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Chapter 6

Effects of Philippine Trade and Development Policies on Resource Allocation, Growth, and Income Distribution

After a brief outline had been given of the various phases of exchange control through which the Philippine economy has passed during the last twenty-five years, a detailed description was presented, in Chapters 2, 3, and 4, of both the trade and payments policies and monetary and fiscal policies followed by the country during that period. An attempt was then made, in Chapter 5, to quantify the differential levels of protection that these combined policies afforded to various sectors of the economy. In the present chapter, the study is concluded by analyzing the effects of the different exchange-control methods and other development policies on the industrial allocation of resources, the distribution of income, and the rate of growth in the economy.

RESOURCE-ALLOCATION EFFECTS

Evidence on changes in the pattern of production within the Philippines is consistent with the hypothesis that the differential incentives associated with the exchange-control and other protective policies pursued by the government did contribute to both an acceleration of the industrialization process during the 1950s and a diversification of manufacturing activities. On the other hand, the effectiveness of export activities in attracting productive resources tended to be undermined during this period, thereby inhibiting continuation of the kind of industrialization program that had been undertaken.

Manufacturing.

As is evident from Table 6-1, which contains Hooley's calculations of growth rates and the composition of output from the turn of the century to

TABLE 6-1

Gross Value Added in Agriculture, Manufacturing, and Other Nonagricultural Activities, 1902–61

	Percentage Distribution			Annual Growth Rates (compounded)[a]			
Year	Agri.	Mfg.	Other Nonagri.	Agri.	Mfg.	Other Nonagri.	Total
1902	55.0	13.0	32.0				
1918	60.4	12.3	27.3	5.4	3.8	3.5	4.7
1928	53.7	16.3[b]	30.0[b]	0.7	4.7	2.7	1.9
1938	46.6	21.2	32.2	0.5	4.6	2.7	1.9
1948	49.1	17.5	33.4	0	−2.3	−0.2	−0.5
1961	33.6	28.0	38.4	3.8	10.9	8.1	6.8

SOURCE: Richard W. Hooley, "Long-Term Economic Growth in the Philippines, 1902–1961," in "Growth of Output in the Philippines" (Papers presented at a conference of the International Rice Research Institute, Los Baños, Laguna, December 9–10, 1966; mimeo.). Hooley's Tables 1 and 3 were used in preparing the data shown.

a. The growth rates refer to the period between the year for which the rate is listed and the previously listed year.

b. Since for 1928 Hooley does not break down the share of nonagricultural activities in gross value added into its manufacturing and nonmanufacturing components, the averages in 1918 and 1938 of these components are applied to the 1928 share of all nonagricultural activities in gross value added.

1961, the shift toward manufacturing and other nonagricultural activities during the 1950s should be regarded as the continuation of an established trend rather than as an entirely new development. Indeed, it seems reasonable that a significant share of the rapid growth in manufacturing during the 1950s was part of the kind of "catch-up" growth that one would expect in view of the stagnation and destruction during the wartime years. For example, not only was gross value added in manfacturing in 1948 still 21 per cent below its prewar level, but the population of the country was 20 per cent greater in 1948 than 1939. Nevertheless, the rate of growth of manufacturing between 1948 and 1961 was 2.3 times greater than in the best decade of manufacturing

growth of the 1902–48 period, suggesting that the strong economic incentives offered to most industrial sectors after World War II contributed to a quickening of industrial growth.

What is more evident than the impact of trade and payments policies on the over-all growth rate in manufacturing is the effect that these policies had on increasing the degree of diversification in manufacturing. This diversification is brought out in Table 6-2, which contains estimates of the distribution of activities within the manufacturing sector from 1902 to 1970. From 1918 to 1948, the food, beverages, and tobacco sector accounted for between 60 and 65 per cent of all value added in the manufacturing sector. However, between 1948 and 1956, the share of this sector dropped to 44 per cent, with such industries as textiles, chemicals, basic metals, machinery, transportation, and miscellaneous manufactures showing significant increases. From 1956 to 1965, the share of food, beverages, and tobacco declined only moderately, to 40 per cent, although there were important shifts within the other sectors of manufacturing. The machinery and transport equipment industries, for example, grew from 4.3 per cent of all manufacturing activity in 1956 to 7.6 per cent in 1965. Between 1965 and 1970 the food, beverages, and tobacco share again dropped significantly, to 34.7 per cent, while the machinery and transport equipment share rose to 10.4 per cent.

As was pointed out in Chapter 2, the main means of stimulating domestic production in both new and old manufacturing lines was to protect local industries from import competition and thus shift domestic demand away from foreign goods and toward domestically produced substitutes. That import substitution occurred on a widespread basis, especially between 1948 and 1956, as is evident from Table 6-3. The ratio of imports of all manufacturers to the gross value of manufacturing output fell from 1.13 to 0.55 between 1948 and 1956, and then declined more slowly, reaching 0.42 by 1968. The same sharp decline in imports relative to domestic production during the early 1950s is seen in the data for a selected list of commodities in Table 6-4.

The government's protection policy was guided throughout the two decades by the principle that importation of basic necessities consumed by low-income groups and of essential intermediate and producer goods should be as liberal as possible, provided they could not be produced domestically except at very high costs. Industries involving relatively simple processing activities that gave some promise of being able to produce on a reasonably efficient basis were given tax assistance as "new and necessary" industries and were also aided by very tight import restrictions. Many production lines that could not be regarded as "new and necessary" even under a very liberal interpretation of this phrase did, nevertheless, benefit from high levels of protection designed to free foreign exchange for imports of essential consumer and producer

TABLE 6-2

Distribution of Value Added of Philippine Manufacturing by Industry Groups,[a] 1902–70
(per cent)

ISIC Code	Industry	1902	1918	1938	1948	1956	1960	1965	1970
20–22	Food manufacturing, beverages, and tobacco products	62.6	65.8	64.0	60.6	43.8	41.2	40.1	34.7
23	Textile products	0.5	0.5	0.8	2.6	3.7	4.6	4.7	5.6
24	Footwear and other wearing apparel	5.9	3.5	7.8	6.6	5.1	3.0	7.0	4.3
25	Wood and cork products	8.0	5.4	5.3	9.7	5.0	4.0	4.6	4.4
26	Furniture and fixtures	2.3	1.3	1.9	1.8	1.3	0.9	1.4	0.9
27	Paper and paper products	0.0	0.0	0.0	0.0	1.7	2.3	2.1	2.9
28	Printing and printed products	4.9	1.7	3.6	3.7	3.1	3.2	4.1	2.7
29	Leather products	0.7	0.3	0.1	0.0	0.2	0.3	0.3	0.3
30	Rubber products	0.0	0.0	0.0	0.6	0.9	3.2	2.9	4.0
31	Chemicals and chemical products	1.9	10.9	6.9	2.9	9.9	10.0	9.1	9.9
32	Products of coal and petroleum	b	b	c	c	c	c	c	c
33	Nonmetallic mineral products	3.9	0.7	3.3	2.1	4.7	3.7	4.4	3.7
34, 35	Basic metal and metallic products	0.9	0.8	0.7	1.9	4.7	8.0	6.5	8.9
36, 37	Machinery	3.6	0.8	0.2	0.5	2.1	4.2	4.8	6.9
38	Transportation equipment	b	1.3	0.4	1.0	2.2	2.2	2.8	3.5
39	Miscellaneous manufactures	4.2	5.9	3.9	5.7	11.2	8.2	5.2	7.3
	Total manufacturing	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

ISIC = International Standard Industrial Classification.

SOURCE: 1902–60—Salvador C. Umaña, "Growth of Output of Philippine Manufacturing: 1902–1960," in "Growth of Output in the Philippines" (Papers presented at a conference of the International Rice Research Institute, Los Baños, Laguna, December 9–10, 1966; mimeo.); 1965 and 1970—National Economic Council, *Statistical Reporter*, January–March 1969 and April–June 1971.

a. For 1902–60, 1938 prices; 1965 and 1970 at current prices.

b. Negligible.

c. Included in miscellaneous manufactures.

goods. To this extent, the effect of the policies was to divert scarce resources into nonessential uses.

There was comparatively little scope for import substitution in the food field, since the ratio of imports to production in this industry was already relatively low in 1948. Moreover, the industry included many essential consumer goods and export products—commodities whose production was not encouraged by the structure of protection. For example, products of rice and corn mills were classified as essential consumer goods, whereas coconut oil, desiccated coconut, and sugar were export products. These four products alone accounted for more than 75 per cent of the total output of the food products sector and nearly 50 per cent of the total value of all manufactures. Another factor preventing an increase in the relative importance of sugar production was the U.S. import quota on this item. Thus, it is not surprising that import substitution was comparatively modest in the food field and that this sector declined sharply in relative importance as a manufacturing activity in the country.

For similar reasons, import substitution was slight in the furniture and fixtures and wood and cork products industries. On the other hand, in fields such as textiles and leather products, the extent of import substitution between 1948 and 1968 was considerable both because imports were still very important in 1948 and because these were relatively simple industries that were prime candidates for protectionist efforts. Imports were also comparatively large in 1948 in such areas as chemicals, metal products, machinery, and transportation equipment. Though the production of many items in these industries was far too costly for the country to undertake under its import-substitution goals, there were also many commodities in these sectors that could be produced under subsidies granted by various protectionist devices without unduly raising input costs in the industrial sector. These were mainly nonessential consumption commodities or simply produced capital goods.

