Volume Title: Trade and Employment in Developing Countries, Volume 1: Individual Studies

Volume Author/Editor: Anne O. Krueger, Hal B. Lary, Terry Monson, and Narongchai Akrasanee, eds.

Volume Publisher: University of Chicago Press

Volume ISBN: 0-226-45492-4

Volume URL: http://www.nber.org/books/krue80-1

Publication Date: 1980

Chapter Title: Trade Strategy for Employment Growth in Thailand

Chapter Author: Narongchai Akrasanee

Chapter URL: http://www.nber.org/chapters/c8738

Chapter pages in book: (p. 393 - 434)

9 Trade Strategy for Employment Growth in Thailand

Narongchai Akrasanee

Introduction

In the past two decades, Thailand has had one of the more rapidly growing economies in Southeast Asia.[1] Since 1960, gross domestic product (GDP) has increased at an annual rate of about 7 percent. Manufacturing activity has become more important in this period; its share of GDP rose from 13 to 18 percent while manufacturing employment increased from 3.4 to 8.3 percent of total employment between 1960 and 1976. Nonetheless, the economy remains principally dependent upon the primary sector: agriculture absorbs 79 percent of the labor force and generates about one-third of GDP.

The rapid growth of the manufacturing sector can be attributed in part to Thailand's promotion of import substitution activities. However, its policies have not been overly restrictive. Tariff protection is relatively moderate, quantitative restrictions are not extensively used, and the currency has been only slightly overvalued. In recent years, policies have shifted to place more emphasis upon promoting exports.

This study has the important objective of analyzing the relationship between trade policies and employment growth in Thailand. Employment creation is a pressing problem. The country has relatively high growth rates of total population (3 percent annually) and urban population (5 percent); urban unemployment is close to 10 percent, according to official figures. Thus, in spite of impressive gains in manufactur-

Narongchai Akrasanee was associated with the Faculty of Economics, Thammasat University, Bangkok. He is now with the Asian and Pacific Development Institute, Bangkok.

Report of Council for Asian Manpower Studies, Project no. 76-3-06. I would like to thank Anne O. Krueger and Hal B. Lary for their advice and most valuable comments on the earlier drafts of this paper.

ing output and employment, it is important to determine if Thailand's import substitution policies have been able to generate as much employment as alternative (export promotion) policies might have done.

This analysis centers upon 1973, primarily because of data availability. The year 1973 falls into the period when policies were shifting to place more emphasis upon exports. However, not all aspects of the export promotion scheme had then occurred (e.g., there was a change in tariff rates in 1974). The data should therefore be broadly representative of the latter phase of the import substitution period.

9.1 Major Characteristics of Thailand's Economy

9.1.1 Growth and Structure

Thailand is a relatively prosperous developing country. In 1976 its per capita GNP was baht 7,541, or about U.S. $370 at that year's exchange rate (baht 20.4 per U.S. $1). Real GDP growth from 1972 to 1976 averaged 6.6 percent annually, down slightly from the 7.1 percent rate in the period 1960 to 1972 (see table 9.1). This rapid growth was due mainly to a relatively high rate of fixed capital formation, which increased as a percentage of GDP from 14.9 in 1960 to 21.0 in 1972 and 23.5 in 1976.

Primary-sector activities (agriculture, mining, and quarrying) dominate Thailand's economy, although their importance has fallen over time. In 1976 they accounted for 31 percent of GDP, compared with 40 percent in 1960. In the first half of the 1970s, primary sector exports, some raw and some in semiprocessed form (SITC sections 0–4),[2] generated about 80 percent of total exports. The most important were rice, maize, rubber, tin, tapioca products, and sugar.

The importance of manufacturing activities has increased rapidly since 1960. As I mentioned above, its shares in GDP and total employment rose from 13 and 3.4 percent to 18 and 8.3 percent, respectively, from 1960 to 1976. The bulk of manufacturing output is produced by import substitution industries. However, the recent emphasis upon manufactured exports (see discussion, section 9.1.2) has had some effect. In 1976 they were either 17 or 37 percent of total exports (depending upon whether an SITC or an ISIC classification is used to categorize activities).[3]

9.1.2 International Trade

The Pattern and Composition of Trade

Thailand is heavily dependent upon trade. Together exports and imports averaged about 36 percent of GDP in 1972–76. Its trading part-

