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PHILIPPINE COCONUT INDUSTRY AND THE INTERNATIONAL TRADE

By

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ABSTRACT

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This study explores effects of Philippines' coconut policies on the performance in the international market. Analysis of the coconut sector found that the Philippine government successfully changed the structure of coconut industry during the 1970s using a fund collected as coconut levies. Since the Philippines dominated the international trade market of coconut products, it could exercise dominant market power in the world trade, by integrating the domestic sector. However, the industrial policies were not effective. Results of an econometric analysis show that the Philippines did not gain the market power despite the heavy investment on the coconut sector. Due to technological development in the oil processing sector, other oil products became close substitutes for the coconut products. Shift in coconut oil utilization from edible use to inedible use also accelerated the substitutability. Under the competitive market, the Philippines could not gain monopolistic profits from the exports.

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ACRONYMS

CCC	Coconut Coordinating Council
CCSF	Coconut Consumer Stabilization Fund
CIDF	Coconut Industry Development Fund
CIC	Coconut Investment Company
COCOFED	Philippine Coconut Producers Federation (PCPF)
COCOFUND	Coconut Investment Fund (R.A. 6260)
INTERCO	International Copra Export Corp.
PCA	Philippine Coconut Authority
PCPF	Philippine Coconut Producers Federation (COCOFED)
PD	Presidential Decree
PHILCOA	Philippine Coconut Administration
PHILCORIN	Philippine Coconut Research Institute
RA	Republic Act
UCAP	United Coconut Association of the Philippines, Inc.
UCPB	United Coconut Planters Bank
UCPLA	United Coconut Planters Life Assurance Co.
UNICHEM	United Coconut Chemicals, Inc.
UNICOM	United Coconut Oil Mills, Inc.

CHAPTER I

INTRODUCTION

Coconut products have been one of the Philippine's most important exports, accounting for more than half of agricultural exports and about four-fifths of processed food product exports. In the 1970s, the Philippine government's heavy intervention promoted centralization of the coconut industry. This effort to gain international competitive power in the coconut products export market, while initially successful, was not sustainable. During the 1980s, total Philippines' export revenue dropped rapidly; and by 1990 the contribution of coconut exports to the national income had declined to less than half of the 1970 level (Table 1.1).

It is important to better understand the history and consequences of these policies to promote the coconut industry because other developing countries are attempting to implement similar industrialization models.

TABLE 1.1 COCONUT PRODUCT EXPORTS, 1976-1990.

Year	COCONUT EXPORTS* (constant US\$ million)	PROPORTION OF MERCHANDISE EXPORTS (percent)	CONTRIBUTION TO GNP (percent)
1976	2015.6	21.1	3.74
1977	2641.5	24.2	4.36
1978	2879.1	26.6	4.60
1979	2813.2	22.3	4.36
1980	1931.0	14.0	2.87
1981	1609.4	13.1	2.41
1982	1344.3	11.8	1.86
1983	1286.7	13.6	2.48
1984	656.8	13.5	2.76
1985	557.9	11.9	2.14
1986	552.1	11.5	2.32
1987	608.5	11.6	2.46
1988	602.6	9.9	2.19
1989	503.0	8.1	1.80
1990	405.6	7.0	1.55

* deflated by Philippine GNP deflator (1985=100)

Source: *Coconut Statistics 1990*.

International Financial Statistics Yearbook 1991.

The objective of this study is first to describe the economic policies pursued by the Philippine government, which affected both the domestic economy and exports of coconut products. These policies included both industrial policies to promote investments intended to stimulate exports and international trade policies affecting foreign exchange and commodity trade. Also, this study attempts to explore the effects of coconut industrial policies on structural changes in the industry, including the processing and trading sectors. Then, the relationship between Philippine industrial policies and the international market is explored. Because most coconut products are processed for international demand, the demand for these products is affected by the international trade environment.

The Philippine government's industrial policies affected negatively the coconut industry for a long time. During the 1970s, the government sought to nationalize the industry and enhance the coconut industry's profits. While the coconut processing and trading sectors initially benefitted from these industrial policies, the government's heavy intervention in the industry reduced its efficiency. In addition, during the 1980s, world demand for coconut products declined as importing countries implemented protective trade policies and consumers sought to avoid saturated fats such as coconut oil. As a result, Philippine coconut exports declined.

A number of studies have examined the impact of the Philippines' economic policies on the agricultural and manufacturing sectors. However, few studies have analyzed the effects of coconut industrial policy on the industry. Buschena and Perloff made econometric estimates of world coconut supply and demand during the 1970s and

1980s.¹ Assuming that the international oilseed market and other countries policies remained constant from 1973 to 1987, they concluded that the Philippines' marketing power became stronger during the period concerned. LUSSA² examined structural changes in the coconut industry. Analyzing the integration program (nationalization) in the 1970s, this study concluded that "the best policy is to nationalize the coconut industry and democratize the distribution of the wealth generated by the industry". Clarete and Roumasset's study³ evaluated the impact of government price interventions in the coconut export sector. Analysis of the protection rate and domestic resource costs showed that the coconut industrial program in the Philippines gave more advantage to processors and more disadvantage to farmers. Therefore, they recommended increasing the export tax instead of coconut levies. Also, Guerrero⁴ explored the effects of coconut industry policies in the 1970s on farmers' welfare. He investigated the impact of industry integration program on farmers' benefits and costs, ignoring indirect benefits and costs arising through changes in the export structure. The study indicated that net benefits to

¹David E. Buschena and Jeffrey M. Perloff, "The Creation of Dominant Firm Market Power in the Coconut Oil Export Market", *American Journal of Agricultural Economics*, (November, 1991).

²Luzon Secretariat of Social Action (LUSSA) research staff, *Countryside Report*, (LUSSA, 1982), pp.40-81.

³Ramon L. Clarete and James A. Roumasset, "An Analysis of the Economic Policies Affecting the Philippine Coconut Industry," *Philippine Institute for Development Studies Working Paper*, 83-08 (Quezon City, Philippines, 1983).

⁴Sylvia H. Guerrero, *A Review of Welfare Issues in the Coconut Industry*, Philippine Institute for Development Studies Working Paper 85-01, (Quezon City, Philippines, 1985).

farmers were minimal. Overall, these studies document the government's heavy intervention in the coconut industry during the 1970s and the early 1980s and argued that these industrial policies benefitted the processing and export sectors and taxed the farming sector. However, analysis of the success or failure of these policies should take into account the international market structure since most coconut products are traded in the world market. If the market structure changes, the government strategy of industrial development may have to be changed.

This thesis consists of six chapters: the next chapter presents an overview of the domestic economy, focusing on agriculture, food industries and policies that affected these subsectors. Then, descriptive analyses of Chapter III focus on the performance of general industrial policies, especially government policies related to international trade and foreign exchanges. The impacts of these domestic policies on structural changes in the coconut industry are discussed in Chapter IV. Then, Chapter V examines the world oilseed market and international economic policies which affected the coconut product exports. Finally, conclusions and policy implications are presented in Chapter VI.

CHAPTER II

PROBLEM SETTING

2.1 OVERVIEW OF THE PHILIPPINE ECONOMY

2.1.1 THE ECONOMY

The Philippines is an volcanic archipelago which consists of approximately 7,100 islands. Two major islands, Luzon and Mindanao, and other nine islands constitute about 95 percent of the total land area. The land is not very favorable for agriculture, because more than half of the land area is upland. Temperature is high in all seasons, averaging 26 to 28 degree Centigrade. Frequent typhoons damage agricultural production, but they are also the source of rainfall necessary for crop and livestock production.

The population of the Philippines was 59.9 million in 1988 and grew rapidly at an annual rate of 2.5 percent during the 1980s.⁵ The labor force increased from 10.0 million in 1960 to 13.0 million in 1970, and to 17.3 million in 1980⁶. Migration into large cities continues, especially in the Manila area, which accounts for one-third of the Philippines' total population. Since the urban industrial sector cannot absorb the rapidly increasing labor

⁵World Bank, *World Development Report 1990*, Table 1.

⁶1989 *Philippine Statistical Yearbook* (National Statistical Coordination Board), the latest estimate of the size of the labor force was made on May 1, 1980.

force, most urban workers are employed by very small-scale informal establishments like petty trading.

Rapid population growth has also depressed development in the rural area. Agricultural land area per farmer (arable land area per person employed in agriculture) has decreased from 0.94 hectare in 1960, to 0.72 hectare in 1970, and to 0.53 hectare in 1980.⁷ Also, the average wage of farmers in the rural areas has decreased, even though agricultural production has increased. The marginal productivity of farm labor decreased as the population increased rapidly on a limited land resources base. Many small farmers in marginal area have had to sell their land when financial problem occurred, and they became landless workers. Therefore, the rapid increase in population, combined with slower growth in agricultural productivity, is one of major factors which accelerated inequality of income distribution in rural as well as urban area.

After over four hundred years of colonial rule by Spain (since the 16th century), the United States (since 1898) and Japan (during World War II), the Philippines acquired full Independence in 1946. In this year the Philippines and the United States signed a trade agreement (the *Bell Act*). This bilateral trade relationship with the United States continued until 1973, when the revised trade agreement of 1955 was terminated.

During the 1950s and 1960s, the Philippine government's development policies focused on import substitution, restricting imports of consumer goods and supporting imports of capital goods. Beginning in the 1970s, the Marcos government promoted

⁷Ponciano S. Intal and John H. Power, *Trade Exchange Rate, and Agricultural Pricing Policies in the Philippines*, The World Bank Comparative Studies. (Washington D.C.: World Bank, 1990)

export-oriented development policies. In 1972, martial law was declared and legislative powers were shifted from the Congress to the President. As the government strengthened its control over the economy, the balance of payments worsened and a serious foreign exchange crisis occurred in 1983. In 1986, President Marcos was expelled from the country and the Aquino government came into power.

In 1988, the gross domestic product (GDP) per capita was US\$ 630, making the Philippines one of Asia's four "middle-income economies".⁸ Although total GDP grew at an annual rate of 5.9 percent from 1965 to 1980, the growth rate in the 1980s fell to only 0.1 percent per year.⁹

From 1965 to 1988, the agriculture, forestry, and fishery share of GDP decreased from 26 percent to 23 percent. On the other hand, the manufacturing share increased rapidly from 20 percent to 25 percent, and that of service sector decreased slightly from 46 percent to 44 percent.

2.1.2 FOOD PROCESSING SECTOR

The food processing industry is an important sector in the Philippine economy because of its high value-added contribution to the economy and its high labor absorption potential. In 1987, value added by the food and beverage sector equaled 31.8 percent of the total manufacturing value added. In contrast, the value added share contribution of

⁸The World Bank, *World Development Report 1990*, p.178.

The other "middle-income economies" included the Republic of Korea (\$3,600), Malaysia (\$1,940), and Thailand (\$1,000).

⁹*World Development Report 1990*, p.180.

the electrical machinery and equipment was only 5.5 percent, the garment's share ¹⁰ was 4.3 percent, and textile's share was 4.7 percent.¹¹ In 1987, employment in the food and beverage sector equaled 23.7 percent of the total manufacturing labor, compared to 6.4 percent for electrical production, 16.5 percent for the garments and 11.4 percent for the textiles sector.

The food processing industry consists of a large number of small-scale establishments. Among all small-scale firms with fewer than ten employees, 40 percent are employed in the food processing industry. These small-scale firms are spread over the country, whereas large-scale food processing firms are concentrated in the Manila area.¹²

2.2 AGRICULTURE

2.2.1 AGRICULTURAL PRODUCTION

Composition

The Philippines' major agricultural products are rice, sugarcane, coconuts and corn. Rice and corn are the main food grains and sugarcane and coconuts are the main export crops. Prior to Independence (1946), abaca, tobacco and sugar were important export crops. In the 1970s, bananas and pineapples also became major export crops.

¹⁰The sum of apparel, footwear and leather products.

¹¹National Economic and Development Authority, *Philippine Statistical Yearbook 1989*.

¹²World Bank, *Philippines: Industrial Development Strategy and Policies*, World Bank Country Study, (Washington, D.C., 1980) p. 102.

By 1988 rice accounted for 24.1 percent of total agricultural production, followed by sugarcane (12.9 percent), coconuts (11.7 percent), and corn (10.2 percent). These four commodities equal about 60 percent of the total value of crop production. Other principal products (and their share of crop production value) include fruits and nuts (19.1 percent), vegetables (15.6 percent), coffee (3.6 percent), cocoa (2.2 percent), and fiber crops (1.1 percent).¹³

From 1972 to 1984, the value of food crop production increased by 75.5 percent, while non-food crops increased by only 58.5 percent. This difference is mainly due to a rapid increase in fruit production. For example, during the period the value of banana production increased by 296 percent, pineapple by 509 percent, and mango by 163 percent; while rice, corn, sugarcane and coconut increased by 47 percent, 65 percent, 27 percent, and 49 percent, respectively.¹⁴

About one-half of Philippine farms are rice farms (47 % in 1980). During 1971 to 1980, the number of rice farms increased by 64.0 percent, while the total rice area increased by 41.1 percent. As a result, average farm size declined from 2.7 hectares in 1971 to 2.3 hectares in 1980.¹⁵

¹³*Philippine Statistical Yearbook 1989*, Table 5.1.

¹⁴Ponciano S. Intal and John H. Power, *Trade Exchange Rate, and Agricultural Pricing Policies in the Philippines*, The World Bank Comparative Studies, (Washington D.C., 1990), Table A 1.1.

¹⁵*ibid.*, Appendix Table A 1.2 (p.307).

Historical trends of agricultural production

Rice

During the 1950s, increases in rice production were due to area expansion. The rice area increased at an annual rate of 3.8 percent during the early 1950s and 4.6 percent during the late 1950s, with almost no change in yield. (Table 2.1) In the 1960s, as land became more scarce, yields began to increase, especially during the late 1960s, due to the introduction of high-yielding rice varieties. During the 1970s and early 1980s, the growth of yield slowed down because of drought, typhoons, and rising fertilizer prices. Also the low price of rice during the early 1980s resulted in farmers reducing area planted.

Corn

In the Philippines, especially in Visaya and Mindanao, white corn is an important staple crop. Until the 1960s, the government attempted to expand corn production to meet the increasing demand. Since the 1970s, demand for yellow corn (which is used for hog and poultry feed) increased and imports were required to meet the needs of domestic livestock production. Thus, the government promoted yellow corn production through price incentives. Since the producer price was set at a high level, the area increased rapidly in the early 1960s. Since the late 1970s, diffusion of high-yielding varieties increased corn yields. However, the high producer price due to domestic protection hurt feed millers and livestock firms, who pressed the government to liberalize feed corn price.

TABLE 2.1 ANNUAL AGRICULTURAL GROWTH RATES - OUTPUT, AREA HARVESTED, AND YIELD (Percent).

	RICE			CORN			COCONUT			SUGARCANE		
	Q ^a	AH ^b	Y ^c	Q	AH	Y	Q	AH	Y	Q	AH	Y
1951-55	4.3	3.8	0.5	6.7	9.1	-1.7	8.6	0.1	8.4	15.9	16.0	-0.5
1956-60	3.3	4.6	-0.9	9.1	6.1	4.3	0.1	1.4	-1.2	8.4	-1.8	10.0
1961-65	1.4	-0.6	2.0	2.4	1.0	1.7	7.0	8.7	-1.5	2.6	8.3	-4.2
1966-70	5.8	-0.5	6.6	8.9	4.8	4.1	2.5	3.4	-0.7	5.5	1.1	4.4
1971-75	3.3	3.2	-0.3	5.7	5.2	0.3	10.7	3.9	6.7	5.8	9.3	-2.9
1976-80	5.8	0.0	5.8	6.1	1.0	4.8	11.3	6.6	4.4	-0.3	-5.3	5.4
1981-85	1.0	-2.4	3.4	2.0	0.8	1.2	-8.1	0.9	-9.0	-2.2	-0.2	-1.2

Note: /a Output annual growth rates

/b Area annual harvest growth rate

/c Yield annual growth rate

Source: Ponciano S. Intal, Jr. and John H. Power, 1990. *Trade, Exchange Rate, and Agricultural Pricing Policies in the Philippines*, World Bank Comparative Studies, p. 222.

Coconuts

The Philippines is the largest producer of coconut in the world. In 1990-91, copra output reached 2,150 thousand metric tons, equal to 44 percent of the total world production in 1990.¹⁶ Mindanao is the most important coconut area in the Philippines and produces about one-half of coconut in the country. Other major regions are Southern Tagalog, Bicol, and Eastern Visayas.

In the first half of the 1950s, yields increased and then declined through the 1960s. As the high-yielding hybrids planted during the 1960s fruited during the 1970s, yields again increased. During the late 1970s, coconut farm area increased rapidly in response to large price increases for coconut in 1974 and in 1979-1980. During the early 1980s, drought and typhoons severely damaged many coconut plantation, reducing production. While coconut yields in the Philippines are low, they are higher than other major producers such as Indonesia and Sri Lanka.¹⁷ Although coconut trees produce for over 60 years, yields are stable for about 40 years and then gradually decline for the next 10 to 20 years. In the 1970s, the Philippine government started a project for replanting aged trees with a high-yielding variety, but the project failed because of lack of funds and staff.

Sugarcane

Sugarcane is grown on a small number of large plantations. Sugar producers (the so-called "sugar bloc") benefitted from the bilateral trade relationship with the United

¹⁶Commodity Research Bureau, *Commodity Yearbook 1991*, p.40.

¹⁷World Bank, *The Philippines*, A World Bank Country Economic Report, (Washington, D.C. 1987) p. 147.

States and have always opposed trade liberalization. The sugarcane area increased rapidly during the first half of the 1960s in response to devaluation of the peso and an increase in the import quota of the United States. During the first half of the 1970s, increasing world prices led to a further area expansion. While production increased as area expanded, yields decreased because the production was extended to marginal areas. However, when the bilateral trade agreement with the U.S. was terminated in the mid 1970s and the world price declined steeply beginning in the late 1970s, the area harvested decreased.

2.2.2 AGRICULTURAL POLICIES AND SOCIAL CHANGES

Land reforms

At Independence, the Philippines inherited a land-tenure system that evolved over 400 years of colonial rule. When introduced property rights in lands during the early colonial period, community leaders acquired vast land areas. Thus, Philippines' landlordism was formed.¹⁸

The first agrarian land reforms were legislated by the Magsaysay government as the *Agricultural Tenancy Act* (R.A. 1199) in 1954 and the *Land Reform Act* (R.A. 1400) in 1955. However, these land reform acts were implemented in only a few area because of landlord resistance and a shortage of funds.

The *Agricultural Land Reform Code* of 1963 was legislated by the Macapagal government. The purpose of this act was to increase agricultural productivity by converting tenants to landowners. The process of the land reform consisted of two stages.

¹⁸Yujiro Hayami and Masao Kikuchi, *Asian Village Economy at the Crossroads* (Baltimore: The Johns Hopkins University Press), 1982, pp.67-79.

First, the status of share tenancy (sharecroppers) was converted to lease tenancy (leaseholders), with rents fixed at the 25 percent of the average harvest. Next, leaseholders paid landowners 10 percent of land value in cash and the remaining 90 percent in credits through the Land Bank. After an amortization period of 25 years, the leaseholders became landowners.