This trend toward the production of nonessential consumer goods is evident when one examines the detailed manufacturing structure of the country in 1960.[1] Rapid growth occurred between 1948 and 1960 in such nonessential industries as the assembly of motor vehicles, electrical household appliances of various sorts, household radios, phonographs, and television sets, as well as the production of toilet preparations and paper stationery. These are the kinds of industries that sprang up in response to the very high levels of protection placed on nonessential consumer goods. The Central Bank could, of course, have blocked the importation of producer goods necessary to establish these industries, but it did not. One indication of the high degree of protection afforded to almost all the industries in the manufacturing sector is that 80 of the 102 four-digit products included in the 1960 Census of Manufactures were listed in that year by the Central Bank as either unclassified items (importable

TABLE 6-3

Measurement of Import Substitution in Manufacturing in the Philippines, 1948, 1956, 1960, and 1968

ISIC Code	Industry	Gross Value of Production (total manufacturing in millions of current pesos; distribution by industry in percentages of total)				Value of Imports, f.o.b.				Ratio of Value of Imports to Value of Production			
		1948	1956	1960	1968	1949[a]	1956	1960	1968	1948 to 1949[a]	1956	1960	1968
	Total manufacturing	1,040	1,842	3,244	10,723	1,172	1,012	1,371	4,486	1.13	0.55	0.42	0.42
20	Food, manufactured	68.1	26.4	26.5	23.7	25.3	17.4	14.0	11.5	0.47	0.24	0.16	0.15
21	Beverages		7.8	6.5	5.8	3.4	1.4	0.1	0.8				
22	Tobacco products		8.0	5.5	5.5								
23	Textiles	3.4	5.9	8.0	7.1	19.2	11.8	5.0	3.8	6.32	1.11	0.27	0.22
24	Footwear and other wearing apparel	5.9[b]	6.5	3.3	1.7	2.4	0.3	0.2	0.1	0.46	0.02[d]	0.02[d]	0.02[d]
25	Wood and cork products	13.3	5.6	4.5	5.1	0.3	0.4	0.1	0.04	0.03	0.01	0.01	0.01
26	Furniture and fixtures		0.9	0.6	0.4	0.03	0.02	0.01	0.1				
27	Paper and paper products	0.1	2.0	3.3	2.9	3.0	3.6	2.8	2.4	43.79	0.98	0.35	0.35
28	Printing and printed products	2.0	2.8	2.3	1.9	0.9	n.a.	n.a.	n.a.	0.53	n.a.	n.a.	n.a.
29	Leather and leather products	0.1	0.3	0.4	0.3	0.9	0.7	0.4	0.05	11.60	1.22	0.35	0.07
30	Rubber products	[c]	0.9	3.3	2.4	2.0	2.9	0.6	0.6	n.a.	1.65	0.07	0.11
31, 32	Chemicals and petroleum products	1.5	12.3	12.4	14.4	11.9	7.7	9.0	9.5	8.76	0.34	0.31	0.28
33	Nonmetallic mineral products	1.4	3.9	3.1	3.6	2.2	3.0	1.1	1.0	1.73	0.22	0.15	0.12
34	Basic metal products	n.a.	0.8	1.6	2.9	n.a.	15.2	2.3	2.8	n.a.	10.26	2.12	0.61
35	Fabricated metal products	2.8	3.9	5.8	4.9	4.7	3.0	2.3	3.7	6.98	0.41	0.17	0.32
36	Machinery except electrical		0.8	0.8	1.3	5.0	15.2	14.3	20.7		10.26	7.65	6.76
37	Electrical machinery		0.8	2.7	3.1	2.9	3.8	3.5	5.3		2.65	0.56	0.71
38	Transportation equipment		2.8	2.9	5.2	4.9	5.7	18.2	12.5		1.12	2.66	1.01
39	Miscellaneous manufactures	1.4	7.7	6.6	7.9	5.5	3.1	3.1	3.7	4.38	0.22	0.19	0.20

Notes to Table 6-3

ISIC = International Standard Industrial Classification.

n.a. = not available.

SOURCE: Data on imports from Central Bank of the Philippines, *Statistical Bulletin*, December 1969; and United Nations, *Yearbook of International Trade Statistics*, 1953 and 1956. Data on gross value of production from Philippine Bureau of Census and Statistics, *Annual Survey of Manufactures: 1956*, vol. 1 (Manila: Bureau of Printing, 1958); ibid., *1960*, vol. 5 (1962); ibid., *1968*, Preliminary Report; and United Nations, *The Growth of World Industry, 1938–1961: National Tables* (1963).

a. Trade data for 1949 are used with 1948 production data because the Central Bank's series on imports does not begin until 1949. Since imports in 1949 were almost the same as in 1948, i.e., $586 million versus $593 million, and the import control program was not effective until 1950, this should not bias the import-substitution results.

b. Includes industries 24 and 30.

c. Included in industry 24.

d. The ratio of imports to gross value of production for industries 24 and 30 combined was 0.23 in 1956, 0.32 in 1960, and 0.07 in 1968.

TABLE 6-4

Production and Imports of Selected Commodities, 1948, 1953, 1954, and 1956
(pesos in thousands)

	Production	Imports	Ratio: Imports to Production	Production	Imports	Ratio: Imports to Production
	1948			1954		
Cigars and cigarettes	P17,061	P47,680	2.79	P147,384	P 3,600	0.02
Soap	13,720	4,865	0.35	26,440	442	0.02
Electric lights and fluorescent lamps	—	1,099	—	1,385	771	0.56
Coffee, cocoa, and chocolate preparations	1,446	17,556	12.14	7,117	10,211	1.43
Cement, portland	9,602	6,150	0.64	17,528	2,587	0.15
Wearing apparel	25,041	20,837	0.83	38,618	12,071	0.31
Paper and paper products	758	33,737	44.57	25,846	32,035	1.24
Construction materials	14,689	68,356	4.65	33,800	56,164	1.66
	1953			1956		
Rubber tires and tubes	—	P23,626	—	P 3,127	P20,742	6.63
Trucks	P12,594	2,546	0.20	30,308	417	0.01
Autos	1,580	3,289	2.08	15,502	2,543	0.15
Steel bars and rods	2,791	6,395	2.29	12,326	3,003	0.24
Ready-mixed paints	2,931	1,863	0.64	16,058	198	0.01
Cotton weaving yarns	2,746	9,493	3.46	7,054	90	0.01
Cotton knitted fabrics	10,277	1,499	0.15	24,093	23	0.00

SOURCE: 1948 and 1954—*Central Bank News Digest*, June 14, 1955; 1953 and 1956—*Central Bank News Digest*, October 15, 1957.

only with explicit permission of the Central Bank), nonessential consumer goods, or nonessential producer goods.

Two other important features of the industrial structure developed in the 1950s: manufacturing production became both increasingly capital-intensive and more dependent on imports of producer goods. The upward trend in the capital-labor ratio is evident from the figures in Table 6-5. Between 1950 and 1959 both the output-capital and output-labor ratios rose. However, the latter ratio increased considerably faster than the former, with the result that

TABLE 6-5

Structural Indices for the Manufacturing Sector of the Philippines, 1950–68
(1955 = 100)

	Ratio: Capital to Labor	Ratio: Output to Capital	Ratio: Output to Labor
1950	61	106	65
1951	76	103	78
1952	87	100	88
1953	96	97	92
1954	99	100	99
1955	100	100	100
1956	97	108	105
1957	92	117	108
1958	103	120	123
1959	106	124	131
1960	118	114	136
1961	121	113	137
1962	118	117	139
1963	124	119	147
1964	127	112	142
1965	126	109	138
1966	132	108	142
1967	139	106	147
1968	142	107	151

SOURCE: George L. Hicks and Geoffrey McNicoll, *Trade and Growth in the Philippines* (Ithaca: Cornell University Press, 1971), p. 68.

Data refer to manufacturing establishments employing five or more persons. Output is measured in value-added terms at constant prices. Capital consists of fixed assets and inventories and is also measured in constant prices.

the capital-labor ratio rose 74 per cent between these years. After 1959 the output-labor ratio continued to rise, though much less rapidly, but the output-capital ratio fell.[2] Thus, both of these changes operated to increase the capital-labor ratio. Since by 1968 the output-capital ratio had declined to its 1950 level, the more than doubling of the capital-labor ratio in manufacturing between these years can be attributed entirely to the increase in the output-labor ratio, i.e., to the failure of employment in manufacturing to rise commensurately with production.

