22	25
08	Construction Materials	25	21	39
15	Cereal-Based Industries	30	26	21
01	Agriculture	36	34	32
13	Chocolate Confectionery	37	32	69
40	Chemical Materials other than Synthetics	39	28	24
31	Wood Pulp	40	24	16
55	Metal Castings	43	38	29
49	Ingots and other Primary Forms of Steel	47	36	13
10	Meat Preserves	47	36	18
54	Non-Ferrous Metals	49	31	17
39	Synthetic Materials	51	42	34
56	Metal Manufactures	54	46	34
59	Electrical Machinery	54	48	38
50	Rolling Mill Products	65	53	23
46	Glass and Glass Products	72	61	48

TABLE XX (continued, page 2)

Code	Description	Balassa Z	Corden Z	t
32	Paper and Paper Products	74	57	38
45	Non-metallic Mineral Products	74	62	45
18	Fats and Oils	81	66	30
11	Prepared Food (other than Meat)	87	68	38
09	Other Minerals	91	82	66
41	Chemical Products	95	83	51
62	Automobiles	103	87	90
16	Other Food Industries	123	95	43
12	Sugar	123	105	33
21	Thread and Yarn	125	98	36
37	Rubber Goods	136	114	63
67	Other Industries	140	123	80
25	Sacks, Bags and Linen Goods	35	31	11
36	Leather Goods other than shoes	143	128	97
38	Plastic Articles	167	144	75
14	Dairy Products	236	200	48
35	Leather	249	205	84

TABLE XXI

AVERAGE RATES OF PROTECTION
BY PRODUCT GROUPS*
(per cent)
(Corden Method)

Agriculture and Fishing	33
Processed Food	94
Tobacco	37
Mining and Energy	09
Intermediate Products I	28
Intermediate Products II	65
Non-durable Consumer Goods	46
Consumer Durables	81
Machinery	24
Transport Equipment	01
Services	00

* Averages based on international trade weights.

and oils is relatively high. Only in the cases of non-ferrous metals and sawn wood does the export character of these Philippine industries register strongly in the estimates of rates of protection based on the standardized table.

6. The Role of Foreign Exchange Rates

The estimates of rates of protection have been carried out in the context of given foreign exchange rates. Even if these are equilibrium rates in the sense that foreign exchange is not being rationed and that reserves have remained adequate over a reasonable period, as was true in the Philippines in 1965, equilibrium itself depends on the existing set of policies affecting trade and capital movements. Under a different set of policies different exchange rates might be the equilibrium ones. In particular, a policy of protection can normally be expected to be associated with a lower equilibrium value for foreign exchange than a policy of free trade. Thus an evaluation of the level of protection, when the latter is estimated on a basis of free trade indicating zero protection, must take into account, if possible, the change in the equilibrium exchange rate that would occur as a result of the removal of protection.

The exercise that follows, then, could be thought of as a crude attempt to estimate the "overvaluation" of the Philippine Peso. But overvaluation of the present rate can have meaning, as indicated above, only in relation to what it would be under a different set of policies. Accordingly,

a comparison will be made of the present rate with that expected to exist (in equilibrium--i.e., no exchange control) under: (1) free trade, and (2) free imports with an "optimum" tax on exports.

In each case, the method used will be to estimate the proportional devaluation required by a simultaneous elimination of protection to keep the trade balance unchanged. For this, we need to know the world elasticities of demand for exports and supply of imports, and the home elasticities of demand for imports and supply of exports--respectively, e_{wd}, e_{ws}, e_{hd} and e_{hs}.

We can easily assume, in the case of the Philippines, a very high elasticity of world supply of imports. So, for simplicity, assume $e_{ws} = \infty$

Estimates for the values of the other three elasticities are much more difficult to make. Attempts based on a time series analysis of the devaluation of the early 1960's turn up depressingly low values for e_{wd} and e_{hs}. Of course, these reflect short-run response and we want, for our purposes, estimates of long-run response. The reason is that we want to know the long run effect of the protection system--to compare the situation with what might have been if an alternative policy had been adopted long ago. Accordingly, this is what "overvaluation" means in this context. In particular, I would not suggest that it indicates that a devaluation of that proportion would be successful in accommodating to free trade. A successful devaluation normally has far less time in which to prove itself.