In 1971, this land reform act was amended by the Marcos government. And in the next year, President Marcos declared martial law and all of the Philippines was decreed a "land reform area." *Presidential Decree 27 (1971)* intended to implement full-scale land reform, which would make all tenants land owners. The process of this land reform was similar to the land reform of 1963. The first step was to identify landlord and tenant, and to give the tenants certificates of procedure of land transfer called a 'Certificate of Land Transfer' (CLT). In the next stage, the land price was determined. In each village, "Barangay Committee on Land Production" (BCLP) was appointed to establish land prices. But since many landlords did not agree to this process, land prices were often determined by agreement between each landowner and his/her tenants. In such cases, land prices tended to be assessed at higher prices than the prices proposed by the BCLP. Once the land prices were determined, "land banks" paid the land owners, and the tenants began to pay back their loans to the land banks over fifteen years. In this stage, tenants became leaseholders, officially called "amortizing farmers," with practically the same status as land owners. When the amortizing farmers repaid their entire loan, 'Emancipation Patents' (EPs) were provided and these farmers became full land owners.

Although these land reforms created many leaseholders, especially in Central Luzon, the reforms' effects were limited. The reforms were restricted to lands which were

used for rice or corn production. Also, since the reforms applied to farms with more than 7 hectares, it covered only one-tenth of farmers in the Philippines. In 1971 the average farm size was 2.7 hectares for rice and 2.9 hectares for corn in 1971.¹⁹ Finally, lands administrated directly by landlords were not covered by the land reform. Therefore, approximately 70 percent of tenants were excluded from benefitting from the land reform.²⁰

Modern farming and agricultural programs

In order to meet the food needs of the rapidly growing population, the government gave priority to achieve self-sufficiency in food crop production was a priority in the Philippines. As of the beginning of the 1970s, extension of high-yielding varieties was the most suitable way to increase the production of the main cereals, rice and corn, because the yields of rice and corn were still low, compared to other Asian countries, and new arable land was limited in the Philippines.²¹ Production of HYVs requires good water control and well-managed farming operations, including control of weeds, pests and disease, and the application of fertilizers. However, in order to use these inputs, farmers needed sufficient credit from the government or other institutions.

¹⁹*Philippine Statistical Yearbook 1980*, Table 5.3.

²⁰Jean G. Rosenberg and David A. Rosenberg, *Landless Peasants and Rural Poverty in Indonesia and the Philippines* (Ithaca: Cornell University), 1980.

²¹World Bank, 1976, *op. cit.*

In 1973, the *Masagana 99 Program* was launched to promote the adaption of high-yield varieties, as well as institutional credits and technical and managerial advice.²² The Masagana 99 Program provided farmers with low-interest loans. Instead of requiring land mortgages as collateral, this program required farmers to get management advice from the government and agree to group liabilities called "selda".²³ The Masagana 99 Program expanded successfully during its first stage and covered 36 percent of total lowland rice area by 1974.²⁴ However, during the late 1970s, it faced difficulties-- including low rates of repayments and a shortage of skilled extension technicians. In addition, because this program provided farmers with loans at a low rate of interest, the real interest rate was even lower (sometimes negative) due to the high inflation rate. Therefore, the government could not sustain the program. By 1978, the program covered only 10 percent of the country's rice farmers and was abandoned in the early 1980s.

The *Maisagana program (Masaganan Maisan Program)*, which began in 1974, was an application of the *Masagana 99 Program* to the production of other food crops, especially corn.²⁵ The most distinguished achievement of the Maisagana Program was the establishment of research institutions to ensure the supply of improved seeds, which are essential for modern farming.

²²The reduction of yield, which was caused by typhoons and floods in 1972 - 1973, encouraged the government to introduce this program.

²³5 to 15 farmers were organized as a group with joint liabilities.

²⁴The World Bank, 1976. *The Philippines, A World Bank Country Economic Report*, Washington, D.C., p.133.

²⁵The other crops were soybeans and sorghum.

In 1984, the Maisagana program was revised as the *Expanded Yellow Corn Production Assistance Program*. Although the purpose of this program was basically the same as the Maisagana program, this program emphasized increasing the production of yellow corn for animal feed corn. By this time, the Philippines had already achieved self-sufficiency in edible corn, but feed corn was still being imported. During this period, the demand for livestock products was rising because of income growth in the urban area and a growing export demand for livestock products in Japan and Taiwan. As part of this program, the government sought to shift sugarcane land to yellow corn production. Thus, sugarcane production fell sharply in the early 1980s. By 1984, sugar exports equaled only 55 percent of the 1980 volume.²⁶

This program relied on three credit systems: credits through local banks, the Ministry of Foods, and private agribusiness companies. After the balance-of-payments crisis in 1983, the government could no longer afford to offer sufficient credits. Therefore, it promoted financing by the food processing and input industries.

Social effects of agricultural policies

Official credits through the Masagana program were discontinued in the early 1980s. However, many farmers had already begun to use HYVs, requiring higher input costs than traditional varieties. Because small-scale farmers tended to have little savings, they had to apply for loans from non-institutional sources. The *Certificate of Transfer of Land* (CTL) was often used as collateral to serve informal sector loans. When their crop

²⁶In 1988, it dropped into 8 percent of the 1980 level. (IMF, *International Financial Statistics Yearbook*)

income was too low to pay back their debts, many leaseholders lost their lands. However, large-scale farmers benefitted from the government programs to promote modern varieties, even without their credits and assistance, because many had sufficient savings and management techniques to utilize the technology. Therefore, diversification of social classes in the rural sector accelerated, as the land reforms and agricultural development program faltered.

CHAPTER III

HISTORICAL OVERVIEW OF INDUSTRIAL POLICIES

Because coconut products are one of the Philippines' major exported processed products, the development of the coconut industry is affected by general industrial and trade policies which affect the whole industry. Therefore, before investigating specific policies influencing the coconut industry, it is necessary to explore the basic evolution of general economic policies in order to identify causes and effects of policies.

This chapter provides a historical overview of general industrial policies. These policies can be divided into three historical stages: (1) import substitution industrialization, covering the period from Independence of 1946 until the late 1960s, (2) radical export oriented industrialization, implemented during the 1970s and the beginning of the 1980s, and (3) sustainable export-led development, which occurred after the mid-1980s. Thus, this chapter follows these development stages (refer to Table 3.1 for chronology of key detail political and economical events).

TABLE 3.1 CHRONOLOGY OF POLITICAL EVENTS AND MAJOR FOREIGN TRADE AND INVESTMENT INCENTIVE POLICIES, 1946 - 1992

- 1946 Independence from the United States--Manuel Roxas elected as president.
 Bell Trade Act passed.
 Tax exemption for "new" and "necessary" industries (Republic Act 35) started.
- 1948 Elpidio Quirino elected as president.
 Sales tax increase on "luxury and semi-luxury items"
 The Import Control Act (R.A. 330) passed, implemented in Jan.1949.
- 1949 Foreign exchange crisis occurred.
 80% of margin requirement set on imports of 'luxury and non-essential items'.
 Exchange controls are introduced by the Central Bank.
- 1950 Import Control Act (R.A. 426) passed.
 Price Control Bill (R.A. 509) passed.
 Sales taxes increased, especially on "luxury consumer items".
- 1951 Sales taxes increased additionally on imported goods.
 Excise tax (17%) imposed on foreign exchange.
 Import Control Act (R.A. 650) passed--Imports of 'essential consumer items' are decontrolled.
- 1953 Import Control Act of 1951 expired
 All imports are controlled by the Central Bank.
 Tax exemption for "new" and "necessary" industries (R.A. 901) passed.
 80% of cash deposit requirement for 'luxury and non-essential items' repealed.
-

TABLE 3.1 CHRONOLOGY OF POLITICAL EVENTS AND MAJOR FOREIGN TRADE AND INVESTMENT INCENTIVE POLICIES, 1946 - 1992 (continued)

1953	Ramon Magsaysay elected as president.
	New tax exemption law for "New and necessary industries" passed.
1955	Laurel-Langley Agreement passed.
	Excise tax on foreign exchange (17%) in effect since 1951 began to be reduced by 1.7% annually.
	"No dollar import law" enacted--permitting certain exports to be bartered for imports.
1957	Carlos Garcia elected as president
	Cash deposit requirements on letters of credit for importation.
	New tariff schedule - low rate on 'essential goods' and high rate on 'non-essential goods'
1958	Repeal of cash deposit requirement on letter of credit
1959	Margin fee (25%) sale of foreign exchange by Central Bank
1960	Multiple exchange rate system was introduced.
	"Free-market rate" was modified.
	Proportion of transactions at "free market" rate increased
	Margin fee reduced to 20%.
1961	Proportion of transactions at "free market" rate increased again. Margin fee reduced to 15%
	Tax exemption from imported capital goods
1962	Peso floated. Exporters required to surrender 20% of foreign exchange receipts at P 2.00/\$.
	Import duties on many items raised
	"Free market rate" stabilized at P3.90 per dollar. (For exporter P3.52)

TABLE 3.1 CHRONOLOGY OF POLITICAL EVENTS AND MAJOR FOREIGN TRADE AND INVESTMENT INCENTIVE POLICIES, 1946 - 1992 (continued)

1963	Ferdinand Marcos elected as president Uniform foreign exchange rate set at P3.90
1967	Some control over foreign exchange transactions Investment Incentive Act (R.A. 5186) passed.
1968	Foreign Business Regulations Act (R.A. 5455) passed.
1969	Ceiling of foreign exchange liabilities of commercial banks, eliminated
1969	2% levy on Central Bank loans and advances except loan to government and high-priority export industries Foreign Trade Zone Authority created (R.A. 5490)
1970	Foreign exchange crisis Floating of Peso in foreign exchange market. Exports required to convert 80% of peso at old rate of P3.90
1970	Most imports required to be covered by letters of credit. Export Incentives Act (R.A. 6135) passed Power of the government to borrow abroad was limited.
1972	Martial law declared. Export Processing Zone Authority created Bataan Export Processing Zone (Presidential Decree 66).
1973	New constitution established--presidential power strengthened.
1973	Progressive Car Manufacturing Plan begun.
1974	Laurel-Langley Agreement terminated.
1977	Agricultural Investment Incentives Decree (P.D. 1159) passed.

TABLE 3.1 CHRONOLOGY OF POLITICAL EVENTS AND MAJOR FOREIGN TRADE AND INVESTMENT INCENTIVE POLICIES, 1946 - 1992 (continued)

-
- 1978 Additional incentives for the Export Processing Zone established.
- 1979 Investment Promotion Act for Less Developed Areas passed.
- 1980 Eleven major projects started.
- Structural Adjustment Program started--program to lift import restrictions over 5 years.
- 1981 Martial Law lifted.
- Marcos reelected.
- Omnibus Investments Code (P.D. 1789) passed--consolidation of R.A. 5185, R.A. 5155, and R.A. 5455.
- Import licensing began to be liberalized.
- All interest rates deregulated.
- 1983 Investment Incentives Policy Act passed--withdraw capital intensive incentives.
- Benigno Aquino assassinated.
- Foreign exchange crisis occurred.
- 1986 Corazon Aquino government began.
- Export taxes eliminated.
- The government received SDR 422 million from the IMF.
- Debt equity conversion by the Central Bank (Central Bank Circular 1111) implemented.
- Committee On Privatization (COP) and Privatization Trust (APT) created to promote privatization
- 1987 New Constitution adapted.
-

TABLE 3.1 CHRONOLOGY OF POLITICAL EVENTS AND MAJOR FOREIGN
TRADE AND INVESTMENT INCENTIVE POLICIES, 1946 - 1992 (continued)

1987 National Development Plan (1987 - 1992) proposed.

New Omnibus Investment Code passed.

Car Development Program (CDP) approved (Memorandum Order 136).

1988 Comprehensive Agrarian Reform Law (R.A. 6657) passed.

1992 Presidential election held.

3.1. CHANGES IN COMPOSITION OF EXPORT PRODUCTS

In recent years, the composition of Philippine export products has gradually shifted from traditional export goods (agricultural, forestry and mineral products, which include both raw and processed products) to non-traditional export goods (manufacturing products).

Until the early 1970s, one-fourth of Philippines' total export earnings were generated by only ten traditional export products: copra, coconut oil, desiccated coconut, sugar, logs and lumber, canned pineapples, bananas, copper concentrates, gold, and abaca (Manila rope material).²⁷ In the second half of the 1970s, the exports of these traditional goods began to decrease, falling to one-third of the 1980 level by 1986.²⁸

Major non-traditional export products include electrical products (including electronic products), garments, textiles, chemicals, copper metal, and coffee beans; with electrical products and garments accounting for more than one-half of non-traditional exports. Since the early 1970s, non-traditional exports have increased rapidly. For example, by 1988 "miscellaneous manufacturing exports" reached 14 times the 1970 level.²⁹

²⁷*Philippine Statistical Yearbook 1980.*

²⁸The total traditional exports, which accounted for U.S.\$ 4,409 million in 1980 (at 1985 price level), declined to \$ 1,531 million in 1986. (*Philippine Statistical Yearbook 1989*)

²⁹"Miscellaneous manufacturing" exports were valued at \$301 million at the 1985 price level (10 % of the total exports) in 1970, \$667 million (16 %) in 1975, \$2,843 million (38 %) in 1980, and 4,313 million (67 %) in 1988.

However, production of most non-traditional manufacturing goods requires the importation of large amounts of raw and intermediate materials. Therefore, the net gain (exports minus imports) was much smaller than their actual export values. For example, in 1986, these firms imported US\$ 640 million in raw material in order to export US\$ 919 million of electrical products.³⁰ Thus, despite the high value of the non-traditional exports, the Philippines' export earnings are still highly dependent on traditional exports since non-traditional exports contribute much less value added than their export value suggests. For example, in 1988 food processing accounted for 43.3 percent of the total manufacturing value added, while the electrical goods production accounted for only 5.2 percent-- although the export value of electrical goods was the highest among all export products. (Table 3.2).

³⁰Florian Alburo, and Erlinda M Medalla, 1989. *Philippine Trade Policy Options*, Working Paper Series No.89-09 Philippine Institute for Development Studies, p. 106.

TABLE 3.2 VALUE ADDED AND EXPORT VALUE (%) IN THE
MANUFACTURING SECTOR, BY INDUSTRY GROUP, 1975 AND 1988.

	Export	Value Added	
	1988	1975	1988
Electrical & Electronic Products	27.6	3.0	5.2
Textile, Garment, Leather Products	26.8	12.2	14.3
Food Processing & Tobacco	18.7	39.5	43.3
Metal Products	5.5	6.7	7.0
Chemicals	4.8	8.6	7.1
Petroleum & Coal Products	2.9	13.3	9.0
Machinery & Transport	1.0	5.5	6.9
Non-Metal Mineral	0.6	2.5	2.0
Miscellaneous Manufacturing Products	12.2	5.4	6.9
Total Manufacturing	100.0	100.0	100.0

Source: *Coconut Statistics 1990*.

3.2 IMPORT SUBSTITUTION POLICIES IN THE 1950S AND 1960S

During the 1950s and the 1960s, the Philippines followed a typical import substitution industrialization strategy. This policy sought to expand domestic markets by restricting imports, especially, consumer products. Although the Philippines had a bilateral trade tie with the United States after Independence, policy makers were rather pessimistic about expanding exports to this external market. While the Philippines' import substitution policies have been complicated and inconsistent, they may be categorized into three types: import controls (including import licensing and tariffs), tax incentives, and foreign exchange rate control.

3.2.1 TRADE AGREEMENT WITH THE UNITED STATES

The Bell Trade Act of 1946

When the Philippines became independent from the United States (July 4, 1946), these two countries established a free trade agreement, the *Bell Trade Act*.³¹ It stipulated that both countries impose no tariffs until 1954, and after that year, tariff rates would be increased by 5 percent of their normal rates until 1973, when they would reach the full level (Table 3.3). Also, the agreement provided the Philippines the U.S. import quotas for several agricultural products, including sugar, cordage, rice, cigars, scrap tobacco, coconut oil, and pearls.

The exchange rate was set at P 2 per dollar which was the same as the pre-war rate, and this rate was fixed for 27 years, until 1973. The agreement also stipulated that

³¹This agreement was prepared by the United States and accepted by the Philippines at Independence.

the Philippine government could not change its exchange rate without permission from the U.S. government. In addition, it forbid the Philippines to impose an export tax or other import controls, or to restrict foreign capital transfers. Finally, it endowed Americans with equal rights as Filipinos to develop natural resources in the Philippines.

Laurel-Langley Trade Agreement of 1955

In 1955, the trade agreement was revised and a new trade agreement, the *Laurel-Langley Agreement*, was enacted.³² The *Bell Act* was criticized by many Filipinos because it appeared to be an obstacle to implementing an import substitution industrialization strategy.

The *Laurel-Langley Agreement* accelerated tariff rates on imports from the United States and reduced U.S. tariff rates, compared to these of the *Bell Act*. During 1956-1958, 25 percent of the normal tariff rates³³ were imposed on Philippine imports from the United States, while 5 percent of normal tariff rates were imposed for the U.S. imports from the Philippines (Table 3.3). These proportions were gradually increased until 1973 when the tariff rates were normalized (both countries applied 100 percent of their regular tariff rates). Another revised aspect of the *Laurel-Langley Agreement* was that it extended Americans' rights of access to Philippine resources to all activities including

³²Although the Bell Act was supposed to expire in 1954, the free trade period was extended one more year until 1955.

³³"Normal rates" represent tariff rates which both countries planned to apply in 1974 when the bilateral trade agreement expired. For example, if "normal rate" for a certain commodity was 20% in both countries, the Philippines applied 5% (20×0.25) tariff and the United States applied 1% (20×0.05) tariff during 1956-58.

TABLE 3.3 RATIO OF PLANNED TARIFF RATES TO THE FULL RATES, UNDER THE INITIAL PLAN AND THE REVISED PLAN, 1954-1973 (Percent)

	Bell Trade Act of 1946		Laurel-Langley Agreement of 1955	
	(Initial schedule)		(Revised schedule)	
	Philippine Imports	U.S. Imports	Philippine Imports	U.S. imports
1954	5	5	N/A ^{a/}	N/A
1955	10	10	N/A	N/A
1956	15	15	25	5
1957	20	20	25	5
1958	25	25	25	10
1959	30	30	50	10
1960	35	35	50	10
1961	40	40	50	10
1962	45	45	75	20
1963	50	50	75	20
1964	55	55	75	20
1965	60	60	90	40
1966	65	65	90	40
1967	70	70	90	40
1968	75	75	90	60
1969	80	80	90	60
1970	85	85	90	60
1971	90	90	90	80
1972	95	95	90	80
1973	100	100	100	100

a/ The Laurel-Langley Agreement started in 1956.

Source: Robert E. Baldwin, *The Philippines*, National Bureau of Economic Research, New York, 1975.

manufacturing and commerce, which were previously limited to natural resources (such as mining) under the *Bell Act*.³⁴

In 1974, the *Laurel-Langlely Agreement* expired and the special bilateral trade relationship between the Philippines and the United States terminated. Thus, the Philippines acquired complete independence from the United States and was now free to implement its own economic policies. However, it also meant that the Philippines was now exposed to full competition in the international market. Most significant, it allowed the Marcos administration to implement export policies during the 1970s and the 1980s, which turned out to be a "costly and risky business" for the small country.

3.2.2 IMPORT CONTROLS IN THE 1950S AND 1960S

Import Controls for 'Non-essential' and 'Luxury' Goods

Although *the Bell Act* prohibited the Philippines from imposing import duties, the Philippines controlled imports by other measures. First, the government raised sales tax rates on "luxury and semi-luxury goods" in June 1948. Next, in order to strengthen import restrictions, the government legislated the *Import Control Act of 1948* (R.A. 338). This law required import licenses for "non-essential and luxury goods" and created the Import Control Board, which issued import licenses.

