

QUEREN 6121

Institute of Economic Development and Research
SCHOOL OF ECONOMICS
University of the Philippines

Discussion Paper No. 1969

April 30, 1969

THE STRUCTURE OF PROTECTION IN THE PHILIPPINES

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A system of protection has existed in the Philippines since 1950, when import controls were implemented in response to a balance of payments crisis. Decontrol accompanied by devaluation was begun in 1960 and completed by 1965. Both before and during this latter period tariff rates were generally raised as a partial offset to the diminution of protection arising from decontrol. The result is a system of protection today that may be similar in its structure to that of the 1950's under exchange control, though this is difficult to demonstrate in quantitative terms. In particular, the biases against backward linkage and exports that existed under the protection of the control system have been retained in the new tariff structure. Because of the magnitude (about 40 per cent) of the devaluation, however, we can judge that the overall level of protection (and, therefore, of the biases) has diminished significantly.

An analysis and evaluation of the structure of protection that prevailed in 1965 may, then, indicate not only something about the pattern of influences on the price system that the present policy of protection

produces, but also something about the influences from protection that have guided industrialization in the Philippines over the past decade and a half.

In any case, however, the year 1965 has been selected for study of the protection system because it is the most recent year for which detailed input-output data in manufacturing is available. The heart of the study is the estimation and analysis of potential and effective rates of protection for more than 90 manufacturing industries, eleven agricultural industries, and sixteen other sectors. For purposes of comparison with other countries, estimates of rates of protection have been calculated also on the basis of a standardized input-output table.

Before turning to this, however, it might prove valuable to provide some background by tracing briefly the main lines of development of the Philippine economy in this century. Then the development of the system of protection and its principal characteristics will be briefly described as an introduction to the analysis of the system.

1. Growth in the Philippine Economy 1902-1966

Per capita product in the Philippines seems to have grown at about an annual average rate of one per cent in the first two-thirds of this century.

¹/This section owes much to the work of Richard W. Hoesley. See his "Long Term Economic Growth in the Philippines, 1902-1961," Proceedings of the Conference on Growth of Output in the Philippines, Los Baños, December 9-10, 1966.

though the data are not reliable enough to warrant great confidence in this estimate. Dividing output between agricultural and non-agricultural, we find that in per capita terms the former has grown scarcely at all, while the latter's growth rate appears to be about 1.6 per cent per annum. These estimates are shown in Table I where the division of the whole period into sub-periods shows clearly also the uneven time pattern of growth. The first sixteen years and the last eighteen show rapid growth, both in absolute and per capita terms. In between output stagnated and per capita output declined.

Before the 1950's the main influences explaining ups and downs in the rate of growth were U.S. tariff and trade policies, depressions, and wars. In the last decade and a half, however, domestic policies, particularly the system of protection, have had a significant influence on growth.

While the rate of increase in agricultural output was moderately high in both periods of rapid overall growth, it was the manufacturing sector that led in each case. This was especially true after 1948 when the share of manufacturing in total output rose very rapidly while that of agriculture declined, as is evident from Table II.

In the earlier period (1902-1918), the gains in manufacturing were concentrated in food processing, particularly sugar. Manufacturing growth in the 1950's, in contrast, was across a broad front of import substitutes, with a great variety of fabricating, assembling, and processing industries.

TABLE I
ANNUAL GROWTH RATES
(per cent)

Period	GROSS DOMESTIC PRODUCT				PER CAPITA PRODUCT			
	Total	Agri- culture	Non-Agri- culture	Manufac- turing	Popula- tion	Total	Agri- culture	Non-Agri- culture
1902-1918	4.4	5.0	3.6	7.8	1.9	2.7	3.0	1.7
1918-1938	1.9	0.5	3.4	2.8	2.2	-0.3	-1.7	1.2
1938-1948	-0.5	0.0	-1.0	-3.8	1.9	-2.4	-1.9	-2.8
1948-1961	6.9	3.8	9.1	12.0	3.1	3.5	0.7	5.8
1961-1966	5.1	4.1	5.3	6.6	3.2	1.8	0.9	2.0
1902-1966	3.36	2.5	4.0	5.1	2.34	1.00	0.4	1.6
								2.7

Sources: For 1902-1961, Richard W. Hookey, "Long Term Economic Growth in the Philippines, 1902-1961," Proceedings of the Conference on Growth of Output in the Philippines, Los Baños, December 9-10, 1966. For 1961-1966, National Economic Council, revised national income accounts.