In any case, the exercise has been carried out with estimates for the three elasticities made by Bela Balassa, based partly on his earlier work on tariff protection in industrial countries and partly on estimates of U.S. demand elasticities for imports made by Barend de Vries.[7/] These give the following values:

$$e_{hd} = 4$$

$$e_{hs} = 3 \text{ to } 5$$

$$e_{wd} = 16 \text{ to } 20$$

Plugging these values into the expression

$$k = \frac{\frac{X}{M}(F) + e_{hd}}{\frac{X}{M}(F) + \frac{e_{hd}}{1+t}} - 1$$

where X is exports, M is imports, t is the average rate of protection and F is

$$F = \frac{e_{hs}\left(e_{wd} - 1\right)}{e_{hs} + e_{wd}}$$

we can calculate k, the rate of overvaluation, or the proportionate change in the price of foreign exchange that would have been necessary under a policy of free trade rather than protection. Note that t is used for the rate of protection rather than Z, since the elasticities are defined in terms of price changes t, equal to .28, is the average (weighted by total supply) of all industries except exports.

7/ Balassa, op. cit., and Barend de Vries, "Price Elasticities for Individual Commodities Imported into the U.S.," IMF Staff Papers, Vol. I, no. 3 (April 1951).

As explained above, exports were penalized in 1965, at a rate equivalent to an eight per cent tax. This was ignored in the expression for k, above. If we consider also simultaneously removing this penalty the expression becomes

$$k = \frac{\frac{X}{M}(.927) + e_{hd}}{\frac{X}{M}(F) + \frac{e_{hd}}{1+t}} - 1$$

The results in both cases are given in Table XXII, with alternative high, low, and medium values corresponding to alternative values selected within the ranges for e_{hs} and e_{wd}.

Since the expert tax was removed in November 1965, the higher estimates on the left are more relevant to the period since then. Moreover, they can be interpreted also as indicating the degree of overvaluation in 1965 vis a vis a policy of free trade plus an "optimum" tax on exports, since the latter would be very nearly eight per cent. This would hardly represent an optimum policy, however, since it is based on an estimate of average elasticity of world demand that is strongly influenced by a few traditional exports. Ideally, a higher tax would be applied to those few only, thereby avoiding an undesirable penalty on all other exports (including potential new exports).

Finally, for adjusting the 1965 effective rates, set out in the tables above, I suggest reducing them by about 14 percentage points, this representing the medium value for overvaluation with an "optimum"

TABLE XXII

ESTIMATES OF OVERVALUATION

	Ignoring Export Tax	Considering Export Tax
High	.163	.129
Medium	.144	.106
Low	.130	.087

export tax. The result is the net rate of protection, above that required to overcome the unfavorable exchange rate.

One other aspect of the relation between exchange rates and the incentives guiding resource allocation should be mentioned, though it doesn't affect the picture presented above of the structure of protection or the overvaluation of the Peso. That is the question of the "real" value of foreign exchange, or the "real" exchange rate. This means nothing more than taking into account changes in the terms of trade between internationally traded and non-traded goods, as influences additional to exchange rates and protection systems in allocating resources between these two categories of industries. It is especially important to introduce this into the analysis of the Philippines case because of the substantial devaluation of 1960-65 and the inevitable repercussions of that on relative prices of traded and non-traded goods.

When a (relatively small) nation devalues its money, the home prices of its (internationally) traded goods are immediately raised in the same proportion as the rise in the price of foreign exchange. If "monetary equilibrium" in a strict sense is maintained--i.e., no change in the general price level or in unemployment--the prices of non-traded goods must decline. A certain degree of additional restrictiveness in monetary-fiscal policy is obviously required to achieve this.

But this may be asking too much of a devaluation. Prices are often "sticky" in the face of pressures for downward adjustments. Moreover, full employment may not prevail at the outset, so that the traded goods sectors could expand without requiring contraction of the non-traded goods sectors. We might, then, set as a goal for stabilization policy (to accompany exchange rate policy) simply the prevention of any rise in the average prices of non-traded goods. Any departure from this norm, then, would mean a dilution of the devaluation--i.e., the "real" devaluation would be less to that extent.

Note that this setting of a normal goal for the stabilization policy that must accompany a devaluation is quite arbitrary. Nevertheless, we cannot even begin to talk about the "real" exchange rate until we have taken such a stand. The selection of this particular goal as the norm has two merits that commend it: (1) that of implying the preservation of the main impact of the devaluation without insisting on the impracticality of trying to force some prices down; and (2) that of facilitating the measurement of the "real" exchange rate (as we shall see below).