Table 9.1 ***Some Salient Features of the Thai Economy***

	1960		1972		1976
Population (million)	27		39		43
Annual growth rate (percentage)		3.0		2.7	
GNP per capita (baht, current prices)	2,056		4,257		7,541
GNP per capita (baht, 1962 prices)	2,198		3,495		4,051
GDP (million baht, current prices)	55,816		164,626		325,112
GDP (million baht, 1962 prices)	59,400		135,169		174,866
Annual growth rate (percentage)		7.1		6.6	
Gross fixed capital formation as percentage of GDP	14.9		21.0		23.5
Primary value added as percentage of GDP	40.2		32.1		31.1
Manufacturing value added as percentage of GDP (ISIC 3)	13.1		17.0		18.4
Utilities, construction, services, etc., as percentage of GDP	46.7		50.9		50.5
Imports as percentage of GDP	17.2		18.8		22.1
Manufacturing imports (SITC 5–8) as percentage of total imports	74.6		74.2		64.2
Exports as percentage of GDP	15.4		13.7		18.4
Manufacturing exports (SITC 5–8 less tin[a]) as percentage of total exports	1.4		10.1		16.6
Manufacturing exports (ISIC 3) as percentage[a] of total exports	n.a.		28.0		36.5
Manufacturing employment as percentage of total employment	3.4		8.8		8.3
Share of manufacturing output in the Central region[b]	73.2		73.9		82.7

Sources: National Economic and Social Development Board (NESDB) and the Bank of Thailand (1976).

[a]See notes 2 and 3 for the differences in manufacturing definitions in ISIC and ISTC codes.

[b]There are four regions in the country: Central, North, South, and Northeast. The Bangkok metropolis is in the Central region.

ners, especially as a source for imports, are developed countries. About 60 to 70 percent of its imports and 50 percent of its exports originated in or were destined for developed nations in the 1970s. Member countries of the Association of Southeast Asian Nations (ASEAN) took about 20 percent of Thai exports but accounted for a very small share of Thai imports.

As I mentioned above, most exports are NRB goods or processed NRB goods. Only 17 percent of exports in 1976 are classified as manufactured under the SITC nomenclature (SITC 5–8). However, this represents a dramatic increase over the 1.4 percent value in 1960. Most

manufactured exports go to developed countries. Data on some major HOS exportables are given in table 9.2.

On the other hand, imports consist primarily of manufactured goods, although their share in total imports fell from 74 to 64 percent from 1972 to 1976 owing to the higher prices of crude oil. The composition of imports has changed markedly since 1960, when consumer goods constituted 32 percent of imports and when intermediate products (including raw materials) and capital goods accounted for 18 percent and 27 percent, respectively.[4] The proportion of consumer goods imports has declined continuously since then. It was 13 percent in 1977, with most of the reduction taking place in nondurable consumer goods. In the meantime, the shares of intermediate products and capital goods imports have increased, reaching 25 percent and 35 percent, respectively, in 1976. These changes reflect the import substitution bias of the trade regime. The rapid growth in the domestic production of consumer goods has entailed increased imports of intermediate products and capital goods. Data on imports of the main import-competing industries are given in table 9.3.

The Trade Regime

Since World War II, Thailand's trade policies have evolved from being very restrictive to being fairly liberal.[5] In the 1960s they emphasized import substitution industries; only recently have exports been promoted in a systematic fashion. In general, though, Thailand has not had a clear-cut trade policy. Responsibility for trade matters extends over a wide range of ministries and therefore there has been no specific objective except to earn income through exports, to meet development

Table 9.2 Characteristics of Major Exportable Industries

Product	Exports, 1973 (Thousands of Baht)			Factor Intensities
	Developed Countries	Developing Countries	Total	Workers per Million Baht of DVA
Sugar	250.7	1,214.0	1,464.7	18.1
Shaved wood	383.8	76.3	460.1	25.5
Leather	51.0	53.1	104.1	80.2
Wood manufactures	246.5	9.8	256.3	23.4
Textiles	846.7	399.0	1,245.7	29.4
Clothing	683.0	13.4	696.4	72.3

Sources: For exports, U.N. Statistics of Foreign Trade, Thailand, 1973; for factor intensities, table 9.12.

Table 9.3 Characteristics of Thailand's Main Import-Competing Industries

Product	Imports (Thousands of Baht)			Factor Intensities
	Developed Countries	Developing Countries	Total	Workers per Million Baht of DVA
Dairy products	517.0	0.1	517.1	14.8
Chemical materials	2,014.9	237.2	2,252.1	25.2
Pharmaceuticals	833.4	9.9	943.3	24.1
Chemical products	1,556.9	129.5	1,686.4	19.5
Rubber tires and tubes	54.9	2.7	57.6	13.8
Paper and paperboard	544.7	97.3	642.0	20.1
Metal manufactures	942.4	130.0	1,072.4	42.0
Radio, television, and household appliances	632.3	55.4	687.7	37.4
Passenger cars	1,041.8	1.9	1,043.7	9.5
Buses and trucks	99.0	0.1	99.1	11.5
Motorcycles and nonmotorized road vehicles	336.0	52.5	388.5	22.7

Sources: For imports, U.N. Statistics of Foreign Trade, Thailand, 1973; for factor intensities, table 9.12.

requirements through imports, and to generate tax revenue (import duties form about 25 percent of government revenue).