The capital-intensive nature of many of the industries that expanded most rapidly is also apparent from the ratios of capital per worker and capital per

unit of value added by industry, shown in Table 6-6. The effect on the average capital-labor ratio in manufacturing of the shifts in industrial composition that were associated with the import-substitution efforts in the early 1950s can be seen if the capital-labor ratios in Table 6-6 are weighted by the value-added shares of these industries in 1938, 1948, 1956, and 1960. The hypothetical average capital-labor ratio for the industries increases from P20,763 in 1938 and P21,867 in 1948 to P27,767 in 1956 and P26,456 in 1960. The 21 per

TABLE 6-6

Capital, Labor, and Skill Intensities of Philippine Manufacturing Industries, 1961

	Capital per Worker (pesos)	Capital per Unit of Value Added	Annual Payroll per Employee[a] (thousands of pesos)
Food, manufactured	17,581	1.909	2.0
Beverages	18,335	1.293	3.1
Tobacco products	11,926	1.400	1.6
Textiles	26,528	6.223	1.7
Footwear and other wearing apparel	6,560	2.866	1.2
Wood products	20,130	5.487	1.7
Furniture and fixtures	12,460	5.326	1.6
Paper and paper products	36,483	4.531	2.6
Printed materials	14,077	2.678	2.7
Leather and leather products	10,740	2.978	1.7
Rubber products	22,231	1.727	2.8
Chemicals	34,381	2.390	3.3
Petroleum products	314,476	1.983	n.a.
Nonmetallic mineral products	34,828	4.379	2.4
Basic metal products	39,385	4.653	2.6
Fabricated metal products	15,663	2.598	2.5
Machinery except electrical	15,880	2.204	2.7
Electrical machinery	27,818	3.756	2.2
Transport equipment	24,118	3.824	2.9
Misc. manufactures	16,268	3.353	2.7
All industries	21,264	2.782	2.1

SOURCE: Capital per worker and capital per value added from Elsa G. Franco, "Capital Intensity of Philippine Manufacturing" (M.A. thesis, University of the Philippines, 1967); annual payroll per worker from Philippine Bureau of Census and Statistics, *Annual Survey of Manufactures, 1960*, Table 1, p. 92.

a. Payroll figures are based on 1960 data.

cent increase between 1948 and 1960 due to the effects of changes in the composition of the industrialization program still accounts for only a small part of the actual percentage increase in the capital-labor ratio in manufacturing between 1950 and 1960. Weighting 1960 annual wages in each industry by the value-added shares of the industries in 1938, 1948, 1956, and 1960 indicates that there was no increase in the average human capital-intensity of production over this period due to shifts in the composition of production. Hypothetical average earnings are P2,020 in 1938, P2,210 in 1948, P2,190 in 1956, and P2,160 in 1960.[3]

The increase in the degree of import dependence of the industrial sector during the 1950s is shown in Table 6-7 by the rise between 1949 and 1960

TABLE 6-7

Imported Industrial Inputs Relative to Industrial Value Added,[a] 1949–64
(1955 prices)

Year	Ratio to Industrial Value Added of:		
	Imported Intermediate Goods	Imported Investment Goods	Imported Intermediate and Investment Goods
1949	.36	.13	.49
1953	.46	.16	.61
1960	.60	.25	.85
1964	.59	.15	.74

SOURCE: D. S. Paauw and J. L. Tryon, "Agriculture-Industry Interrelationships in an Open Dualistic Economy: The Philippines, 1949–1964," in "Growth of Output in the Philippines" (Papers presented at a conference of the International Rice Research Institute, Los Baños, Laguna, December 9–10, 1966; mimeo.).

a. Industrial value added equals the sum of value added in the manufacturing, mining, construction, and transportation sectors.

in the ratios to industrial value added of both imported intermediates and imported investment goods. However, by 1964 the ratio of imported investment goods to value added had declined to its former level, presumably because of the slowdown in the growth of industrial capacity that was associated with the decontrol period.[4]

These resource shifts during the period of exchange control are consistent with those that would be predicted on the basis of knowledge of the protective pattern of the exchange system. The economic subsidies granted on

imports of raw materials and capital goods coupled with the protection given to the final output of previously imported, nonessential goods pulled resources into capital-using and import-dependent industries. The use of capital-intensive methods of production was also thereby encouraged in any given industry.

Employment.

In countries with a high rate of population growth, such as the Philippines, an especially important economic goal is to create enough new jobs to match the increase in the labor force. Fortunately, although the labor force growth rate has averaged 3 per cent between 1956 and 1970, employment has increased at the rate of 3.3 per cent.[5] Unemployment, however, has been significant over this entire period. Between 1956 and 1971 it averaged 7.7 per cent of the labor force in May and 6.8 per cent in October and exhibited no clear-cut trend. On an urban-rural breakdown (available only since 1965) the data show a rate of about 9 or 10 per cent in urban areas in contrast to 4 to 7 per cent in rural areas. Needless to say, these figures do not begin to tell the story of the extent of underemployment.[6]

The various trade, monetary, and fiscal policies designed to increase the relative importance of the manufacturing sector have not been the most desirable ones in terms of increasing employment. The elasticity of employment with respect to value added in manufacturing is the lowest of all the productive sectors. For example, studies by Mangahas, Meyers, and Barker and by Oshima place this elasticity at 0.5 in manufacturing in contrast to 2.5 for mining, 1.2 for transportation, 1.3 for commerce, 1.1 for services, 0.7 for agriculture, and 1.0 for construction.[7] The comparatively low employment-creating nature of the industrialization process can also be brought out by noting that, although the real stock of capital utilized in manufacturing increased 428 per cent and real output in manufacturing rose 430 per cent between 1950 and 1968, employment in this sector increased only 128 per cent.[8]

Exports.

As industrial production in the Philippines has become highly import-dependent, the ability to earn foreign exchange through exporting has become increasingly important for continued growth of the economy. The average annual increase in the volume of exports over the entire 1950–70 period was 5.5 per cent. This can be demarcated into an annual rate of 5.9 per cent from 1950 to 1960 and 5.0 per cent between 1960 and 1970.

Although the Philippines is usually thought of as an exporter of primary

products, actually six of the ten leading exports as of 1969 were classified as manufactured products in the Census of Manufactures, namely, sugar, coconut oil, desiccated coconut, canned pineapples, veneer, and plywood. These six accounted for 36 per cent of total exports in 1949 and 32 per cent in 1970 (see Table 1-3). The other four major export products, accounting for about 50 per cent of the value of exports in both 1949 and 1950, are copra (dried coconut meal from which coconut oil is extracted), abaca (the source of Manila hemp), logs and lumber, and copper concentrates. Although the total export contribution of these four primary products has remained roughly the same between 1949 and 1970, there has been a sharp shift within the group. The two agricultural goods, copra and abaca, constituted 48 per cent of total export value in 1949, whereas logs and lumber and copper concentrates amounted to only 2 per cent. By 1970 copra and abaca had dropped to 9 per cent, and logs and lumber and copper concentrates had risen to 41 per cent. Minor exports accounted for 24 per cent of all exports in 1949 and 17 per cent in 1970.

Exports of sugar have been almost entirely a function of the U.S. quota because the United States has been an extremely profitable market for foreign producers. Except for a few short periods, the U.S. price has always been above the world price in postwar years. In early 1970, for example, the U.S. price for raw sugar was 6.88 cents per pound, whereas the world price was only 3.27 cents per pound. A quota of 980,000 short tons (raw value) was first granted to the Philippines in 1934.[9] (Producers in the Virgin Islands, Cuba, and Puerto Rico, as well as the United States also were allocated quotas.) This was not changed until 1960, when the quota was increased by 70,000 short tons. Shortly thereafter, an embargo was placed on Cuban sugar, and additional imports from other foreign producers were permitted. Between 1960 and 1962 the Philippines was able to sell to the United States almost 800,000 tons more than its regular quota. Although the supplementary allocations due to the Cuban embargo were gradually reduced, a further 76,000 short tons of sugar imports were allowed each year under the Sugar Act of 1965, bringing the quota to 1,126,000 tons. Subsequently, 47 per cent of any short-fall in the quota exports of Puerto Rico and the Virgin Islands was added to the Philippine import quota. Except for the drought year of 1957 as well as in 1961 and 1963, the U.S. quota has in effect been filled since 1954, when the industry first regained its prewar capacity.

The other major food export of the Philippines, namely, coconut products (mainly in the form of copra, desiccated coconut, copra meal, and coconut oil) has declined significantly in relative importance since the early 1950s. In 1950, for example, the export value of these four products amounted to 54 per cent of the value of all exports; by 1970 this had fallen to 20 per cent.

However, despite this decline in coconut products as a whole, the export share of coconut oil actually rose from about 4 per cent in 1950 to 9 per cent in 1970. A major reason for this seems to have been the fall in ocean freight rates for coconut oil due to the introduction of bulk tankers.[10] The export share attributable to copra meal or cake also increased slightly.

The coconut oil and desiccated coconut industries have been helped by tax preferences in the U.S. market. A study of the effect of preferential treatment on the Philippine economy between 1900 and 1940 indicates that the degree of processing in the coconut industry as well as in the sugar and abaca industries was increased significantly as a result of the preferences granted by the United States.[11] Until 1974, the duty on imports of Philippine coconut oil into the United States was only 1 cent per pound, whereas the duty on imports from other foreign producers was 3 or 4 cents, depending upon whether or not they were members of GATT.[12] Similarly, imports of desiccated coconut from the Philippines are subject to only 60 per cent of the tariff of 1.75 cents per pound. In 1974, when U.S.-Philippine preferential arrangements ended, coconut oil from the Philippines became subject to the full duty of 4 cents per pound; and desiccated coconut, to the full duty of 1.75 cents per pound. The general view seems to be that the elimination of preferential treatment will not significantly affect these two industries,[13] although the responsiveness of output to price changes that are reported below casts some doubt on this prediction.