The "real" effect of the devaluation depends also, of course, on what happens to world prices of internationally traded goods. There may be occurring "exogenous" changes in world prices; or world demand and supply elasticities may be less than infinity, so that "endogenous" changes occur as a result of the devaluation; or both may conspire to alter the effect of the devaluation.

These separate influences are not easily identified from data, however. Moreover, we do not have a world monetary authority to take responsibility for world "monetary equilibrium," however, we might define it. Under the circumstances, the simplest and most practical way to correct the price of foreign exchange for world price movements of a country's traded goods is to multiply the former by an index of the latter. This procedure is far from ideal, since it doesn't distinguish between exogenous and endogenous changes. But neither does it make any sense to set, for some hypothetical world monetary authority, an arbitrary goal about price stabilization by which we could judge what is exogenous. About the best we can do is to assume that world supply and demand elasticities are very high, so that the major influences on world prices of traded goods are not themselves the product of variations in exchange rates.

We have, then, two corrections of the nominal exchange rate to convert it to a "real" rate--i.e., to correct for the changes in other relevant prices. First, it should be delfated by a rise in the domestic prices of non-traded goods, since these reduce the relative attractiveness of resource allocation to the traded goods sectors. Second, for the same reason, it should be deflated by any fall in the world prices of traded goods.

In the case of the Philippines, we could use for the former the index of wholesale prices of locally produced goods for domestic consumption, published by the Central Bank. For the latter, we could use different world price indexes for the export exchange rate and the import exchange rate. For the former, we select the export (dollar) unit value index and for the latter the import (dollar) unit value index. Then, in each case, the real exchange rate is equal to the nominal multiplied by the "inflator", which is

$$\frac{\text{Domestic Non-Trade Price Index}}{\text{World Price Index}}$$

Nominal and real exchange rates for Philippines exports and imports, 1950-1966, are shown in Table XXIII. The inflators and their components are shown in Table XXIV.

What is most striking is the gap that has opened up between the real import and export rates over the period. As is evident from Table XXIII this has resulted from a 30 per cent rise in dollar import prices coupled with a five per cent decline in dollar export prices. This indicates another significant deterrent (beyond the system of protection) to resource allocation to traditional exports in competition with import substitution. Potential new exports cannot be assumed to suffer the same disadvantage, however, since their world prices are probably better indicated by the import unit value index.

TABLE XXIII

PHILIPPINE EXCHANGE RATES: 1950-1966
(Pesos per U.S. Dollar)

Year	Export Rate		Import Rate[a/]	
	Nominal	Real (1950 prices)	Nominal	Real (1950 prices)
1950	2.00	2.00	2.01	2.01
1951	2.00	1.94	2.36	2.42
1952	2.00	1.63	2.36	2.53
1953	2.00	2.03	2.36	2.47
1954	2.00	1.89	2.36	2.49
1955	2.00	1.76	2.36	2.52
1956	2.00	1.75	2.01	2.13
1957	2.00	1.71	2.01	2.12
1958	2.00	1.74	2.01	2.12
1959	2.00	1.91	2.52	2.76
1960	2.22	1.99	-	-
1961	2.71	2.13	-	-
1962	3.51	2.74	3.91	4.03
1963	3.47	2.63	3.91	3.95
1964	3.51	2.46	3.91	3.73
1965	3.88	2.49	3.91	3.69
1966	3.89	2.57	3.91	3.55
1967	3.89	2.14	3.91	2.96

a/ The import rates for 1951-55 and 1959 include special taxes and margin fees. Some imports were exempted from these charges. Import rates were so numerous and varying in 1960 and 1961 that no attempt has been made to estimate an average.

Sources: International Monetary Fund, International Financial Statistics, Supplement to 1966/67 issues, p. 212

Central Bank of the Philippines, Central Bank News Digest, July 26, 1966, p. 11.

International Monetary Fund, International Financial Statistics, January, 1969, p. 258.

