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EMPLOYMENT IN PHILIPPINE DEVELOPMENT

by

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ABSTRACT

This paper examines the employment effects of economic policies since World War II by analyzing data on output and employment and various studies on trade and industrial policies. It concludes that Philippine output growth has been lower than selected neighbors and that this may be traced to the country's trade policies. It also finds that during the post-war period, implicit factor substitution has gone against labor.

Employment in Philippine Development

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Two terms describe the predicament of the Philippine labor force: low income and unemployment. The proportion of households below the poverty line increased from 50 percent in 1971 to 60 percent in 1985². The unemployment rate was estimated to be 12 percent and the underemployment rate to be 35 percent for 1986 representing a worsening from 1956, when labor force surveys started, when unemployment was measured at 14 percent and the underemployment rate was 21 percent³.

Trying to climb out of the deep recession of 1984 and 1985, the Philippines was confronted with what to do about income and

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²National Economic and Development Authority, 1986, page 33.

³The rates are not directly comparable because 1956 figures use 10 to 65 years to be in the labor force and the past week as the reference period. After 1976 the labor force was redefined to include only those 15 to 65 years old and the past quarter as the reference period. More comparable but much earlier information for 1976 give the unemployment and underemployment rates as 5 percent and 10.6%, respectively.

employment. In 1986 the problem of labor under-utilization was divided into two parts: structural and conjunctural (Alburo et al., 1986: 11). The latter was what would be eliminated with appropriate monetary and fiscal policies. The former was the large residual of unutilized labor due to inappropriate industrial, trade and commercial policies. The government could go for a "quick fix" that would immediately solve conjunctural labor under-utilization. However, this would increase the cost of later modifying its industrial structure in order to solve structural under-utilization. The alternative was to start modifying the industrial structure which would require more deliberate choice and, therefore, slower resuscitation of industries. This would avoid the extra cost of reviving industries that would disappear with more appropriate policies anyway.

The policy dilemma in 1986 embodies the predicament of the Philippines. The long-term solution to its labor under-utilization requires some short-run sacrifices. However, the loss of time and the resulting social impatience put a very high price tag on the long-term solution. How did it all come to this for a country that only three decades ago appeared to be leaving its neighbors behind? This paper attempts to explain how this evolved. Section two surveys the growth record of the Philippines, section three analyzes the policies undertaken in the post-World War II period, section four traces the effect of these policies, and section five gives a summary suggests a policy program.

II. The Philippine's Growth Record

The Philippine growth record is, perhaps, put in better perspective when compared with those of other countries. From 1965 to 1985, the per capita gross national product of the Philippines grew by an average of 2.9 percent (Table 1). During that same twenty-year period, low-income economies also grew by 2.9 percent (if China and India are excluded, by 0.4 percent). Middle-income economies grew by 3.0 percent and industrial market economies by 2.4 percent⁴. The Philippine growth record looks respectable until it is noted that compared to its ASEAN neighbors and the newly-industrializing economies (NICs), Taiwan, Singapore, Hongkong, and South Korea, the growth performance of the Philippines leaves a lot to be desired. All other ASEAN countries grew by at least 4.0 percent while the NICs grew by an average of 6.8 percent annually. Reckoned from 1965 to 1982, the Philippine growth rate would still be only 2.6 percent, indicating that the difference in growth performance cannot be entirely blamed on the 1984-86 recession.

With this disparity in growth rates, the Philippines' per capita GNP of \$580 in 1985 U.S. dollars looked small compared to the US\$2,000 of Malaysia, US\$800 of Thailand, and only marginally higher than the \$530 of Indonesia. (With the recovery, the Philippines would have per capita GNP of \$560 in 1986 U.S. dollars; Indonesia, US\$490). The NICs had even higher per capita incomes. In contrast, the Philippines' per capita income at the

⁴World Bank (1987): 202.

Table 1

Output and Growth Rates of Per Capita Income, 1985

	Population Millions Mid-1985	Area Thousands of square km.	GDP per capita	
			Dollar 1985	Ave. Annual Growth Rate % 1965-85
a. ASEAN				
Indonesia	162.2	1,919	530	4.8
Malaysia	15.6	330	2,000	4.4
Philippines	54.7	300	580	2.3
Thailand	51.7	514	800	4.0
b. NICs				
Hongkong	5.4	1	6,230	6.1
Korea	41.1	98	2,150	6.6
Singapore	2.6	1	7,420	7.5
Taiwan				

Source: Paderanga (1988), Table 1

Table 2

Gross Domestic Product
Total and Per Capita

(In Dollars)

	1965		1985	
	Total	P.C.	Total	P.C.
a. ASEAN				
Indonesia	3830	210	86470	530
Malaysia	3130	850	31270	2000
Philippines	6010	370	32590	580
Thailand	4050	365	38240	800
b. EICs				
Hongkong	2150	1910	30730	6250
S. Korea	3900	600	66180	2150
Singapore	570	1720	17470	7420
Taiwan				

Sources: World Development Report, 1987.
(Table 1 & 3 of Table 27 for population growth rates).

start of that period was the same as Thailand's and not too far behind South Korea's (Table 2).

Industrial Structure

Striking is the Philippine's apparent inability to shift its industrial structure while substantial changes in sectoral composition were taking place in other countries in the area. Changes were most pronounced in the NICs where Taiwan decreased the agricultural share of GDP from 27 percent to 7 percent and increased the share of the industrial sector from 29 percent to 45 percent (Table 3). South Korea decreased agriculture's share from 39 percent to 14 percent and increased industry's share from 26 to 41 percent. Malaysia and Thailand showed more modest but nevertheless significant changes. In the Philippines, Agriculture's share of GDP remained the same and the share of industry inched up from 28 percent to 32 percent at the expense of the service sector. Changes in the composition of the Philippine labor force told essentially the same story. Industry's share was constant while agriculture's share dropped only from 38 percent to 32 percent with the share shifting to services. Tables 4 and 5 show how the shifts in sector shares came about.

A drop in service's share of GDP coupled with an increase in labor force share indicate the perverse nature of the sector's "growth." These also indicate the inability of the industrial sector to absorb a greater proportion of the growth in labor force and the role of the service sector as an employer of last resort.

Table 3a

Sectoral Composition of Gross Domestic Product (GDP)

	GDP		Distribution of GDP (percentage)							
	M of \$		A		I		M*		S	
	1965	1985	1965	1985	1965	1985	1965	1985	196	1985
a. ASEAN										
Indonesia	3,830	86,470	56	24	13	36	8	14	31	41
Malaysia	3,130	31,270	28	..	25	..	9	..	47	..
Philippines	6,010	32,590	26	27	28	32	20	25	46	41
Thailand	4,050	38,240	35	17	23	30	14	20	42	53
b. NICs										
Hongkong	2,150	30,730	2	1	40	31	24	24	58	68
Korea	3,000	86,180	39	14	26	41	19	28	35	45
Singapore	970	17,470	3	1	24	37	15	24	73	62
Taiwan** (NDP)	90,731	1,887,687	27	7	29	45			44	47
	(NT \$ M)									

*Because manufacturing is generally the most dynamic part of the industrial sector, its share of GDP is shown separately.

**Net Domestic Product.

Source: Paderenga (1988), Table 3a.

Table 3b

Sectoral Composition of the Labor Force

	Percentage of pop'n of working age (15-64 yrs.)		Percentage of Labor Force						Avg. Annual Growth of LP (%)		
	1965	1985	A		I		S		1965-80	1980-85	1985-90
			1965	1980	1965	1980	1965	1980			
a. ASEAN											
Indonesia	53	56	71	57	9	13	21	30	2.1	2.4	2.2
Malaysia	50	59	59	42	13	19	29	39	3.4	2.9	2.6
Philippines	52	56	58	52	16	16	26	33	2.5	2.5	2.4
Thailand	51	59	82	71	5	10	13	19	2.8	2.5	1.7
b. NICs											
Hongkong	56	68	6	2	53	51	41	47	3.9	2.5	1.4
Korea	53	64	55	36	15	27	30	37	2.8	2.7	1.9
Singapore	53	67	6	2	27	38	68	61	4.2	1.9	0.8
Taiwan*			47	18	22	41	31	41			

Source: Paderanga (1988), Table 3b.
Taiwan Statistical Data Book, 1987.

Table 4

Average Annual Growth Rates of Domestic Product

Table 4

Average Annual Growth Rates of Domestic Product (1972 prices)
By Industrial Origin, 1949-1977
(percent)

	1949-53	1953-57	1957-61	1961-65	1965-69	1969-73	1973-77	1949-78	1977-81*	1981-85*
Agriculture	7.7	4.3	4.2	4.6	4.0	3.4	5.4	4.5	4.5	1.4
Industrial Sector	8.8	8.1	3.7	5.8	5.5	7.3	8.1	6.5	6.1	-3.7
Mining	23.5	7.7	1.0	2.7	14.6	11.4	4.3	8.8	5.7	-5.1
Manufacturing	14.1	11.1	5.7	4.8	6.6	7.5	5.0	7.8	5.2	-2.5
Construction	0.3	2.6	-1.6	10.8	-0.6	5.2	21.8	3.6	8.9	-14.2
Utilities	3.6	5.7	2.5	3.0	5.3	7.9	11.2	4.6	8.8	5.6
Service Sector	9.4	0.6	4.6	4.6	4.7	4.6	5.2	5.7	5.3	-0.9
Net Domestic Product	8.6	6.2	4.2	4.8	4.6	4.9	6.1	5.5	5.1	-2.5

*GDP data was used (raw data from Philippine Statistical Yearbook (1986), NEDA).

Source: Paderanga (1987), Table 1.

Table 5

Growth Rates Of Population and Employment
(1956-80)

Period	Population	Employment
1956-65	3.6	2.7
1966-75	4.0	3.1
1976-80	3.7	4.0

Source: Paderanga (1988), Table 2.

Table 6

Employment Growth Rates By Broad Industry
(1956-85)

Period	a/ Agriculture	b/ Industry	c/ Services
1956-61	3.8	2.1	2.4
1965-69	1.0	4.1	6.8
1965-70	1.3	1.2	5.9
1970-75	4.9	7.1	4.1
1975-80	1.7	1.9	5.5
1980-85	2.8	5.2	4.5

a/
Agriculture, forestry, hunting and fishing.

b/
Mining and quarrying; Construction; Manufacturing; Electricity, gas, water
and sanitary services; Commerce

c/
Transport, community business and recreational services; Domestic
services; Personal services other than domestic

Note: "Industry not reported" is excluded.

Source: Paderanga (1987), Table 3.

Table 7
Employed Persons By Broad Industry Groupings
(1956-82)

	1956		1970		1982	
	No.	%	No.	%	No.	%
a/ Agriculture	5047	60.7	6100	53.7	8919	51.3
b/ Industry	2013	24.2	2714	23.9	4389	25.3
c/ Services	1122	13.5	2360	20.8	4063	23.4

a/
Agriculture, fishery and forestry

b/
Mining and quarrying; Manufacturing; Electricity, gas and water;
Construction, wholesale and retail trade

c/
Transportation, storage and communications; Financing, insurance, real
estate and business services; Community, social and personal services

Note: Excludes data on Industry not adequately defined.