Bautista and Encarnación, in a study of export supply equations, have found that relative prices play a significant role in coconut oil exports as well as exports of copra and desiccated coconut. Specifically, their export supply equation for copra is:[14]

$$X_{cp} = -541.2 + \underset{(2.11)}{1.933}\, P_{cp} - \underset{(-2.42)}{1.755}\, P_{dc} + \underset{(5.83)}{.8421}\, Y_{cp}$$

$R^2 = .939$; Durbin-Watson statistic ($D.W.$) = 2.40; years covered, 1962–68

where X_{cp} = exports of copra (in thousands of metric tons); P_{cp} = export price index of copra (1955 = 100); P_{dc} = export price index of desiccated coconut (1955 = 100); and Y_{cp} = domestic output of coconuts (expressed in units of copra) in thousands of metric tons. The own-price elasticity of export supply for copra is 0.49 at the mean values, while the cross-elasticity for desiccated coconut is −0.42. These estimates are used as part of a larger model to project Philippine exports to 1976.[15] The increase in the price of copra is assumed to be 3 per cent; in the price of dessicated coconut, 5 per cent; and in the output of coconuts, 3.31 per cent. On that basis, the export supply of copra is expected to rise at an annual rate of 4.7 per cent between 1972 and 1976.

For coconut oil exports, the best equation estimated by these authors is:

$$X_{co} = \underset{}{-1{,}393.8} + \underset{(3.68)}{.8670\,P_{co}} + \underset{(3.42)}{60.365\,\frac{W_n}{P_n}} + \underset{(4.61)}{.4126\,Y_{cp}}$$

$$R^2 = .822;\ D.W. = 2.17;\ \text{years covered, 1962–68}$$

where X_{co} = exports of coconut oil (in thousands of metric tons); P_{co} = export price index of coconut oil (1955 = 100); W_n = annual money wage rate in manufacturing (in pesos); P_n = implicit price index for manufacturing value added (1955 = 100); Y_{cp} = domestic output of coconuts expressed in equivalent units of copra (in thousands of metric tons). The W_n/P_n term is inserted to reflect the point that the higher the real wages in manufacturing, the lower will be the derived local demand for use in manufacturing of such products as margarine, cooking oil, and soap. This, in turn, means that exports will be higher. The export supply elasticity of coconut oil at the mean values is 0.80. Bautista and Encarnación estimate that exports of coconut oil will grow at an average annual rate of 10 per cent between 1972 and 1976.[16]

In the case of desiccated coconut, which is almost entirely exported, Bautista and Encarnación postulate that export supply is a function of the size of the capital stock and the labor force employed in the industry. The size of the capital stock, in turn, depends upon past prices of desiccated coconut and copra, since these affect the profitability of investment. Again, these price terms are significant in the authors' estimates of the export supply function. The expected average annual increase in the quantity of desiccated coconut between 1972 and 1976 is 6.0 per cent.

Another agricultural product that has declined rapidly in relative importance as an export is abaca. Synthetic fibers have made heavy inroads into the market for Manila hemp, and between 1949 and 1970 the export share of abaca fell from about 12 per cent of total exports to about 1.5 per cent. By 1976 the Encarnación group estimates that abaca exports will disappear.

Since the mid-1960s, the largest contributor to the foreign-exchange earnings of the Philippines has been logs and lumber. In 1970 the export share of logs and lumber was 23.5 per cent and, if veneer and plywood are added to the figure, the total rises to nearly 27 per cent. The export supply equation estimated by Bautista and Encarnación for logs and lumber is as follows:

$$X_{ll} = \underset{}{-861.2} + \underset{(4.05)}{16.178\,P_{ll}} - \underset{(-2.55)}{7.030\,P_{pl}} + \underset{(1.99)}{.327\,Y_l}$$

$$R^2 = .877;\ s = 429.4;\ D.W. = .321;\ \text{years covered, 1950–69}$$

where X_{ll} = supply of logs and lumber (in millions of board feet); P_{ll} and P_{pl} = export price indices (1955 = 100) for logs and lumber and for plywood,

respectively; and Y_l = domestic output of logs in millions of board feet. The own-price elasticity of export supply is 1.33 at the mean values, and the cross-price elasticity is −0.405. The authors found that exports of plywood depended solely on the domestic output of plywood. This, in turn, depended upon past levels of production and past levels of the export price of plywood relative to logs.

There is considerable concern in the Philippines about the ability of log exports to continue to serve as the main source of Philippine export growth. In addition to the depletion effects of the rapid growth of authorized logging, commercial forest areas have been reduced at an alarming rate in recent years by illegal logging, land clearing, and shifting cultivation.[17] A forestry expert from the United Nations Food and Agricultural Organization has estimated that the average annual growth rate of logs and lumber exports during the decade from 1975 to 1985 will drop from its 10.7 per cent average between 1960 and 1970 to, at best, a growth rate of 1 per cent and, at worst, to an annual decline of 15 per cent.[18] However, the Encarnación group projects an annual average growth rate of 4.4 per cent for logs and lumber between 1972 and 1976. The wood and lumber industry in the Philippines also is not as pessimistic as the UN expert. A trade association representing the industry expects log exports to level off during the 1970s but exports of processed wood products to increase. The association's projection is that export earnings for all wood products will rise about 2.5 per cent annually from 1972 to 1980.[19]

Exports of copper concentrates have also grown very rapidly since 1949. Since this output is entirely exported, the export supply equations fitted by Bautista and Encarnación were similar to those used for desiccated coconut and abaca. The best equation is:

$$X_{cc} = -912.4 + \underset{(2.46)}{.7245}\, SP_{cc} - \underset{(-2.36)}{.1138}\, SW_q + \underset{(2.66)}{156.7}\, t$$

$$R^2 = .934;\ D.W. = 2.90;\ \text{years covered, 1956-68}$$

where X_{cc} = export supply (in thousands of metric tons); SP_{cc} = sum of export price index of copper concentrates from t (time period) = 0 to $t - 1$;[20] SW_q = sum of annual money wage rates in mining from $t = 0$ to $t - 1$; and t is a time variable running from 0 in 1956 to 12 in 1968. Copper exports are expected by the Encarnación group to decline at an average annual rate of 3.3 per cent between 1972 and 1976.

The export supply of so-called minor exports, i.e., those not included in the list of the ten principal exports, could best be explained by Bautista and Encarnación on the basis of an equation which includes total exports lagged one year (an expectations proxy) and the exchange rate. According to this

equation, an increase in the exchange rate between the dollar and peso by 1 peso increases exports of these commodities by P42.3 million.

The various equations fitted by Bautista and Encarnación clearly establish that the supply of Philippine exports is sensitive to the peso price of these exports and thus, through the relations between these prices and the exchange rate, to exchange-rate policy.[21] A very rough estimate can be made of the magnitude of the increase in the value of exports that would have been possible with a peso that was less overvalued. Suppose that in the period 1950 through 1969, the effective exchange rate applicable to exports was not the actual export rate but either the rate applicable to essential producer goods or that applicable to semiessential consumer goods. An equilibrium rate probably was somewhere between these two rates. Also assume for simplicity—although this is clearly not the case for copra and coconut oil—that the demand for Philippine exports in dollars is perfectly elastic. In this case, export prices in pesos will change in the same proportion as changes in the exchange rate. With these assumptions it is possible to estimate from the supply equations of Bautista and Encarnación the amount by which the average annual level of export earnings in the 1950–69 period under these hypothetical exchange rates exceeds the actual average annual level of export earnings in the same period. Because of the dependence of sugar exports on the size of the U.S. quota, the two authors did not estimate an export supply function for this commodity. Therefore, it is assumed that exports of sugar would have remained unchanged. It also turns out that applying the supply elasticities implied by the estimates of Bautista and Encarnación for desiccated coconut to the entire 1950–70 period yields negative values for the change in the export earnings for this product, because of cross-elasticity effects. Clearly, it would be erroneous to conclude that raising the price of all coconut products by the same proportion would actually decrease the dollar value of the exports of this commodity. However, it will be assumed that the supply elasticity of this product with respect to changes in peso prices is zero. Thus, dollar earnings from exports of desiccated coconut are assumed to remain unchanged at the new hypothetical exchange rates.

With the effective exchange rate applicable to essential producer goods, the average annual dollar level of exports from 1950 through 1969 would have exceeded the actual average annual export level during this period by $116 million. This increase is composed of the following commodity changes (in millions of dollars): sugar products, $0; copra, $13.0; coconut oil, $8.2; desiccated coconut, $0; abaca, $21.9; logs and lumber, $39.2; copper concentrates, $22.1; and minor exports, $11.4.[22] The $116 million figure represents a 20 per cent increase over the actual average annual value of commodity exports from 1950 to 1969. Alternatively, it may be assumed that peso prices

increase in proportion to the excess of the effective exchange rate for semi-essential consumer goods over the effective exchange rate for exports. On that basis, the average annual level of exports increases from 1950 to 1969 by $188 million. The increase breaks down as follows (in millions of dollars): sugar products, $0; copra, $19.8; coconut oil, $12.2; desiccated coconut, $0; abaca, $32.8; logs and lumber, $59.0; copper concentrates, $33.2; and minor exports, $31.5. This hypothetical export level is 33 per cent above the average annual export level from 1950 to 1969. While these estimates must be taken only as very rough approximations, they do add support to what has been directly observed about exchange rate changes, namely, that the value of exports is quite responsive to currency depreciations. However, in both cases, about one-third of the increase in export earnings is due to greater exports of logs and lumber. In view of the existing depletion of the country's forests, it might be argued either that the export supply equation used would no longer apply if attempts were made to expand log and lumber exports significantly or that, even if it did, the government should not permit such an increase. Nevertheless, the rise in export earnings under the two hypothetical exchange rates is still substantial without projecting any increase at all in the logs and lumber sector.