TABLE XXIV

EXCHANGE RATE INFLATORS: 1950-1966
(1950 = 100)

	Wholesale Price Index of Locally Produced Goods for Domestic Consumption (1)	Export Unit Value (2)	Import Unit Value (3)	Export Inflator (2)/(1)	Import Inflator (3)/(1)
1950	100.0	100.0	100.0	100.0	100.0
1951	110.0	106.7	112.8	97.0	102.5
1952	103.3	84.0	111.0	81.3	107.4
1953	101.3	102.6	106.0	101.3	104.6
1954	96.2	91.1	101.4	94.7	105.4
1955	94.9	83.5	101.4	88.0	106.8
1956	96.8	84.7	102.8	87.5	106.2
1957	100.7	85.9	106.1	85.3	105.4
1958	102.9	89.3	108.5	86.8	105.4
1959	101.2	96.8	110.8	95.6	109.5
1960	106.1	95.3	113.1	89.8	106.6
1961	111.4	87.7	114.8	78.7	103.0
1962	113.5	88.7	117.0	78.2	103.1
1963	123.4	93.4	124.7	75.7	101.0
1964	132.1	92.6	125.9	70.1	95.3
1965	135.5	94.2	128.0	69.5	94.5
1966	143.4	95.1	130.0	66.3	90.7
1967	175.9	96.8	133.0	55.0	75.6

Source: Central Bank of the Philippines, Statistical Bulletin.

Except again for traditional exports, the improvement in the exchange rate resulting from the devaluation of 1960-1965 has not been eroded to any great extent. The import inflator declined over the period by only about 14 per cent, while the devaluation was approximately 40 per cent (36 per cent for imports and 43 per cent for exports).

7. A Summary Evaluation of Philippine Protection

The principal characteristics of the structure of protection in the Philippines have been indicated above, but a brief summary might prove useful before attempting an evaluation of the implications for trade and growth. The system appears to correspond very well with the guidelines for tariff policy recently set forth in an unofficial statement by an official of the Tariff Commission.[9] In addition to the general criterion of "protection for deserving domestic industries," the statement emphasizes low rates of duty on essentials, high rates on non-essentials and lower rates on materials than on finished products. These criteria are taken to be "no longer debatable," and to "hardly need justification."

What is "essential" is not spelled out, but we might think of certain consumption goods like milk products, flour mill products and medicines as essential and note their corresponding low rates of protection.

9/ Manila Times, August 18, 1967

Consumer durables plus jewelry, cosmetics, candy and tobacco products, which might be thought of as less essential have, in contrast, very high rates.

But the question of essentiality is probably more closely tied to production needs than to consumption needs. So the really essential imports are the machinery and intermediate inputs that are required for the maintenance and expansion of production and employment in the manufacturing industries that have been established. And the general pattern of tariffs shows low rates for machinery, moderate rates for intermediate inputs and generally high rates for finished consumption goods. This tends to exaggerate the protection given to the finishing stages activities in comparison to what the picture of nominal tariff rates would suggest. The result is evidently a strong bias in favor of resource allocation to finished consumption goods industries that are heavily dependent on imported supplies. And the pattern of industrial growth and trade over the past decade and a half in the Philippines tends to confirm the existence of this bias.

Exports are, however, the most heavily penalized group, especially when we exclude sugar, which derives its relatively high degree of protection from its preferential treatment in the protected U.S. market. The negative rates for exports derive, of course, from the fact that they are not at all protected from world competition, but must pay the penalty of higher prices

from the protection accorded some of their inputs. In addition, exports are penalized by the lower price for foreign exchange that the whole system of protection defends.

This is brought out in a comparison of net average rates (after adjustment for overvaluation) for industries grouped by end-use of product in Table XXV. Exports are penalized by an average net rate of minus 33 per cent, while consumption goods, at the other end of the scale, have an average net rate of protection of 80 per cent. The result for exports must be qualified by two considerations, however. First, the less favorable exchange rate for exports, implying an eight per cent tax, ended in November of 1965. Second, the Government is making efforts to implement the drawback on import duties, which has heretofore been ineffective. With these two changes the net penalty on exports would be simply the overvaluation of the Peso.

What effect has this system of protection had on efficiency, growth, industrialization and trade in the Philippines? All one can do in answer to this question is to try to deduce the likely effects and test whether actual events have not conflicted with what would have been predicted.