Source: Paderanga (1987), Table 4.

III. Trade and Industrial Policies:

Effects on Income and Employment

The experience of countries in Southeast and East Asia indicates that various approaches to growth and industrial development are available. While all of the countries went through varying initial stages of import-substitution, they branched out into different industrialization strategies. Their comparative experience may be instructive.

Hughes (1974) summarizes the development strategies of countries into two contrasting models. The first consists of "balanced growth" countries namely Japan, Taiwan, Singapore, Hongkong and to some extent Korea. These countries gave high priority to exports and kept the disparities between international and domestic costs of production (even for goods meant for domestic consumption) small. Agriculture was given a weight appropriate to natural resource endowment, meaning that Hongkong and Singapore basically did not bother much with developing a strong agricultural sector.

In this model, the commonly held view of the prevalence of an unduly capital-intensive technology and the lack of adaptation of production techniques did not apply. With market prices closely reflecting actual factor prices, comparative advantage was built up in labor-intensive industries for international markets, leading to a product mix and production techniques geared to actual factor proportions. Over time, capital intensity just moved up as capital, human and physical, developed and accumulated in all industries. With full employment and as

higher productivity was passed on in higher labor income, a mass market for increasingly sophisticated products was developed.

The other model is the one employed by a number of Southeast and East Asian countries ranging from small countries like Laos and Kampuchea, through medium-sized countries such as Malaysia and the Philippines, to Indonesia. These countries have followed an industrially dominated development strategy characterized by structure of protection favoring durable consumption goods and a bias against agriculture and exports. Manufacturing industries, urban construction, and limited public works tend to be highly capital-intensive. Small scale production units are discouraged by incentives to capital which render labor-intensive production methods unprofitable. Philippine development experience exemplifies the experience of this group of countries⁵.

IV Impact of Policies

The policies which prevailed during the first quarter century of independence have been described as penalizing agriculture and exports, and spawning industries which tend to be inefficient, import-dependent, capital-biased and unable to generate the employment necessary for utilization of the country's labor force. Power and Sica (1971) summarized the consequences of the policies as: (a) inward-looking industries; (b) an excessive dependence on imported inputs; (c) an excessive reliance of the economy on a few primary export, owing to the

⁵See Paderanga (1988b), section III for a summary of policies.

failure of the industrial sector to develop as a source of foreign exchange; (d) over-concentrated regional development; (e) greater inequality of income distribution; (f) the neglect of wage-goods industries; (g) slow growth of industrial employment; and (h) technical and economic inefficiency.

During the first fifteen years, import-substitution strategy was primarily expressed by the system of exchange and import controls although other policies like tariff, credit and tax incentives reflected the priorities of the more dominant instruments. In the last ten years of that period, tariffs became dominant. However, as Valdepenas (1970) noted, the priorities of economic policy showed no effective change. Favored industries belonged mostly to the industrial sector and were oriented towards the domestic market. At the same time, the type of incentives given, tax and tariff rebates on imports of inputs and credit subsidies, tended to bias growth toward those industries which were more receptive to capital-intensive techniques. Industries less able to adapt to capital-intensive activities were left out of the available incentives. The bias also tended to be for import-substituting industry and against agricultural, export-oriented activities.

Power and Sicat (1970) estimated the effective protection rates (EPRs) for the various industries for 1965. Agricultural and agriculture-based industries typically suffered negative EPRs. For example, effective protection on canned meat and dairy products was negative; at the other extreme, value added at world market prices was negative for metal furniture, stationery,

Table 8
Average Rates of Protection in Philippine Manufacturing, 1965

Industry Group	(In Percent)		
	Nominal Protection	Effective Protection	
		Balassa	Corden
Exports (excluding sugar)	-8	-19	-19
Import-competing	30	62	59
Non-import-competing	26	85*	83*
Sugar	35	186	183
All Manufacturing	24	49	48
Except exports	28	74	71

*Realized protection.

Source: Power (1970), Table 11.10.

Table 9

DRC estimates: Philippine Manufacturing, 1969 and 1974

continued...

I - O Code		Industry	DRC	
1969	1974		1969	1974
37	39	Slaughtering and poultry dressing	8.21	8.00
38	40	Meat products, canned	8.02	8.26
	41	Meat products, uncanned	8.02	9.43
39	42	Evaporated and condensed milk	2.02	1.67
40	43	Ice cream and other flavored ices, dairy drink specialties	3.95	8.10
41	44	Butter, cheese & other dairy products		18.13
42*	45	Canned fruits & veg. products	3.26	10.33
43*	46	Other fruits & veg. products	52.88	9.94
44	47	Fish canning	12.55	6.33
	48	Other fish & seafood products	12.55	9.36
45	49	Rice milling	5.70	9.86
46	50	Corn milling	5.13	7.45
47	51	Flour milling	6.93	26.02
48	52	Bakery products	5.15	15.68
49	53	Sugar milling & refining	4.95	6.40
50	54	Candy & chewing gum products		15.18
51	55	Cocoa & chocolate products	-	10.38
52	56	Processed coffee	5.17	9.97
53	57	Desiccated coconut products	2.96	4.69
55	59	Starch & starch products	3.66	10.55
56	60	Macaroni, spaghetti, & noodles	-	9.44
57	61	Veg. lard & margarine	5.48	
58	62	Prepared feeds for animals & fowls	5.05	8.06
59	64	Misc. food manufactures, n.e.c.	5.68	23.97
60	65	Distilled, rectified & blended liquors	25.40	15.61
	66, 67	Wines, brewery & malt products	25.40	
61	68	Soft drinks & carbonated water	3.96	9.04
62	69	Cigarettes	541.08	18.23
	70	Cigars, chewing, & smoking tobacco	541.08	6.15
63	71	Leaf tobacco processing	3.52	26.26
64	72	Textile mill products	6.99	12.15
65	73	Knitting mill products	5.84	6.92
66	74	Cordage, twine & net industries	-	10.18
67	76	Other textile products	3.93	8.16
68	77	Footwear, except rubber & plastic	8.25	6.47
70	79	Ready-made clothing	2.72	5.13
71	80	Manufacture of embroidery products	3.59	5.74
72	81	Other made-up textile goods	4.41	6.45
73	82	Lumber	3.68	6.14

Table 9

DRC estimates: Philippine Manufacturing, 1969 and 1974

continued...

I - O Code		Industry	DRC	
1969	1974		1969	1974
74	83	Plywood veneer plants	4.65	6.48
75	84	Doors, windows	-	11.53
76	85	Other wood, cane & cork products	3.46	10.18
77	86	Wood & rattan furniture & fixtures	6.99	5.77
78		Metal furniture & fixtures	6.29	5.77
80	87	Pulp, paper, & paperboard manufacturing	6.04	9.14
81	88	Paper products	6.04	11.10
82	89	Paper & paperboard container	6.36	11.47
83	90	Misc. converted paper products, n.e.c.	5.12	10.22
84	91	Newspaper, magazine, & periodicals, n.e.c.	4.76	5.83
85	92	Books & pamphlets	4.99	8.17
86	93	Commercial & job printing	-	6.67
87	94	Bookbinding & other allied activities	3.20	-
88	95	Tanning & leather finishing	6.35	9.55
89	96	Leather products, except footwear	9.86	6.25
90	97	Rubber footwear	8.22	20.36
91	98	Tires & inner tube manufacturing	3.73	9.85
92		Tire vulcanizing, retreading & repair	4.60	9.85
93	99	Other rubber related products	4.35	28.41
	100	Compressed & liquified gases	-	6.35
94	101	Basic industrial chemical	5.33	10.96
95	102	Fertilizer & lime	4.03	6.98
96	103	Coconut oil	3.64	3.48
	104	Other oils & fats	3.64	7.34
97	105	Paints, varnishes, & related cpds.	7.56	15.36
98	106	Plastic materials	3.24	7.51
99	107	Medicinal & pharmaceutical products	3.93	6.33
100	108	Cosmetics & toilet preparations	127.99	139.08
101	109	Soap & other washing & cleansing cpds.	4.78	10.39
103	110	Insecticides, germicides	3.08	4.03
104	111	Other chemical products, n.e.c.	4.27	a
105	112	Petroleum refineries	3.45	8.96
106	113	Products of petroleum, coal & coke	20.88	6.12
107	114	Structural clay products	10.44	7.94
108	115	Structural concrete products	6.26	9.79
109	116	Glass & glass products	5.14	11.09
110	117	Pottery, china, & earthenware	5.51	8.68
111	118	Hydraulic cement	4.77	7.09
112	119	Other non metallic mineral products	13.83	a

Table 9

DRC estimates: Philippine Manufacturing, 1969 and 1974

concluded...

I - O Code		Industry	DRC	
1969	1974		1969	1974
113	120	Iron & steel basic industries	4.97	13.06
114		Iron & steel foundry products	5.94	13.06
115	121	Basic non-ferrous metal products	4.13	5.85
116	122	Metal cans, boxes, & containers	5.12	4.78
117, 118	123	Cutlery & gen. hardware handtools	a	13.74
119	124	Structural metal products	5.33	9.89
120	125	Stamped, coated, & engraved products	6.31	7.26
121	126	Fabricated wire products	5.46	6.47
122	127	Heating apparatus, lighting & plumbing	8.49	9.76
123	128	Other fabricated metal products, n.e.c.	6.74	25.52
124	129	Agricultural machinery & equipment	4.62	5.87
125	130	Other fabricated metal products, n.e.c.	4.80	4.75
126	131	General industry machinery & equipment	5.28	5.98
128	133, 134	Elec'l distribution & control apparatus	2.32	5.40
129	135	Communication equipment	-	14.55
130	136	Batteries	2.55	5.45
131	137	Elec'l lamps & fixtures	5.22	8.35
132	138	Elec'l wires & wiring devices	4.71	a
133	139	Household elec'l appliances & wires	6.27	-
134		Household radio, television receiving sets, phonographs and accessories	4.69	-
135	140	Refrigeration & air-conditioning equipment	-	14.91
	141	Other household elec'l appliances	-	12.37
136	142	Shipbuilding and repair	7.75	6.45
137	143	Motor vehicles	4.70	9.82
	144	Motor vehicle engines, body & parts	-	9.82
138	145	Rebuilding, repair of vehicles & engines	3.16	-
	146	Manufacture of motorcycles, bicycles & parts	-	7.23
141	149	Musical instruments	13.49	-
142	150	Fabricated plastic products	5.18	23.24
	151	Manufacture of measuring controlling equipment	-	4.31
	152	Manufacture of medicinal, orthopedic & surgical supplies	-	4.39
143	157	Misc. manufactures, n.e.c.	3.88	6.75

Notes: * I-O (1969): Fruit juices, canned and preserved

I-O 43 (1969): Vegetables, canned and preserved

a Negative net earning or saving of foreign exchange.

- Data on capital or labor cost not available from the ASM/ASE or Economic Census.

Source: Bautista and Tecson (1979), Table 1.