TABLE II

GROSS DOMESTIC PRODUCT BY INDUSTRIAL ORIGIN AND PERCENTAGE SHARES
(value in 1955 prices in million pesos)

	1950		1955		1960		1965		1966	
	Value	%	Value	%	Value	%	Value	%	Value	%
1. Agriculture, fishery and forestry	2214	40	3161	41	3170	33	3930	32	4063	32
2. Mining and quarrying	74	1	121	1	157	2	195	2	213	2
3. Manufacturing	567	10	1001	13	1657	17	2271	18	2385	18
4. Construction	224	4	230	3	325	3	506	4	476	4
5. Transportation, communication, storage and utilities	192	4	250	3	473	5	593	5	622	5
6. Commerce	706	13	861	11	1444	15	1647	13	1721	13
7. Services	1590	28	2000	26	2409	25	3147	26	3305	26
8. Less: Net factor income from abroad (20)			(133)	2						
Sub-Total: Net Domestic Product	5596	100	7757	100	9635	100	12289	100	12785	100
9. Indirect taxes less subsidies	346		633		880		989		1016	
10. Depreciation	315		430		585		1119		1201	
Total: Gross Domestic Product	6257		8820		11100		14397		15002	

Source: National Economic Council, revised national accounts.

gaining in shares at the expense of food, beverages, and clothing manufacture. This can be seen in Table III, where long-run changes in percentage shares for eighteen manufacturing subsectors are shown.

Hooley has attempted heroically to produce estimates of the sources of long-term growth for both agriculture and manufacturing. If his estimates are indicative of actual productivity trends, the picture is a depressing one.

* In agriculture, despite substantial increases in inputs of land, machinery, and animals per worker, labor productivity increased only seventeen per cent between 1902 and 1961. Productivity of all inputs declined about fifteen per cent over the period. In manufacturing, labor productivity rose more -- about 50 per cent over 59 years -- but this required a more than doubling of the capital-labor ratio, so that output per unit of capital declined substantially, as did the productivity of both inputs aggregated. Part of this unimpressive performance can be explained by the depression of the 1930's and World War II. But even in the two periods of more rapid growth, at the beginning and at the end, productivity gains were not impressive.

We can relate these results to the earlier one concerning growth of per capita income, the latter serving as a proxy for growth of labor productivity, on the assumption that labor force participation rates were unchanged. Then Hooley's data tells us that labor productivity in both agriculture and manufacturing grew more slowly than the one per cent overall rate of growth. Of course, productivity in all sectors could grow more slowly than the average rate if labor is shifting relatively to the higher productivity sectors. The data shows

TABLE III

PER CENT DISTRIBUTION OF VALUE ADDED IN PHILIPPINE
MANUFACTURING BY INDUSTRY GROUPS

	<u>1902</u>	<u>1918</u>	<u>1938</u>	<u>1948</u>	<u>1966</u>
20 Food Manufacturing	25.7	50.9	52.1	30.8	22.0
21 Beverages	12.7	5.3	4.7	25.1	10.3
22 Tobacco Products	24.2	9.6	7.2	4.7	5.4
23 Textile Products	0.5	0.5	0.8	2.6	6.1
24 Footwear and Other Wearing Apparel	5.9	3.5	7.8	6.6	2.7
25 Wood and Cork Products	8.0	5.4	5.3	9.7	5.0
26 Furnitures and Fixtures	2.3	1.3	1.9	1.8	0.9
27 Paper and Paper Products	0.0	0.0	0.0	0.0	2.6
28 Printed and Printed Products	4.9	1.7	3.6	3.7	3.5
29 Leather Products	0.7	0.3	0.1	0.0	0.3
30 Rubber Products	0.0	0.0	0.0	0.6	3.4
31 Chemical and Chemical Products	1.9	10.9	6.9	2.9	12.4
32 Products of Coal and Petroleum	a	a	b	b	4.0
33 Non-Metallic Mineral Products	3.9	0.7	3.3	2.1	5.5
34 Basic Metal and 35 Metallic Products	0.9	0.8	0.7	1.9	7.1
36 & Machinery	3.6	0.8	0.2	0.5	4.3
38 Transportation Equipment	a	1.3	0.4	1.0	3.2
39 Miscellaneous Manufactures	4.2	5.9	3.9	5.7	1.3
Total <u>Manufacturing</u>	100.0	100.0	100.0	100.0	100.0