In 1949, the Philippines faced a balance-of-payments crisis because world commodity prices, including coconut prices, fell in the world market. As a result, the

³⁴Gerardo P. Sicat, *Economic Policy and Philippine Development*, University of the Philippines Press, Quezon City, 1972. p.3

value of total exports declined by 20.2 percent in 1949 and the country's international reserves decreased by 38.1 percent.³⁵

In response, in November of 1949 the Central Bank implemented import controls, including an 80 percent of margin requirement (cash deposit obligation) on letters of credit covering "luxury and non-essential products" (*Central Bank Circular 19*)³⁶ and the Central Bank introduced foreign exchange licensing with U.S. permission (*Circular 20*)³⁷.

After the election of 1950, the government legislated the *Import Control Act of 1950 (R.A. 426)*. Under this law, import licenses were required for all importations. Import goods were categorized into four groups: "primary imports", "essential imports", "non-essential imports", and "luxury imports", each with a different degree of restriction. Also, this law gave Filipino citizens preference in obtaining import licenses. This policy implemented because the import business was dominated by foreign companies (Chinese and American) at this time. As a result, the percent of licenses granted to Filipinos rose from 30 percent in 1950 to 40 percent in 1951, and to 50 percent in 1952. In addition to the *Import Control Act*, an excise tax on foreign exchange was introduced (17 percent) in March, 1951, in order to reduce imports and raise tax revenue.

After these Central Bank and government interventions, the Philippines successfully reduced imports.³⁸ Among imports, consumer goods declined faster than raw

³⁵International Monetary Fund, *International Financial Statistics Yearbook*.

³⁶Under this regulation, cash deposits were to be held by the Central Bank until the import bills were liquidated.

³⁷The licenses covered all transactions of foreign exchange and gold. All foreign exchange which was obtained by the licenses had to be sold to the Central Bank.

³⁸Exports also expanded in 1950, mainly due to the Korean War.

material and capital goods imports. The consumer goods share of total imports declined from 64 percent in 1949 to 50 percent in 1950, while the raw materials share increased from 26 percent to 38 percent, and that of capital goods increased from 10 percent to 12 percent.

The *Import Control Act of 1951* (R.A. 650) abolished import restrictions for "essential imports" including raw material and capital goods. Also, re-export of "essential goods" was banned and the 80 percent of margin requirements in effect since 1949 were lifted under this act.

Import Controls by Tariffs

As mention above, after the *Bell Trade Act* expired, both the United States and the Philippines introduced tariffs. Low tariff rates were imposed on "essential consumer goods" which were necessary for peoples's health and well-being, and on "essential producer goods", which were mainly raw materials and intermediate products. In contrast, high tariff rates were imposed on luxury and non-essential goods and on imports competing with locally produced products.

3.2.3 TAX INCENTIVES FOR PIONEER INDUSTRIES IN THE 1950S AND 1960S

In September 1946 a tax exemption law (R.A. 35) was enacted in order to promote domestic industrialization. This tax exemption covered all domestic taxes for "new" and "necessary" industries. "New" and "necessary" industries were those which had not been commercially exploited before World War II and contributed to the industrial and

economic development of the Philippines. However, this law had minimal impact, since only one firm was appointed under this act during its early years (1946-49). Existing industries were more profitable at this time, because of the free trade and relationship with the United States. However, after import controls were imposed in 1950, the number of approved firms increased. By 1953, 48 firms had been granted tax exempt status.

The *Tax Exemption Law of 1953* (R.A. 901) covered external taxes, including tariffs, sales tax on imported goods, and excise tax on foreign exchange, as well as domestic taxes. "New" industries were defined as industries created after 1945, and "necessary" industries were defined as those which contributed to stable and balanced economic development and had a reasonable degree of permanency. Also, to qualify imported materials used by those industries had to equal less than 60 percent of total expenses. This law offered ten years of tax exemption: 100 percent exemption for the first six years, 90 percent in the seventh year, 75 percent in the eighth year, 50 percent in the ninth year, and 10 percent in the tenth year. By 1957, 722 firms qualified for a tax exemption. Most of these firms granted tax exempt status were "non-essential consumer product" industries.

3.2.4 FOREIGN EXCHANGE RATE CONTROLS IN THE 1950S AND 1960S

1949 Foreign Exchange Crisis and Import Control in the 1950s

After the World War II, the Philippines set the foreign exchange rate at P2.00 per dollar, which was the same as the rate before the war. Although this exchange rate was overvalued, it was offset by large-scale cash in-flows as aid from the United States. However, as the amount of aid declined, the balance of the trade worsened. Moreover,

because of the presidential election in the fall of 1949, the government implemented expansionary monetary and fiscal policies. By the end of 1949, a balance-of-payments crisis emerged.

Foreign exchange control was introduced as an *ad hoc* measure to restore the balance of payments. After the crisis ended, policy makers did not removed these controls and relied on foreign exchange controls to support the import substitution policies.

The overvalued exchange rates favored importers and discriminated against exporters. Thus, in 1955, the so-called "no-dollar import law" permitted exports to barter for imports, outside of the exchange control system. Also, several additional penalties were imposed to control imports. For example, a sales tax was levied on imported goods in 1951. In 1951, an excise tax was levied on all foreign exchange sold by the Central Bank. In 1955, new tariff rates were introduced as import control measures, as well as measures to correct the exchange rate.

Multiple Exchange Rates and Devaluation

Government introduced import substitution policy in the 1950s, which discouraged exports and slowed economic growth. Export goods producers pressured the government, and as a result, foreign exchange controls were liberalized gradually in the first half of the 1960s.

In 1960, the government introduced a multiple exchange rate system (*Central Bank Circular 105*). Under this system, the rate varied between P2.30 and P4.00, depending on the kind of export item. Each rate was determined as a proportion of the existing "official exchange rate" of P2.00 and "free market rate" of P3.20, which was rigidly maintained by

the Central Bank. In addition, a 25 percent margin fee was levied on some imported goods. For example, the export exchange rate was computed as 75 percent of the "official rate" and 25 percent of "free market rate" without the margin fee, therefore:

$$P2.00 \times 0.75 + P3.20 \times 0.25 = P2.30$$

The non-essential import rate was computed as 100 percent of the "market rate" with the 25 percent margin fee, therefore:

$$P3.20 \times 1.25 = P4.00$$

The essential import rate was computed as 100 percent of "official rate" with the margin fee, therefore:

$$P2.00 \times 1.25 = P2.50$$

In 1962, all import licensing was abolished (*Circular 133*). However, the government required that imports must be covered by letters of credit with a special time deposit.³⁹ In this year, the peso was actually floated in the free market. By June 1962, the rate stabilized around P3.90 per dollar and the Central Bank supported this rate.

However, the export exchange rate had to include 20 percent of "official exchange rate" (P2.00 per dollar). Therefore, the rate was set at P3.52 per dollar for exporters.

$$P2.00 \times 0.2 + P3.90 \times 0.8 = P3.52$$

In 1965, this levy on exporters was eliminated and the exchange rate was unified. Peso floatation was stopped in 1965, when the exchange rate was officially set at P3.90

³⁹In addition, the government required importers to maintain a certain amount of their deposits in the bank for 120 days. The time deposits requirement was set at 150 percent of the value for non-essential consumer goods, 100 percent for non-essential producer goods and semi-essential consumer goods, 50 percent for semi-essential producer goods, and 25 percent for all essential goods.

per dollar. Therefore, during the first half of 1960s, the Philippines implemented a *de facto* 50 percent peso devaluation.⁴⁰

1969 Balance-of-Payments Crisis and Export Taxes

After Ferdinand Marcos became president in 1966, the government again followed expansionary monetary and fiscal policies. The interest rate was lowered (from 6.00 percent to 4.75 percent), the government invested heavily in development programs, exchange control was liberalized, and the reserve requirement on special time deposits was reduced from 100 percent to 25 percent.

As a result, inflation accelerated and the balance-of-payments worsened in the late 1960s. Although, the government reintroduced exchange controls in late 1967 and 1968, the economy did not recover.

In 1969, the economy faced a serious balance-of-payments crisis. For the purpose of *de facto* devaluation, the peso was again floated in February 1970. Consequently, the peso depreciated from P3.90 per dollar to P6.40 per dollar by the end of 1970.

Because of the rapid peso depreciation, a *Special Stabilization Export Tax* was levied on exports to offset the sudden export price depreciation.⁴¹ The tax rates were set at 10 percent for most principle export products (*i.e.*, copra, sugar, logs and copper ores)

⁴⁰Instead of official devaluation by which the government might lose the support of the industrial sector, a floating exchange rate system for a short period was introduced, because the government expected that peso would be depreciated after floating exchange system was applied.

⁴¹At first, major exports (*i.e.*, copra, sugar, logs and copper ores) were required exchange for 80 percent with old rate of P3.90 per dollar and 20 percent with new rate of P2.00 per dollar, but it was replaced to export taxes because of political pressure by these exporters.

and 8 percent for the other major export products (*i.e.*, coconut oil, desiccated coconut, copra meal, molasses abaca, tobacco, plywood lumber).

3.3 EXPORT ORIENTED INDUSTRIALIZATION IN THE 1970S

3.3.1 BOI INVESTMENT INCENTIVES

The Board of Investment

The import substitution strategy of the 1960s failed to achieve the expected rate of economic growth. Thus, in order to accelerate economic growth by encouraging foreign and domestic investment, the government adopted an aggressive industrial development strategy which promoted new investment and the production of export goods. To administer the new initiative, the Board of Investment (BOI) was created.⁴² BOI approval was required for all foreign investment, and the BOI provided fiscal incentives to both domestic and foreign investors.

Foreign firms approved as "pioneer" industries (firms which did not exist before or who produced goods not available in the Philippines) were allowed to have 100 percent foreign ownership in the Export Processing Zones. Foreign firms not meeting these stipulations could acquire up to 40 percent of equity for investments. Four investment incentive acts were legislated and managed by the BOI: *the Investment Incentives Act* (R.A. 5186), *the Foreign Business Regulation Act* (R.A. 5455), *the Export Incentives Act* (R.A. 6135), and *the Agricultural Investment Act* (P.D. 1159).

⁴²The BOI consists of five members, who are appointed by the president.

Investment Incentives Act and Export Incentives Act

The Investment Incentives Act of 1967 (R.A. 5186) was intended to promote both import substitution industrialization and export-oriented industrialization. This law provided three types of incentives: (1) tax deduction from taxable income, including a reinvestment allowance, accelerated depreciation rate, and reduced level of income tax; (2) tax exemption for imported capital equipment and sales tax for pioneer enterprises; and (3) a tax credit for raw material or capital goods used for exports production (See Table 3.4). *The Export Incentives Act of 1971* (R.A. 6135) was similar to *the Investment Incentives Act of 1967*; however, it placed greater emphasis on export incentives and corrected R.A. 5186's bias toward large firms (Table 3.5).

This act removed restrictions on the business activities of foreign firms which exported more than 70 percent of their output. Also, it removed tariffs on raw and intermediate goods used for export products. R.A. 6135 provided significant export production incentives, valued at 27 million pesos in 1973 (3.3 percent of the total exports) and 136 million pesos in 1977 (9 percent of total exports).

R.A. 5186 was biased toward capital-based incentives. In 1975, 65 percent of the pesos available as incentives were applied to accelerated depreciation allowances and tax exemptions of imported capital equipment, which represented subsidies on capital goods. In contrast, R.A. 6135 emphasized other incentives than capital subsidies. Fifty-three percent of available funds were directed to reducing income taxes and 21 percent were used for tax credits for raw materials used to provide export products. Yet, through both BOI acts, industries with large capital-labor ratio received large amounts of tax benefits, except food, beverages and rubber industries (Table 3.6).

Other BOI Incentives

Although the most important industrial policies administrated by the BOI were based on R.A. 5186 and R.A. 6135, it also managed other kinds of investment incentives. For example, *the Foreign Business Regulations Act* (R.A. 5455) stipulated that foreign investment with at least 30 percent of equity must obtain authority from the BOI. Also, *the Agricultural Investment Incentives Act* of 1977 (P.D. 1159) provided incentives for individual persons and corporations which invested in agricultural services and food processing.

TABLE 3.4 INVESTMENT INCENTIVES ACT (R.A.5186) AND EXPORT INCENTIVES ACT (R.A.6135)

(1) Allowable Deduction From Taxable Income

Undistributed profits invested in capital equipment for expansion

Organizational and pre-operating expenses from taxable income within ten years

Accelerated depreciation of fixed assets at a rate up to twice the normal rate

Carryover of net operating losses incurred in any of the first ten years of operation, up to following six years

Direct labor costs and local raw materials used in the production of export goods, up to 15 percent of total export sales, for the first five years

50 percent of labor training expenses, up to 10 percent of wages

(2) Tax Exemption

COMPENSATING TAX AND CUSTOM DUTIES ON IMPORTED CAPITAL EQUIPMENT

Full or partial exemption from tariff and compensating sales taxes on imports of capital goods including approved machinery, equipment and spare parts for them

COMPENSATING TAX ON RAW MATERIAL IMPORTS

Exemption from tariff and compensating sales taxes on raw material imports of registered pioneer enterprises

SALES TAX FOR PIONEER ENTERPRISES

Exemption from all taxes for preferred pioneer enterprises based on a graduated schedule

EXPORT TAX

Exemption from export taxes

(3) Tax Credits

CAPITAL EQUIPMENT

Tax credits which are of equal value to the compensating sales taxes, and tariffs paid on machinery, equipment and spare parts purchased from domestic producers. A subsidy equal to 50 percent of the value of the compensating sales taxes and tariffs was provided to the domestic producers

RAW MATERIAL AND SUPPLIES

Tax credits which are of equal value to sales taxes, compensating taxes, specific taxes and tariff, paid on materials and supplies for production of export goods.

INTEREST WITHHELD ON FOREIGN LOANS

Tax credit for tax withheld on interest on foreign loans

(4) Other Incentives

Permission to employ foreigners in supervisory, technical or advisory positions for up to five years

Anti-dumping protection

Protect from government competition

TABLE 3.5 INCENTIVES PROVIDED BY THE BOI, BY SIZE OF FIRM , 1970-1977
(R.A.5186, R.A.6135)

Fixed Assets of Firms (P million)	R.A.5186				R.A.6186	
	Non-Export Firm		Export Firm		Export Firm	
	(P1,000)	(%)	(P1,000)	(%)	(P1,000)	(%)
0 - 0.5	1,477	0.4	0	0.0	10,433	2.5
0.5 - 0.9	90	0.0	0	0.0	131,199	31.2
1.0 - 1.9	1,522	0.4	0	0.0	15,517	3.7
2.0 - 4.9	19,122	5.6	750	0.3	29,728	7.1
5.0 - 9.9	12,162	3.6	558	0.2	96,597	23.0
10.0 - 29.9	38,391	11.3	5,831	2.4	25,695	6.1
30.0 - 49.9	5,031	1.5	17,285	7.0	17,404	4.1
above 50.0	262,351	77.1	222,464	90.1	93,733	22.3
TOTAL	340,146	100.0	246,888	100.0	420,306	100.0

Source: The Board of Investment

TABLE 3.6 BENEFITS OF BOI INCENTIVES BY INDUSTRY (R.A.5186,
R.A.6135)

INDUSTRY	K/L ^a (1974)	INCENTIVES RECEIVED (1977)	
		P 1,000	%
OIL & COAL PRODUCTS	621.2	26214	7.5
NON-METALLIC PRODUCTS	70.3	10114	2.9
PAPER PRODUCTS	57.8	97472	27.7
FOOD PRODUCTS	24.5	33	0.0
BASIC METALS	23.8	30618	8.7
CHEMICALS	25.8	53006	15.1
TRANSPORT EQUIPMENT	15.0	15049	4.3
RUBBER PRODUCTS	13.4	532	0.2
TEXTILE	13.2	60884	17.3
BEVERAGES	12.5	0	0.0
WOOD PRODUCTS	11.9	18607	5.3
PRINTING	11.0	0	0.0
MACHINERY	10.9	3338	1.0
METAL PRODUCTS	10.4	27905	7.9
ELECTRICAL MACHINERY	10.0	7521	2.1
MISCELLANEOUS	9.8	0	0.0
TOBACCO PRODUCTS	9.5	0	0.0
LEATHER PRODUCTS	6.5	0	0.0
FURNITURE	4.3	0	0.0
FOOTWEAR & CLOTHING	2.3	0	0.0
TOTAL	20.0	351293	100.0

/a Capital-labor ratio (book value of fixed assets / number of laborers)

Source: BOI, and NCSO, Annual Survey of Establishments.

3.3.2 EXPORT PROCESSING ZONE

Countries often establish a free trade zone to encourage export-oriented industrialization. Typically, free-trade zones contribute to employment creation, provide infrastructure to support new types of export production, relieve urban congestion, and provide for an international trade center. In the Philippines, a free-trade zone was initially proposed in 1946. However, because of some problems (such as protection of local industries and lack of funds for the establishment), it was not actually established until the 1970s. In 1969 President Marcos signed legislation establishing a free trade zone (Republic Act 5490)⁴³, and in 1972 the first free trade zone, the Bataan Export Processing Zone (BEPZ), was created.

The BEPZ was located at Mariveles in Bataan Province, about 170 kilometers from Manila across Manila Bay. This site provided firms ready access to both the seaway for trading ships from Manila and to the Manila labor market. The BEPZ spans 1,209 hectares, including 345 hectares of industrial area and 374 hectares of residential area.

Of the 56 firms in the BEPZ, 43 were light industries, including 16 clothing firms, 8 plastic and rubber producing firms, and 6 leather production firms (Table 3.7). In contrast, free-trade zones in neighboring countries were established mainly to support electronics assembling.⁴⁴ Because many firms in the BEPZ were garment and miscellaneous light manufacturing industries, a relatively large number of firms were

⁴³R.A.5490 was amended as P.D.66 in 1972.

⁴⁴In the BEPZ, electronic / electrical manufacturing firms and machinery manufacturing firms each accounted for only 5 (9%) of the firms, respectively.

owned by Filipinos. In 1980, 16 firms were established using Filipino capital, 20 were joint ventures, and 20 were based on foreign capital investments.

A feasibility study showed that the BEPZ authority incurred operating losses for the first three years, before turning a profit.⁴⁵ However, from 1973 to 1979, revenues were negative for squeezed the net revenues of the BEPZ. For example, as of 1980, occupancy reached only one-half of the projected level.

⁴⁵Judy Castro, *Philippines: The Bataan Export Processing Zone*, 1984

TABLE 3.7 TOTAL NUMBER OF FIRM IN THE BATAAN PROCESSING ZONE
BY INDUSTRY, 1973 - 1980.

Industry	PROJECTED	ACTUAL
<i>Light Industry</i>		
Clothing	36	16
Electric & Electrical products	19	5
Fabricated metal products	8	2
Leather products	7	6
Plastic & Rubber products	5	8
Food Products	4	1
Paper products	0	1
Misc.light industries*	6	4
Subtotal	90	43
<i>Medium Industries</i>		
Automotive	5	1
Woodcraft	3	2
Metal works	2	1
Subtotal	10	4
<i>Heavy Industries</i>		
Integrated textile mills	3	1
Machineries	6	5
Shipyards	3	3
Integrated plastic products	1	0
Subtotal	13	9
Total	113	56

* "Misc. light industries" include jewelry, handicrafts, optical, musical instruments, and oil painting.