Table 10

Rank correlations results

Variable Correlated w/ Domestic Resource Cost	Number of Sectors		Spearman Correlation Coefficient		Level of Significance	
	1969	1974	1969	1974	1969	1974
Share of exports sectoral output	88	97	-0.308	-0.280	0.002	0.003
Capital intensity	84	94	-0.114	0.136	0.151	0.096
Capital productivity	81	68	-0.383	-0.417	0.001	0.001
Labor productivity	83	67	-2.34	-0.366	0.017	0.001
Effective rate of protection	-	88	-	0.601	-	0.001

Source: Bautista and Tecson (1979), Table 2.

refrigerators and air conditioners, leather, jute mill products, household radios, phonographs, and televisions, as well as for jewelry, implying an absolute waste of resources⁶.

The discrimination against exporting was strong even in protected industries because protection implied much higher margins for domestic sales than exports. Table B shows the average rates of protection of commodities by target market. Effective protection as of 1965 (after twenty years of independence) penalized exports and discriminated against capital and intermediate goods in favor of consumer products. Since there was little change in the tariff structure from 1965 to 1970, the structure described could be taken to be the culmination of the first quarter century of independence.

Policy Impact, 1970 to present

After the policy changes connected with decontrol in 1961, the most important changes occurred later in that decade. In 1967, the Investment Incentives Act was enacted, followed by the Export Incentives Act in 1970. The 1967 act, formed the Board of Investments (BOI) which implemented most of the policies regarding trade and industrial policy aside from monetary, exchange rate and closely related policies.⁷ The major changes

⁶The authors qualify this result by that noting the bias against domestic products may have contributed to this result or, owing to widespread evasion, the actual level of protection may be lower than the apparent level.

⁷The Depressed Area Incentives Act (Batas Pambansa Blg. ____), passed in 1981 granted incentives which were also to be administered by the Board of Investments.

in industrialization policy could be said to have been made at the start of the period.

Bautista, Power and Associates (1977) examined the pattern of industrial promotion as of 1974. Medalla and Power (1977) in the same volume designed a method of estimating effective protection rates (EPRs) based on product differentiation and imperfect competition incorporating the effect of indirect taxes. While some of the most obvious anomalies in 1965 were remedied, the basic thrust was untouched. Three elements of bias remained: first, the bias in favor of manufacturing; second, the penalty imposed on exports, both in manufacturing and non-manufacturing industries; and third, the bias in favor of the finishing stages of producing consumption goods over intermediate and capital goods.

The same authors also estimated for all industries the domestic resource cost (DRC) which is essentially "a cost-benefit ratio of the social valuation of domestic resources used per unit of net foreign exchange earned (or saved) by the export (or import substitution) of a given product." Table 9 presents the DRC estimates. The authors found a positive correlation between the sectoral DRC and EPR estimates, implying that high cost industries were generally receiving heavy protection, more efficient industries were being penalized⁹. They also noted a negative relation between DRC and export orientation. Finally,

⁸Bautista, Power and Associates (1977), page 40.

⁹Bautista, Power and Associates (1977), page 41.

they noticed a rough classification dividing the industries two groups: a) low DRC and high capital and labor productivity; and b) high DRC and low capital and labor productivity.

Gregorio (1979) analyzed the impact of the Investments Incentives Act and the Export Incentives Act. She noted that while the BOI incentives have a relatively minor effect on the overall structure of protection, the characteristics of the more important incentives granted like tax exemption/credit on the purchase of capital equipment, accelerated depreciation, etc., leads to a bias against employment creation. The incentives are also inadequate for offsetting the penalty on exports.

In sum, the policy changes during 1970 to 1985 did not alter the general character of industrial promotion. Contrary to policy pronouncements of the early seventies, the thrust of trade and industrial policy has been unchanged from World War II until today¹⁰.

V. Interrelationships: Policies and Development Output Growth¹¹

The effects of the Philippines' trade and industrial strategy on the pace and pattern of its development is, perhaps, best appreciated in comparison with the ASEAN countries and Asian NICs. Starting at roughly the same levels of income almost

¹⁰This statement will more concretely supported when EPRs and DRCs are estimated from the 1983 input-output tables.

¹¹The discussion in this section basically follows that of Paderanga (1987): 5 - 12.

thirty years ago, they had similar industrial structures. They also adopted essentially similar initial approaches in industrial development; import-substituting and inwardly-oriented, resulting in an annual growth of industrial production at 5-10 percent. However, as the potential of the domestic markets became rapidly filled up growth slackened and the import-dependence of import-substituting manufacture began to produce periodic foreign exchange shortages.

The NICs shifted toward outward-oriented, export promoting policies, looking towards foreign investment to solve their problems of capital and foreign exchange shortage and exports to solve market shrinkage. Taiwan, for example, changed its institutional environment from one that sheltered domestic industry to one that allowed private entrepreneurs to explore the foreign market. The "internally oriented," import-substituting strategy gave way to "outwardly oriented" policies (Kuo & Fei, 1985). Korea began dismantling its inward-looking strategy by unifying exchange rates and devaluing the won in 1960-1961 and liberalizing import controls. An export subsidy scheme was put into effect, a 50 percent tax reduction allowed on export profits, and full exemption from indirect taxes on inputs for exports was given.¹² Other countries like the Philippines maintained their protective structure over import-substitutes. For the Philip-

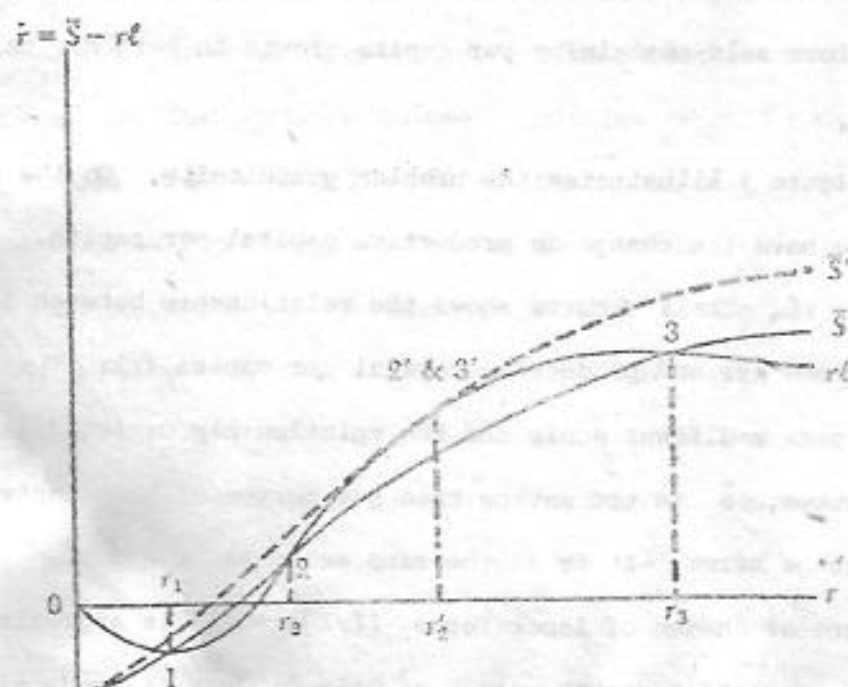
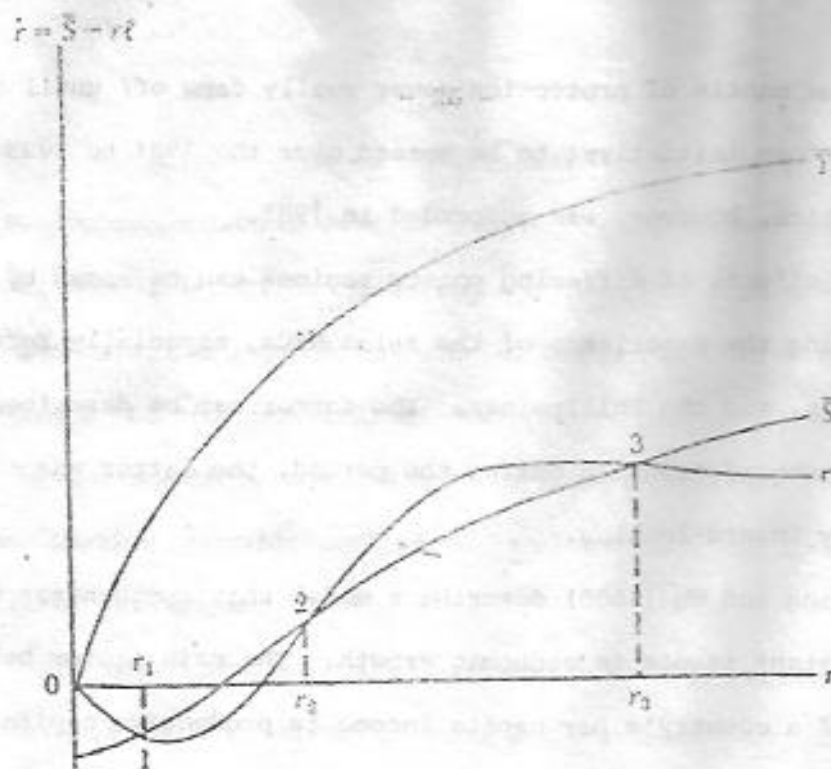
¹²Some observers believe that South Korea overinvested in exportables in the sense that the proportion of its resources going to exports may have gone beyond diminishing returns relative to resources going to production for the domestic market. See, for example, Krueger (1981) pp. 214-215.

pinas, the mantle of protection never really came off until the tariff reform initiatives to be spread over the 1981 to 1985 period which, however, was suspended in 1983.

The effects of differing policy regimes can be shown by contrasting the experience of the Asian NICs, especially Korea and Taiwan, and the Philippines. The former can be described as largely outward-oriented during the period, the latter was basically inward-looking.

Tsiang and Wu (1985) describe a model that synthesizes what the important issues in economic growth. The main factor behind growth of a country's per capita income is productive capital per person, $r = K/L$. A developing country's main task is to reach a self-sustaining rate of increase in capital per person. However less developed countries seem to settle at a low-level of capital per person. A "big-push" is often necessary to "get over the hump" into self-sustaining per capita growth in both capital and income.

Figure 1 illustrates the problem graphically. On the vertical axis we have the change in productive capital per capita, $\dot{r} = \bar{s} - r\ell$. The $\bar{Y}$ - curve shows the relationship between income per person (Y) and productive capital per capita (r). The Y - curve uses a different scale and the relationship depicted is merely indicative. $\bar{s}$ is the saving rate per person of the country in percentage terms. It is on the same scale as r and $r\ell$. ℓ is the rate of change of labor force $[L/L]$ which is approximated by the population growth rate. $r\ell$, the product of productive capital per person (r) times the population growth rate, is the capital investment of necessary just to equip the new workers coming on stream. When $\bar{s} > r\ell$, r increases if $\bar{s} < r\ell$,



r decreases. In the diagram r_2 is a stable equilibrium point. The economy tends to go back to it. If the economy is to reach self-sustaining growth, it must get beyond r_3 . (Multiplying both sides of the inequality by the inverse of average income per person (L/Y) transforms it into the more familiar condition $S/Y \geq (K/Y)\ell$ which is the form used in Table 12 and Appendix Tables 5-8).