Not only has export growth been retarded by effective exchange rates that discriminated against the export sector, but export expansion has been hampered by the import-substitution program, since this has artificially inflated the prices of some inputs used by the export sector. Examples where the rise in input prices resulted in negative rates of effective protection in the export sector were given in the last chapter. A rough estimate of the cost of discouraging the production of processed wood products such as veneer and plywood by means of discriminatory trade policies has been made by Gerardo P. Sicat.[23] One of his estimates is based on the assumption that the volume of logs and lumber exported was only one-half of the actual amount but that these timber products were first processed into other wood products, for example, plywood, before being exported. He found that under this assumption the annual increase in domestic value added would have been about one-third of 1 per cent of gross national product prior to 1962 and 1 per cent of GNP thereafter. Not only would this be a significant gain, but it would permit the timber resources of the Philippines to be depleted at a much less rapid rate.

Since the Philippines now wishes to promote selective programs both of import substitution and export expansion, it must find ways of eliminating the costs of the former program from the latter. One possible but fairly crude method of achieving this would be to use input-output data to estimate the increases in input costs caused by protection for a particular product and then to pay exporters this sum for each unit of the product they export. This solu-

tion would, of course, require assurance by importing countries against retaliatory action on grounds of export subsidization by the Philippines.

GROWTH EFFECTS

There seems no doubt that the Philippine exchange-control system played a significant part in the industrialization activities of the country during the early 1950s. As pointed out in Chapter 2, the emergence of exchange controls as a significant allocating device was related generally to the immediate postwar consumption boom, but more specifically to the election year exchange crisis of 1949. By greatly restricting imports of nonessential consumption goods and nonessential producer goods while adopting a liberal import policy with respect to intermediate inputs and capital goods, the government's actions led to high profit rates in many import-competing manufacturing lines and, as pointed out in the first section of this chapter, thereby brought about a major shift of resources into the manufacturing sector. Various other fiscal and monetary policies reinforced this pattern of development, but the scarcity-creating effects of restricting imports of so-called nonessential manufactures through exchange controls was the major means of promoting industrialization.

From the beginning of the exchange control period, in 1950, until 1956, growth in the manufacturing sector proceeded at an average annual rate of 13.5 per cent, whereas the rate in the agricultural sector was about 6.4 per cent. Real net domestic product rose an average of 8.0 per cent per year. By most standards, all these growth rates would be judged to be highly satisfactory. Moreover, they were achieved with a ratio of gross domestic capital formation to GNP that averaged only about 13 per cent. After 1956, however, growth rates in the Philippine economy slackened, especially in the manufacturing sector. The real growth rate in this sector dropped to an annual average of 6.3 per cent from 1957 to 1960 and to only 4.0 per cent from 1961 to 1965. Net domestic product rose at an average annual rate of 4.6 per cent from 1957 to 1960 and at a rate of 5.0 per cent from 1961 to 1965. From 1966 to 1969, growth rates accelerated somewhat, to 5.2 per cent for manufacturing and 5.6 per cent for net domestic product. In 1970, manufacturing growth fell to only 2.0 per cent but increased to 7.4 per cent in 1971. Net domestic product increased at rates of 4.5 per cent and 3.3 per cent, respectively, in 1970 and 1971.

As many countries have discovered, during the early period of an import-substitution program it is relatively easy to maintain a high growth rate in the manufacturing sector by diverting consumer demands for simple manu-

factures from foreign to domestic producers. But it becomes increasingly difficult to maintain growth rates in this sector above those in the rest of the economy as the ability to capture established market demands narrows and local manufacturers are forced to enter product lines that are technologically more complex or are more capital-intensive. Since import-substituting production relies heavily on imports of raw materials and capital goods, the growth rate may also be constrained by a shortage of foreign exchange.

The narrowing of import-substitution opportunities for simple consumer goods appears to have been the most important factor in accounting for the slowdown in manufacturing growth after the mid-1950s. As is indicated in Table 6-8, the extent to which consumption demand was diverted from the

TABLE 6-8

Percentage Distribution of Imports, 1949–69

	1949	1951–53	1955–57	1959–61	1963–65	1967–69[a]
Producer goods	62.7	76.8	81.7	86.1	83.9	87.9
Machinery and equipment	9.9	9.1	11.0	19.7	17.4	19.9
Unprocessed raw materials	1.0	1.6	4.2	10.4	15.4	13.1
Semiprocessed raw materials	41.6	48.0	51.3	45.8	45.9	50.2
Supplies	10.1	18.0	15.2	10.2	5.1	4.5
Consumer goods	37.3	23.2	18.3	13.9	16.4	12.1
Durable	2.5	1.6	1.3	0.8	1.0	1.1
Nondurable	34.8	21.6	17.0	13.1	15.4	11.1

SOURCE: John H. Power and Gerardo P. Sicat, *The Philippines: Industrialization and Trade Policies* (London: Oxford University Press, 1971), p. 39.

a. First half of 1969 only.

foreign sector to domestic producers was very impressive in the early 1950s. The share of consumption goods in imports was reduced from 37 per cent in 1949 to 18 per cent for 1955–57. The capital goods share rose somewhat between these years, but the greatest increase occurred in the intermediate goods sector. As was already pointed out in the discussion of Table 6-3, the extent of import substitution in these early years was very significant in many industries.

The government had no wish to limit industrialization to the easily captured markets for very simply processed manufactures. It continued to tighten controls over the importation of those consumer and producer goods that

seemed capable of being produced at not "unreasonable" costs within the Philippines. By 1959, nonessential consumer goods constituted only 1.1 per cent of total imports, and nonessential producer goods, only 3.7 per cent (see Table 2-6), while essential producer goods reached 61.3 per cent.

One of the most interesting aspects of Philippine growth, which first becomes noticeable during the mid-1950s and continues until the mid-1960s (see Table 1-5), is the gradual increase in the ratio of gross domestic capital formation to gross national product. This was not due to a relative increase in the inflow of foreign funds, but rather to a sharp increase in personal and corporate savings (especially the former). In 1953–54 these two categories of savings constituted 80 per cent of total net savings (general government and net borrowing from abroad making up the rest), whereas in 1958–59 they amounted to 91 per cent of net savings. It is tempting to argue that the import-substitution program helped to increase domestic savings by creating very attractive profit opportunities in manufacturing, thereby encouraging own-savings. Sicat and Hooley, in a study of investment demand for 200 firms, found, for example, that profits were by far the major determinant of gross investment.[24] They also concluded that investment in manufacturing displayed a strong profits-push type of behavior rather than a sales pull.[25] However, since the investment ratio continued to rise during and after the liberalization period and there was no significant change in the rate of this increase, it does not seem possible to say that the exchange-control system (or the liberalization program) had any significant effect on the investment ratio. A detailed study of savings patterns in the country is very much needed; perhaps after that is made, some relationship between the nature of the exchange-control regime and savings propensities may be found.

The rise in the ratio of gross domestic capital formation to GNP implies that given increments in the capital stock of the Philippines resulted in successively smaller increments in output, i.e., the incremental capital-output ratio increased. This trend can be observed from the behavior of the ratio of the annual volume of gross domestic capital formation to the yearly change in gross domestic product (GDP). The average yearly level of this ratio during various subperiods from 1946 to 1971 is as follows: 1946–50, 1.03; 1951–55, 1.62; 1956–60, 3.08; 1961–65, 3.67; 1966–71, 3.8.[26] The rise in this figure after 1955 is especially remarkable and confirms that the system of incentives established by the government increasingly shifted production into highly capital-using forms after that date. The upward trend also occurred in the manufacturing sector. In this sector the ratio of the change in the real value of fixed assets to the change in real value added is as follows: 1958, 0.55; 1960, 0.63; 1962, 0.99; 1964, 0.99; 1966 and 1968 (average), 0.85.[27]

An important complement to the increased savings response has been the emergence of an active entrepreneurial group within the Philippines. As

has been documented by others,[28] a vigorous and economically bold group quickly moved into manufacturing from such activities as commerce, finance, and traditional exports. Thus, in terms of helping to create an entrepreneurial group, the industrialization program was successful, even though this accomplishment might have been achieved at lower resource costs.

As noted in discussions of several economic variables, e.g., growth rates and incremental capital-output ratios, the nature of post-World War II economic growth in the Philippines prior to around 1955 or 1956 seems quite different than after these years. In a study of the sources of economic growth between 1947 and 1965, Jeffrey Williamson analyzes this difference in some detail.[29] For the 1947–55 period he finds that the sources of the average annual aggregate growth rate of 7.3 per cent can be attributed to the following factors: increase in the labor force, 1.93 per cent; increase in the stock of land, 0.30 per cent; increase in the capital stock, 0.99 per cent; and technical improvements, 4.08 per cent.[30] The average annual growth rate for 1955–65 was only 4.5 per cent and can be broken down as follows: labor, 1.93 per cent; land, 0.36 per cent; capital, 1.68 per cent; and technical change, 0.53 per cent. The sharp increase in the relative importance of the growth contribution of capital in the second period and the significant decline in the contribution made by technical change underscore the basic differences in the nature of growth prior to and after the mid-1950s.

Williamson suggests that the high contribution of technological improvements in the first period is related to the fact that this period is one of revival following wartime destruction.[31] He notes, however, that in the 1955–65 period increases in the productivity of traditional inputs were unimpressive not only in comparison with the earlier period, but also in comparison with such countries as Taiwan or Japan. The analysis here seems to indicate that the rapid growth rate for 1947–55 also was partly due to an initially successful import-substitution program that diverted purchases of simple manufactured goods from abroad to the domestic sector. After the mid-1950s it became much more difficult to raise growth rates by import substitution. However, the pattern of protection and subsidization still made investment in capital-intensive industries and the use of capital-intensive methods in general appear to be potentially profitable. Thus, the rate of growth in the capital stock increased, even though the over-all growth rate declined.