Notes: a = negligible

b = included in miscellaneous manufactures

Source: Salvador Umasia, "Growth of Output in Philippine Manufacturing: 1902-1960," Proceedings of the Conference on Growth of Output in the Philippines, op. cit.; Bureau of the Census and Statistics, 1966 Survey of Manufactures.

that the proportion of the labor force in agriculture remained constant while that in manufacturing more than tripled, implying a decline in the proportion in the other sectors. The identity

$$\frac{Y_s/L_s}{Y/L} = \frac{Y_s/Y}{L_s/L} \quad ?$$

Where Y and L are output and labor force, and the subscript s indicates sector s, then tells us that labor productivity in these other sectors rose more rapidly than the aggregate rate (since Y_s/Y rose and L_s/L fell).

The conclusion seems to be that the modest one per cent rate of rise in per capita income came principally from a relatively rapidly rising labor productivity in sectors other than agriculture and manufacturing plus a relative shift of labor to the high productivity manufacturing sector. The failure of agricultural labor productivity to increase to any significant extent plus the related failure to reduce the proportion of the labor force engaged in the low productivity agricultural sector appear to be the principal factors holding down the overall rate of growth. These conclusions must be considered only tentative, however, because of the nature of the data, especially the omission of the construction and services sectors.

It is interesting to note that in the most recent period of rapid growth, 1948-1961, when per capita income grew at a rate of 3.5 per cent per annum, the most significant difference seems to have been the very much faster rise in labor productivity in manufacturing, though another contributing factor was a modest decline (seven per cent) in the proportion of labor engaged in agriculture.

2. Growth since World War II

More comprehensive data are available for the most recent two decades. Because the reconstruction of the economy required several years, it is better to judge post-war growth as beginning no earlier than 1948.

Table IV gives real gross domestic product by industrial origin for selected years 1950-1966; Table IV gives the annual percentage rates of growth of GDP and its major sectors of origin for 1948-1966. It is evident that growth over the whole period was moderately rapid, averaging 5.8 per cent per annum, but that growth slowed somewhat in the second half of the period to a 5.1 per cent rate in contrast to a 6.6 per cent rate in the first half. The slowdown was almost entirely in manufacturing where the growth rate declined from 13.3 per cent in the first half of the period to 6.5 per cent in the second half. In contrast, agricultural growth slowed only slightly and the growth rate of services increased moderately.

* The retardation of growth in manufacturing does not seem to have been a result of decontrol and devaluation, the growth rate during 1961-1966 being virtually the same as for 1957-1966. A closer look at the annual rates suggest that the turning point might have been reached in the middle 1950's. It is possible, however, that the method of estimating manufacturing growth may understate gains in more recent years, because of low weights accorded to new and rapidly growing industries, so that the retardation might be less than the official figures indicate.