Tsiang and Wu (1985) infer recommendations from their model. First, external assistance and foreign investments can push the economy on the horizontal axis past the self-sustaining threshold (r_3). Even if that did not happen, the distance to be covered by domestic measures is correspondingly shortened. Domestic measures to be undertaken by an LDC on its own are also implied in the model:

"(1) to lower the $r\ell$ curve by reducing the net reproduction rate of the domestic population at each per capita income level (hence at each level of r); (2) by raising the S curve through increasing the willingness of the domestic population to save at each level of per capita income and hence at level of r ; (3) by introducing improved technology that would increase the real per capita productivity at each level of the capital/labor ratio ... This would have the effect of shifting the $\bar{S}$ curve upward and to the left relative to the $r\ell$ curve (Tsiang, 1964)."

Trade by permitting a country to specialize in those industries in which it has comparative advantage has the same effect as an enormous improvement in technology. It raises the $\bar{S}$ -curve in Figure 2, decreasing the capital-labor (K/L) level needed for self sustained growth.

The impressive record of the Asian NICs which employed the open, outwardly oriented policies are reviewed here as a

yardstick for the Philippines. Appendix Tables 1, 2, 3 and 4 summarizes the experiences of Taiwan, Korea, Singapore and Hongkong, respectively. Note how sudden increases in changes in productive capital per person (r) roughly lead or coincide with sustained increases in per capita income. Tsiang and Wu estimate the take-off years for the Asian NICs as follows:

Taiwan	1964
Korea	1966 - 1967
Singapore	1966
Hongkong	1965

The Philippines, on the other hand, has been beset by various problems. Table 11 provides similar information the Philippines. Most surprisingly, aside from the period around the crisis, the Philippines had a very respectable record on the basis of the Tsiang model. It had a high saving rate. Even discounting for the period of large borrowing by the Philippines starting in the mid seventies, up to and beyond the NICs take-off years. Therefore, its rate of increases in capital per person could be characterized as being superior to those of the NICs up to the time of their take-offs. If any country could have been expected to take-off on the basis of the model, it should have been the Philippines. What happened?

One explanation may be the inability of the country to implement the complementary policies implicit in the Tsiang model, preventing the full use of the high saving rate that the

Table 11

Changes in Productive Capital Per Capita and
Annual Growth Rate of Real GDP and Real Per Capita

Year	K/Y	L/L	(K/Y)x(L/L)	S/Y	S/Y- (L/L)x(K/Y)	Annual Growth Rate ^a	
						Real GDP	Per Capita GDP
1957	4.54	2.89	13.12	18.48	5.36	5.28	..
'58	4.50	2.89	13.00	17.88	4.88	3.55	..
'59	4.36	2.89	12.60	19.35	6.75	6.72	..
'60	4.42	2.89	12.77	16.78	3.99	1.49	..
'61	4.33	2.93	12.69	18.41	5.72	5.60	2.66
'62	4.29	2.94	12.61	17.36	4.75	4.78	1.82
'63	4.16	3.06	12.73	19.26	6.53	6.96	3.90
'64	4.20	2.98	12.52	20.93	8.41	1.47	0.41
'65	4.10	3.00	12.3	20.95	8.65	5.24	1.95
'66	4.07	3.03	12.33	20.22	7.89	4.44	1.68
'67	3.99	3.05	12.17	22.01	9.84	6.09	2.90
'68	3.97	3.08	12.22	22.97	10.75	5.56	2.44
'69	3.97	3.10	12.31	23.02	10.71	4.80	1.64
'70	3.89	3.11	12.1	21.24	9.14	4.58	1.46
'71	3.86	2.89	11.16	20.97	9.81	4.92	1.95
'72	3.80	2.96	11.25	20.64	9.39	4.76	2.05
'73	3.60	3.02	10.87	22.58	9.71	8.66	5.14
'74	3.64	3.08	11.21	24.26	13.05	5.26	2.11
'75	3.51	3.14	11.02	27.40	16.38	6.58	4.59
'76	3.50	1.63	5.70	27.72	22.02	6.73	3.77
'77	3.50	2.80	9.80	26.92	17.12	6.03	3.99
'78	3.50	2.72	9.52	28.80	19.28	5.81	3.32
'79	3.50	2.65	9.28	30.44	21.16	5.72	3.99
'80	3.50	2.57	8.99	28.70	19.71	7.13	2.18
'81	3.50	2.50	8.75	28.29	19.54	3.78	1.36
'82	3.50	2.54	8.89	26.53	17.64	2.98	0.51
'83	3.50	2.50	8.75	24.94	16.19	1.08	-1.74
'84	3.50	2.49	8.72	16.88	8.16	-5.99	-7.97
'85	3.50	2.47	8.64	12.37	3.73	-4.28	-6.28
'86	3.50	2.44	8.54	11.15	2.61	1.54	-2.05
TOTAL						129.19	37.78

NOTE: 1) K/Y for 1976-86 assumed to be 3.50.

2) Population growth for 1948-60 assumed to be a constant rate.

Source: Paderanga (1988), Table 8.

country produced. The full effect of a raised saving rate is achieved through specialization in industries where the economy has the highest comparative advantage. Trade allows this specialization while foreign investment raises the capacity to increase capital per worker. The Philippines did not fully exploit its increased saving rate when it neglected its export markets. Thus, the story of its missed opportunity is captured by its relative neglect of the foreign sector compared to its ASEAN neighbors and the Asian NICs.

The hindrance posed by inward orientation is indicated by the country's inability to substantially decrease its capital-labor (K/Y) ratio. During the same period, Taiwan decreased its K/Y ratio from a very high 6.0 to 2.1. Korea proceeded from an already low 2.8 to an even lower level of 1.8 in 1973. In contrast, the Philippines decreased its K/Y ratio only from 4.54 in 1957 to 3.51 in 1975 when the latest reliable estimates of capital stock are available. This sustained high capital-labor ratio is concretely manifested in the wrong choice of industries to promote. While its endowments suggest that the country's greatest comparative advantage is in labor-intensive manufactures for the moment, productive resources have been induced by industrial policies to flow towards relatively inefficient, capital-intensive, inward-looking manufacturing industries (Tan, 1987: 54).

The net effect of prevailing trade and industrial policies was to create a dualistic economic structure with two essentially separate industrial sectors applying widely different production techniques. The manufacturing sector was highly-capital intensive while the non-manufacturing sector was labor-intensive. The effect of this cleavage is illustrated by an analytical decomposition of the national capital-output (K/Y or k_n), and that for non-manufacturing (k_{nm}). The method of calculating Philippine capital stock makes the assignment by sector difficult. As a proxy, the capital-output ratio for Korea in 1973, 1.8, is used as an estimate for the non-manufacturing capital-output ratio (k_{nm}) in the Philippines. This is probably a high estimate because Korea had a significant capital-intensive industrial sector by that time. Using the national capital-output ratio (k_n) is then deduced. The computed magnitudes are summarized in Table 12a.

Trade and industrial policies induced capital into the capital intensive sector raising the overall threshold at which take-off could occur. Figure 3 illustrates the Philippine situation by showing three r_1 curves. The solid r_1 curve reflects the national capital-output ratio, k_n . It depicts the take-off threshold to be at r_3 . However, the dualistic nature of the economic structure is shown by the two broken r_1 curves.

The r'_1 curve reflects the capital-output ratio for manufacturing (k_m) and shows a much higher take-off threshold level, r'_3 . The other broken curve, r^*_1 , reflects the capital-output ratio for non-manufacturing (k_{nm}) and shows a lower threshold for take-off, r^*_3 . Unfortunately, trade and industrial policies have induced capital into the capital-intensive sector. This has raised the effective threshold at which take-off could occur to the much higher level of r'_3 . Viewed in this perspective, the Philippines' high saving and poor economic growth records are reconciled. Table 12a shows that using the higher capital-output ratio for manufacturing, the excess of saving over the needed capital per new worker ($S/Y - k_m^*L/L$) is much lower than originally thought.

In contrast, Korean manufactured exports became increasingly labor-intensive relative to manufactured imports as well as to manufactured output during the 1960-68 period when take-off started (Balassa, 1985: 155). Taiwan's exports also required less capital per worker than its import-competing goods. Because

$$\dot{r} = \bar{s} - rl$$

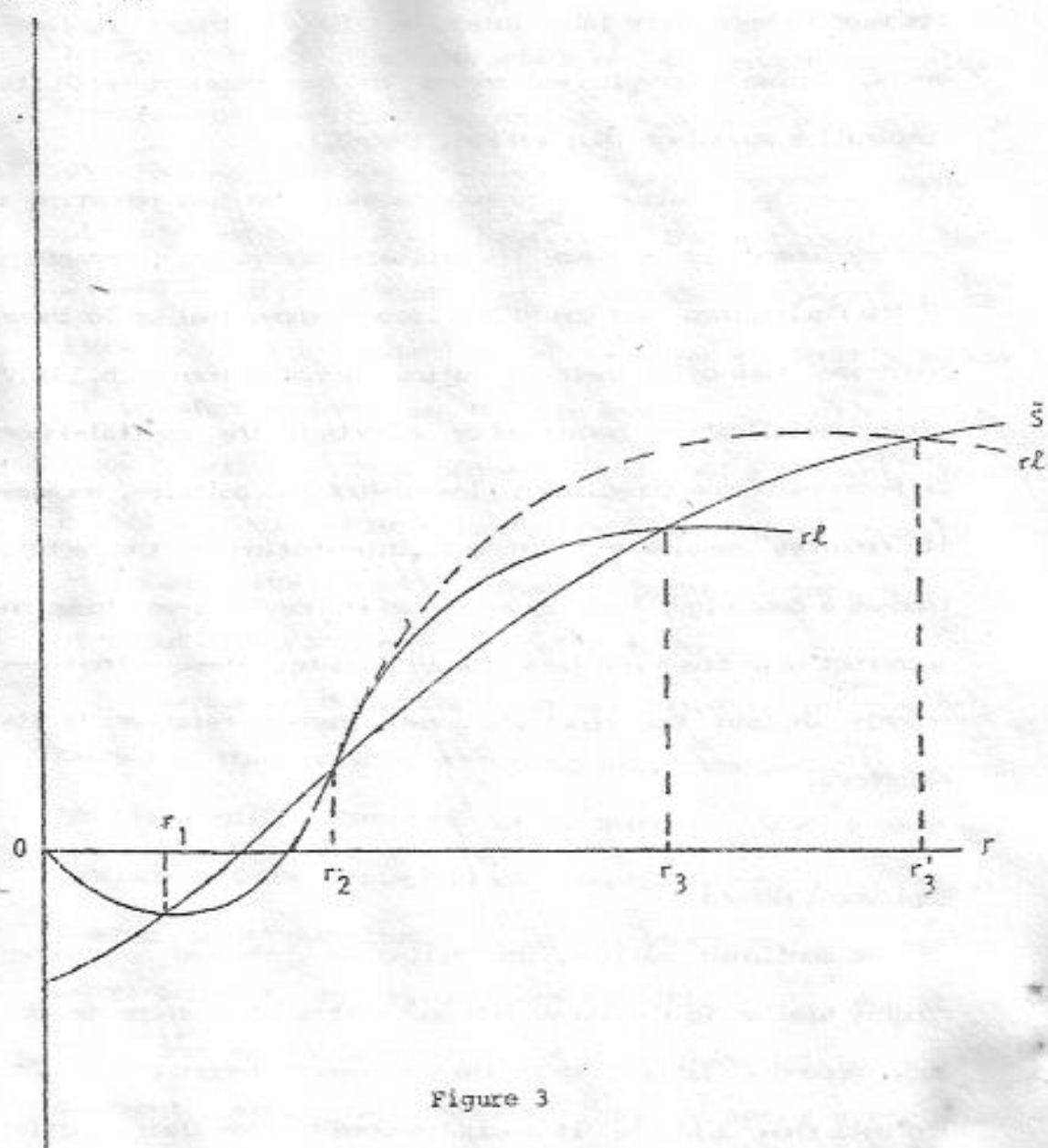


Figure 3

its exports were more labor intensive than its import replacements, Taiwan's development proved to be consistent with its comparative advantage (Kuo and Fei, 1985:82).