Another aspect of the difference in the nature of growth after the mid-1950s is the creation of excess capacity in manufacturing. Unfortunately, no comprehensive time series on the degree of capacity utilization exists, but the fact that there was little discussion of the problem during the first part of the 1950s suggests that excess capacity did not become a significant problem until the last part of the decade. In a 1959 questionnaire sent out by the American Chamber of Commerce of the Philippines, 28 of the 50 responding man-

ufacturing firms stated that they were operating below capacity.[32] The median level of capacity utilization was 50 per cent. That the problem still existed in 1970 is indicated in Table 6-9, where capacity utilization rates are listed for industries officially declared to be overcrowded.

TABLE 6-9

List of Industries with Excess Capacity, 1970

Industry	Capacity Utilization	Industry	Capacity Utilization
Meat processing	20%	Flour milling	45%
Beer brewing	80	Soft drinks	35
Alcoholic drinks	77	Air conditioners	26
Refrigerators	65	Automotive assembly	17
Sewing machines	15	Electric and gas stoves	24
Radios and phonographs	30	Cement	80
Soaps and detergents	77	Storage batteries	55
Pipes	18	Ammonium sulphate	25
Complex and mixed fertilizers	44	Superphosphate	5
Nails	25	Nonintegrated paper plants	75
Cold rolling steel mills	32	Tin plating	35
Leather tanning	n.a.	Truck assembly	16
Wheeled tractor assembly	28	Cordage	n.a.
Steel wires	28	Rubber tires	81
Bar mills	10	Light bulbs	22
Copper wires	22	Sugar processing	87
Paints, varnishes, and allied products	52		

n.a. = not available.

SOURCE: UN Economic Commission for Asia and the Far East, "Country Study on the Philippines" (Paper presented at Asian Conference on Industrialization, Tokyo, Japan, September 8–21, 1970; mimeo.).

Under current government policy, expansion in such industries will not receive tax exemption privileges. In the 1950s and 1960s, however, no such attempt to control excess capacity was made. In some instances in those years, markets for particular differentiated products were probably not large enough to utilize fully an optimum-sized plant. Yet the degree of output protection and subsidization of inputs was sufficiently high to make production profitable at low levels of capacity utilization. In a number of cases, producers were encouraged to expand capacity because of the favorable exchange rate

and liberal exchange allocations for capital goods but were then unable to obtain the necessary foreign exchange with which to purchase imported intermediate inputs once the additional capacity was installed.[33] In other cases, the entry of new firms into an industry may have led to a market-sharing, monopolistic solution in which capacity utilization rates were reduced but prices were kept high enough for most firms to maintain comfortable profit levels. The controls on the supply of foreign exchange for any industry in themselves acted to prevent entry of enough new firms to eliminate monopolistic price and output policies.

In addition to the constraints imposed by the size of domestic markets, another factor that increasingly acted to limit the Philippine growth rate after the liberalization episode was the low growth rate of export earnings. During the first part of the 1950s insufficient foreign exchange with which to purchase producer goods from abroad was not a significant problem. The sharp rise in exports at the time of the Korean War boom, in 1950–51, the considerable room that then existed for cutting back on nonessential consumption goods, the large reserves built up with U.S. aid, and the comparatively low import-requiring nature of the early industrialization all prevented this. In the last half of the 1950s the problem was still not serious, largely because the value of exports rose at an average annual rate of about 10 per cent, due in part to an increase in export prices. An expansion of foreign borrowing also helped prevent a foreign-exchange problem.

Even though nonagricultural production had become highly import-dependent by the early 1960s, severe pressures on the supplies of foreign exchange needed for intermediate and investment goods still continued to be offset in the first part of the 1960s by the favorable effects of the decontrol program on exports. However, with the expansion of manufacturing and infrastructure activities after this period and the consequent growing overvaluation of the Philippine peso, the constraint imposed on growth by the need to import producer goods became more and more obvious. The significant rise in imports that was associated with economic growth after 1966 was not financed by growing exports, but instead by short-term foreign borrowing. When sources of this type of borrowing became exhausted and exports continued to stagnate, the foreign-exchange crisis of 1969–70 brought about a dramatic end to the expansionary phase and again forced a devaluation in order to generate additional foreign exchange.

DISTRIBUTIONAL EFFECTS

A useful way of gaining insights into the pattern of economic development in countries such as the Philippines is to analyze the economic interrelation-

ships between the agricultural and industrial sectors during the growth process.[34] The focus of this analysis is on the manner by which the agricultural surplus required both to feed a growing labor force in the industrial sector and to purchase additional producer goods from abroad is made available to the industrial sector in exchange for manufactured goods, and then how this two-way exchange behaves over time in response to various development policies and such basic factors as population growth and technical progress.

The Philippines is fortunate in possessing an agricultural sector that has long been capable of producing a sizable surplus over and above the basic needs of the rural population. This rural population is divided into two main groups: (1) those who grow food crops (principally rice and corn) for domestic consumption and have a surplus above their own needs and (2) those who produce traditional export commodities. Prior to the deliberate industrialization efforts of the postwar period, foreign exchange earned by the latter group provided the economy with its machinery and equipment needs and certain essential intermediate products such as mineral fuels and lubricants plus a wide variety of manufactured consumption goods, many of which would be considered nonessential in terms of basic needs. However, the agricultural surplus was not entirely used in importing manufactured goods. A portion was used not only to provide the urban services needed to undertake export and import activities but also to purchase some domestically manufactured goods. Before World War II these local manufacturing activities, which had developed as a result of agricultural growth, mainly involved processing food, making cigarettes and cigars, and distilling or blending liquor.[35]

In the early 1950s the government effectively rechanneled a significant part of the agricultural surplus by introducing exchange controls and greatly limiting imports of so-called nonessential goods. This turned the market demand for these products inward and imposed greater demands on the uses of the surplus for importing capital goods and intermediate production inputs.

There are several potential obstacles to continued growth under these import-substituting conditions. One of the most important of these is a failure of the agricultural surplus to grow at a rate sufficient to sustain the high import requirements of the industrialization process. Producers of traditional export commodities tend to decrease their output levels because of the adverse income effects brought about by the higher prices for manufactured goods as well as the increasing extent of currency overvaluation that is used to subsidize the industrialization process. As already pointed out, a failure of this sort halted the growth efforts of the Marcos administration from 1966 to 1969. The government shaped a development strategy that not only imposed import demands far above reasonable expectations of export earnings, but also produced repercussions which halted the growth of the surplus.

A second form in which a decline of the agricultural surplus may take

place is through a shortage of basic domestic foodstuffs that causes food prices to rise. During the period of vigorous Philippine industrialization efforts in the 1950s, this does not seem to have been a problem. In part, food prices did not rise significantly because, at least until recently, the country had some of the features of a land-surplus economy.[36] During the 1950s, adequate new land and technical knowledge were available for the growing rural population to expand food production sufficiently to prevent any major pressures on food prices. The wholesale price index for domestically produced agricultural goods for home consumption (1955 = 100) was 111 in 1950 and 110 in 1960. However, the government also used a part of the surplus for importing basic foodstuffs, especially rice, in order to assure adequate food supplies for the industrialization efforts. Actually, as previously noted, the period in which rising food prices threatened the industrialization process through a rise in money wages and a cut in manufacturers' profits was during the decontrol period in the early 1960s.

In terms of the effects of relative price changes in products sold versus products bought, the agricultural sector was penalized during the early period of industrialization, as is indicated in Table 6-10. Between the periods 1949–52 and 1956–59, average prices of agricultural products for home consumption fell by 9 per cent, and average export prices of agricultural goods fell by nearly 6 per cent. On the other hand, between these same periods, domestic prices of imported goods rose nearly 10 per cent, and prices of domestically produced nonagricultural goods remained unchanged.

The liberalization episode from 1960 to 1965 brought a marked improvement in the terms of trade to agricultural producers. Between 1960 and 1965, prices of agricultural goods for home consumption rose 38 per cent; those for exports rose 52 per cent. At the same time, prices of imported goods rose only 24 per cent, and nonagricultural domestic goods, only 18 per cent. The terms of trade continued to improve somewhat between 1966 and 1969 as the government's borrowing policy proved able to hold down the prices of imports. The 1970 devaluation temporarily worsened the trading terms for agricultural producers of domestically consumed items, but by 1971 they had essentially regained their 1969 relative position. Traditional exporters, however, gained moderately as a result of the peso depreciation.