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TABLE IV

GROWTH RATES OF REAL GDP
AND MAJOR SECTORS OF ORIGIN 1948-1966
(per cent per annum)

Year	GDP	Agriculture	Manufacturing	Services
1948-49	6.7	5.0	5.9	10.5
49-50	8.1	8.9	20.9	7.9
50-51	4.8	10.8	17.3	-6.4
51-52	8.9	5.9	5.3	10.1
52-53	8.4	11.7	13.0	7.6
53-54	5.4	4.8	12.4	3.9
54-55	8.0	4.0	12.6	9.2
55-56	2.7	-12.8	27.5	-9.6
56-57	6.2	3.6	6.3	10.3
57-58	4.6	4.8	8.8	9.1
58-59	8.0	8.0	9.9	5.7
59-60	2.2	-1.8	2.2	4.8
60-61	5.4	5.0	4.4	5.1
61-62	5.4	5.7	5.6	5.5
62-63	7.6	7.8	12.0	6.9
63-64	2.4	-2.2	7.1	4.9
64-65	6.1	5.9	3.6	5.0
65-66	4.2	3.4	5.0	5.0
66-67	6.1	7.6	4.5	5.2
1948-57	6.6	4.4	13.3	4.6
1957-66	5.1	4.0	6.5	6.9
1961-66	5.1	4.1	6.6	5.5
1948-66	5.8	4.2	9.8	5.2

In any case, manufacturing growth was rapid over the whole period, its share in total product rising sharply from nine per cent in 1948 to eighteen per cent in 1966 and agriculture's share dropping from 40 to 32 per cent over the same period. Moreover, as was indicated in the previous section, the growth occurred across a broad front of manufacturing sectors as domestic production (principally at finishing stages) was substituted behind protection for imports of manufactures.

The rapid decline in imports of consumption goods as a share of total manufactured imports and the corollary rise in the share of capital goods is seen in Table V. ^{good} The standard international trade classification of Table VI shows a sharp rise in the share of crude materials and a decline in that of food, beverages and tobacco. Fuels and other manufactured goods showed little change in relative shares. Thus, the trend of imports demonstrated the usual pattern in a process of import substitution, capital goods and materials replacing consumption goods in the import bill. The latter, in fact, represented less than five per cent of total supply (production plus imports) of manufactured consumption goods in 1965.

* It is worth noting, however, that intermediate goods did not rise as a share of total imports. This has its counterpart in the sharp rise of intermediate goods as a proportion of domestic manufacturing, as shown in Table VII. Domestic production of intermediate manufactures jumped sharply after decontrol began in 1960, but then tended to level off as tariff rates were raised on products of industries hurt by the higher prices of imported goods

TABLE V

PHILIPPINE IMPORTS OF MANUFACTURED GOODS
1940-1965

Total Manufac- tured Goods Value (P000)	<u>Intermediate</u> <u>Inputs</u>		Inputs Into Construction		<u>Capital Goods</u>		Consumption Goods	
	Value (P000)	%	Value (P000)	%	Value (P000)	%	Value (P000)	%
175,388	80,253	42	19,479	11	29,971	16	55,685	30
452,975	187,537	41	60,558	13	84,367	19	120,513	27
708,305	316,567	45	70,595	10	158,528	22	162,615	23
829,515	348,397	42	66,361	8	340,101	41	74,656	9
1,926,054	751,161	39	173,345	9	866,724	45	134,824	7

ce: Foreign Trade Statistics of the Bureau of the Census and Statistics.

TABLE VI
PHILIPPINE IMPORTS & EXPORTS
(thousand pesos)

Year	Total	Food, Beverages, Tobacco		C r u d e Materials		F u e l s		Manufactured Goods	
		Value	%	Value	%	Value	%	Value	%
<u>Imports</u>									
1940	269,462	49,701	18	6,298	2	28,416	11	185,308	69
1950	747,591	197,276	26	23,030	3	74,260	10	452,975	61
1955	1,061,329	232,510	22	31,965	3	88,549	8	708,305	67
1960	1,229,640	172,174	14	76,829	6	151,122	12	829,515	68
1965	3,100,301	643,617	21	246,501	8	284,129	9	1,926,054	62
<u>Exports</u>									
1940	305,320	123,147	40	166,601	55	-	-	15,572	5
1950	656,817	187,154	28	452,703	69	-	-	22,960	3
1955	833,126	276,249	33	514,178	62	-	-	42,699	5
1960	1,070,875	328,892	31	691,045	64	-	-	50,938	5
1965	2,979,720	868,858	29	1,946,478	65	14,665	1	149,719	5

Source: Foreign Trade Statistics of the Bureau of the Census and Statistics.