Inward orientation may be more harmful than just rendering a country unable to decrease its capital-labor ratio. Comparison of the Philippines' and the NICs' records shows that up to these countries' take-offs, their K/L ratios did not differ much. Only after specialization permitted by exports do the capital-labor differences become conspicuous. Inward-looking policies, because it requires massive and constant intervention in the market, imposes a deadweight loss by making an economy's firms focus on incorrect objectives and less able to compete. These differences roughly explain the country's growth record relative to its neighbors.

Employment Record

As mentioned earlier, the Philippines possessed an economy roughly similar to the Taiwan and South Korea about three decades ago. Appendix Table 6 shows the employment record of Taiwan. The data show a stable if gradual movement from their initial position to the present situation of generally adequate labor utilization.

In contrast, the Philippines exhibits a persistent picture of inadequate labor utilization. Table 5 shows the labor force, unemployment and estimated under-employment figures at various points. These figures need to be interpreted in the context of Oshima's (1985) description of the economics of monsoon Asia.

According to him, the characteristic of monsoon agriculture requires the "traditional industrial structure" the large pool of body required for various functions during the peak seasons of planting and harvesting. The rest of the year, most of these workers would be under-utilized in various "make-work" occupations. Part of the accomplishment of Taiwan and South Korea was in transferring these workers from monsoon agricultural industries to activities requiring year-round full employment. This, of course, required technological and institutional innovations in the agricultural sector allowing it to produce the same volume of output with a smaller "standing" labor force.

Analysis of Philippine trade and industrial policies indicates that these policies encouraged industries unable to address the labor utilization needs of the economy. Studies generally conclude that the protective or promotion structure was biased towards import-substituting, capital-intensive, and against export-oriented, agriculture-based industries¹³. The bias is strong for manufacturing which is import-substituting, import-dependent, and capital-intensive. There is also a general bias against agriculture and other primary, export-oriented and labor-intensive industries like garments manufacture and some agriculture-based industries¹⁴. The picture indicates a general failure of strategy in the sense that the expansion of the industrial sector which was the linchpin of the plan was inadequate. The

¹³See section IV.

¹⁴See, for example, Power and Sicat (1970) and Baldwin (1975).

sectors share of the labor force and absorb additional entrants into the labor force. Table 1215 shows that while industry, specifically manufacturing, was able to significantly increase its share of total output, its share of employment remained basically the same. Services was the major recipient of agriculture's decrease in employment share.

Two factors determine an industry's ability to provide employment: its output growth and the change in its labor-output ratio. Relative to our ASEAN neighbors and the NICs, the Philippine economy grew more slowly than hoped for. Since the strategy hinged on the expansion of the industrial sector, the slow growth can be traced to industry's inability to expand as expected. The industries favored by the strategy also tended to be those with lower than average incremental labor-output ratios. Table 13 shows that industries which were favored and, therefore, tended to grow faster¹⁵ in the post-war period also tended to have higher incremental output-labor ratios. In other words, our industrialization strategy chose "non-winners" which at the same time were less than perfect absorbers of labor.

As an indication of the net impact of the package of policies prevailing during the post-war period two rough measures of the combination of input substitution and technological change were estimated. The first is an estimate of the percent change in labor-output ratio. Using the formula

¹⁵In this section, net domestic product (NDP) and gross domestic product (GDP) are expressed in real terms.

¹⁶See Table 4.

Table 12

Share Of Output And Employment By Industry Group*
1955-1986

	APP	NO	M	C	ECV	TSC	S	Total
1. Net Domestic Product								
1956	46.74	1.75	21.17	6.71	0.83	4.43	18.37	100.00
1961	45.76	1.68	22.70	5.63	0.78	4.61	16.86	100.00
1966	44.71	1.65	23.14	6.28	0.71	4.68	18.81	100.00
1971	42.46	2.92	24.48	4.86	0.84	4.92	19.51	100.00
a/ 1976	33.94	2.57	30.16	9.06	1.17	6.68	16.41	100.00
a/ 1981	32.17	2.84	31.32	10.24	1.30	6.59	15.54	100.00
a/ 1986	37.76	2.16	30.11	4.69	2.39	7.08	15.81	100.00
b/								
2. Employment								
1956	68.20	0.23	13.82	2.47	0.11	3.15	12.01	100.00
1961	67.95	0.40	13.29	3.00	0.26	3.81	12.19	100.00
1966	64.15	0.29	13.61	3.30	0.26	3.96	14.44	100.00
1971	58.42	0.51	13.35	4.24	0.53	4.70	18.26	100.00
1976	60.11	0.41	12.43	3.63	0.34	4.07	19.01	100.00
1981	57.63	0.52	11.66	3.82	0.43	4.74	21.20	100.00
1986	57.86	0.84	10.71	3.54	0.35	4.73	21.97	100.00

*5-year averages centered on the years indicated.

a/
Gross Domestic Product

b/
Excludes those whose industry is not adequately defined.

Table 12a

Implied Changes in Productive Capital Per Worker

Year	Nat'l (actual) k	Non-manufacturing		Manufacturing		k'	L/L	S/Y	S/Y - (k'x(L/L))
		sh	k	sh	k				
	n	nm	nm	m	m				
1957	4.54	0.617434	1.8	0.162565	10.65	10.65	2.89	10.48	-35.43
'58	4.50	0.831033	1.8	0.168966	17.78	17.78	2.84	17.88	-33.50
'59	4.36	0.827419	1.8	0.172590	16.63	16.63	2.84	19.35	-28.72
'60	4.42	0.825342	1.8	0.174657	16.80	16.80	2.89	16.76	-31.79
'61	4.33	0.827869	1.8	0.172130	16.50	16.50	2.93	18.41	-29.93
'62	4.29	0.816872	1.8	0.173127	16.18	16.18	2.94	17.36	-30.21
'63	4.16	0.825967	1.8	0.174032	15.36	15.36	3.06	19.26	-27.74
'64	4.20	0.826045	1.8	0.173954	15.60	15.60	2.98	20.93	-25.55
'65	4.10	0.827986	1.8	0.172015	15.17	15.17	3.00	20.95	-24.56
'66	4.07	0.823070	1.8	0.176929	14.63	14.63	3.03	20.22	-24.11
'67	3.99	0.776499	1.8	0.223300	11.61	11.61	3.04	22.01	-13.39
'68	3.97	0.774879	1.8	0.225126	11.44	11.44	3.04	22.97	-12.26
'69	3.97	0.776604	1.8	0.223395	11.51	11.51	3.19	23.02	-12.67
'70	3.89	0.768240	1.8	0.231759	10.82	10.82	3.11	21.24	-12.46
'71	3.86	0.764394	1.8	0.233605	10.54	10.54	2.89	20.97	-9.50
'72	3.80	0.751331	1.8	0.247668	9.88	9.88	2.96	20.64	-8.59
'73	3.60	0.749684	1.8	0.250315	8.99	8.99	3.02	20.58	-6.57
'74	3.64	0.750838	1.8	0.249161	9.18	9.18	3.08	24.26	-4.03
'75	3.51	0.758093	1.8	0.241906	8.97	8.97	3.14	27.40	-0.45
'76	3.50	0.760409	1.8	0.239590	8.96	8.96	1.63	27.72	13.22
'77	3.50	0.749557	1.8	0.250442	8.59	8.59	2.80	26.92	2.87
'78	3.50	0.745043	1.8	0.254936	8.47	8.47	2.72	28.80	5.77
'79	3.50	0.748273	1.8	0.251726	8.55	8.55	2.65	30.44	7.77
'80	3.50	0.750016	1.8	0.249083	8.60	8.60	2.57	28.70	6.60
'81	3.50	0.750964	1.8	0.249335	8.63	8.63	2.50	28.29	6.72
'82	3.50	0.752169	1.8	0.247830	8.66	8.66	2.54	26.53	4.53
'83	3.50	0.748718	1.8	0.251281	8.57	8.57	2.50	24.94	3.53
'84	3.50	0.751732	1.8	0.248267	8.65	8.65	2.49	16.88	-4.65
'85	3.50	0.760130	1.8	0.239869	8.89	8.89	2.47	12.37	-9.58
'86	3.50	0.760802	1.8	0.239197	8.91	8.91	2.44	11.15	-10.58

NOTES: 1) K/Y for 1976-86 assumed to be 3.50.

2) Population growth for 1948-60 assumed to be a constant rate.

3) k = assumed to be 1.8.

nm

4) $k' = \frac{k}{nm}$

5) sh = non-manufacturing share of total GNP

6) sh = manufacturing share of GNP.

7) $k = \frac{(k - (sh \cdot k_{nm} + k_m))}{nm}$

8) k is measured by real NDP, 1957-66; by real GDP 1967 to 1986.

Sources: Paderanga (1988), Table 8.

SEDA, National Income Accounts, various issues.

$$(1) \quad \frac{d(N/Q)}{(N/Q)} = dN/N - dQ/Q$$

we obtain the direction towards which the economy was implicitly substituting. The second measure was the concept of the aggregate production function with an allowance for technological change. Using the simple aggregate production function

$$(2) \quad Q = F(K, N, t)$$

we derive the change in output as

$$(3) \quad dn = \frac{dQ}{dK} dK + \frac{dQ}{dN} dN + \frac{dQ}{dt} dt$$

Rearranging, we get the following expression for the change in labor employed.

$$(4) \quad dn = \frac{dN}{dQ} dQ - \left(\frac{dN}{dK} \right)_{Q=\text{constant}} dK - \left(\frac{dN}{dt} \right)_{Q=\text{constant}} dt$$

A rearrangement of equation (4) gives us an estimate of the impact of implicit substitution on labor employment.¹⁷

¹⁷For a conservative estimate, a weighted average of the labor-output ratio of all five year periods as the proxy for the inverse of the marginal product is used. That is,

$$\frac{dN}{dQ} = \frac{\text{Sum, first to last year, } (N_i)}{\text{Sum, first to last year, } (Q_i)}$$

(for the 1956-1978 period, I used the 1956-61 estimate; for the 1967-81 period, the 1967-72 estimate).