As a consequence of the country's ability throughout most of the industrialization episode to provide foodstuffs to feed the expanding urban population without encountering significant increasing real costs in agriculture, it has been possible to attract labor to the cities without bidding up real wages. Indeed, one of the remarkable facts about the postwar development period is that real wages have not improved for the industrial labor force. The behavior of employment and of money and real wages of industrial workers together by sector is shown in Table 6-11. During the phase of rapid growth between

TABLE 6-10

Import Prices and Prices of Domestic Products for Home Consumption and for Export,[a] 1949–71
(1955 = 100)

	Domestic Prices of Imported Goods	Prices of Domestic Goods for Home Consumption		Prices of Domestic Goods for Export	
		Agricultural	Nonagricultural	Agricultural	Nonagricultural
1949	84.4	123.5	106.8	124.2	100.2
1950	102.5	111.2	99.7	141.2	104.8
1951	128.9	122.2	109.4	147.0	106.7
1952	114.4	111.2	106.1	100.0	101.6
1953	108.5	106.3	107.3	133.8	113.5
1954	105.2	100.2	102.8	110.9	106.2
1955	100.0	100.0	100.0	100.0	100.0
1956	108.8	101.7	102.3	104.6	102.8
1957	114.6	107.9	104.3	111.6	98.1
1958	119.2	111.2	105.9	125.0	104.0
1959	129.9	103.5	109.9	141.7	115.2
1960	137.4	110.1	112.7	138.4	111.7
1961	144.5	117.8	117.0	145.1	110.1
1962	158.2	117.6	121.5	178.5	121.8
1963	167.8	133.4	126.9	217.6	129.8
1964	169.4	148.0	130.4	208.8	133.1
1965	170.2	152.0	133.6	210.7	155.4
1966	172.3	165.8	136.6	208.6	154.8
1967	173.5	176.6	140.0	231.6	155.1
1968	174.6	179.6	142.6	262.0	167.3
1969	178.2	181.6	144.9	249.8	166.1
1970	220.9	207.2	173.6	330.0	204.7
1971	245.3	239.5	184.3	364.2	198.4

SOURCE: Central Bank of the Philippines.
a. All indices are for wholesale prices.

1949 and 1956 labor held its own or, as in the case of unskilled workers, improved its real wage position somewhat. The inflation of 1950–51 reduced real wages sharply, but the government at this time was much concerned about the real-income position of lower-income groups. Consequently, special efforts were made to keep the prices of "essentials" from rising in 1950–51,

TABLE 6-11

Wages and Employment in the Nonagricultural Sector, 1949–71
(1955 = 100)

	Money Wages		Real Wages		Employment				
	Skilled	Un-skilled	Skilled	Un-skilled	Mfr.	Constr.	Com-merce	Transp. & Comm.	Govt.
1949	102.3	94.6	100.7	93.1	86.2	251.1	97.9	101.4	76.3
1950	102.2	82.8	97.6	79.1	84.4	175.1	91.5	99.6	78.4
1951	95.8	89.4	84.5	78.8	85.3	110.3	88.6	94.9	82.8
1952	97.4	95.6	91.8	90.1	85.4	127.9	93.1	98.0	87.7
1953	99.5	98.3	97.1	95.9	94.0	116.8	91.7	99.6	92.0
1954	100.0	97.1	99.0	96.1	99.6	138.9	95.1	100.1	92.0
1955	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1956	100.3	101.5	97.7	98.8	100.5	114.9	106.8	106.5	111.4
1957	100.0	100.4	95.7	96.1	106.2	135.8	119.1	112.1	117.8
1958	103.5	101.0	95.8	93.5	106.5	151.1	122.3	116.2	121.8
1959	105.3	101.8	98.4	95.1	111.6	157.5	121.2	115.5	130.7
1960	105.1	101.9	94.3	91.4	115.3	167.4	119.7	123.4	133.0
1961	104.8	104.4	92.6	92.2	117.0	177.3	119.8	135.0	138.3
1962	106.1	107.5	88.6	89.7	118.8	161.2	125.8	143.8	145.0
1963	109.3	113.4	86.4	89.6	121.3	161.5	131.1	143.4	152.8
1964	111.2	114.4	81.2	83.6	123.3	165.2	135.9	143.5	160.3
1965	114.4	122.5	81.5	87.3	127.0	173.7	145.0	141.2	164.3
1966	120.1	131.4	80.6	88.2	125.6	191.4	141.3	139.6	163.3
1967	125.7	137.6	79.8	87.3	127.2	185.3	137.9	141.5	164.4
1968	135.8	153.1	86.0	96.9	130.6	199.9	141.8	146.6	166.6
1969	143.0	160.3	89.2	100.0	132.5	193.3	140.8	149.7	170.7
1970	151.9	177.9	80.9	94.5	132.4	191.8	140.1	157.8	172.1
1971	159.9	189.9	71.5	85.1	132.6	193.5	142.6	161.1	174.5

SOURCE: Central Bank of the Philippines, *Statistical Bulletin*, December 1971.

and liberal foreign-exchange allotments were continued for this category of commodities after the Korean War period. However, in the last half of the decade, real wages fell, as they continued to do throughout the decontrol period. Near the end of the 1960s, when the country engaged in the experience of living beyond its means, real wages began to rise, but this upward movement was sharply reversed with the currency depreciation of 1970.

It should not be concluded from the absence of an increase in real wages

that labor has not benefited at all from the country's industrialization. Real wages in industry have remained about twice[37] as high as in agriculture throughout the entire period, and the transference of labor from agriculture to industry has thus resulted in an increase in labor's absolute income share. The share of the labor force employed in agriculture declined from 72 per cent in 1952 to 57 per cent by 1967.[38] Furthermore, within the urban labor force many have benefited from the relatively greater use of skilled and technical labor as manufacturing and tertiary services (especially government services) have expanded.

The major beneficiaries of the government's development policies have been those who own or control businesses in the industrial sector. Exchange-control as well as related import-substitution policies created enormous windfall gains and profit opportunities in the industrial sector, which were then exploited by a vigorous Philippine entrepreneurial group. In response to the incentives devised by the government, a large share of these profits was, of course, plowed back into the economy in the form of additional capital, much of which unfortunately merely added to excess capacity in the economy. Purchases of such equipment provided jobs for foreign workers, but the equipment itself ended up in the Philippines as industrial monuments.

AN EVALUATION OF PHILIPPINE DEVELOPMENT POLICIES

In judging a country's development performance, four economic criteria are relevant. How well did the country succeed in raising its growth rate? To what extent was the country successful in solving the problems of unemployment and underemployment? Did the development effort help to distribute income more equitably? Were resources allocated more efficiently because of the development programs? When these criteria are applied to the Philippines, it would appear that the country does not receive very high marks.

The main objective of trade, fiscal, and monetary policies in the 1950s was to accelerate the rate of industrial growth. As already mentioned, while it is not easy to separate the type of "catch-up" growth that would be expected after World War II from development that occurred in response to deliberate policies, a reasonable conclusion is that industrial growth was significantly accelerated during this decade by the import-substitution policies of the government. However, once the relatively easy type of import substitution was completed, by the latter part of the 1950s, the development rate in the manufacturing sector as well as in the economy as a whole declined quite sharply. During the decontrol period from 1960 to 1965 that followed this slowdown, the growth rates for manufactures and real gross national product fell even

lower. Not until the 1966–69 period did these development rates return to the level of the late 1950s. But even the growth rates in this period could not be maintained for long. Thus the question arises as to whether different sorts of development policies would have brought about higher rates of growth.

One study throwing some light on this subject is the investigation by Gonzalo Jurado into the production cost of exchange controls in 1961.[39] Using linear programming techniques and comparing actual production levels with those that would exist under free trade, Jurado estimated the production cost of exchange controls in 1961 to be between 0.18 per cent and 1.65 per cent of gross national product. Presumably one would wish to balance the dynamic benefits from import substitution, especially in the early 1950s, against this static allocation loss, which became relatively more important after the reduction in growth rates in the latter part of the 1950s. While any assessment of the net balance of these factors can be no more than an educated guess, my view is that it is not obvious that the government's development policies, as compared with free trade, increased the growth rate over the entire 1949–71 period.

A more relevant assessment, however, would involve a comparison of the government's import-substitution policies with a set of policies designed to stimulate more export growth, particularly in the manufacturing area. In other words, the government might have tried to adopt at least some of the export-oriented policies of Korea and Taiwan. This does not mean that no import substitution should have occurred. Undoubtedly, the government's action of protecting and subsidizing some industries did help to overcome various market imperfections and correct for various technological externalities in ways that improved the dynamic allocation of resources. Yet these policies were pushed too far, and it is now difficult politically and economically to dismantle the inefficient parts of the industrial system. These parts of the industrial system also retard potential export growth in manufacturing by being able to bid away scarce resources from this sector. A more selective use of import-substituting and export-promoting policies might have resulted in faster growth in the past and almost certainly would have set the basis for a higher development rate in the future than the inward-looking policy of import substitution. Fortunately, within recent years more emphasis has been placed on stimulating exports, though probably not yet enough to establish a firm foundation for future growth.

While one's judgment of the Philippine economy between 1949 and 1971 on the basis of the growth criterion is likely to be uncertain, an assessment of the country's performance according to the other three criteria seems quite straightforward. The economy has not done well on the basis of any of these criteria. The distortions in resource allocation were examined in detail in

Chapter 5 and in the first section of this chapter. The bias produced by the trading regimes toward capital-intensive production and thus the low rate of employment creation associated with the country's growth have also been discussed in the first section of this chapter. Finally, the failure of the real wages of labor to be any higher currently than at the beginning of the development efforts and the high profits fostered by import controls have been analyzed in the preceding section and in the last chapter. Consequently, considering all the criteria and viewing the 1949–71 period as a whole, it seems necessary to conclude that the economic policies pursued by the government did not make the needed contribution to the solution of the country's problems.