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TABLE VIIPHILIPPINE MANUFACTURING PRODUCTION
(Thousand Pesos)

	1948	1956	1960	1965
Total	944,845	1,818,769	3,244,132	6,346,586
<u>Intermediate Inputs</u>				
Value	28,327	147,347	507,629	1,318,936
%	<u>3</u>	<u>8</u>	<u>16</u>	<u>21</u>
Inputs into Construction				
Value	35,910	117,408	230,681	395,768
%	<u>4</u>	<u>6</u>	<u>7</u>	<u>6</u>
Capital Goods				
Value	10,851	61,809	89,875	218,241
%	<u>1</u>	<u>3</u>	<u>3</u>	<u>4</u>
Consumption Goods				
Value	612,922	953,383	1,698,273	2,748,714
%	<u>65</u>	<u>52</u>	<u>52</u>	<u>43</u>
Export Goods				
Value	167,311	242,555	285,153	952,652
%	<u>18</u>	<u>13</u>	<u>9</u>	<u>15</u>
Rice Mill Products				
Value	11,102	11,149	21,463	28,133
%	<u>1</u>	<u>1</u>	<u>1</u>	-
Sugar Mill Products				
Value	78,422	285,118	411,058	684,142
%	<u>8</u>	<u>16</u>	<u>13</u>	<u>11</u>

Sources: Bureau of the Census and Statistics, Annual Surveys of Manufacturers,
Census of the Philippines: 1948,
 Economic Census Report Volume IV,
Economic Census of the Philip-
pines, Volume III (Manufacturing), 1961.

Despite the sharp changes in the structure of domestic production, Philippine exports showed almost no variation from their traditional pattern, as evidenced in the standard classification of Table VI. In particular, despite rapid gains in manufacturing, the share of the latter in exports remained very low. The Philippines continued to depend overwhelmingly on a relatively few traditional exports -- mainly agricultural, forestry, and mineral products with only a modest degree of processing. As Table VIII demonstrates, the share of eleven principal exports remained roughly constant at just under 90 per cent of total exports during the period 1949-1966.

This constancy of share of principal exports masks some sharp changes in relative importance within the group of eleven, however. In particular, there is evident a relative decline over the period of the importance of coconut products, abaca and very recently, sugar. Timber products -- logs, lumber, and plywood -- and copper were the principal gainers.

Overall, the value of exports tended to grow slightly faster than GDP during the exchange control period of the 1950's, the ratio rising from ten to twelve per cent between 1950 and 1960. The share of imports during the same period remained constant at slightly more than eleven per cent.

The terms of trade moved with the international business cycle, as is evident from Table IX, though the trend was moderately downward. Export volume increased a substantial 75 per cent over the decade of the 1950's, while import volume was held to a 50 per cent rise (all of the

TABLE VIII

PRINCIPAL EXPORTS OF THE PHILIPPINES
AS A PERCENTAGE OF TOTAL EXPORTS

Principal Exports	1950	1955	1960	1965	1966	1967	
Copra	41.99	29.84	24.81	22.17	20.27	16.23	↓
Sugar	13.97	26.73	23.88	17.27	13.85	17.91	↑↓
Abaca	12.67	7.00	7.47	3.16	2.23	1.86	↓
Logs and Lumber	3.25	10.45	16.39	21.00	24.90	26.20	↑
Desiccated Coconut	7.35	3.22	3.37	2.67	2.12	2.15	↓
Coconut Oil	3.80	4.16	2.80	8.88	9.02	7.38	↓↑
Copra Meal or Cake	1.15	1.11	0.87	1.54	2.06	1.38	↓↑
Plywood	0.00	0.23	1.16	2.29	2.17	2.20	↑
Copper Concentrates	0.53	1.37	3.27	5.50	9.93	9.46	↑
Canned Pineapples	2.88	1.49	1.32	1.14	1.06	1.28	↓
Chromite Ores	0.66	2.60	3.08 *	1.29	1.00		↓
Total Principal Exports	88.25	87.84	88.42	86.91	88.61	86.04	

Sources: Statistical Bulletin of the Central Bank
Trade Statistics of the Bureau of the Census and Statistics.