Table 13a

Change in Output by Industry Group, 1956-1986
Units: Million Pesos

Industry/Period	1956-61	1961-66	1966-71	1971-76	1976-81	1981-86	1956-78	1967-81
Agri., Fishery & Forestry	1680	2271	2259	3336	4819	2625	11239	11457
Mining & Quarrying	54	86	542	46	684	-617	913	1511
Manufacturing	1188	1398	2613	3566	5669	-2242	9445	13658
Construction	39	492	-58	2674	2555	-4448	3710	5852
Elec., Gas & Water	23	33	95	188	321	548	380	771
Trans., Storage & Comm.	219	276	398	943	1038	63	2024	3108
Services	845	1046	1509	2858	2512	-53	6312	6168
TOTAL	4048	5588	6758	12811	17589	-4120	34223	42475

Sources: NEDA, Philippine Statistical Yearbook, various issues.
NEDA, National Income Accounts, 1985-87.

Table 13b

Employment Generation By Industry Group, 1956-1986
Units: In Million Pesos

Industry/Period	1956-61	1961-66	1966-71	1971-76	1976-81	1981-86	1956-78	1956-81	1956-86
Agr., Fishery & Forestry	570	658	165	1686	802	1361	3356	3681	5242
Mining & Quarrying	17	-6	28	0	24	70	44	63	133
Manufacturing	90	218	141	208	127	98	720	784	882
Construction	68	72	144	24	101	37	333	409	446
Elec., Gas & Water	14	3	33	-12	20	-4	42	58	54
Wholesale & Retail Trade	14	301	334	333	92	858	844	1174	2032
Trans., Storage & Comm.	86	68	131	32	184	107	463	501	608
Services	132	391	601	557	714	622	2086	2395	3017
TOTAL	1091	1705	1577	2828	2064	3149	7888	9265	12414

Notes: Excludes "industry not adequately defined".

Source: NEDA, Philippine Yearbook, 1987

Table 13c

Incremental Output-Labor Ratio

1956-1978

Industry/Period	1956-61	1961-66	1966-71	1971-76	1976-81	1981-86	1956-78
Agri., Fishery & Forestry	2.95	3.45	13.69	1.98	6.01	1.93	3.35
Mining & Quarrying	3.18	-14.33	19.36	0.00	560.00	-687.00	869.00
Manufacturing	13.20	6.39	14.28	17.14	44.57	-23.88	19.40
Construction	0.57	6.83	-0.40	111.42	25.30	-120.22	11.14
Elec., Gas & Water	1.64	7.67	2.88	-15.67	16.05	-137.00	9.05
Trans., Storage & Comm.	2.55	4.06	3.04	29.47	5.64	0.61	4.37
Services	6.46	2.68	2.51	3.69	3.52	-0.08	3.03
TOTAL	4.14	3.98	5.44	5.13	8.92	-1.80	4.86

a/

Cannot be computed.

Source: Output figures, 1956-78, NDP: 1967-86, GDP.

$$\begin{aligned}
 (5) \quad \text{implicit substitution} &= dN - (dN/dQ) * dQ \\
 &= - \left\{ \frac{(dN/dK) * dK}{Q=c} + \frac{(dN/dt) * dt}{Q=c} \right\}
 \end{aligned}$$

Figure 4 illustrates the points above. N_0 is employment during the initial period N_1 is in the terminal period. N_0 is chosen by producers given the relative prices between K and N , as shown by the budget line B_0 . N_1^* would have been the labor employed in producing the output in the end period if the labor-output (and the capital-labor) ratio had been constant. This would have happened if the budget line has been B_1^* , parallel to B_0 . $N_1^* - N_0 = (dN/dQ)*dQ$. However, because of trade and industrial policies, producers think that the relative price between K and N is shown instead of B_1 . Therefore, they choose the combination c which implies labor employment at N_1 . $N_1^* - N_1 = (dN/dK)*dk$. This is the substitution effect which is biased against labor employment. An additional bias against employment is possible through labor-saving technical change, shown in our diagram as a shift from the solid isoquant Q_1 to the broken curve Q'_1 . This is measured by the term, $(dn/dt)*dt$. However, the paucity of innovations in the economy and the pervasive importation of machinery for expansion by

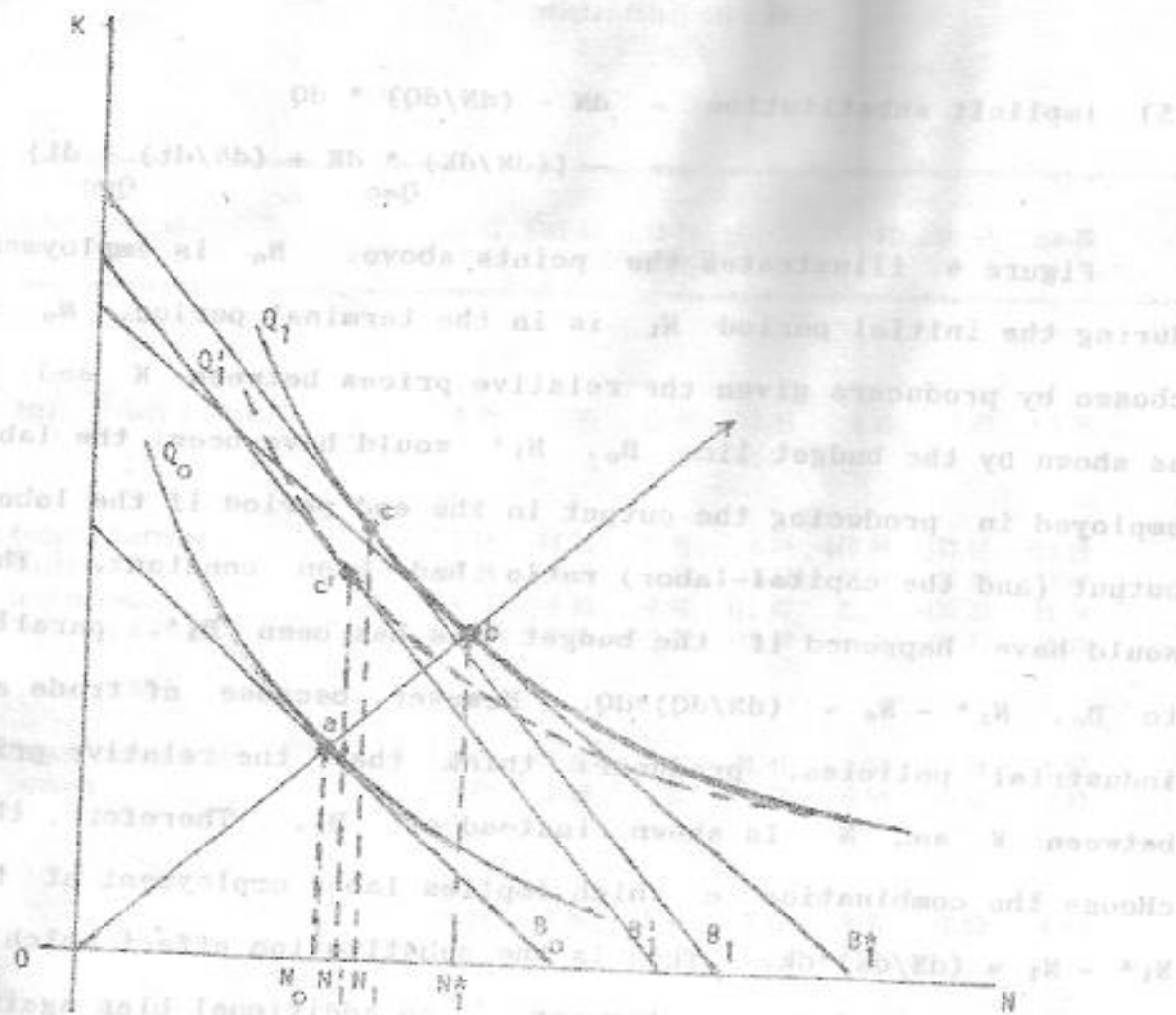


Figure 4

favored sectors, tend to diminish the significance of this term. Embodied technical change in imported inputs is, perhaps, best classified as a substitution effect coming from relative prices. At any rate, structural dualism reinforces the belief that implicit substitution is mostly caused by relative prices.

Table 14 shows the percentage change in the aggregate labor output ratio as described by equation (1). For the period 1956-1981, the implicit substitution was negative. The economy's output was becoming relatively less-labor intensive. The sole exception was the 1981-87 period when employment still grew while output shrunk. Aggregate substitution can happen through substitution against labor in existing industries or commodities or by movement of economy towards commodities which use less labor. There are indicators that both trends have been presented.

Table 15 summarizes the percent change in labor output ratio by industry. The largest percentage decrease was in manufacturing where the capital-bias of the incentives was probably more easily accommodated or incorporated. What may be surprising is that the tendency to substitute against labor was quite widespread. It was probably least in mining and quarrying, construc-

tion and utilities (electricity, gas and water), industries with wide possibilities in capital-labor combinations. (The large spectrum of available techniques probably explains the wide swings from large positive to large negative implicit substitution percentages). Even agriculture exhibited this tendency. Services showed a stable resistance to the substitution trend. However, this includes domestic services and public sector employment, traditionally residual places for those unable to find employment somewhere else.

Table 16 and 17 show the employment effect of implicit substitution from labor as assessed by equation (5). The results corroborate the findings of Table 14 showing negative impacts on employment for all periods except 1981-87 which included the economic recession of 1984-86. The information for broad industry groups shown in Tables 18 and 19 also reinforce the story told by Table 14. Most industries exhibited a tendency to substitute away from labor with the exception of the services sector which showed positive implicit substitution during 1956-78 and 1967-81. Mining and quarrying and construction also show positive effects for 1967-86.

Public Sector Employment

One of the principal results of Philippine industrialization is, perhaps, illustrated by the non-conforming behavior of service sector employment. One clue to this unusual response is provided by a finer breakdown of the employment figures by class of workers. Table 20 shows the number of employed persons by

Table 14
Percent Change in Aggregate Labor-Output Ratio
1956-87

Year	Employment (1)	NDP (2)	GDP (3)	GNP (4)	QO/Q (5)	(4)-(5) (6)
1956	7702	23013		3.380787	4.362348	-0.98156
1961	9095	25490		3.755507	4.554264	-0.79875
1966	10936	35586		2.765239	4.463652	-1.69841
1971	12534	44282		4.240949	6.042429	-1.80147
1976	15427	59378	72962	2.497375	5.684684	-3.1873
1981	17452		96196	2.381818	-2.11241	4.493430
1987	20854		90194			
1956-78				3.408630	4.890548	-1.48191
1967-81				3.441639	5.730210	-2.28857

a) Annual growth rate of output measured by NDP growth, 1956 to 1978;
by GDP growth, 1978 to present.