Also, exports from the BEPZ were lower than expected, reaching only 35 percent of the projected export values by 1979. Finally, since the Philippines did not produce enough raw and intermediate materials to meet the needs of the BEPZ industries, which required these inputs to produce garments, plastic and rubber products, and heavy machinery. Thus, net export earnings were low--only 36 percent of the actual export value--and linkage to the domestic economy was also low. Net present value⁴⁶ at 1972 of net exports (exports minus imports) from 1973 to 1979 was US \$5.109 million using a 14.2 percent annual discount rate (Table 3.9).⁴⁷ Thus, the BEPZ did not generate foreign exchange earnings, despite the high investment costs. However, because there were many light industry firms in the BEPZ and these industries absorbed large number of unskilled labors, the free trade zone contributed to employment creation.⁴⁸ Yet, Castro shows that the workers in the BEPZ labored under bad conditions, were poorly paid, and had to work long hours. One-third of workers were paid less than the minimum wage rate in the

⁴⁶Net Present Value (NPV) is the present value of future cash flow, which is obtained as follows:

$$NPV = \sum_{t=1}^n \{X_t / (1 + r)^t\}$$

where

X_t = earning at the year after base year
 r = averaged annual discount rate

⁴⁷Averaged annual discount rate (r) is calculated as compounded average from 1972 to 1979: $(1 + r)^8 = \text{CPI}_{1979} / \text{CPI}_{1972}$ (Data: IMF, *International Financial Statistics Yearbook*).

⁴⁸According to Castro's study, 64 percent of workers had no previous experience for their jobs.

Philippines (P13 per day) and 86 percent earned less than P20 per day.⁴⁹ On average, employees worked 53.9 hours per week and one-quarter of the workers worked more than 60 hours per week, about 1.5 times the average work week of industrialized countries almost all year, partly because personnel costs and power expenses were higher than initially anticipated (Table 3.8).

TABLE 3.8 NET REVENUE AND EXPORT VALUE FOR THE BATAAN EXPORT PROCESSING ZONE, PROJECTED AND ACTUAL VALUE.

	NET REVENUES FROM OPERATION (1,000 peso)		EXPORT (US\$ 1,000)	
	Projected	Actual	Projected	Actual
1973	-6,778	-1,394	NA	119
1974	-10,198	-1,394	43,586	3,779
1975	-350	989	157,229	10,613
1976	10,643	-270	252,255	27,865
1977	17,828	-1,434	298,574	44,768
1978	18,696	-1,416	315,463	76,430
1979	18,742	-817	319,224	113,249

Source: Bataan Export Processing Authority, *Annual Reports. Feasibility Report Bataan Export Processing Zone, vol. 1*, Manila, May 1973.

⁴⁹However, their average earning per day was 35 percent above that of their previous job.

TABLE 3.9 EXPORT AND IMPORT VALUE IN THE BATAAN EXPORT PROCESSING ZONE, 1973 - 1979.

	EXPORTS (US\$ 1,000)	IMPORTS (US\$ 1,000)	NET EXPORTS (US\$ 1,000)
1973	120	3,260	-3,140
1974	3,779	37,510	-33,731
1975	10,613	20,690	-10,077
1976	27,865	19,440	8,425
1977	44,768	34,500	10,268
1978	76,430	45,000	31,430
1979	113,249	72,516	40,733
NPV (1972) ^{a/}	128,723	123,613	5,109

Source: Export Processing Zone Authority, *Annual Reports*, selected years.

a/ Net present values of each return from 1973 to 1979, discounted at the beginning of 1972.

3.3.3 INDUSTRIAL PROMOTION AND TRADE LIBERALIZATIONS IN THE EARLY 1980S

Eleven Major Projects

Despite the deteriorating current account, in 1980 the government launched a set of large-scale projects--called the "eleven major projects"--intended to produce "vital commodities" and intermediate goods at low prices and to promote downstream industries through import substitution.

Most of these projects were in the heavy and chemical industry sectors, including coco-chemical manufacturing, copper smelting , phosphate fertilizer manufacturing, diesel engine production, alcogas distillation, integrated steel production, and other heavy manufacturing. Total investment costs were approximately US\$ 4 billion, equal to 10 percent of the country's GNP at the time.

However, the projects did not accomplished their initial purpose and were very costly to the Philippine economy. First, since production was "protected" from international trade, downstream producers were forced to use expensive and low quality domestic raw and intermediate materials. Second, the projects were highly capital intensive and created little employment because they were concentrated in heavy and chemical industries. Third, three-fourths of the investment costs were financed through foreign borrowing, which contradicted the government's assertion that the Philippines was successfully recovering from being a debt-dependent economy. Finally, none of the projects were completed--except the copper smelter--because of the foreign-exchange crisis of 1983. Therefore, the projects only decreased the productivity of the economy and increased the government deficit, without making any improvements.

Trade Liberalization of 1980 - 1983

As the current account deficit worsened, in 1980 the government recognized the need to revise its industrial policy, and implemented its Structural Adjustment Program. Beginning in January 1981, import restrictions were reduced each year. In 1981 and 1982, the government reduced high tariffs on consumer goods, while raising low tariff rates on capital goods and raw materials. As a result of these changes, during 1980-1985

average tariff rates decreased from 70.3 percent to 31.0 percent.⁴⁸ In addition, of the 1,304 items requiring import licenses, 263 were dropped in 1981, 610 additional items were dropped in 1982, and 87 more items were dropped in 1983.⁴⁹

The *New Investment Incentives Policy Act* in 1983 was designed to withdraw capital-based incentives (such as tax exemptions on capital goods and accelerated depreciation allowances), which the BOI had instituted as investment incentives during the 1960s and the 1970s. Recognizing that the low real interest rates of the 1970s had encouraged capital rather than labor uses and depressed domestic savings, in 1980 government raised the interest rate ceiling, and in 1981 all interest rates were deregulated.

3.4 FOREIGN EXCHANGE CRISIS AND TRADE LIBERALIZATION IN THE 1980S

3.4.1 FOREIGN EXCHANGE CRISIS OF 1983

Causes of the Crisis

The performance of the economy hit a low during the late-1970s and the early 1980s. Although neighboring countries also experienced weak economic growth, the Philippine economy was affected more than other countries. From 1975 through 1979, GNP grew at 6.4% per year but declined to 5.0% in 1980, 3.4% in 1981, 1.9% in 1982, and 1.1% in 1983. As the current account deficit increased, the BOP deficit, as a percent

⁴⁸Romeo M. Bautista, *Impedient to Trade Liberalization in the Philippines*, Trade Policy Research Centre, London, 1989.

⁴⁹World Bank, *Philippines, A Framework for Economic Recovery*, A World Bank Country Study, Washington, D.C., 1987.

of GNP, rose from 4.6% (1975-79), to 4.9% (1980), to 5.1% (1981), to 7.6% (1982), and to 7.1% (1983). During the late-1970s and early-1980s, the terms of trade continued to decline, and by 1983, it had fallen to one-half of the early 1970s' level.

Foreign Exchange Crisis of 1983

On August 21, 1983 former senator and opposition party leader Benigno Aquino was assassinated at the Manila International Airport upon returning from the United States. Aquino was recognized as the 'most charismatic and influential figure'⁵⁰ in the United National Democratic Organization, a coalition of opposition parties established in February 1982. After being exiled from the Philippines and arriving in the United States, the Marcos government warned that he would be arrested if he returned to the Philippines. The assassination of Aquino deepened the country's economic crisis. Capital flows from the Philippines accelerated and foreign investment declined because of fear of domestic disorder.

The Philippines' economic crisis of 1983 was different from the debt crises faced by other countries.⁵¹ In Latin America, the cause of the debt crisis was an overvalued exchange rate. In Mexico's case it was due to over-consumption by the government. In contrast, the main cause of the Philippines' crisis was a deficit in the international trade balance due to government policies which led to an inefficient industrial structure. The biased industrial and trade policies misallocated resources and lowered their productivity.

⁵⁰Martin Wright, *Revolution in the Philippines*, Harlow: Longman, 1988, p.16.

⁵¹One of common reasons of the economic crisis in the world is a massive increase in world interest rates during the late 1970s and the early 1980s.

As a result, export earnings declined and import requirements increased. Consequently, the current account deficit rose from US\$ 1,495 million in 1979, to US\$ 1,916 million in 1980, to US\$ 2,096 million in 1981, and to US\$ 3,212 million in 1982. The government fiscal deficit also grew rapidly in the early 1980s, rising from P3,385 million in 1980, to P12,154 million in 1981, and to P14,414 million in 1982. Yet, the government continued to invest in large-scale projects and programs, which did not contribute to economic recovery.

3.4.2 RECOVERY AFTER THE CRISIS

Beginning October 1983, exchange and trade controls (*i.e.*, new tariffs and quotas) were imposed temporarily to increase revenues and reduce imports.⁵² The government devalued the peso (with respect to the US dollar) by 7.8% in June and by 27.3% in October 1983. Import controls and peso devaluation resulted in a decrease in real absorption (consumption plus investment) in 1983, 1984 and 1985. As a result, imports declined by 18.9% in 1984, and by 15.8% in 1985, while current account improved quickly in 1984 and 1985. However, rapid inflation occurred in this period because of import controls and currency devaluation. The inflation rate reached 50.3% in 1984 and 23.1% in 1985 -- much higher than those of 1982 (10.2%) and 1983 (10.0%).

Policies introduced after the crisis failed to reflect a long-range perspective. Instead of encouraging price adjustment and export promotion, the government attempted to balance trade by reducing demand. As a result, the real GNP decreased by 6.8% in

⁵²These controls excluded oil imports, raw materials for vital industries, and maturing domestic assistance loans.

1984 and 3.8% in 1985.⁵³ Also, the government failed to implement structural adjustment policies to improve productivity and reduce inefficient resource allocation, that resulted from its strongly biased incentive policies. Therefore, when the economic crisis eased and the GNP began to increase, imports again increased and the current account deficit grew simultaneously--largely because the Philippines' international competitiveness was still low due to the weak productivity.

3.4.3 NEW POLICIES IN THE AQUINO ADMINISTRATION

When the Corazon Aquino government came to power in February 1986, it began to modify the Marcos government policies and further liberalized the trade controls. Also, as a new initiative, Aquino's long-term development plan promoted agricultural-based economic development by, for example, correcting price policies that had discriminated against agricultural products and promoting rural infrastructure improvements designed to increase agricultural productivity.⁵⁴

International Policies

The Aquino administration implemented several policies to reduce government intervention in international trade. First, export taxes (*e.g.*, on coconut oil) and export bans (*e.g.*, on copra) were abolished. Second, imports were decontrolled. From 1986 to

⁵³Until 1983, real GNP growth rate had been positive.

⁵⁴The plan was made by the National Economic Development Authority (NEDA), and approved by the Cabinet in October in 1986.

1988, 1,232 items were proposed to be eliminated from import controls.⁵⁵ Third, the government supported export promotions, including merchandising consultation, information service for foreign markets, and trade exhibitions in regions other than the Manila district. These activities sought to diversify products, producing regions, and export destinations.

In August 1986, the Central Bank introduced the *Debt Equity Conversion Program* (Circular 1111). This program transferred debt (fixed term external liabilities) into equity (contingent liabilities), as a strategy to transfer repayment liabilities from the public to the private sector.⁵⁶ Thus, this program decreased government debt and, at the same time, promoted private investment.

The economy began to recover in 1986, partially because of world price increases for traditional Philippine export products, especially coconut products. As a result, the balance of trade turned positive for the first time since 1973. However, external debt remained large. In 1988, total external debt was US\$ 29,448 million, the tenth largest in the world.⁵⁷

The Philippines gradually won back international confidence and assistance. In July, 1986, the government received in 422 million Special Drawing Rights (SDRs) from

⁵⁵Bautista 1989. *ibid.* p.72.

⁵⁶John D. Shilling, Anthony Toft, Woonki Sung, and Wayne Edisis, "Debt Equity Conversion Analysis--A Case Study of the Philippine Program", *World Bank Discussion Paper*, 76, Washington, D.C., 1990.

⁵⁷World Bank, *World Development Report, 1990*, p.218.

the International Monetary Fund. Also, in January 1987 14 developed countries (the Paris Club) agreed to reschedule the country's debt payment.

New Industrial Policies

In 1987, the government revised the *Omnibus Investment Code of 1981* (see Table 3.10) and designated the Department of Trade and Industry to administer it through the Board of Investment and the Export Processing Zone Authority. This law provided tax incentives for investing in the Export Processing Zones, for multinational firms' regional warehouses and headquarters, and for pioneer industries in less developed procedures. The Investment Priorities Plan (prepared by BOI each year) identified "preferred production and activities". Among these projects, "pioneer projects"⁵⁸ were given more incentives than "non-pioneer projects". Furthermore, the Investment Priorities Plan identified agro-industry and export-oriented industries as new priority development areas.⁵⁹

In order to simplify investment procedures and to provide necessary advice, the government created a "One Stop Action Center for Investment". This facility promoted investment by integrating all related agencies, such as the BOI, the Central Bank, the Department of Foreign Affairs, the Export Processing Zone Authority, Immigration Commission, and the Securities Exchange Commission.

⁵⁸The "pioneer projects" were defined as those which produced new products, used new technologies, or were considered to be essential to national goals.

⁵⁹*Philippine Yearbook*.

TABLE 3.10 SUMMARY OF THE OMNIBUS INVESTMENT CODE OF 1987.

Incentive for Exports

Tax credits for raw materials and intermediate goods used in the production of export goods

Access to bonded warehouse for exporting enterprises

Export tax exemption for non-traditional exports

Simplification of custom procedures for imports

Incentives for Investments

Income tax holiday of 6 years for new pioneer enterprises and 4 years for non-pioneer enterprises in preferred area

Import tax exemption for capital equipments and machinery

Import tax exemption for breeding stocks and genetic materials

Tax credit for domestic breeding stocks and genetic materials

Tax deduction (50%) for incremental labor wages in registered projects

Tax deduction for construction costs in less-developed area

Small and Medium-scale Enterprises Promotion Program

In order to correct the large-scale firm policy bias of the Marcos administration, the Aquino government implemented policies to promote small- and medium-scale enterprises, especially in the rural areas. These included financial support programs and entrepreneurial and technology development programs.

Among several financial programs, the largest was "the Industrial Guarantee and Loan Fund", supported by the World Bank. In 1988, it approved 555 projects valued at P1,528 million.⁶⁰ This program supported projects to assist small- and medium-scale firms to acquire working asset and fixed assets. "The Agro-Industrial Technology Transfer Program" (AITTP) and "the Guarantee Fund for Small and Medium Enterprises" (GFSMEs) promoted food processing and the agribusiness sector. "The Export Industry Modernization Program I" (EIMP I) and "the Philippine Export and Foreign Loan Guarantee Fund" (PHILGUARANTEE) provided financial assistance to small- and medium-scale exporting enterprises. "The Urban Livelihood Financing Program" (ULFP) and "the Tulong sa T-Self Employment Loan Assistance Program" (TST-SELA) were aimed mainly at creating employment in urban and rural areas, respectively.

The entrepreneurial and technological programs provided business consultancy, designed to improve productivity and efficiency through managerial and technical consultancy. "The Small Business Technology Improvement Program" provided technology information and "the Marketing Assistance Program" helped firms to expand domestic and export marketing.

⁶⁰National Economic and Development Authority, *Philippine Development Report*, 1989.

Finally, "the Community Employment Development Program" (CEDP) financed labor intensive projects, including local road, small port, water supplies, irrigation, forestry, and seed production projects.

Remaining Problems and New Direction

The Philippine economy is still weak and remains one of the world's most severely in-debt economies.⁶¹ Socio-economic stratification between urban and rural areas and between high and low income classes is accelerating.

Furthermore, the country's export-oriented industrialization strategy is unstable because it depends on world demand. Not only are Philippine exports limited to a few kinds of products, but the exports are highly dependent on the U.S. market. Thus, U.S. import quotas on garments and textiles, as well as the U.S. recession of the 1980s, severely affected the export sector in the Philippines.⁶² Therefore, it is clear that the Philippines needs to diversify both the kinds of products and their markets to achieve sustained development.

⁶¹World Bank, *World Development Report 1991: The Challenge of Development*, Oxford University Press.

⁶²Show Robert T., *Export-Oriented Industrialization, the International Division of Labor, and the Rise of the Subcontract Bourgeoisie in the Philippines*, in Norman G. Owen ed. 'The Philippine Economy and the United States', Center for South and Southeast Asian Studies, The University of Michigan, 1983.

3.5 SUMMARY

This chapter discussed the Philippines' general industrial and trade policies from a historical perspective. Until the late 1960s, the Philippines followed an inward-looking import substitution industrialization policy. Because of *the Bell Trade Act*, the Philippines could neither impose tariffs on imports from the United States (a major trading country), nor change its foreign exchange rate without U.S. permission. Therefore, the Philippines devised various measures to restrict imports and create domestic industries, including import licensing, sales taxes on luxury imported goods, and taxes foreign currency exchange control. In order to develop the domestic manufacturing industry, government introduced various tax incentives for "pioneer industries".

During the 1960s, although the Philippines kept in place its import substitution measures, trade policy became more realistic. *The Laurel-Langley Agreement* (revised trade agreement) allowed the government to gradually impose tariffs. After multiple exchange rates were implemented, the peso was devalued from the pre-war rate.

Due to its restrictive international trade policies, the Philippines lost the opportunity for export-led development built around its strong bilateral relationship with the United States. In essence, the Philippines attempted to protect its domestic market from the U.S. with tariffs, rather than trying to expand exports to the U.S., as did several Asian countries (*i.e.*, Japan, South Korea, and Taiwan) in the 1960s and 1970s, thereby benefiting from the growing U.S. market. However, the government recognized that its import substitution industrialization resulted in inefficiency in the economy and led to higher domestic prices for low-quality goods. As a result, the terms of trade worsened, which precipitated several foreign exchange crises.

In the 1970s, the Marcos administration sought to implement an aggressive export promotion policy. The government spent vast sums of money for tax incentives to encourage export-oriented industries (*i.e.*, *the Export Incentives Act of 1970* and *the Omnibus Investment Code of 1981*) and invested in large-scale projects (*i.e.*, the export processing zones, and *the eleven major projects*). After the trade agreement with the U.S. was terminated in 1974, and the Philippines was free to modify its overall trade policy strategy.

As discussed in this chapter, these policies failed to accelerate economic development. First, the investment projects were skewed toward electric manufacturing and the garment industry. However, these industries contributed little value added to the domestic economy, because most of the raw and intermediate materials were imported. Second, the Philippines implemented these projects before developing sufficient technological capacity. Therefore, even though it created several heavy industries, it lowered the productivity of downstream industries which used these intermediate materials as inputs. Third, because the government spent a large share of its budget to support these industries, development of other industries was neglected.

After the Aquino government came to power in 1986, the country implemented policies to achieve more sustainable economic development. It reduced heavy public expenditure and foreign borrowing, corrected its industrial policy bias toward specific manufacturing sectors, and gave priority to agriculture and agro-based industries. Finally, it sought to diversify export goods production and its market destination, while gradually easing import regulation. In general, the export-oriented industrialization policies under the Aquino administration were quite different from those pursued under the Marcos

CHAPTER IV

DOMESTIC POLICIES AFFECTING THE COCONUT INDUSTRY

The previous chapter found that the export-led industrialization strategy pursued by the Marcos government was biased toward heavy manufacturing and provided little benefit to food processing industry. Also, because of the heavy expenditure to manufacturing sector, the government could not afford to support coconut industry development. Therefore, it sought other less expensive strategy. This chapter analyzes policies which the government implemented to develop the coconut industry. This objective achieved by first describing the industrial structure and then exploring structural changes in the industry over the past 30 years.