To the extent that the system of incentives produced by the structure of protection influences resource allocation we would expect the Philippine system to have (1) given strong encouragement to finishing stages of production of consumption goods, (2) relatively less encouragement to intermediate goods, (3) much less to capital goods (excluding construction, which is inhibited by the moderately high protection given to inputs into that industry), and

TABLE XXV

AVERAGE EFFECTIVE RATES AFTER ADJUSTMENT FOR OVERVALUATION
(Corden Method)
(per cent)

Exports	-33
Capital Goods	66
Machinery	20
Intermediate Goods	51
Inputs into Construction	50
Consumption Goods	80

rather severe penalties on exports. This expectation is generally confirmed by the trade and production figures of Tables V and VII. Imports of consumption goods declined absolutely and relatively to other imports, while imports of capital goods rose more rapidly than any other category and by 1965 was the largest of the four groups of imports in Table V.

Production trends in manufacturing complemented the trade trends with output of consumption goods increasing most absolutely and capital goods least. In relative terms, however, intermediate goods gained most rapidly, reflecting the weaker bias against that group. Relative rates of growth are, however, less significant than absolute rates in assessing the direction of the allocation of resources, there being no presumption that proportionality or any other relationship of that sort is in any sense neutral. The key question is, rather, where was most of the investment budget allocated? And the answer seems clear--to consumption goods output.

Exports of manufactures tended to stagnate during the 1950's and only with devaluation did this category begin to show signs of rapid growth. The response since 1960, as exports rose from nine to fifteen per cent of manufacturing production, is encouraging enough, however, to suggest that further correction of the bias against manufactured exports

might prove rewarding. On the other hand, manufactured exports are still dominated by sugar, coconut oil, desiccated coconut, canned pineapple, lumber and plywood.

Traditional exports, which include the just-named five manufactures, have performed remarkably well throughout the whole period of a decade and a half following the reconstruction after World War II. Their share of total exports has remained at about 88 per cent since 1950 and their rate of growth was about five per cent per annum during the 1950's and about seven per cent per annum since 1960. Moreover, the Philippine share in world trade of its major exports generally rose from 1950 to 1965, as is shown in Table XXVI. This is particularly surprising in the light of the biases of the system against exports--biases which, prior to devaluation and decontrol in the early 1960's were presumably much stronger than those indicated above. Perhaps equally surprising is their only modest response to the devaluation, which very sharply increased export earnings. Nor can this be explained by adverse price movements as a result of devaluation, for overall the world prices of this group remained roughly constant from 1960 to 1966.

What appears to be true is that these traditional export industries offer relatively advantageous employment to Philippine resources even after the implicit taxes imposed by the system of protection and the exchange

TABLE XXVI

SHARE IN WORLD TRADE OF PHILIPPINES' MAJOR EXPORTS, 1950-1965
(per cent)

	1950	1955	1960	1965
Copra	47	53	51	63
Abaca	84	93	94	94
Copper metal	1	3	10	17
Logs and lumber				
a. Broadleaved	18[a/]	27	32	32
b. Sawnwood	4[b/]	3	4	1
Plywood and Veneer				
a. Plywood	-	1	7	5
b. Veneer	-	7	16	19
Coconut Oil	25	21	22	50

a/ for average for years 1951 and 1952

b/ for 1951

Sources: Food and Agricultural Organization of the UN, yearbook of Forest Products Statistics (1953 and 1966 issues).

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rate it defends. These taxes probably go beyond what would be optimal in the light of world demand elasticities. In effect, then, these taxes enable the rest of the economy to take advantage of low elasticities of supply in these industries to transfer income away from them to the protected manufacturing sector.

Such a transfer could be defended in terms of forcing saving for development priorities. What cannot easily be defended, however, is the method of transfer. For, by taxing traditional exports by means of penalizing all exports, the system discourages the development of new exports, including the wide range of potential new exports that should otherwise emerge in the years ahead.

* Manufacturing growth in substituting for imports was most rapid in the 1950's. But this process of import substitution slowed sharply after 1957 as Table IV indicates. This is at least consistent with the hypothesis that the system of protection as it has been described above was very effective in encouraging the relatively easy capture by domestic manufactures of the existing market for finished consumption goods, but that as this process approached completion in many lines the rate of growth began to be constrained by the rate of growth of the market itself, and by the greater difficulties of moving backward to the earlier stages of manufacturing and into the export market. These difficulties, especially for exports, were of course compounded by the system of incentives that the structure of protection implies.