Table 15

Percent Change In Labor-output Ratio By Industry, 1956-1986

Industry/Period	1956-61	1961-66	1966-71	1971-76	1976-81	1981-86	1956-78	1967-81*
Agri., Fishery, Forestry	-1.63	-1.90	-2.95	0.51	-2.68	0.83	-1.66	-62.82
Mining & Quarrying	11.59	-8.16	-2.32	-0.93	-0.45	19.85	0.48	-5.72
Manufacturing	-4.00	-1.49	3.67	-4.72	-5.04	3.01	-3.54	-4.66
Construction	5.07	-1.85	8.34	-20.23	-4.49	16.69	-1.85	-6.44
Elec., Gas & Water	19.45	0.00	9.96	-15.13	-0.57	-12.76	2.69	-4.49
Trans., Storage & Comm.	1.39	-1.07	0.41	-8.16	0.54	2.50	-0.90	-3.43
Services	-1.96	2.02	2.04	-0.55	0.46	4.37	0.59	-0.14

*Used real GDP data.

Notes: Annual growth rate of output measured by real NDP growth, 1956-78;
by real GDP growth, 1978 to present.

Table 16

Employment Effect of Implicit Substitution
in Net Domestic Product
(1956-1978)

Year	NDP (1)	N (2)	dN (3)	dQ (4)	(N/Q) (5)	(4)x(5) (6)	(3)-(6) (7)
1956	23013	7702					
			1393	5477	0.325469	1782.596	-390
1961	28490	9095					
			1841	7106	0.312162	2218.227	-377
1966	35596	10936					
			1598	8686	0.279873	2430.977	-833
1971	44282	12534					
			2893	15096	0.272247	4109.850	-1217
1976	56378	15427					
			674	6414	0.243780	1563.610	-890
1978	65792	16101					
'56 - '78			8399	42779	0.283270	12118.00	-3719

Table 17

Employment Effect of Implicit Substitution
in Gross Domestic Product
(1967-1987)

	GDP	N	dN	dQ	(N/Q)	dQ	dN
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1967	44093	10867	1667	9433	0.231455	2123.321	-516
1971	53526	12534	2893	19436	0.221907	4312.999	-1420
1976	72962	15427	2025	23234	0.187493	4355.218	-2331
1981	96196	17452	3402	-6082	0.212235	-1273.83	4676
1987	90194	20854					
1967-81			6585	52103	0.206808	10775.34	-4190
1967-87			9987	-1667	0.210617	-351.100	10338

Table 18

Employment Effect of Implicit Substitution
in NDP By Industry, 1956-1978

Industry/Period	1956-61	1961-66	1966-71	1971-76	1976-78	1956-78
Agri., Fishery, Forestry	-410.49	-585.53	-941.78	125.18	-451.43	-2284.12
Mining & Quarrying	12.51	-13.07	-10.02	-2.45	-3.89	-14.05
Manufacturing	-194.62	-84.52	-231.75	-335.25	-129.66	-988.18
Construction	60.79	-25.38	157.23	-465.60	-35.84	-319.47
Elec., Gas & Water	-9.12	-20.14	-62.15	-200.13	-47.09	-338.12
Trans., Storage & Comm.	21.83	-17.29	14.85	-206.12	101.36	-89.12
Services	-83.92	117.85	161.79	-21.18	149.98	330.16

Table 19

Employment Effect of Implicit Substitution
in GDP by Industry, 1967-1986

Industry/Period	1967-71	1971-76	1976-81	1981-86	1967-81	1967-86
Agri., Fishery, Forestry	-1662.90	-129.83	-421.59	379.92	-2132.69	-1804.13
Mining & Quarrying	-29.19	-8.24	9.30	106.95	-21.77	60.06
Manufacturing	-259.45	-282.79	-215.72	277.92	-718.98	-441.12
Construction	130.85	-479.97	-37.20	512.92	-333.36	135.59
Elec., Gas & Water	8.65	-31.69	6.71	-42.47	-11.80	-53.96
Treas., Storage & Comm.	20.93	-266.54	69.57	96.43	-127.45	-58.14
Services	8.65	-45.80	290.16	769.82	318.10	894.93

Table 20

Number of Employed Persons By Class of Workers 1956-1984

(In Thousands)

Year	Total	Wage and Salary Workers	Own Account Workers	Family Workers	Not Reported
1956	7702	1300	1842	3440	40
1960	8539*	2797	3609	2096	37
1964	10315	3350	4192	3017	13
1968	10471	4062	4481	2001	44
1972	12582	4785	5053	2726	19
1976	14238	6409	5412	2309	108
1980	16434	6955	6207	3272	-
1981	17452	7303	6602	3547	-
1982	17371	7104	6739	3528	-
1983	19212	7864	7440	3909	-
1984	18724	8795	6625	3304	-

* Includes person whose category as worker was not reported numbering 36,000 for 1960.

Source: Canlas (1988), Table 5.2.

class of workers. It shows that wage and salary workers increased from 30% to 46% of the total from 1936 to 1984. At the same time, the proportion of government workers to total wage and salary workers increased from 17% to 21% during the 1963-83 period (Table 21).

The role of the government in the Philippines is similar to that in some other less developed countries, sometimes serving as the employer of last resort. Further, the service sector includes domestic services and various occupations belonging to the informal sector such as hawking and occasional odd jobs. The employment record of the service and public sectors, therefore, indicates that a residual sector rather than that of an expanding sector in the stage of high-mass consumption.¹⁷ Its relatively low incremental output-labor ratio is an indication of this role.

VI

Summary and Conclusions

The record of the Philippine economy since the second world war is easy to summarize. Our output growth is dismal compared to countries similarly situated even as late as 1960. The unemployment situation has not improved in the past three decades. The presence of a large pool of unemployed and underemployed workers has depressed wages to a point where real wages seem to have been decreasing in the face of increasing national income

¹⁷Rostow, W.W., The Stages of Economic Growth.

Table 21

Number of Government Workers, Wage and Salary Workers, 1956-1984

Year	Wage and Salary Workers (000)				Ratio to Government to Wage and Salary Employment (5)
	Total (1)	Priv. (2)	Own Family Enterprise (3)	Gov't. (4)	
1956	2380	-	-	-	-
1960	2797	-	-	-	-
1963	3393	2829	-	564	16.6%
1968	4062	3146	-	797	19.6%
1972	4785	3850	-	936	19.6%
1976	6409	4995	199	1305	20.3%
1980	6955	5377	90	1488	21.4%
1981	7303	5619	102	1582	21.7%
1982	7104	5381	150	1573	22.1%
1983	7864	6126	83	1655	21.0%
1984	8795	n.a.	n.a.	n.a.	-

Source: Canlas (1988), Table 5.3.

per worker¹⁸. Finally, the pattern of growth has been biased against labor in favor of capital with consequences on income distribution. All of these observations point to a rather disappointing record for the Philippines. A rather drastic overhaul of the development strategy seems to be required.

Philippine development strategy needs to be reoriented towards consciously putting the employment objective on at least an equal plane as output growth. The study of policy including tax and credit incentives from the 1950s to the early seventies shows policy attention to employment as more of an afterthought. Wanton granting of tax and credit incentives and market protection through tariffs and quotas imposed a heavy cumulative burden on those sectors and industries not included as recipients of such incentives. At the same time, the characteristics of the incentives tended to make the favored industries capital-intensive, inward-looking and inefficient. Their growth was dependent on the performance of the penalized sectors. The end result, as we have seen, was a dismal performance in income and employment.

The Role of Agricultural Development

Oshima (1987) calls for a development strategy designed for monsoon Asia that is expressed in long-run equilibrium periods indicating various transitions. One of these is the agro-industrial transition consisting of five steps. First, is the construction of rural infrastructure which, incidentally, gene-

¹⁸Even excluding the 1984-85 recession.

rates employment during the slack months. Second, with more work year-round and rising annual incomes, more will be spent on better seeds, fertilizers, insecticides, tools, and equipment. Next, the rising income leads to higher employment on such non-crop activities as livestock raising, fishery and forestry, some of whose output can be exported. In the fourth step, diversified agriculture gives rise to off-farm jobs. Finally, higher incomes generate demand for industrial goods especially garments, shoes, home utensils, and others. As the above process continues, the increases in employment tend to outrace the growth labor supply, the labor markets tighten and real wages begin to rise with the approach of full employment.

Too literal an adaptation to the Philippines would be detrimental for two reasons. First, some of the conditions may not apply to the Philippines. The resources to be used for increasing the demand for labor and keeping prices stable have already been over-exploited and may need a recovery period before they can provide the magnitude of employment needed for the development push. Second, the five steps that Oshima (1987) enumerates are best interpreted as a stylized representation of the whole process. As it stands, the steps focus on a narrow portion of the economy, agriculture and agriculturally related industries, and on a narrow set of instruments, concentrating on changes within the economy. Policies on other sectors of the economy with profound effects on agriculture and other sectors are neglected. It may also be possible to by-pass stages (1) to (4) and use employment expansion in garments and other labor-

intensive industries early on by exploiting the world market through intelligent use of the international product cycle. Thus, as other countries lose their advantage in certain products the Philippines can succeed then. However, Oshima's five steps may be taken as design for agriculture and its related industries. The strategy also highlights two main ingredients of an alternative strategy. It focuses on the role of agriculture and agriculture-based industries as a potential market for industrial goods, and the role of labor utilization and its resulting emphasis on labor-using industries raising real wages.

The Role of Trade

An alternative strategy, would be best if it incorporates two interrelated features mentioned above: restored attention to agriculture, and emphasis on labor utilization for labor abundant economies like the Philippines as a way to attain full employment and develop the domestic market. The country's development strategy up to this point has effectively penalized the agricultural, export and labor sectors. The removal of excessive penalties on all sectors of the economy including restrictions on competition (e.g. quotas) means easier access to our markets by potential suppliers. In some cases, it will mean confronting domestic producers with foreign competition. Most probably this change in policies will imply an expansion of exports as resources are shifted from import substitutes to other sectors. The peso-to-dollar rate may also be expected to rise as restrictions on imports (tariff and non-tariff barriers) are lowered. This

will encourage exports further. Since a country's greatest asset in international trade lies in using its most abundant resource, a labor abundant country like the Philippines automatically goes a long way towards solving its unemployment problem. Tsiang and Wu (1995) note, "fully utilizing the opportunity to trade ... enables a country to specialize in those industries in which it has the highest comparative advantage".

The expansion of trade resulting from a realignment of incentives should not be confused with a growth strategy that is anchored on export promotion, although export expansion may result from a balanced strategy. In the former case, the emphasis is on the alignment of the price signals with the economy's resources. Too much emphasis on the latter may cause an economy to overinvest in exportables in the sense that the proportion of its resources going into exports may have gone beyond diminishing returns relative to resources going into domestic products.¹⁹

An Alternative Strategy

A policy program for the short to medium-term can be drawn incorporating the Oshima (1987) five-step process:

- (a) Restructure the system of protection towards a more uniform pattern around a reasonable level of protection and government revenue.

¹⁹See, for example, Krueger (1981: 214-215) on Korea.

(b) Invest in infrastructure services with significant public good characteristics²⁰.

(c) If desired, go into five-year promotion programs with following features:

(1) promote at most one to three industries with infant-industry potentials for a period of five years. The one-to-three limitation is designed to ensure that the burden on the rest of the economy does not become excessive.