4.1 STRUCTURES OF THE COCONUT INDUSTRY

4.1.1 COCONUT FARMING INDUSTRY

Farmland Structure

Most coconut farms in the Philippines are small, averaging about four hectares. The rest are very large farms, owned by rich landlords. Approximately 90 percent of the farms (small- and medium-scale farms of less than 7 hectares) account for less than 30 percent of the total coconut farm area, while only 1 percent (large farms, more than 24 hectares) account for more than 10 percent of the total area (Table 4.1). A relatively large

number of coconut farms are owned by the farmers themselves (Table 4.2). Three-quarters are fully or partly owned by farmers and one-fifth are farmed by tenants-- including leaseholders (who earn fixed amounts of payments) and sharecroppers (who earn shared payments).⁶³

Regions

The Philippines' biggest coconut-producing region is Southern Mindanao. It accounted for 25.6 percent of the coconut area, 41.8 percent of the nut harvest, and 26.3 percent of the coconut trees in 1990. The second most important coconut region is Southern Tagalog (southern Luzon Island), which accounted for 17.4 percent of the farm area, 16.4 percent of the harvest, and 21.4 percent of the trees.⁶⁴ Productivity depends on weather conditions, especially typhoons and drought, and varies by region. In 1990, nut productivity per tree ranged from 79 in Southern Mindanao to only 21 in Central Luzon. Productivity in Southern Tagalog, the second biggest producer, was only half of the level in Southern Mindanao. During the 1980s, productivity declined from a national average of 51 nuts per tree (1981-1983) to 49 nuts per tree (1988-1990).

⁶³"Partly owned farmers" refers to those farmers who act as the owner although they do not have full ownership.

⁶⁴*Coconut Statistics, 1990.*

TABLE 4.1 STRUCTURE OF COCONUT FARM HOLDINGS, PHILIPPINES, 1980.

FARM SIZE (ha)	NUMBER OF FARMS (percentage of the total farms)	AREA OF FARM (percentage of the total area)
0 - 6.9	88.9	28.5
7 - 14.9	8.4	20.5
15 - 23.9	1.8	8.1
24 and over	1.1	12.6
TOTAL	100.0	100.0

Source: *NCSO Census of Agriculture 1980.*

TABLE 4.2 TENURIAL STRUCTURE OF COCONUT FARM, PHILIPPINES, 1980.

TENURE FORM	NUMBER OF FARMS (percentage of the total number)	AREA OF FARM (percentage of the total area)
OWNED	69.5	69.8
PARTLY OWNED	22.0	20.6
LEASED	6.5	7.6
OTHERS	2.0	2.0
TOTAL	100.0	100.0

Source: *NCSO Census of Agriculture, 1980.*

Tenurial Structure and Incomes

Although the nominal wage of tenants and workers in coconut industry increased during the late 1970s and the 1980s, real wages decreased because of rapid inflation.⁶⁵ From 1977 to 1985, the nominal wage increased by 339 percent, while the consumer price index (CPI) increased by 380 percent. Thus, the real wage decreased by 11 percent over the period.

Tenants receive a small share of the harvest. On average size coconut farms, landlords take about two-thirds of the harvest, and the caretakers (hired labors) receive one-sixth to one-half of the production.⁶⁶ Moreover, according to the Luzon Secretariat of Social Action, in the Philippines, middlemen sometimes price the copra below real market value, further reducing farmers' earnings.⁶⁷

Besides tenants, coconut producers employ many hired workers to clear the farm land, burn dead leaves and trees, control pests, and harvest the nuts.⁶⁸ The hired wage rate is very low (P10 to P20 per day in 1980). Also coconut workers are in a disadvantageous position, compared to their landowners. Since unemployment rates have been very high, especially in rural area, workers accept low wages. Also, farm workers are not organized in the Philippines, so it is difficult for them to request wage increases.

⁶⁵Luzviminda B. Cornista, and Rolando T. Bello, *The Coconut Farming Industry: A Situationer*, University of the Philippines at Los Banos, 1988.

⁶⁶The Luzon Secretariat of Social Action, *Countryside Report*, Manila, 1982.

⁶⁷*idem*, p.64.

⁶⁸Workers, who are employed for several days for specific tasks, typically engage in other jobs in addition to coconut farming.

Finally, because the coconut wholesale price declined while other operation costs increased due to rapid inflation, employers have been forced to cut hired labor costs.

4.1.2 COCONUT PROCESSING AND TRADING INDUSTRY

Coconut Products

Copra

Copra, the dried meat of coconut, is an intermediate product from which coconut oil and copra meal (copra cake) are produced (Figure 4.1). The Philippines produces several grades of copra in accordance with their processing methods. However, only high grade copra is exported.

Desiccated Coconut

Desiccated coconut is dried and disintegrated coconut meat. Unlike copra, it is formed into flakes, threads, ribbon shapes, and granules. Its abundant flavor and "chewiness" makes the product an important material for the confectionery and bakery industries. The manufacturing process for desiccated coconut is as follows: after the coconut meat is removed from the shell and the brown covering of the meat is pared, the kernel pieces are pasteurized in steam and stabilized by a solution of sulfur dioxide. Then, the kernel pieces are cut or shredded into various forms (*i.e.*, flakes and granulated shapes). After drying, the product is graded according to size. toasted or colored desiccated coconut is used as topping materials for confectionery and bakery products. Desiccated coconut can be processed into other forms. Creamed coconut, made by milling desiccated coconuts, is processed into whipping cream and related products.

Coconut Oil

Coconut oil is processed from copra. This oil contains a high proportion of saturated fat.⁶⁹ Because the oil is stable, even after long exposure to air, it is desirable as spray oil in bakeries.⁷⁰ Also, the properties of coconut oil make it suitable for soap and detergent production. For example, soap made of coconut oil does not yellow with age. In the past, margarine was one of the major products processed from coconut oil, but today it is rarely used because of increasing health consciousness about the dangers of saturated fats. Coconut oil can also be processed into other products, such as shortening,

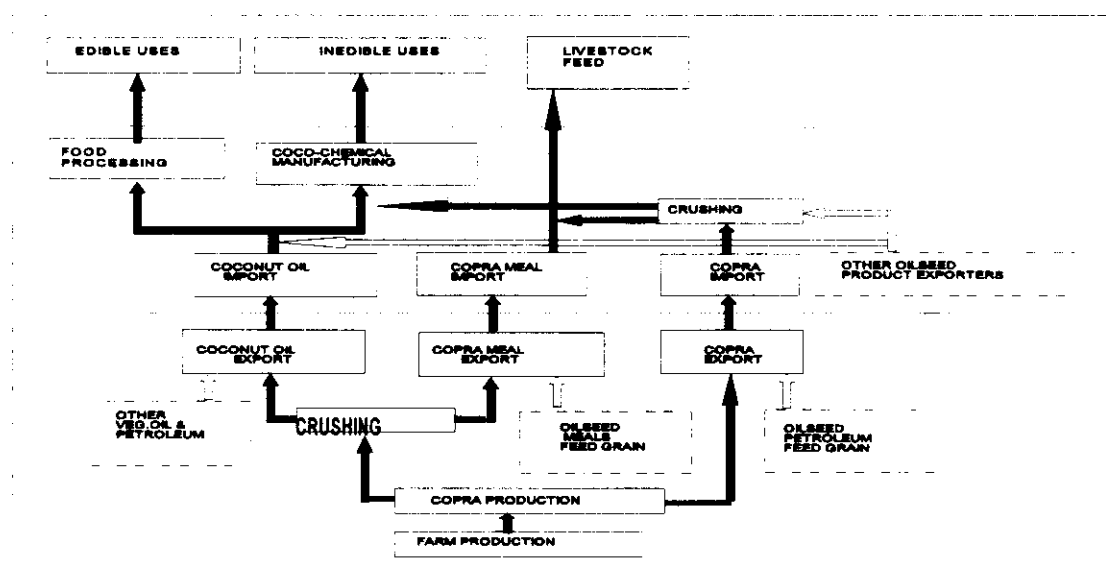


FIGURE 4.1 COCONUT MARKET STRUCTURE, PHILIPPINES.

Source: original

⁶⁹The proportion of saturated fatty acids in the total fats is 91 percent for coconut oil, compared to 84 percent for palm kernel oil, and only 14 percent for soybean oil.

⁷⁰Saturated fats have oxidative, hydrolytic and ketonic rancidity.

imitation cream (coffee creamer, whipped toppings, cream fillings), and confectionery materials. Although edible uses have declined, inedible uses of coconut oil (mainly for soap, detergent, and other chemical materials) have increased in the United States. Recent technological advances for fat and oil chemicals have made coconut oil a good substitute for petro-chemical products. These coco-chemical products include fatty alcohol, fatty acids, glycerine, paint base, lubricant additive, and plastics.

Copra Meal (Copra Cake)

Copra meal (or copra cake) is a by-product of coconut oil that is processed from residuals of coconut oil extraction. Copra meal, an important animal feed, especially in Europe and the Philippines, is suitable for cattle feed because it contains abundant protein and fat.⁷¹ Also, it is palatable for animals, and can absorb molasses. In Europe, the price of copra meal is competitive with other meals. However, this meal is unfit for swine and poultry because of its high fiber content. Finally, although it can be used as fertilizer, other fertilizer needs to be mixed with it because it contains a low level of nitrogen.

⁷¹However, copra meal has less protein than cotton-seed meal, linseed meal, and groundnut meal.

Coconut Trading Firms

In the Philippines, the coconut market consist of a few large-scale and many small-scale firms. About one-third of the copra traders exported about 95 percent of the total produced, and one-six of the coconut oil traders exported about 60 percent of the oil.⁷²

Since the late 1970s, when the Philippines nationalized the export firms and created the United Coconut Oil Mills, Inc.(UNICOM) and its subsidiaries, INTERCO and Interco Manufacturing Corporation, these domestic firms have dominated coconut oil and copra meal exports (Table 4.3). However, American firms still dominate the desiccated coconut export sector. (Table 4.3)

Oil Processing Firms

As of June 1991, there were 109 coconut oil mills (crude coconut oil processing factories) in the Philippines, compared to 65 mills in 1980 (a 68 percent increase). Total copra crushing capacity is 17,270.5 metric tons (MT) Although crushing capacity expanded in the 1980s, actual capacity utilization dropped from 62.8 percent in 1981 to 41.6 percent in 1990 due to lower than expected coconut oil demand.⁷³

In regard to location, in 1991 the Mindanao area had 29 plants (45.6% of the country's capacity), followed by the Laguna/Quezon area, 36 plants (19.1%), Metro Manila area, 20 plants (15.9%), and the Visaya area, 17 plants (11.7%). Because Mindanao is the largest coconut-producing area in the Philippines, it attracts the most

⁷²World Bank, *The Philippines, Priorities and Prospects of development*, 1976, p.150.

⁷³*Coconut Statistics, 1990.*

milling firms. In Luzon, the coconut factories are concentrated in Manila and its surrounding area.

Firm Ownership

Since the pre-war era, foreign companies played a major role in the coconut industry in the Philippines. Initially, they exported copra to be processed in their own countries. Later, they established local operations to process copra into coconut oil in the Philippines, because fresh raw materials and a cheap labor force were available. Most foreign companies have been American, and the rest, Chinese (foreign), British, Japanese, and Spanish. While several foreign coconut-processing firms were established before World War I, Ceylon's coconut prices increased after the United States passed the *Fordney-McCumber Tariff Act* of 1922. As a result, many multinational firms relocated to the Philippines (Philippine copra was not subject to this law),⁷⁴ including Spencer Kellog & Sons, Proctor & Gamble, Philippine Refining, Blue Bar Coconut, and Franklin Baker Co.. After the war, Peter Paul built a factory (1946), and Legaspi Oil was established (1958).

⁷⁴U. S. imports of Philippine copra increased from 60 percent (of the total copra imports) in the early 1930s to 95 percent in the late 1930s.

TABLE 4.3 SHARE AND OWNERSHIP OF PHILIPPINE COCONUT EXPORTING FIRMS, 1980

COCONUT OIL EXPORTING FIRMS	OWNERSHIP	SHARE (%)
<i>COCONUT OIL EXPORTING FIRMS</i>		
UNICOM	Domestic	63.9
INTERCO and Interco Mfg. Corp.	Domestic	19.5
Philippine Refining Co.	British	3.8
Philippine Int'l Development Inc.	N/A	2.3
Others		<u>10.5</u>
TOTAL		100
<i>COPRA MEAL & CAKE EXPORTING FIRMS</i>		
UNICOM	Domestic	61.8
Interco Mfg.	Domestic	10.8
International Copra Export Corp.	N/A	8.6
Philippine Refining Co.	British	3.6
Philippine Int'l Development Inc.	N/A	2.9
Others		<u>12.3</u>
TOTAL		100
<i>DESICCATED COCONUT EXPORTING FIRMS</i>		
Franklin Baker of Philippines	American	35.0
Red V. Coconut Products	Domestic	21.0
Peter Paul Philippines Corp.	American	19.5
Blue Bar Coconut Philippines	American	11.8
Others		<u>12.7</u>
TOTAL		100

Source: Kunio Yoshihara, *Philippine Industrialization*, Oxford University Press, 1985; *Coconut Statistics* 1980.

Note: N/A indicates that the data is not available for the company.

Opposed to foreign domination of the industry, the Philippine government, under pressure from a coconut landlord group, started to nationalize the coconut processing and trading industries. By the beginning of the 1980s, the government had taken over most coconut oil mills and exports.

Labor and Capital Requirements of Coconut Oil Mills

Coconut processors have varying labor requirements, depending on their size. A ILO study (1983) showed that a small-scale plant requires more employees (8 to 17 times) to process the same amount of copra as a large-scale plant.⁷⁵ However, a large-scale of coconut processing plant requires more skilled labor than a small-scale plant (Table 4.4).⁷⁶ This ILO study found that large-scale coconut oil mills are not necessarily capital intensive (Table 4.4). Except for the smallest and the most traditional style of coconut processing mill (ghani mill), small-scale oil mills require more investment costs to produce the same quantity of coconut oil than large-scale mills. However, small-scale plants use less investment cost per employee.

Furthermore, foreign exchange requirements per production volume are higher in small-scale mills, while they are lower per employee. In sum, the small-scale oil mills are less productive because of their inability to benefit from "economies of scale," but they generate considerable employment in the rural area.

⁷⁵The International Labor Office, *Small-Scale Oil Extraction from Groundnut and Copra*, (1983), prepared under the joint auspices of ILO and UNIDO.

⁷⁶According to the ILO study, small-scale coconut plants do not require labor with high school level education. On the other hand, large-scale plant required about 30% of labor with at least high school level education.

TABLE 4.4 EMPLOYMENT AND INVESTMENT COSTS BY SCALE OF PLANT (per 28,800 ton of input requirement)¹

Type of plant	Typical size Capacity of input processing (kg per hour)	Employment Number of employees required	Investment costs (US\$)				Foreign exchange per ton produced
			Investment ² per employee	Investment per ton produced	Foreign ³ exchange per employee	Foreign exchange per ton produced	
Power ghani		570	2,585	89.8	1,167	59.4	
Baby expeller		801	7,496	340.1	4,000	271.3	
Small-scale expeller		399	13,890	313.9	10,666	360.4	
Large-scale expeller		48	37,395	100.5	29,166	114.6	

Note:

¹ Average tonnage of input required by a plant with a large-scale expeller

² Not included working capital

³ Imported equipments

Source: International Labour Office, 1983. *Small-scale oil extraction from groundnut and copra*,
Technical memorandum no.5, Geneva.

4.1.3 COCO-CHEMICAL INDUSTRY

Products

Coco-chemicals (coconut-based chemical manufacturing products) are intermediate or final chemical products further processed from coconut oil. Major coco-chemical products made in the Philippines include fatty acid, fatty alcohol, and glycerine.

Fatty Alcohol

Fatty alcohol, the most important coco-chemical product, is used for making soap as well as for shampoos and other cleansing agents. Its other applications include use as a solvents for fats, waxes and gums, lotions, and lube oil additives.

Fatty Acid

Coco fatty acid is mainly used for soap and detergent production. Also, fatty acid is used in the manufacturing of various chemicals, including nitrate, esters, anides, and acid chlorides.

Glycerine

Crude glycerine is a by-product of fatty acid and fatty alcohol. Refined glycerine is used as a solvent for fats, waxes, making cosmetics and pharmaceutical, paints, fuel oil additives, and rust inhibitors.

Exports

In 1986, the Philippines exported US\$ 40.1 million of fatty alcohol, US\$ 15.5 million of glycerine, and US\$ 8.0 million of fatty acid products (Table 4.5). Coco-chemical exports increased rapidly in the 1980s. From 1981 to 1986, fatty alcohol export increased by 164% (in volume), crude glycerine by 451%, and fatty acid oil by 155%.

However, the export of these three products (US\$ 63.6 million) was only equal to one-fifth the value of coconut oil exports (US\$ 332.8 million) in 1986.

TABLE 4.5 SHARE OF PHILIPPINE COCO-CHEMICAL PRODUCT EXPORTS IN TOTAL WORLD EXPORTS, 1983-86 (Percent).

	1983	1984	1985	1986
Fatty Alcohol	4.9	8.4	7.7	12.1
Glycerine (including Glycerol Lyes)	3.7	3.8	7.0	8.9
Fatty Acid (including Fatty Oil)	0.4	3.2	6.0	3.2

Source: Bureau of External Trade Promotion; Philippine Department of Trade & Industry

The Firms

The first coco-chemical company, Coco-chemical Plants, Inc.(CCPI), was established by the National Investment and Development Corporation, using technologies provided by Kao Corporation of Japan. Initially, CCPI's produced butyl coco phthalate, but the firm later extended production to include plasticizer, methyl esters, and fatty alcohols. The largest coco-chemical producer in the Philippines is the United Coconut Chemicals, Inc. (UNICHEM), a joint venture between a coconut landlords' organization, the United Coconut Producers Bank (UCPB) and a German company, Lurgi Urmwelt und Chemotechnik. Apart from UNICHEM, most coco-chemical firms are owned by foreign companies, including Colgate Palmolive Philippines, Proctor and Gamble PMC, and Philipinas Kao, Inc. (Table 4.6).⁷⁷

⁷⁷Colgate Palmolive Philippines bought the CCPI in 1985.

TABLE 4.6 CAPACITY OF COCO-CHEMICAL COMPANIES, PHILIPPINES, 1987.

COMPANY	PRODUCTS	CAPACITY (MT/yr)
Philippines Kao, Inc.	Fatty Alcohol	54,000
	Methyl Ester	35,000
	Glycerine	5,500
United Coconut Chemicals, Inc. (UNICHEM)	Fatty Alcohol	30,010
	Fatty Acids	29,175
	Glycerine	8,000
Colgate Palmolive Philippines	Coconut Fatty Alcohol	23,000
	Hydro Coco Fatty Acid	7,500
	Cocodiethanolamide	6,000
	Coco Methyl Esters	4,723
	Coco Acid Oil	4,000
	Diocetyl Phthalate	3,240
	Sodium Lauryl Alcohol	1,500
Glycerine	418	
Procter & Gamble PMC	Fatty Alcohol	17,600
Proton Chemical Industries, Inc.	Methyl Ester	9,600
	Glycerine	1,176
D & L Industries	Methyl Ester	3,000
	Cocomonoethanolamide	600
	Cocodiethanolamide	600
	Glycerine	300

Source: Board of Investment, Organic Chemicals Department. Bureau of Export Trade Promotion, *Coco-chemicals*, 1989, table 1.