It is no doubt true that there is considerable evasion of the system of protection in the Philippines, so that the distortion indicated by this assessment may be exaggerated. Moreover, a variety of other forces are at work to influence resource allocation. Nevertheless, it seems to this writer that it will be difficult for manufacturing again to become a leading sector in Philippine growth unless the protection system is revamped to correct the relative bias against production at the earlier stages, and especially against exports. Thus, the protection system is seen as inhibiting the future growth of the Philippine economy.

Moreover, the existence of this system in the past may have led to an overstatement of real growth that has occurred. For prices of the more rapidly growing manufacturing sector are rendered artificially high by the system and this increases the weight of that sector in growth calculations. Accordingly, if we attempt to measure growth in terms of world prices by correcting values in each sector by its effective rate of protection (adjusted for overvaluation), we find that the average annual growth rate of net domestic product, 1950-65 declines from 5.4 per cent to 5.1 per cent.

Finally, a traditional way to indicate the welfare cost of protection from static misallocation of resources is to measure the so-called "dead-weight loss". While this has the disadvantage of applying partial equilibrium techniques to a general equilibrium problem, it may, nevertheless, be a useful approximation for purposes of inter-country comparisons. Hence, the consumption and production

costs of protection have been calculated according to the standard formulas adopted for this project. Based on the assumption that the domestic demand and supply curves for importables are linear, these costs are simply one-half of the product of the average rate of protection and the change in quantity associated with its imposition. However, in the case of the consumption cost, the rate of protection as a proportion of the value of the product (t) is used, while z, the rate of protection of value added is used for the production cost. (Correspondingly, the change in production is change in value added.) In each case, the rates are adjusted for overvaluation. Finally, these costs are measured for manufacturing only, since this is the only sector for which net protection is of any importance.

Average net protection (t') for manufacturing is about .15, since average t is .29, and overvaluation is .14. If we assume that the domestic demand elasticity for this kind of aggregate good is unity, then the cost is about 4.2 per cent of the total consumption of manufactures. (Consumption, of course, includes use by industry as inputs.) In absolute terms, this would mean about ₱347 millions, or about 1.6 per cent of GNP.

Average net protection of value added in manufacturing (z') is .49 (Corden estimate). If the elasticity of domestic supply is one, this puts the production cost at between one-sixth and one-third of manufacturing production. This amounts to between ₱550 millions, and ₱1,100 millions, or a mid-value of more than four per cent of GNP.

Thus, the total cost measured in this manner is no more than the annual growth of GNP, as measures of this kind commonly indicate. But the real cost is the slowing of growth itself, which arises from biasing investment allocation away from the potential growth areas--backward linkage and new exports. It is difficult to avoid the conclusion that tariff reform plus exchange rate adjustment, or some other means of overcoming these biases, is a prerequisite for a resurgence of industrial growth in the Philippines.

Finally, what remains to be explained is how an exchange rate which doesn't seem to encourage new exports to develop is one at which traditional exports thrive. Part of the answer may be simply that the Philippines has an overwhelming comparative advantage in the latter. In addition to this possibility, however, there is the fact that the traditional agricultural and mineral based exports are favored by lower wage rates than the new manufacturing industries. Thus, an exchange rate that is appropriate to rural wage rates implies overvaluation of the Peso in the context of urban wage rates.

THE STRUCTURE OF PROTECTION IN THE PHILIPPINES

APPENDIX

There were two special aspects of the Philippines system of protection that complicated the calculations. Start with the relatively simple formula for Z,

$$Z = \frac{W_i/X_i}{\frac{1}{1+t_i} - \sum_j \frac{c_{ji}}{1+t_j}} - 1$$

where $\frac{W_i}{X_i}$ is value added as a proportion of output (at factory prices), t_i is the proportion of protection given to domestic output, t_j is the same for any input, and c_{ji} is the proportion of the value of output accounted for by the value of any input. Then, the complications involve only t_i and t_j.

The first complication comes from the discriminatory application of percentage sales taxes referred to previously. Let s be the proportional sales tax, nominally the same for both foreign and domestic goods. Then, let m represent the proportional margin used to augment the tax base for foreign goods and v', the proportion of the domestic product's price (includes value added, electricity, fuels, and depreciation) on which the tax is imposed. If t'_i is the nominal tariff on the product and t'_j, the nominal tariff on any input, then