(2) where necessary, structure incentives, towards those that encourage the use of labor (for example, a per worker subsidy).

(3) Limit promotion to five-years in order to induce investment in productivity increases. If an industry's promotion must last more than five years, then it must mean that one prospective industry will lose its chance at being promoted during the next five-year period.

(4) Incentives must be available to any one who wishes to invest in an eligible industry. That is, incentives should be industry-specific. This will encourage efficiency and discourage abnormal returns.

²⁰While not discussed in the text, this incorporates Oshima's emphasis on the support structures.

This sketch is general and tentative. The hope is that it will start discussion on a program for genuine industrialization that promotes employment and income growth.

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Appendix 1

Estimation of the Approximate Year of Take-off & Annual Growth Rate of Real Nat'l Income & Per Capita Income in Taiwan

Year	K/Y	L/L	(K/Y) x (L/L)	S/Y		Annual Growth Rate of Real ^a	
				(S/Y)	(K/Y) x (L/L)	Nat'l Income	Per Capita Income
1952	6.0	3.3	19.8	5.2	-14.6	13.1	9.3
1953	5.5	3.8	20.9	5.0	-15.9	9.1	5.7
1954	5.1	3.7	18.9	3.3	-15.6	8.7	5.0
1955	4.8	3.8	18.2	4.9	-13.3	8.8	4.9
1956	4.6	3.4	15.6	4.8	-10.8	4.6	0.9
1957	4.8	3.2	13.8	5.9	-7.9	7.3	4.0
1958	4.1	3.6	14.8	5.5	-9.8	7.1	3.7
1959	3.9	3.9	15.2	5.0	-10.2	6.6	3.2
1960							
1961	3.7	3.5	13.0	7.6	-5.4	5.0	1.7
1962	3.6	3.3	11.9	8.0	-3.9	6.8	3.5
1963	3.4	3.3	11.2	7.6	-3.6	8.7	5.5
1964	3.2	3.2	10.2	13.4	-3.2	9.2	6.2
1965	2.9	3.1	9.0	16.3	7.3	16.1	10.5
1966	2.7	3.0	8.1	16.5	8.4	7.6	4.6
1967	2.6	2.9	7.5	19.0	11.5	9.4	6.5
1968	2.5	2.3	5.8	20.1	14.3	10.5	7.8
1969	2.4	2.7	6.5	19.8	13.3	9.0	6.4
1970	2.3	2.5	5.8	22.1	16.3	10.1	7.7
1971							
1972	2.2	2.4	5.3	23.8	18.5	11.1	8.8
1973	2.1	2.2	4.6	27.6	23.0	12.3	10.1
1974	2.0	2.0	4.0	31.6	27.6	13.2	11.1
1975	2.0	1.8	3.6	35.0	31.4	12.0	10.0
1976	2.1	1.8	3.8	31.5	27.7	-1.9	-3.7
1977	2.3	1.9	4.4	25.3	20.9	3.3	1.4
1978	2.2	2.2	4.8	32.2	27.4	15.4	13.1
1979	2.1	1.8	3.8	32.3	28.5	9.0	6.8
1980	2.0	1.9	3.8	35.2	31.4	11.9	9.8
1981	2.1	2.0	4.2	34.9	30.7	7.7	5.7

^aAt constant 1976 prices adjusted for gains or losses due to changes in the terms of trade.

Source: Paderanga (1988), Table 4.

Appendix 2

Estimation of the Approximate Year of Take-off and Annual Growth Rate of Real GDP and Per Capita GDP in Korea

Year	K/Y	L/L	(K/Y)x(L/L)	S/Y -		Annual Growth Rate of Real ^a	
				S/Y	(K/Y)x(L/L)	GDP	Per Capita GDP
1953	2.8	0.9	2.5	4.4	1.9	n.a.	n.a.
1954	2.7	1.3	3.5	1.4	-2.1	5.6	4.7
1955	2.6	1.7	4.4	0.5	-3.9	4.2	2.4
1956	2.6	2.9	7.5	-7.4	-14.9	-1.7	-4.4
1957	2.5	2.9	7.3	0.9	-6.4	7.6	4.5
1958	2.4	2.9	7.0	-0.1	-7.1	5.5	2.5
1959	2.4	2.9	7.0	-1.3	-8.3	3.6	0.7
1960	2.4	2.9	7.0	-4.8	-11.8	0.9	-4.7
1961	2.3	2.9	6.7	-2.3	-9.0	6.2	0.3
1962	2.3	2.9	6.7	-2.4	-9.1	1.7	3.2
1963	2.2	2.8	6.2	3.9	-2.3	9.1	6.1
1964	2.1	2.6	5.5	4.0	-1.5	9.9	7.6
1965	2.0	2.6	5.2	1.9	-3.3	5.3	2.6
1966	1.9	2.5	4.8	7.0	2.2	12.1	9.3
1967	1.9	2.3	4.4	6.2	1.8	5.2	2.8
1968	1.9	2.3	4.4	10.3	5.9	10.7	8.2
1969	1.9	2.3	4.4	14.8	10.4	13.6	11.1
1970	1.9	2.2	4.2	13.2	9.0	7.9	5.5
1971	1.9	2.0	3.8	10.8	7.0	8.8	6.6
1972	1.9	1.9	3.6	10.1	6.5	5.7	3.7
1973	1.8	1.8	3.2	18.3	15.1	14.4	12.4
1974	n.a.	1.7	n.a.	14.0	n.a.	7.5	5.6
1975	n.a.	1.7	n.a.	13.0	n.a.	7.8	6.0
1976	n.a.	1.6	n.a.	19.0	n.a.	12.4	10.6
1977	n.a.	1.6	n.a.	21.6	n.a.	10.0	8.2

^aAt constant 1975 prices.

Source: Paderanga (1988), Table 5.

Appendix 3

Estimation of the Approximate Year of Take-off
and Annual Growth Rate of Real GDP and Per Capita GDP in Singapore

Year	K/Y	L/L	(K/Y)x(L/L)	S/Y	S/Y - (K/Y)x(L/L)	Annual Growth Rate of Real* GDP	Per Capita GDP
1960	1.7	3.2	5.4	-14.0	-19.4	n.a.	n.a.
1961	1.5	3.7	5.6	-15.0	-20.6	8.4	4.8
1962	1.5	3.6	5.4	-6.0	-13.4	7.0	4.0
1963	1.3	2.9	3.8	-8.6	-12.4	10.0	7.2
1964	1.4	2.2	3.1	-2.0	-5.1	-3.5	-5.9
1965	1.4	2.7	3.8	-0.1	-3.9	7.5	4.9
1966	1.3	2.1	2.7	1.4	1.4	11.1	8.4
1967	1.3	2.6	3.4	4.2	0.8	11.8	9.4
1968	1.3	1.5	2.0	9.3	7.3	13.9	11.9
1969	1.3	1.5	2.0	9.0	7.0	13.7	12.0
1970	1.2	1.5	1.8	9.3	7.5	13.7	12.0
1971	1.3	1.9	2.5	9.4	6.9	12.5	10.6
1972	1.3	1.9	2.5	15.8	13.3	13.4	11.5
1973	1.3	1.9	2.5	21.1	18.6	11.5	9.3
1974	1.5	1.4	2.1	19.6	17.5	6.3	4.6
1975	n.a.	1.4	n.a.	18.2	n.a.	4.1	2.6
1976	n.a.	1.3	n.a.	21.0	n.a.	7.5	5.0
1977	n.a.	1.3	n.a.	22.7	n.a.	7.9	6.4
1978	n.a.	0.9	n.a.	21.8	n.a.	8.6	7.3
1979	n.a.	1.3	n.a.	23.0	n.a.	9.4	8.0

*At constant 1968 prices.

Source: Paderanga (1988), Table 6.

Appendix 4

Estimation of the Approximate Year of Take-off
and Annual Growth Rate of Real PerCapita GDP & GDP in Hong Kong

Year	K/Y	L/L	(K/Y)x(L/L)	S/Y -		Annual Growth Rate of Real*	
				S/Y	(K/Y)x(L/L)	GDP	Per Capita GDP
1961	1.4	3.0	4.2	-5.2	-9.4	n.a.	n.a.
1962	1.4	4.3	6.0	-2.5	-8.5	10.1	5.5
1963	1.4	3.5	4.9	2.5	-2.4	11.9	8.1
1964	1.4	2.5	3.5	2.9	-0.6	7.7	5.7
1965	1.4	2.7	3.8	7.2	3.4	18.2	15.2
1966	1.5	0.9	1.4	5.7	4.3	8.9	7.9
1967	1.5	2.6	3.9	18.0	6.1	7.8	5.1
1968	1.4	2.2	3.1	7.9	4.8	4.7	2.5
1969	1.3	1.6	2.1	12.8	18.7	14.8	13.0
1970	1.3	2.5	3.3	15.4	12.1	6.2	3.7
1971	1.3	2.2	2.9	14.4	11.5	5.0	2.8
1972	1.3	0.8	1.0	18.1	17.1	9.7	7.8
1973	1.2	2.0	2.4	15.9	13.5	15.8	12.8
1974	1.3	3.8	4.9	15.0	10.1	1.8	-0.7
1975	-	1.8	-	14.9	-	2.2	0.5
1976	-	1.1	-	25.3	-	18.8	17.6
1977	-	1.6	-	20.0	-	9.8	8.1

*At constant 1973 prices.

Source: Paderanga (1988), Table 7.

Appendix 5

Structure of Demand

Distribution of gross domestic product

	Govt Consumption		Private Consumption		Gross domestic investment		Gross domestic savings		Exports of goods & nonfactor services		Resource balance	
	1965	1985	1965	1985	1965	1985	1965	1985	1965	1985	1965	1985
a. ASEAN												
Indonesia	5	12	47	51	8	30	8	32	5	25	(.)	2
Malaysia	15	15	51	52	20	28	24	33	42	55	4	5
Philippines	9	7	26	28	21	16	15	13	17	22	(.)	3
Thailand	10	13	70	65	20	23	21	21	18	27	-1	-1
b. NICs												
Hongkong	7	7	64	65	35	21	29	27	71	100	-7	6
Korea	9	10	14	50	15	30	7	31	9	36	-8	1
Singapore	10	13	19	45	23	43	10	42	123	..	-12	-2
Taiwan												

Source: Same as Appendix 5.

Appendix 6

Unemployment Rate (1953-1980)

Year	No. of Unemployed (1,000 persons)	Unemployment Rate (%)
1953	194	6.29
1954	188	6.02
1955	182	5.79
1956	176	5.63
1957	185	5.73
1958	194	5.88
1959	204	5.99
1960	213	6.12
1961	222	6.21
1962	231	6.32
1963	241	6.38
1964	250	6.40
1965	203	5.20
1966	161	4.15
1967	140	3.16
1968	120	2.76
1969	157	3.42
1970	142	3.01
1971	147	3.01
1972	141	2.77
1973	122	2.24
1974	150	2.66
1975	214	3.73
1976	153	2.63
1977	138	2.27
1978	173	2.69
1979	145	2.21
1980	137	2.05

Source: Kuo (1983), Table 4.1.