4.2 LEVIES AND THE INTEGRATION PROGRAM

From the late 1960s to the beginning of the 1980s, the Marcos government intervened heavily to promote the coconut industry. In response to pressure from the large landlords, the government imposed levies on all farmers and used the revenue generated to support the coconut industry, especially the coconut processing and exporting sectors. This policy, called "the vertical integration program", was intended to "enable coconut farmers to become participants in and beneficiaries of the development and growth of the coconut industry".⁷⁸

4.2.1 CREATION OF COCONUT INDUSTRY ORGANIZATIONS

Following Independence, initially the government was indifferent or at least passive towards the development of the coconut industry. In 1947, coconut producers (especially large ones) joined together to form the Philippine Coconut Planters Federation (PCPF) in order to lobby for more favorable governmental policies.⁷⁹ Under pressure from the large landlords, the government established the National Coconut Corporation (NACOCO) in 1950, as the first government agency to serve the industry. Its main duty was to stabilize the coconut market by buying and selling copra. In 1954, in response to pressure from producers, the government established the Philippine Coconut Administration (PHILCOA), a second government agency, to administer coconut industry development programs.

⁷⁸UCAP, *The Coconut Story*, p.98.

⁷⁹In 1977 the name was changed to the current Philippine Coconut Producers Federation (COCOFED).

4.2.2 COCOFUND LEVY

In response to COCOFED's political pressure, the Congress passed *Republic Act 6260* in 1971. This law imposed a levy on coconut farmers, and designated that revenues be used to establish coconut processing firms and finance related infrastructure developments, farmers loans, industrial research, and scholarships. The COCOFUND levy was fixed at P5.5 per metric ton of copra at the first sale. The government made the Philippine Coconut Administration (PHILCOA) the trustee of the fund, and designated the Philippine Coconut Producers Federation (COCOFED) to collect the levy. Revenues were deposited with the Development Bank of the Philippines and then transferred to the Coconut Investment Fund. Under R.A. 6260, the government provided an initial subsidy of P100 million to establish the Coconut Investment Fund. Subsequently, P5.0 of the P5.5 levy was used to finance this fund and the other P0.5 was returned to COCOFED as its collection fee.

This bill had several controversial aspects. First, it infringed on individual's right to free association because it forced the farmers to be stockholders of the CIF. Second, the bill granted a private corporation (COCOFED) authority to exercise government power to collect the levy. Finally, the bill created the industrial integration system, which created a strong relationship between large coconut landlords and the government.

4.2.3 COCONUT CONSUMER STABILIZATION FUND (CCSF)

The Coconut Consumers Stabilization Fund Levy (CCSF Levy)

In 1973 and 1974, world oil and fat prices rose steeply. The border price of coconut oil increased from US\$ 167.6 per m.t. in January 1973 to US\$ 1,092.9 (651

percent) in July 1974. Similarly, the domestic coconut oil price rose from P1.32 per kilogram in January 1973 to P7.55 (567%) in March 1974. This resulted in a serious shortage of coconut product oil, especially cooking oil, in the domestic market as processors earned higher profits from export compared to local markets. To increase the domestic supply of coconut oil, in August 1973 (P.D. 276) the government sought to subsidize the price of coconut products by establishing the Coconut Stabilization Fund (CCSF). The Philippine Coconut Authority (PCA) was authorized to collect the CCSF levy (P15 per 100 kilogram of copra) at first sale or its equivalent in other coconut products (P30 for husked nuts). This levy, which fluctuated according to the copra prices (Table 4.7), remained in effect until 1982.

Creation of the Philippine Coconut Authority (PCA)

In June 1973, the government sought to better coordinate the administration of the coconut industry by creating the Philippine Coconut Authority (P.D. 232). At that time, all functions of the Coconut Coordinating Council (CCC), the Philippine Coconut Administration (PHILCOA), and the Philippine Coconut Research Institute were transferred to the PCA (P.D. 276).

Following the steep increase in the price of coconut products, the military became a power in the coconut industry.⁸⁰ Soon after Defence Minister Juan Ponce Enrile became the first administrator of the PCA (*Letter of Instruction 115*, August 16 1973), he proposed the creation of a stabilization fund. In August 20, 1973, the CCSF was created

⁸⁰The military took over 20 percent of coconut oil mills and other coconut facilities in the Philippines and attempted to reduce the coconut oil price.

along with a producer levy to finance the fund. The PCA became the sole agency with strong legal power in the industry. In addition to the subsidy program, PCA administered the coconut industry's vertical integration program. In 1978, P.D. 1468 granted the PCA the authority to enforce nationalization of the coconut processing and trading industry.

The PCA board was initially composed of several representatives from both the public and private sectors.⁸¹ The board was reduced from eleven to nine members in August 1973 (P.D. 271) and to seven in December, 1974 (P.D. 623); with the government representatives reduced from five to two. The remaining five representatives were large coconut producers (three from COCOFED, one from UCAP, and the other, Eduardo Conjuangco, Jr.⁸²). Thus, over time this government agency was increasingly dominated by large producers, who biased coconut industry policies in favor of their interests.

Expansion of the Levy Program

Although the CCSF levy collection was to terminate when the commodity price boom eased, government and industry leaders found that this levy could be used to support industry development. Therefore, in April 1974, P.D. 414 authorized the PCA to use the levy for other purposes; and in November, 1974, P.D. 582 created the Coconut Industry Development Fund (CIDF) to finance a replanting program for old coconut trees, which was managed as a part of the CCSF. The levy rate for CIDF was P200 per metric

⁸¹Initially, the board included representatives from the National Science and Development Board, Department of Agriculture and Natural Resources, the Undersecretary of Trade, the Bureau of Plant Industry, and the Bureau of Agricultural Extension.

⁸²Mr. Conjuangco was the only hybrid seednut farm owner in the Philippines. Among the landlords, he had the strongest political power in the Marcos administration.

ton of copra at its first sale. This rate was fixed permanently, although the CCSF levy rate changed frequently according to coconut prices.

In 1978, the government authorized additional uses for funds collected through CCSF levy. For example, P.D. 1468 created the Coconut Industry Investment Fund (CIIF), which financed acquisition of coconut oil mills to support the vertical integration program. P.D. 1468 also created the Coconut Farmers Refund (CFR), which financed a life insurance program that provided all coconut farmers with free life insurance up to P10,000. Other uses of the levy included a college scholarship program for coconut farmers, research and development of coconut products, and funds for other industry programs (Tables 4.7 and 4.8).

During the late 1970s, about one-third of the total CCSF levy was spent for replanting program and coconut processing industry projects, respectively. Other uses included support to COCOFED and PCA operations and research (3.3% each) and a scholarship program (1.7%).

TABLE 4.7 COCONUT CONSUMERS STABILIZATION FUND LEVY RATES,
FOR COPRA AND HUSKEDNUTS, PHILIPPINES, 1973 - 1979.

PERIOD	COPRA (Peso/100 kg)	HUSKED NUTS (Peso/ m.t.)
Aug.1973 - Dec.1973	15	30
Dec.1973 - Jan.1974	25	50
Jan.1974 - May 1974	55	110
May 1974 - Nov.1974	100	140
Nov.1974 - Jan.1975	70	70
Jan.1975 - May 1975	40	40
May 1975 - Mar.1977	30	100
Mar.1977 - Dec.1979	60	120

Source: UCAP, *The Coconut Story*, 1980.

TABLE 4.8 USES OF COCONUT CONSUMERS STABILIZATION FUND LEVY, 1977-1979.

DESTINATION	Supervision	LEVY RATE (peso/MT)	(%)
Replanting program (CIDF)	PCA	200	33.3
Coconut Farmers Refunds	UCPLA	150	25.0
Subsidy to oil mills	PCA	120	20.0
Coconut processing industry projects (CIIF)	UCPB	80	13.3
COCOFED operations, researches	COCOFED	20	3.3
PCA operation, researches)	PCA	20	3.3
Scholarships	COCOFED	10	1.7
Total CCSF Revenue		600	100.0

Source: *Philippine Coconut Policy*.

Note: PCA: Philippine Coconut Authority
 UCPLA: United Coconut Planters Life Assurance
 UCPB: United Coconut Planters Bank
 COCOFED: Philippine Coconut Producers Federation

Replanting Program

"The National Coconut Replanting Program" sought to replace aged coconut trees with a hybrid variety, a cross between the West Africa tall (from Côte d'Ivoire) and the Malaysian dwarf. This variety increases yield five times and matures earlier than existing varieties.⁸³ The replanting program was administrated by PCA, which allowed a single

⁸³Luzon Secretariat of Social Action, *Countryside Report*, Manila, 1982, p.70.

company (the Agricultural Investors, Inc.) to grow seed nuts and distribute them to coconut farmers.⁸⁴ Until the 1980s, the replanting program had minimal impact on output.⁸⁵ Replanting proceeded slowly because some farmers resisted cutting standing coconut trees to make room for hybrid varieties, and some farmers thought short hybrid trees would hinder double-cropping with cocoa and other crops.⁸⁶

United Coconut Planters Bank (UCPB)

Due to its strong political power, in 1975 COCOFED succeeded in getting the Marcos government to establish a credit institution to serve the coconut subsector. Using funds from the CCSF levy, the government purchased the First United Bank and renamed it the United Coconut Planters Bank (UCPB).⁸⁷ The UCPB provided financial credits to coconut farmers and processors. Seventy-two percent of the UCPB stock was purchased by a levy on the coconut farmers, who were supposed to receive shares of the stocks. But, these shares were never distributed to the farmers. Minister of Defense J.P. Enrile served as the board chairman and Eduardo Conjuangco, Jr. chaired the executive committee.

⁸⁴Agricultural Investors, Inc. was owned by Eduardo Conjuangco, Jr., who had the greatest political power among the coconut landlords.

⁸⁵Commodity Research Bureau, *1985 CRB Commodity Yearbook*, A Knight-Ridder Business Information Service, New York, 1985.

⁸⁶Commodity Research Bureau, *1986 CRB Commodity Yearbook*, New York, 1986.

⁸⁷The First United Bank was chosen for acquisition because the equity of this bank was owned by Eduardo Conjuangco, Jr. who was related to President Marcos.

However, UCPB funds were not used efficiently. Not only did large landlords and traders receive a large portion of available shares, but also about one-half of the shares were not distributed to stock-owners.⁸⁸ In addition, UCPB kept most of coconut levy revenues (all CCSF revenues and one-half of CIDF revenues), and these funds were deposited interest free. Therefore, UCPB seized a considerable portion of the fund generated.

4.2.3 NATIONALIZATION OF THE INDUSTRY

Nationalization of Coconut Oil Industry

Since the American colonial era, foreign owned-companies had dominated the coconut industry. First, they engaged primarily in trade, but later established processing factories to gain access to raw materials as well as a cheap labor force. The coconut landlord group (COCOFED and UCPB) and the government agency (PCA) opposed the foreign domination in the coconut industry, and sought to nationalize the industry in order to enhance their own position in the international market. In June 1978, P.D. 1468 authorized the UCPB to buy coconut oil milling companies. In 1979, the UCPB bought stocks in the United Coconut Oil Mills, Inc.(UNICOM)⁸⁹, using the CIIF fund. In the same year, the UCPB took over the ownership of several major coconut oil milling companies, including Legaspi Oil, Cagayande Oro Oil Co., Granex Manufacturing, San

⁸⁸*Countryside Report*, 1982, op. cit., p.74.

⁸⁹The UNICOM was originally created by the ACCRA Investments in 1979. (ACCRA Investment is the investment group of the Angara, Concepcion, Cruz, Regala, and Abello Law Office) After the UCPB's purchase, ACCRA Investments still had 25 percent of UNICOM's shares.

Pablo Manufacturing, Iligan Bay Manufacturing Corporation, and Mindanao Coco Oil Mills.⁹⁰ By 1980, UNICOM and its affiliate (INTERCO) also dominated the exports of coconut oil and copra meal, exporting 83.4 percent of the coconut oil and 72.6 percent of the copra meal.⁹¹

By the early 1980s, UNICOM completed its take-over of oil milling companies in the Philippines. In its early stage, foreign firms were targeted, but later Filipino firms were also purchased. Only two large multi-national companies (Proctor & Gamble PMC and Philippine Refining Corp.) were not included in the UNICOM's program, probably because these firms are exceptionally large consumer product manufacturing companies. The take-over of oil mills by UNICOM proceeded so rapidly because P.D. 1468 (1978) stipulated that only UNICOM could receive subsidies from the government. Therefore, other companies became far less competitive than UNICOM, and decided to move under UNICOM's umbrella.

Nationalization of Coco-chemical Industry

In the 1980s, the United Coconut Producers Bank (UCPB) attempted to extend the vertical integration of the industry to the end use of coconut oil, coco-chemical manufacturing. In 1981, the UCPB and Lurgi Urmwelt und Chemotechnik (a division of Metaelgesellschaft of West Germany) established the United Coconut Chemicals, Inc. (UNICHEM). In 1982, UNICHEM announced a major plan to build a coco-chemical

⁹⁰Gary Hawes, *The Philippine State and the Marcos Regime - The Politics of Export*, Cornell University Press, 1987, p.75.

⁹¹UCAP, *Coconut Statistics, 1980*.

project in Bauan, Batangas to produce fatty alcohol, fatty acid and glycerine. Since the UNICHEM board consists of 8 (out of 11) members from the UCPB group, and the chairman was Eduardo Conjuangco, Jr., UNICHEM was under the control of UCPB.

Most coco-chemical firms, other than UNICHEM, were owned by foreign companies, including Colgate Palmolive Philippines,⁹² Proctor and Gamble PMC, and Philipinas Kao, Inc.. The government sought to influence the coco-chemical industry further through *House Bills 774* and *2407*, which stipulated that 100 percent of domestic coco-chemical inputs for local soap and detergent manufacturing come from local sources.⁹³ These laws sought to replace imported petro-chemicals with domestically-produced coco-chemicals. The government thought that low world petroleum prices would make coco-chemicals less competitive; so these laws were intended to create a domestic demand for locally-produced coco-chemicals, using a import substitution strategy.

Ironically, in the early 1980s, the world demand for the coco-chemicals increased more rapidly than the domestic demands. As a result, the Philippine coco-chemical industry grew rapidly, led by export demand. However, this industry still faced severe problems. First, the Philippine coco-chemical industry was strongly dependent on foreign technologies. Although research and development investments are expensive, they are necessary to create cost-saving technologies to enable domestic industry to compete in world markets. Second, the Philippines' supply of raw material (coconut oil) was unstable.

⁹²Colgate Palmolive Philippines bought the CCPI in 1985.

⁹³Bureau of Export Trade Promotion, Philippine Department of Trade and Industry, *A Profile on Coco-chemicals*, Makati, 1989, p.16.

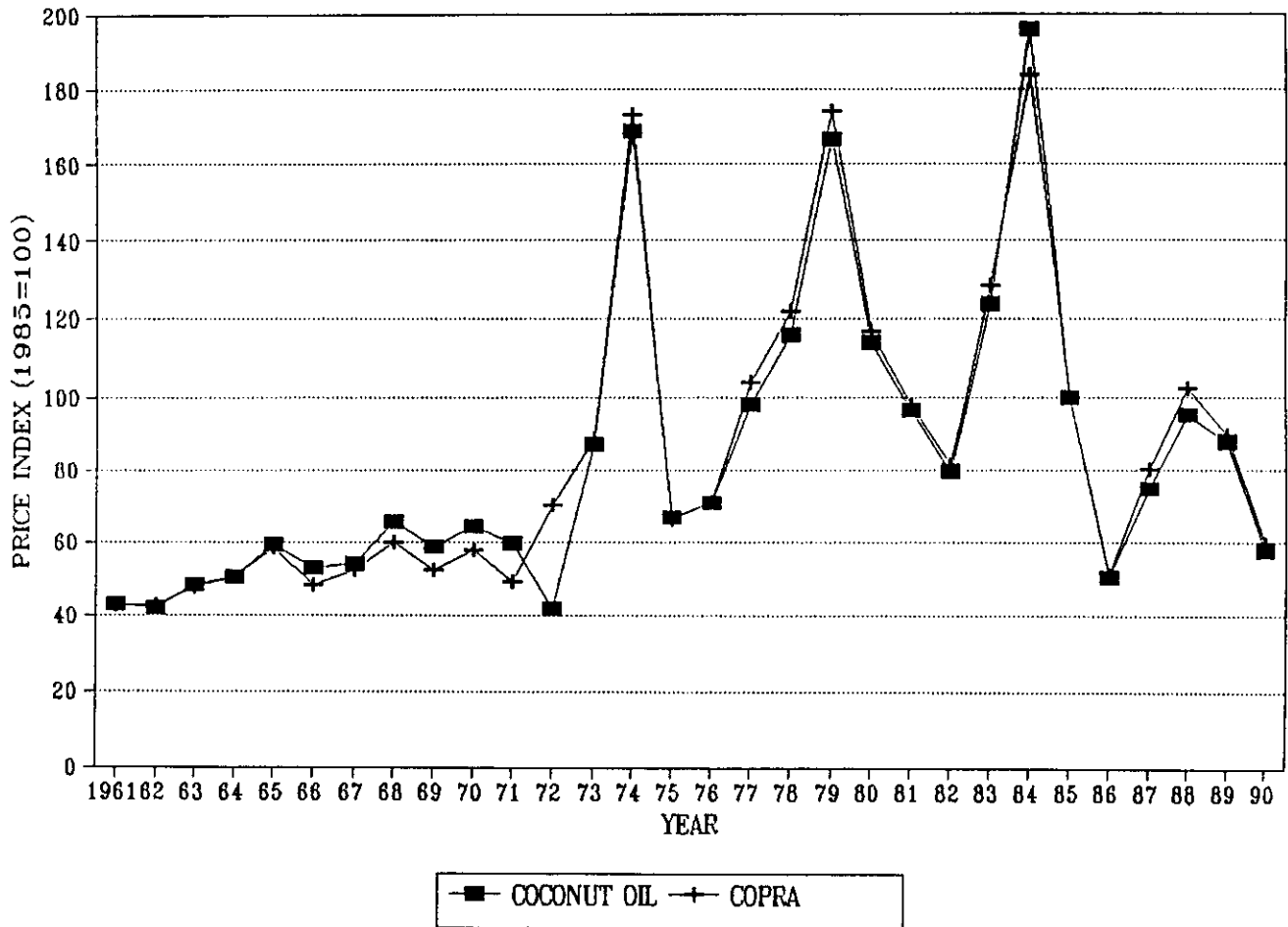
This was a major constraint, as a stable input supply is a crucial condition for manufacturing development.

Coconut Industry Policies in the 1980s

After prices of coconut products jumped due to the second oil price shock in 1979, the prices decreased sharply from 1980 to 1982 (Figure 4.2). In order to stem the falling coconut prices in the world market, in the early 1980s the government attempted to redirect coconut oil to domestic consumption.⁹⁴ All unscheduled export of coconut oil was prohibited in September 1982. Then, all copra export were suspended in order to switch the copra supply to domestic coconut oil mills. In addition, the National Oil Company purchased available coconut oil for the coco-diesel program. After June 1983, only 3 of the 44 coconut oil mills were allowed to export coconut oil. As a result, coconut oil exports decreased in 1984. As many coconut trees in the Philippines became old, replanting was critical to the survival of the industry. Since 25 percent of trees were more than 60 years old, in 1984 the government resumed its replanting program, using revenues generated by the export taxes.