THE POLITICAL CLIMATE OF DEVELOPMENT

Perhaps the most serious threat to the use of the economic surplus available in the Philippines for steady development is its dissipation for short-run political purposes. As has been mentioned several times in Chapters 2, 3, and 4, monetary and fiscal policies have been closely related to the two-year election cycle. A study of the 1957–68 period by Averich, Denton, and Koehler showed, for example, that in the five election years in this period, the change in government net receipts from the previous year was negative, whereas in six of the nonelection years the change was positive in five years and negative in one.[40] If 1969 is added, another negative change is given for net receipts of the government in an election year. The authors also show that expansionary and contractionary monetary policies are closely related to the election cycle. They further point out that these monetary and fiscal policies produce alternating increases and decreases in the real growth rate of GNP as well as periodic exchange crises. On the last point they conclude that periodic exchange crises "at any level of foreign exchange availability are inevitable with the electioneering practices." [41]

Although it seems to me that Averich, Denton, and Koehler do not give sufficient emphasis to the growth goals of the government in accounting for fiscal, monetary, and foreign-exchange developments, there is no doubt that the practice of increasing government expenditures and easing monetary control in an election year has greatly contributed to the nation's economic problems. The 1969 foreign-exchange crisis is a case in point. Only some fortunate development such as a sharp rise in export prices could have prevented an eventual exchange crisis, but large increases in government spending and the money supply brought about the crisis much sooner than it would otherwise have occurred and made it more severe. Now that the country's economy

is so dependent on foreign trade for essential imports, a severe exchange crisis imposes significant hardships on the urban sector. The strikes and riots of 1970–71 attest to the penalties imposed on labor.

The Philippine economy possesses favorable basic conditions for growth. Traditional exports coupled with the growing importance of new mineral and agricultural exports should provide adequate foreign-exchange resources for sustaining a satisfactory rate of growth. The demonstrated savings and entrepreneurial ability of the population also should prevent a lack of capital or business talent from becoming serious obstacles to satisfactory growth. However, the main driving forces for sustaining development will have to come from the internal economic interactions among the various sectors. The foreign sector can play an important role in facilitating this growth, but the easy days of import substitution are over. Moreover, trying to force the domestic production of manufactured intermediates and capital goods in the manner used to achieve local production of simply processed consumer goods is likely to prove self-defeating because of the greater import requirements for the former and the adverse effects on exports. What is needed is a more realistic policy of development that does not aim at the establishment of a completely integrated industrial structure in the not-too-distant future, but instead gives greater emphasis to export production and high employment in light manufactures and services in the industrial sector. Yet, no change in development policies will prevent periodic economic crises unless the government exercises a much greater degree of fiscal and monetary discipline.

NOTES

1. The detailed 1960 breakdown of the manufacturing sector is not presented here because of the length of the table.

2. See the section on Growth Effects, in this chapter, for a further analysis of the behavior of the output-capital (or capital-output) ratio.

3. However, if it were not for the very high wage rate in the beverages industry, these ratios would also show a rise between 1948 and 1956. Specifically, if this industry is excluded, average earnings are P1,950 in 1938, P1,869 in 1948, P2,026 in 1956, and P2,019 in 1960. Jeffrey G. Williamson, "Economic Growth in the Philippines, 1947–1965: The Role of Traditional Inputs, Education and Technical Change" (Institute of Economic Development and Research, School of Economics, University of the Philippines, Discussion Paper 67–8, 1970), found that about one-tenth of the aggregate growth rate can be explained by investment in education.

4. The figures for the decline between 1960 and 1964—from 0.25 to 0.15—are, however, suspect. In Table 6-8, for example, it is indicated that the capital-goods share of imports declined only from 19.7 per cent in the 1959–61 period to 17.4 per cent in the 1963–65 period.

5. Mahar Mangahas, "A Broad View of the Philippine Employment Problem" [Paper presented at a seminar on Employment Creation Strategies for Southeast Asian

Economies, sponsored by the Southeast Asian Development Advisory Group (SEADAG) of the Asia Society, Atlanta, December 7–10, 1972]. The data in the rest of the paragraph are from this paper.

6. Ibid., p. 7.

7. From Mahar Mangahas, William H. Meyer, and R. Barker, *Labor Absorption in Philippine Agriculture* (Paris: Organization for Economic Cooperation and Development, 1972); and Harry T. Oshima, "Labor Absorption in East and Southeast Asia," *Malayan Economic Review*, October 1972, as reported in ibid., p. 9.

8. George L. Hicks and Geoffrey McNicoll, *Trade and Growth in the Philippines* (Ithaca: Cornell University Press, 1971), p. 68.

9. *Philippine Sugar Handbook* (Manila: Sugar News Press, 1970), pp. 13–14. The following data on the quota system are also from this source.

10. Hicks and McNicoll, *Trade and Growth*, pp. 194–195.

11. Lee Douglas Badgett, "The Response of Processing Activity to Preferential Tariff Reductions: The Philippines Case, 1900 to 1940" (Ph.D. diss., Yale University, 1971), p. 182.

12. National Economic Council, *Four-Year Development Plan*, Fiscal-Years 1971–74 (Manila: Office of the President, 1970), p. 58.

13. Ibid., pp. 58–59; also based on conversations with officials of the Development Bank of the Philippines.

14. The following equations are from Romeo M. Bautista and Jose Encarnación, Jr., "A Foreign Trade Submodel of the Philippine Economy, 1950–1969" (University of the Philippines, School of Economics, Institute of Economic Development and Research, Discussion Paper 71–28, December 1971). The domestic output of coconuts is considered a predetermined variable in their model. Numbers in parentheses below the regression coefficients are the corresponding *t* values. Annual data were used for the years covered.

15. Jose Encarnación and others, *Econometric Models of the Philippines* (Manila: National Economic Council, 1970), Chap. 6.

16. Loc. cit.

17. See Hicks and McNicoll, *Trade and Growth*, pp. 211–215, for a more extensive discussion of this problem.

18. Cited in ibid., p. 215.

19. Philippine Association for Permanent Forests, Inc., *Philippine Forestry and Wood Industry* (Diliman, Quezon City: PERMAFOR, 1972), p. 34.

20. The logic of using the sum of export prices is that output is a function of the capital stock which in turn is a function of investment in previous years. Investment in any previous year depends on the price of copper in that year.

21. Encarnación and others, *Econometric Models*, p. 18.

22. The proportionate increase in the quantity of exports of any commodity is given by multiplying the relevant supply elasticity by the proportionate increase in the peso price of the commodity. Since the dollar price of the commodity is assumed to remain constant, multiplying this proportionate increase by the average annual dollar export value of the commodity during the period gives the hypothetical dollar increase in exports.

23. Gerardo P. Sicat, *Economic Policy and Philippine Development* (Quezon City: University of Philippines Press, 1972), Chap. 9.

24. Richard W. Hooley and Gerardo P. Sicat, "Investment Demand in Philippine Manufacturing" (University of the Philippines, School of Economics, Institute of Economic Development and Research, Discussion Paper 67-2, 1967).

25. Ibid., pp. 47–49.

26. The yearly figures are obtained by dividing the difference in GDP between two successive years into the volume of gross domestic capital formation in the later year. The ratios for 1948–49, 1951–52, and 1966–67 are combined with those for one year later because these ratios were abnormally high. The source of the data, which are in real terms, is the national accounts of the Philippines as given by the Office of Statistical Coordination and Standards of the National Economic Council and reported in various issues of the *Statistical Reporter.*

27. The ratios refer to changes in the real value of fixed assets and real value added between the given date and two years prior to the given date. The years 1966 and 1968 are combined because of unusually high and low ratios, i.e., 3.27 and 0.50, respectively. The source of the data is Philippine Bureau of Census and Statistics, *Preliminary Report on the BCS Annual Survey of Manufactures, 1968* (Manila, 1970). The earliest survey of manufacturing is for 1956.

28. See John J. Carrol, *The Filipino Manufacturing Entrepreneur* (Ithaca: Cornell University Press, 1965); and F. H. Golay, *The Philippines: Public Policy and National Economic Development* (Ithaca: Cornell University Press, 1961), pp. 408–409.

29. Williamson, "Economic Growth in the Philippines."

30. These figures and the following figures are from ibid., p. 25. Williamson's assumption B data are reported here.

31. Loc. cit., p. 21.

32. As reported in A. V. H. Hartendorp, *History of Industry and Trade in the Philippines; the Magsaysay Administration* (Manila: Philippine Education Press, 1961), pp. 444–445.

33. Ibid., pp. 445–448.

34. For an application of this framework to the Philippines, see Hicks and McNicoll, *Trade and Growth.*

35. Marvin C. Goodstein, "The Pace and Pattern of Philippine Economic Growth" (Cornell University, Department of Asian Studies, Data Paper 48, July 1962; mimeo.).

36. See Hicks and McNicoll, *Trade and Growth,* pp. 76–87.

37. Hicks and McNicoll, *Trade and Growth,* p. 91.

38. Vicente B. Valdepeñas, Jr., *The Protection and Development of Philippine Manufacturing* (Manila: Ateneo University Press, 1970), p. 14.

39. Gonzalo M. Jurado, "The Production Cost of Exchange Control in the Philippines, 1961" (University of the Philippines, School of Economics, Institute of Economic Development and Research, Discussion Paper 71-16, 1971). Also Jurado, "A Linear Programming Analysis of the Economic Cost of Exchange Control: The Philippine Case" (Ph.D. diss., University of Wisconsin, 1970).

40. H. S. Averich, F. H. Denton, and J. E. Koehler, *A Crisis of Ambiguity: Political and Economic Development in the Philippines,* A Report Prepared for the Agency for International Development (Santa Monica, Calif.: RAND Corp., 1970), p. 162.

41. Ibid., p. 170.

Appendixes