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TABLE IX
PHILIPPINE TERMS OF TRADE 1948-1966

Period	Price Index ^{a/}		Net Terms of Trade
	Imports	Exports	
1948	124.4	154.8	124.4
1949	129.6	106.7	82.3
1950	98.6	119.7	121.4
1951	111.2	127.7	114.8
1952	109.5	100.6	91.9
1953	104.5	122.8	117.5
1954	100.0	109.0	109.0
1955	100.0	100.0	100.0
1956	101.4	101.4	100.0
1957	104.6	102.8	98.3
1958	107.0	106.9	99.9
1959	109.2	115.9	106.1
1960	111.5	114.1	102.3
1961	113.2	105.0	92.6
1962	115.4	106.2	92.0
1963	123.0	111.8	91.0
1964	124.1	110.9	89.4
1965	126.2	112.8	89.4
1966	128.2	113.8	88.8
1967	131.1	115.9	88.4

Sources: Central Bank of the Philippines, Statistical Bulletin,
Vol. III (December 1951), pp. 86-7.
Central Bank of the Philippines, Statistical Bulletin,
Vol. XVIII (December 1966), p. 162.

increase occurring in the first half of the period). Export prices declined about five per cent in contrast to a 13 per cent rise in import prices.

With devaluation and decontrol, however, there appears a somewhat more rapid increase in export volume -- about 39 per cent between 1960 and 1965. *A part of this may be illusory, however, as it is widely believed that exports were under-stated before devaluation. If this is true, the trend of export growth may have been little affected by the devaluation.

Import volume, likewise, continued to grow in the decontrol period at about the same pace as in the previous decade; though faster than in the years immediately preceding decontrol. There was a very slight decline in export prices following devaluation which, together with a 14 per cent rise in import prices, accounts for the rather significant deterioration of the terms of trade since 1960.

Finally, a look at the expenditure shares of GNP (Table X) in the post-war period turns up an interesting anomaly. We would normally expect a higher ratio of investment to GNP to be accompanied by faster growth. But the first half of the period, which had a faster rate of growth, showed a much lower proportion of GNP invested -- averaging about eleven per cent as compared to more than fifteen per cent in the second half. *This may indicate something about the difficulties of sustaining an industrialization after the first easy stage of import substitution has been accomplished. Investment here is gross of depreciation, of course, and this may explain a small part of the rise in the ratio.

TABLE X

EXPENDITURE SHARES OF GROSS NATIONAL PRODUCT
(In percentage)

	Average	1948-57	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
Personal Consumption Expenditures <i>C</i>	87	87	84	84	82	81	74	73	72	70	70	70
General Government Consumption Expenditure <i>L</i>	8	8	8	8	9	9	10	10	10	10	10	10
a. Compensation of employees	6	6	6	6	7	7	8	8	8	8	8	8
b. Other expenditures	2	2	2	2	2	2	2	2	2	2	2	2
Gross Domestic Capital Formation <i>I</i>	10	15	15	14	16	14	15	17	17	16	16	17
a. Construction	5	8	8	7	8	7	8	8	9	8	8	8
b. Durable equipment	3	5	6	6	6	6	6	7	6	7	7	8
c. Increase in stocks	2	2	1	1	2	1	1	2	2	1	1	1
Net Exports of Goods & Services <i>X-M</i>	(2)	(1)	..	..	(2)	(7)	1	(1)	1	5	5	5
Statistical Discrepancy <i>✓</i>	(2)	(8)	(6)	(5)	(4)	3	..	2	1	..	..	5
Expenditure on Gross Domestic Product	101	101	101	101	101	100	100	101	101	101	101	101
Net Factor Income from Abroad <i>✓</i>	(1)	(1)	(1)	(1)	(1)	..	..	(1)	(1)	(1)	(1)	(1)
Expenditure on GNP	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>

.. less than 1 per cent

Source: Office of Statistical Coordination and Standards, National Economic Council