⁹⁴Because the Philippines is the major coconut exporter, it was able to support the world price effectively by restricting export supply of coconut.

FIGURE 4.2 PRICE INDEXES OF COCONUT OIL AND COPRA (1980=100)



Source: IMF, *International Financial Statistics Yearbook*, 1991.

Note: Real price of coconut oil: Philippine coconut oil price at New York, US cents/pound, discounted by US CPI (1980=100). Real price of copra: Philippine copra price at European Port, US dollar/pound, discounted by US CPI (1980=100).

4.3 WELFARE PROGRAM OF THE INDUSTRY

Scholarship Program

In 1975, COCOFED started a scholarship program named the First National College Scholarship Program (later, renamed the "President Ferdinand E. Marcos Scholarship Grant") for the educational development of coconut farmers. In the first year, it awarded 300 scholarships, and by 1980, 7,100 scholarships were granted. These scholarships had several conditions, including that the grantee must be a COCOFED member or the relative of a member and that recipients may not have enough funds to finance a college-level education. Although P308 million (5.5 percent of the CCSF levy) was spent, a very small portion of the farmers received scholarships. According to Manuel and Maunahan's study, only one in 422 sample farmers in the emphasized region received a grant.⁹⁵ Thus, this program had no significant effect on improving the education of poor coconut farmers. First, few farmers received grants. Second, those who intended to go to college were already affluent, and most poor farmers were not interested in college-level education. Also, farmers who were not COCOFED members were excluded, although every farmer had to pay into the fund, as it was financed through a levy on all producers.

Life Insurance Program

The life insurance program for coconut farmers (COCOLIFE) was established in June 1978 (P.D. 1468) and provided to every farmer a policy. The Coconut Planters Life

⁹⁵Pacencia Manuel and Matilde V. Maunahan, *Coconut/Copra Marketing System - Its Structure, Conduct and Performance*, University of Philippines at Los Banos, 1982.

Assurance Corporation (UCPLAC), a sister company of UCPB, was designated to manage the fund. By the early 1980s, the company paid 200 million peso of insurance benefits to the farmers. According to Defense Minister Enrile, in four years, COCOLIFE paid 113,433 death claims (and five disability), valued at P132.8 million in total.⁹⁶

The MOLE-NEDA study (1982) shows that one-third of farmers favored the program, and one-fifth thought it helped their living condition. Critics of the program argued that the insurance premium was too expensive, and that premium collection was unfair, because each farmer paid a different level of premium (since the premium is collected as a part of the coconut levy) even though the receivable amount from the program was fixed.

4.4 EFFECTS OF THE INTEGRATION PROGRAM ON THE COCONUT MARKET

Domestic Coconut Market Structure

For the Philippines, the primary source of coconut products is the domestic farm supply of copra, since the Philippines rarely imports copra or other coconut products. Similarly, the primary source of demand for coconut products is the export market because most (about two-thirds) of the country's coconut products are exported. The difference between the farm and the retail prices is the cost of marketing services (marketing spread or marketing margin). Retail supply or export supply (derived supply at

⁹⁶Sylvia H. Guerrero, *A Review of Welfare Issues in the Coconut Industry*, Philippine Institute for Development Studies, 1985, Annex 5.2.

retail level; export supply) is equal to the farm supply plus the marketing spread. Farm demand (the derived demand at farm level; demand for copra) is the retail demand minus the marketing spread. Empirically, the marketing spread (per unit) is constant in the short run.⁹⁷ Therefore, retail demand and farm demand are parallel. If processing and marketing costs changes, the marketing spread also changes.

Effect of the Market Change on Coconut Production

The industrial integration program administered by COCOFED-PCA was financed through taxes on the farm gate price of copra, implemented through the Coconut Investment Fund (COCOFUND) levy and the Consumer Coconut Stabilization Fund (CCSF) levy. The industrial programs may have had following consequences: (1) These levies increased the quantity produced. If market demand does not change, the levy increases the retail price and decreases the farm price. In Figure 4.3(1), the farm demand curve shifts to the left (from FD_0 to FD_1), while the farm supply schedule (FS_0) and the market demand schedule (MD_0) are stable. As a result, the farm price decreases from FP_0 to FP_1 , then the market price increases from MP_0 to MP_1 .

⁹⁷Marketing margin consists of costs of marketing and processing, including cost of transportation, intermediate inputs, processing, storage, and retailing. In general for agricultural products, most of these costs can be assumed to be in proportion to quantity in a short-run. However, this does not necessarily apply to all cases. For example, if the fixed costs are significantly large or if the price changes extensively, the margin varies as the quantity changes (William B. Tomek, *Agricultural Product Prices*, Cornell University Press, 1990).

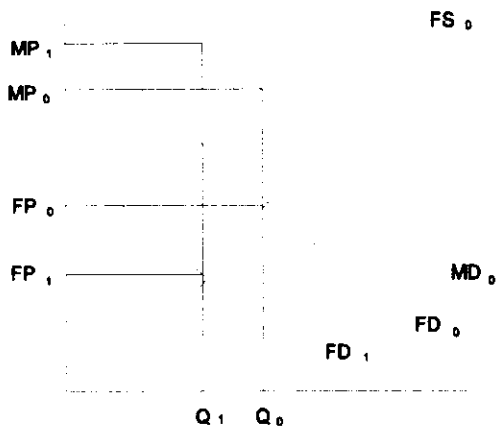


FIGURE 4.1(1)

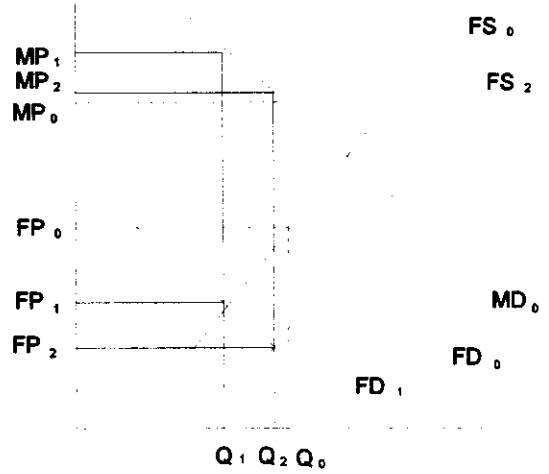


FIGURE 4.2(2)

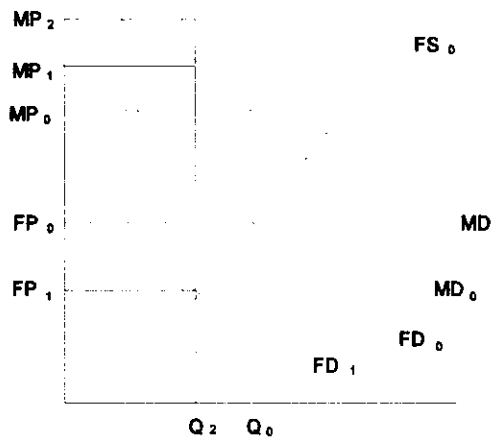


FIGURE 4.3(3)

FIGURE 4.3 COCONUT MARKET

(2) If the industrial programs raise the productivity of the coconut farm (due to the replanting program and other coconut industry revitalization programs), the farm supply increases (from FS_0 to FS_1), while the farm demand (FD_0) still decreases as in situation (1) (Figure 4.3(2)). In this case, the farm price decreases to FP_2 . However, change in the market price and quantity is minimal (the equilibrium point is near MP_0 and Q_0).⁹⁸ If increased quantity due to supply increase is greater than the decreased quantity due to demand decrease, the market price becomes lower.

(3) If demand for coconut products in importing countries increases due to an increase in the quality of the products or the domestic manufacturers' demand for coconut oil increases, the market demand curve shifts from MD_0 to MD_1 . While the farm supply does not change, the farm demand is not necessarily reduced from FD_0 , and farm price and quantity stay at or near FP_0 and Q_0 , respectively, if the increase in the retail price offsets the amount of the levy.⁹⁹ Price and quantity could even increase.

(4) Finally, if the Philippines succeeds in using UNICOM's monopolistic power to reduce the quantity (in order to set the price at which the marginal cost equals marginal revenue) the country is able to maximize profits. In this case, price become higher at the lower quantity. The actual impact of the Philippine's industrial policy on marketing power is an empirical question. Among the above options, the first option reduces coconut farmers'

⁹⁸Effect of the supply increase is offset by effect of the demand decrease. However, the direction of change in Q and MP is unknown, because it depends on the relative size of shifts of FD and FS .

⁹⁹Decrease in the farm demand is offset by increase in market demand. Therefore, the change in price and quantity at farm level depends on the size of the two effects discussed above.

incomes, while the effects of the second or the third option on coconut production may be minimal or even positive. However, as discussed in this chapter, the coconut industry programs had little impact on farm-level productivity. Therefore, the second option is unlikely. The third option depends on the world coconut demand or ability to expand demand for exports or domestic demand. And the fourth option depends on the Philippines' marketing power in the international market (or partially on development of domestic coco-chemical industry). The next chapter analyzes the world market situation in the 1970s and the 1980s.

4.5 SUMMARY

The coconut industry consists of farmers, landlords, processors (including manufacturing firms), traders, and government agents. Since the early 1970s, the landlord group (COCOFED) and the government (PCA) promoted an integration program for the coconut industry. Funds were collected from farmers through the COCOFUND levy and used for various coconut development programs. In response to the commodity price shock of 1974, the government and COCOFED introduced an additional levy (the CCSF levy), designed to stabilize the price of domestic coconut products. Soon, the CCSF expanded its functions (*i.e.*, funded replanting projects, a coconut processing sector subsidy, research and development, scholarships, and life insurance) and evolved into a vehicle for financing a broad-based vertical integration program.

In an effort to integrate further the coconut subsector, PCA and COCOFED sought to monopolize the coconut-processing sector. They established the United Coconut Oil Mills, Inc.(UNICOM), which used legal pressure (P.D. 1468) to include most

of the country's oil mills under its umbrella. As cited at the beginning of this chapter, coconut producers became "participants in and beneficiaries of" the vertical integration of the industry. The coconut farmers were participants because all farmers were required to pay the levy which funded these programs. Also, farmers benefitted from the replanting and various welfare programs (*i.e.*, scholarships and life insurance). However, these programs actually provided minimal benefits to improve the lives of most farmers. On the other hand, the landlords and the government successfully established the tax system, and used it to nationalize the industry.

Because the Philippines is the largest coconut producer and exporter in the world, the government believed that through the centralization of the industry the Philippines could become the dominant price-setter in the world market. However, this scenario implicitly assumed that the world oil and fat market had changed little since the 1960s; that coconut products had unique properties for edible and inedible uses; and that other countries would continue to buy these products from the Philippines at higher prices.

CHAPTER V

INTERNATIONAL MARKET FOR COCONUT PRODUCTS

The previous chapter argued that the government coconut programs succeeded in developing the processing and trading sectors, while farmers benefitted little. For a more complete analysis of the impact of the industrialization policy, it is important to analyze not only its impact on domestic production but also changes in the international market. This chapter explores the effect of the Philippines' policies in the world market.

5.1 INTERNATIONAL TRADE STRUCTURE

Effects of Coconut Industry Monopoly

By monopolizing the coconut processing industry through UNICOM, the Philippines gained an advantageous position in the international coconut market, compared to foreign-owned firms in the Philippines. *Countryside Report* concludes that "a local (domestic) monopoly is better than a foreign monopoly," because "it enables the government to dictate the price of the country's own price."¹⁰⁰ This is possible, because the Philippines is a large exporter of coconut products. Its coconut oil export accounted for 68.1 percent of the world total in 1979, while export from the second largest exporting country, Indonesia, accounted for only 4.8 percent of world trade.

¹⁰⁰Luzon Secretariat of Social Action, *Countryside Report*, 1982, *op. cit.* p.81.

Optimal Tariff Theory

A tax on exports reduces the quantity traded in the world market. If the exporting country is large, the tax changes the terms of trade.¹⁰¹ Figure 5.1 illustrates effects of a tax by an exporting country on a hypothetical market where only two countries exist in the world. S_I and D_I represent the supply and demand curve of the importing country, respectively, while S_E and D_E represent those of the exporting country. In the graph in the center, ES (export supply curve) represents the supply less the demand in the exporting country and ID (import demand curve) represent the demand less the supply in the importing country. In the importing country, the tax raise the import price from P_0 to P_1 . The producers' surplus decreases by area c , while the consumers' surplus increases by the area a , b , c , and d . Area c represents tax revenues transferred to the exporting country. The higher importing price creates inefficiency of the economy (the deadweight loss), which is the sum of area b and d (or area i). In sum, the importing country loses area b , c , and d . On the other hand, in the exporting country, producers' surplus increases by area e , f , g , and h , and the consumers' surplus decreases by area e . The government tariff revenues in the exporting country is area g . Area f and h (or area j) represent inefficiencies due to the market distortion. Therefore, in total, the exporting country's gain (loss) is $(c - f - h)$, or $(c - j)$. If area c exceeds area j , the exporting country benefits from the tax on exports, although the importing country always loses by area b , c , and d in

¹⁰¹A "large" country refers to country whose trade policy affects prices of the world market, while a "small" country refers to a country whose policies do not affect world prices.

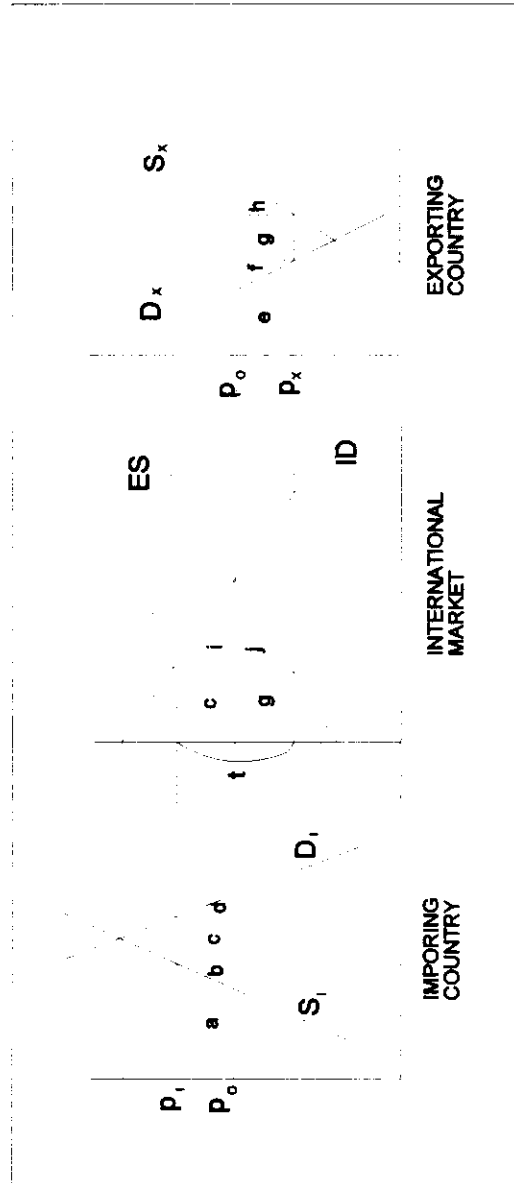


FIGURE 5.1 EFFECTS OF COCONUT LEVIES ON INTERNATIONAL MARKET

this model. The optimal tariff rate for the exporting country is obtained by maximizing area $(c - f)$. The Philippines is a large exporting country for coconut products, while their importing countries (*i.e.*, U.S. and EC) are relatively small countries for coconut product imports. If a tax is imposed on exports and it squeezes the quantity traded, the price rises greatly in a small importing country, while it decreases a little in a large exporting country. In the U.S. and the EC, the world coconut price increase due to the Philippines' tax (CCSF levy) does not raise the domestic supply because their producers hardly increase production of coconut products. Until 1970s, consumers in industrial countries were reluctant to reduce the quantity demanded because they could not switch to other oil and fat products.

However, if the market becomes more competitive and the world demand becomes more price elastic, the total import demand curve becomes more flat. In this case, the transfers from importing countries to the Philippines decline, thus, the Philippines' revenues decrease.

5.2 PRICE ANALYSIS

5.2.1 PRICE DISTORTION

Nominal Protection Rate

The main direct price interventions in the coconut industry are the export tax and the coconut levies. As described in Chapter III, the Philippine government introduced temporary export taxes on major export goods in 1970 when the peso was devalued. In 1973, the government fixed the rate at 6 percent for copra and 4 percent for processed coconut products. After the copra rate was raised to 7.5 percent in 1979, all tax rates

were reduced in 1980, and lifted in 1981. A coconut levy (tax on the first sale of all copra) was also introduced in the early 1970s and eliminated in the early 1980s. The levy rates were much higher than export tax rates, averaging 20 percent of the export values (Table 5.1). The degree of price intervention, or protection of the domestic industry from the foreign market, can be observed by the nominal protection rates (NPRs). The NPR is the ratio of the price difference between domestic and border prices, divided by the border prices¹⁰²,

$$\text{NPR (\%)} = (P^d - P^b) / P^b \times 100$$

where P^d = domestic price

P^b = border price (world price)

or an equivalent expression, the nominal protection coefficient is:

$$\text{NPC (\%)} = P^d / P^b \times 100$$

¹⁰²An NPR less than zero represents taxation of the domestic industry, while an NPR greater than zero represents protection relative to the world market.

TABLE 5.1 CCSF LEVY AND EXPORT TAX RATES, 1970-1981^a, PHILIPPINES.

	CCSF LEVY (%)	EXPORT TAX (%)	
		COPRA	PROCESSED COCONUT
1970	N/A	10	8
1971	N/A	8	6
1972	N/A	6	4
1973	4	6	4
1974 - 1978	21	6	4
1979	13	7.5	4
1980	24	3	2
1981	31	N/A	N/A

Source: Philippine Coconut Authority.

a/ Percent of export price. N/A indicates data not available

TABLE 5.2 NOMINAL PROTECTION RATES FOR COCONUT PRODUCTS, 1970-81, PHILIPPINES.

PERIOD	COPRA (%)	COCONUT OIL (%)
1970 - 1972	-13	-6
1973 - 1979	-18	-4
1980 - 1981	-42	-1

Note: NPR obtained from direct price comparisons.

Source: Ramon L. Clarete and James A. Roumasset, *An Analysis of the Economic Policies Affecting the Philippine Coconut Industry*, 1983.

The NPR for various periods (Table 5.2) shows that after the export tax and COCOFUND levy were introduced (1970-1972), the NPR for copra was -13 percent and the NPR for coconut oil was -6 percent.¹⁰³ After the PCA was created and the CCSF levy was imposed (1973 - 1979), the NPR for copra decreased (from -13% to -18%), while the NPR for coconut oil increased (from -6% to -4%). When UNICOM nationalized the industry (1980-1981), the distance between copra NPR and coconut oil NPR widened (NPR for copra = -42, NPR for coconut oil = -1). This change represents a relatively lower domestic copra price and higher domestic coconut price, and indicates a rapid increase in disincentives for coconut farmers' production and a decrease in disincentives for domestic coconut oil production.

Effective Protection Rate

While the nominal protection rate indicate the magnitude of the difference between border price and domestic market price, the effective protection rate (EPR) represent the ratio of foreign compared to domestic profitability¹⁰⁴. In other word, the EPR is the wedge between domestic and foreign value added, over foreign value added.

$$EPR = \frac{\{P^d - \Sigma(P_j^d * a_j)\} - \{P^b - \Sigma(P_j^b * a_j)\}}{\{P^b - \Sigma(P_j^b * a_j)\}}$$

where:

P^d = domestic price of the good

¹⁰³Ramon L. Clarete and James A. Roumasset, *An Analysis of the Economic Policies Affecting the Philippine Coconut Industry*, 1983.

¹⁰⁴An EPR less than zero represents taxation of the domestic industry, while an EPR more than zero represents protection relative to the world market.

P^b = border price of the good
 P_j^d = domestic price of input j
 P_j^b = border price of input j
 a_j = quantity of input j required to produce one unit of good

For the Philippine coconut industry, the EPR of copra is essentially equal to its NPR because copra uses very little foreign inputs. The EPR of the coconut oil increased slightly during the 1970s and then rose rapidly in the early 1980s (Table 5.3). This rapid increase was due to an increase in the domestic value added, which was caused by government policies that generated UNICOM's monopsonistic profits. Also, it was achieved by a reduction in the producer price of copra, since the value added of copra decreased during the same period.

TABLE 5.3 EFFECTIVE PROTECTION RATES FOR COCONUT PRODUCTS, 1970-81, PHILIPPINES.

PERIOD	COPRA (%)	COCONUT OIL (%)
1970 - 1972	-8	-2.3
1973 - 1979	-24	-2.0
1980 - 1981	-29	42.0

Source: Clarete et. al. (1983).

5.2.2 PRICE TREND OF COCONUT AND OTHER OILSEED

PRODUCTS

From the late 1970s to the early 1980s, the coconut oil price became high relative to other major vegetable oils and petroleum. From 1978 to 1985, the average price index (nominal prices, 1977=100) for coconut oil rose to 127, significantly higher than palm oil (110), soybean oil (104), sunflowerseed oil (105), rapeseed oil (95), and petroleum (88) (Table 5.4).

Also, coconut oil prices have fluctuated much more than other oils. At the price peak of 1979, the coconut oil price averaged 40 percent higher than other oils. In 1984, another peak, coconut oil price rose to 53 percent higher than other competing oils. (Meal prices were generally stable, relative to oils.) One possible reason for the observed price instability is that other vegetable oils have benefitted from domestic price support programs, whereas coconut oil has not. Also, unlike other vegetable oils, petroleum is a major substitute for coconut oil. During the period considered, there were large fluctuations in petroleum prices, which contributed to the instability in the coconut oil price.

TABLE 5.4 WORLD PRICE INDEXES OF MAJOR OILS, 1977 - 1987 (1977=100).

	COCONUT OIL	PALM OIL	SOYBEAN OIL	SUNFLOWER OIL	RAPSEED OIL	PETRO- LUEM
1977	100	100	100	100	100	100
1978	118	125	108	104	102	110
1979	170	123	116	119	109	142
1980	117	110	99	99	98	86
1981	99	108	89	100	83	66
1982	80	84	77	83	71	51
1983	126	95	99	87	85	77
1984	200	138	129	153	118	116
1985	102	95	113	94	92	57
1986	51	48	69	57	53	28
1987	76	65	67	56	52	41
COEFFI- CIENTS OF VARIATION	0.375	0.267	0.204	0.255	0.246	0.441

Source: IMF, *International Financial Statistics*.
CRB Commodity Yearbook.

5.3 INTERNATIONAL COCONUT DEMAND

5.3.1 COCONUT DEMAND CHANGES

Consumer Trends

In the United State (a major importing country for Philippine coconut products), there was little change in the total edible and inedible demand for coconut oil during the 1970s. While the uses of coconut oil for margarine and cooking oil decreased, its uses for shortening and other confectionery and bakery did not decrease, as substitutes have rarely been available.¹⁰⁵

In contrast, during the 1980s, total demand for coconut oil for edible uses decreased rapidly (Tables 5.5 and 5.6). The major reason for this trend has been that consumers in developed countries increasingly avoid saturated fats such as coconut oil.

TABLE 5.5 UTILIZATION OF COCONUT OILS IN THE UNITED STATES, 1970-1987 (annual average).

YEAR	EDIBLE USES		INEDIBLE USES		TOTAL
	(MT)	(%)	(MT)	(%)	(MT)
1970-1974	392.4	48.1	417.4	51.9	809.8
1975-1979	439.0	48.9	458.0	51.1	897.0
1980-1984	317.0	38.4	521.4	61.6	838.4
1985-1987	255.7	26.3	711.0	73.7	966.7

Source: CRB Commodity Yearbook, selected years.

¹⁰⁵CRB Commodity Yearbook, 1986.

TABLE 5.6 UTILIZATION OF COCONUT OIL IN THE UNITED STATES, BY PRODUCT, 1967-1977.

Year	Edible Uses					Inedible Uses				
	Shorte ning	Marga -rine	Cooking oil	Others	Total	Soap	Fatty acid	Others	Total	
1967	40	15	N/A	360	361	146	55	248	449	
1968	41	14	N/A	322	368	154	64	216	434	
1969	17	15	1	641	368	150	56	226	432	
1970	15	10	2	293	368	164	60	217	441	
1971	56	7	24	393	368	166	60	152	378	
1972	82	6	8	323	368	180	85	149	414	
1973	86	4	15	375	368	181	95	155	431	
1974	61	9	36	252	368	167	82	174	423	
1975	106	20	74	249	368	163	90	177	430	
1976	128	4	36	363	368	194	107	198	499	
1977	78	5	74	323	368	198	116	181	495	

Source: CRB Commodity Yearbook, Selected years.

On the other hand, inedible uses of coconut oils have increased during the 1980s, especially as intermediate materials for coco-chemicals. Once coconut oil is processed into chemicals, the properties are very close to those of other products such as petro-chemicals. Therefore, one can assume that coconut products for industrial uses (including soap and chemicals) are more substitutable than coconut products for food uses.

Over the period considered, the utilization of coconut oil has shifted from edible to inedible uses. The more coconut oil is used for inedible uses, the more elastic becomes the total demand structure for coconut oil.

Also, many vegetable oils have become close substitutes for coconut oil in edible uses, due to developments oil and fat processing technology. Today, most final products made of coconut oil can be made from other oils. Therefore, in the 1980s, the market became more competitive than that before 1970s.

Global Trade Relations

The United States subsidizes oilseed products through the domestic price support programs and its export enhancement program. In the United States, soybeans and peanuts are the major oilseeds products. In 1975, the government started a program offering non-recourse loans for soybeans, and in 1981, the loan rates were raised.¹⁰⁶ However, in the mid-1980s when oilseed prices dropped, a substantial number of the farmers benefitted from the loan. In 1985, an export subsidy (the Food Security Act) was applied to oilseed products to match the export subsidy offered by the European

¹⁰⁶Since higher loan rates were applied to corn and cotton production, oilseed production was relatively disadvantaged.

Community. The U.S. oilseed sector was highly protected, relative to other countries. From 1982 to 1986, the producer subsidy equivalent (PSE)¹⁰⁷ averaged 15 percent in oilseeds, making U.S. oilseeds very competitive in the world market.¹⁰⁸

The European Community is the world's largest importer of oilseed products. Since the beginning of the 1980s, agricultural production subsidies (the Common Agricultural Policy) were raised for oilseed products. Under the CAP, the EC subsidized producers by an amount equal to the difference between a EC's calculated "world price" and a "support price". While exporters are also subsidized by the price wedge, the export support price is a little lower than that for domestic production. Since oilseed support prices were set higher than for grain, oilseed production increased rapidly during the 1980s (at an annual average of 18 percent). From 1980 to 1988, the oilseed area increased 4 million hectares, while the grain area decreased 2.5 million hectares. Subsidy costs to the EC have been extremely large and expenditures for oilseed subsidies more than tripled in the 1980s. As a counter measure to the EC's heavy subsidization of oilseeds, the U.S. introduced export subsidies in 1985.

As a result of these government protection and subsidization policies, oilseed product prices have remained stable, relative to coconut oil, which has not benefitted from price stabilization policies. As shown in Table 5.4, the coconut oil price has fluctuated

¹⁰⁷PSE is a measure of government support given to producers. On a percentage basis, the PSE represents the total value of support for a commodity divided by the total producer revenue for that commodity.

¹⁰⁸Thomas W. Bickerton and Joseph W. Glauber, *World Oilseed Markets: Government Intervention and Multilateral Policy Reform*, USDA Staff Report, (1990) No. AGES9021, p.45.

more than other oils. During the 1980s when oilseeds products prices became more stable due to protective agriculture policies, changes in the coconut price were not accompanied by similar fluctuation in the price of its substitutes. As the coconut price increasingly less stable, its demand decreased relative to other oilseed products, because the manufacturing sector--using coconut oil or copra as raw materials--tried to avoid uncertainty of input prices. A decrease in quantity demanded (shift in demand curve to the left) raises the price elasticity, therefore, the quantity demanded became more sensitive to the price changes.

5.3.2 PRICE ELASTICITIES OF THE COCONUT DEMAND

Coconut Models

The previous section described the structural changes that occurred in the international coconut market during the 1970s and 1980s. Overall, market demand became more price elastic as coconut oil became increasingly utilized for inedible uses, other oil products became close substitutes, and the world market in oils became more competitive due to export subsidies. Taken together, these changes toward a more competitive market weakened the Philippines' monopolistic marketing power.

In order to test whether or not the market became more competitive (*i.e.*, the price elasticity of the demand is higher in the absolute term), the following section examines the evidence of change in the elasticity over times.¹⁰⁹ I estimate the relationship between price, quantity and other factors which may affect the demand, using OLS regression.

¹⁰⁹Abba Lerner "The Concept of Monopoly and the Measurement of Monopoly Power," *Review of Economic Studies*, 1934, pp.157-175.

Librero (1971) analyzed the export demand for copra, coconut oil, and copra meal during the period 1957 to 1967. Variables in his model were own product prices, incomes, prices of substitutes (soybean oil, cotton oil, and palm kernel oil for coconut oil; soybean meal for copra meal; and palm kernel oil for copra). In his model, price elasticity of the coconut export products ranged from -0.838 to -1.315. Labys (1973) estimated a comprehensive lauric oil models, using 22 endogenous variable and 19 exogenous variables.¹¹⁰ This study included a coconut export models for the Philippines, Sri Lanka, Indonesia, Oceania and the rest of the world; a palm kernel oil export model for the total world; stock models for the Philippines, U.S., U.K., E.E.C. and Sri Lanka; and consumption models for U.S., U.K., EEC, Japan. Nyberg (1968) analyzed import demand for lauric oil -- including coconut oil, palm kernel oil, copra, and palm kernel -- both in the United States and Europe from 1953 to 1966. The estimated price elasticities of demand ranged from -0.22 to -0.24. Finally, Kromer (1964) estimated a coconut demand equation for the U.S. market, which used only two variables, price and quantity. The estimated elasticity of import demand was -0.9.

This analysis estimates the coconut demand by the ordinary least square method, using four variables--two periods of own product price, a substitute price index, and two dummy variables.¹¹¹ It incorporated a limited number of variables, because the data base includes a small number of observations. Therefore, using a large number of variable will result in a degrees of freedom problem.

¹¹⁰Lauric oils include coconut oil and palm kernel oil.

¹¹¹Data is obtained from *International Financial Statistics Yearbook* (the International Monetary Fund), in various issues.

This study applies the following model for the structural changes:

$$QCOX_t = a_1 * C70 + a_2 * C80_t + a_3 * PCOD70_t + a_4 * PCOD80_t + a_5 * PISUB_t + E_t$$

where

C70 : dummy variable = 1 for 1970s (1970-1979) and zero elsewhere

C80 : dummy variable = 1 for 1980s (1980-1988) and zero elsewhere

PCOD70 : price of coconut oil deflated by U.S. CPI for 1970s (CIF at New York)

PCOD80 : price of coconut oil deflated by U.S. CPI for 1980s (CIF at New York)

PISUB : price index for substitute products (palm oil and petroleum) 1980=100

and the disturbance, E_t , is assumed to be i.i.d. The OLS estimates and t-statistics are

$$\begin{aligned} a_1 &= 343.9 (1.551) \\ a_2 &= 1,011.3 (5.186) \\ a_3 &= 1,494.2 (1.415) \\ a_4 &= 5,948.0 (2.962) \\ a_5 &= 6,178.4 (2.403) \end{aligned}$$

$$R\text{-squared} = 0.61 \quad \text{Durbin-Watson statistics} = 1.88$$

Note: t-statistics are in parentheses

Result from using this model give estimated price elasticities of the demand, ϵ , in the 1970s and 1980s:

$$\epsilon(1970-1979) = -0.431$$

$$\epsilon(1980-1988) = -0.637$$

The standard errors of 1970s and 1980s values are 0.304 and 0.215, respectively. Test for the difference between two values of elasticities rejects the hypothesis that the former is not greater than the latter, at the 0.10 level.¹¹²

The variables C80, PCOD80 and PISUB are significant at the 0.05 level (2 tail statistics), although C70 and PCOD70 are only significant at the 0.20 level. The R-square and Durbin-Watson statistics are acceptable. The price elasticities are calculated at the

¹¹²T-value of the test for the difference between the two means is 1.689.

mean values of 1970s and 1980s. These values are smaller than Librero's estimate, but larger than Nyberg or Kromer's estimate.

The results show that the elasticity of demand increased from -0.43 to -0.64 over the period considered, supporting the hypothesis that the demand became more elastic and that the Philippines' monopolistic marketing power decreased as substitutability among oil products in the world market increased.

5.4 SUMMARY

This chapter analyzed the effects of international demand changes on the monopolistic power of the Philippine coconut industry. The Philippines' CCSF levy and export tax, as well as monopolist profit maximizing activities, increased domestic prices relative to the world market price. This is reflected in the fact that since the 1970s the nominal protection rate (NPR) of coconut oil increased and that of copra decreased. Also, the increase in the effective protection rate (EPR) of coconut oil explains the profit gains in the processing and trading sector. Similarly, the decrease in EPR of copra explains depressed farmers' profits--farmers were the most serious losers under these programs.

However, in the long run the producers and traders did not benefit from these programs either. Since 1970s, the international coconut market has become more competitive. First, developed countries increasingly subsidized their oilseeds, making the price of these substitutes for coconut products relatively stable. As other oil prices fluctuated less than coconut oil price due to the stabilization policies in developed countries, the quantity demanded for coconut oil became more sensitive to its own price changes. Second, technological development has made other oils more substitutable for

coconut oil. Although coconut oil used to have unique properties as a lauric oil, soft oils (*i.e.*, soybean oil and palm oil) and petroleum have increasingly become close substitutes for it. Third, the demand for edible uses of coconut oil (*i.e.*, bakery and confectionery uses) has decreased as people attempt to avoid saturated fat, while the inedible use demand (*i.e.*, chemical materials, soaps and detergents) has increased. Since the demand for inedible uses is more sensitive to price changes, this change has made total demand more price sensitive. In sum, since the 1970s the demand for coconut products has become more elastic.

In order to determine if these observable changes in the structure of the oilseed market were reflected in demand elasticity, a regression demand model was estimated. The result revealed that the coconut oil demand elasticity was significantly higher in the 1980s than that in the 1970s. As a result, the level of monopolistic profit going to Philippine processing and trading sector declined over the period considered, as a consequence of these the demand changes.

CHAPTER VI

CONCLUSION

6.1 SUMMARY AND CONCLUSION

This study analyzed the relationship between institutional changes in the coconut industry caused by both Philippines' industrial policies and declining international competitiveness of Philippine coconut products. During the 1960s and 1970s, the Philippine government promoted aggressive industrialization through vast investments to expand its industrial sector. However, the policy failed to promote anticipated economic growth and the most profits in the manufacturing sector were largely captured by foreign firms. In addition, in the early 1970s the major agriculture-based industries, including coconut, sugar industries, food manufacturing sector, suffered the export taxes as well as termination of the bilateral trade agreement with United States. The lack of government funds, irritation of coconut landlords, and expectation of industrial nationalization were fundamental reasons that led the government to create the coconut industry development program in the 1970s.

The coconut industrial policies were financed by levies on the coconut farmers, which were allocated to the coconut processing and export sectors. The coconut landlords group (COCOFED) and a government agency (PCA) jointly promoted the Vertical Integration Program. As the government provided legal privileges to specific

private companies (*i.e.*, UNICOM and UCPB), other companies (including most of foreign firms) became less competitive with them, and most processing and trading firms were forced to merge under UNICOM and UCPB's umbrella. Consequently, by the beginning of 1980s, the government had succeeded in monopolizing the coconut industry.

The most important anticipated effects of the coconut industry policy was that the Philippines would earn monopolistic profits in the international coconut market. Because the Philippines dominated the world export market, domestic nationalization meant that the country monopolized the coconut trade market. Although the government had already controlled a major share of the market, it did not necessarily exercise the monopolistic performance in the market: Even though its market share is large, the profits would be marginal in a very competitive market. During the 1980s, other oil products became more substitutable, as oil processing technologies were developed so that the properties of coconut oil has not been much unique as before. Also, shift of coconut utilization from edible to inedible uses has increased the substitutability. Moreover, the world oilseed markets become further competitive due to export subsidies in developed countries. These changes in the coconut market is proved by an econometric test for structural changes.

In addition, the levy increased the costs of marketing services, and then decreased the farm gate copra price and quantity produced, compared to the case without the levy. However, there is little evidence that the industrial programs increased the productivity or raised the world demand enough to offset decrease in farm demand. Thus, coconut farmers were satisfied by the programs.

It is clear that the policies pursued by the Philippine government failed to meet their objective. In such a competitive oilseed market, the Philippines should have sought to reduce costs and improve efficiency. However, policies implemented made the processing industry more inefficient and uncompetitive. A major lesson learned is that domestic policies to promote institutional change need to take into account the external market environment.

Since the 1980s, edible uses for coconut oil have decreased rapidly. In contrast, the demand for inedible uses like chemical materials has increased. Future demand increases will depend on further development of coco-chemical technologies and efforts to market these products.

In addition, the Philippines' political atmosphere is relatively unstable. Although the Aquino administration attempted to ease the economic distortions introduced by Marcos government, it has not fully succeeded, due to conflicts among political groups. Thus, successful development of the coconut industry in the 1990s will require that the new administration introduce major institutional reforms to reduce remaining policy distortions.

6.2 LIMITATION OF THIS STUDY AND IMPLICATION TO FURTHER STUDIES

This study does not incorporate long-term effects of the Philippines' government policies. For example, if new coconut variety eventually raise farm productivity, increased farmers' profits may offset the effect of the levies in a long run. Since the maturing period

for coconut trees is relatively long (10 to 15 years), it is difficult to conduct research on the long-run impact of the replanting program.

In addition, a long-run price elasticity of demand may be different from a short-run elasticity. Although in many cases, elasticities of demands are several times larger in the long-run than in short-run, they can be smaller than short-run elasticities.¹¹³ If the long-run demand elasticity of the Philippine's coconut products is larger than the elasticities estimated in this paper, the impact of government policies on market power will be more limited than this analysis indicates.

¹¹³Moshe Justman, "An Extension of Lerner's Monopoly Index for Markets with a Disparity Between Long- and Short-run Demand Elasticities", *Economic Inquiry* 25 (1987) 681-694.

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