Subject to these provisos concerning the lack of a clear policy focus, we can identify four phases of varying degrees of trade restrictiveness since World War II. The first period (1944–55) was the only one with very restrictive trade and exchange controls, particularly in rice trade (Corden 1967). Licenses were required for exports and imports, and all export proceeds had to be sold to—and foreign exchange to pay for imports bought from—the Bank of Thailand at the official rate. Foreign exchange controls were replaced by a multiple exchange rate system in 1947 (Yang 1957; Marzouk 1972), and trade controls were gradually relaxed through the period. In 1955, after an improvement in the balance of trade, the multiple exchange rate system was abolished and trade was liberalized.

The end of trade control and the multiple exchange rate system marked the beginning of a liberal phase in trade policy (1955–61). The only significant measure retained from the previous period was the taxation of rice exports. The government did not interfere in trade, though it was involved in the establishment of public industrial enterprises.

When Field Marshall Sarit came to power in 1957, the policy of direct government participation in industrial production was also dropped. No more industrial state enterprises were created, and some of the existing ones were leased to the private sector. The government, with assistance from the World Bank, designed a new strategy for economic development, which later became the first National Economic and Social Development Plan.

The First Six-Year Plan, inaugurated in 1961 and implemented by the newly established National Economic Development Board, marked the beginning of the import substitution phase (1961–71). This plan and the ensuing one covering 1967–71 essentially dealt with sector programming, the organization of government revenue, the planning of government expenditures on infrastructure, and project evaluation over a longer period of time (National Economic and Social Development Board 1963, 1968).[6]

The plans imposed no general policy restrictions or guidelines on foreign trade, implying that imports were allowed and exports were not actively encouraged. However, they directly affected trade through their encouragement of industrial development, which was to be left to the private sector. This encouragement took the form of protecting domestic production that competed with imports and was reflected in the system of taxation of foreign trade and tax exemptions for domestic production, and in the promotion of industrial investment under various investment promotion acts.[7] While the structure of taxes provided a certain degree of protection, most incentives to domestic production were found in various provisions (tax exemption, etc.) in these promotion acts. Toward the end of the period these investment incentives were reduced, but tariff protection was increased.[8] The government also used a number of other measures to help import substitution industries. These included industrial controls (which regulated entry and expansion), import and export controls, and credit assistance. Throughout the period, exports were discouraged or neglected. Some primary exports were taxed, and there was no effective promotion scheme for manufactured exports.

After 1971 the trade regime began to promote exports, especially manufactured goods, while simultaneously continuing to encourage import substitutes. This policy increased tariff protection through a revision of the tariff schedule in 1970, which was actually intended to correct the deficit in the balance of payments. Then in 1972 the Investment Promotion Act was revised to include incentives for manufactured exports. In addition, the Export Promotion Act (1972) provided a number of other measures to encourage exports.[9] In the meantime there was more frequent resort to direct controls on trade, industry, and prices. The outcome of all these changes was a reduction in the bias against exports. In addition to the promotion of manufactured exports, the new Invest-

ment Promotion Act was aimed at stimulating employment. That is, priority in promotion was to be given to firms that would create a large amount of employment.

In summary, there were three areas of policy that affected domestic sales and exports sales during the 1972–76 period: taxation and subsidization, promotion of industry and exports, and restrictions and controls on trade and industry. All three are discussed in greater detail in section 9.2.

Balance of Payments

Since World War II, Thailand has almost continuously experienced relatively large current account deficits, offset to a major degree by large capital inflows, mainly direct investment inflows (see table 9.4). Changes in current account balances have often caused adjustments in trade policies. For example, as I mentioned above, the loosening of trade controls in 1955 was a direct result of an improvement in the current account. Similarly, the shift to the simultaneous encouragement of exports and import substitutes after 1971 was due, in part, to worsening merchandise balance (from 1965 to 1970, the merchandise balance fell from —U.S. $117 million to —U.S. $584 million).

Exchange Rate Policies

Thailand has adjusted its exchange rate only infrequently, probably becaues inflation has not been a major problem and because the general consensus in Thailand is that currency overvaluation is not important. To correct balance of payment problems, policymakers have instead adjusted tariffs or imposed controls. After the elimination of multiple exchange rates in 1955, Thailand maintained a rate in the neighborhood of baht 20.5–baht 20.8 per United States dollar until 1974, when it was lowered slightly to baht 20.25–baht 20.45 per dollar.[10] During this period, inflation averaged about 2–3 percent per year except for 1972–74, when it rose to double-digit figures. Since 1974, prices have risen by about 5–6 percent annually.

Table 9.4 **Thailand's Balance of Payments, Selected Periods 1960–74 (Millions of U.S. Dollars)**

	Averages 1960–64	Averages 1965–69	Averages 1970–74
Goods and services balance	—52.4	—126.6	—208.2
Current account balance	—13.3	— 72.0	107.4
Capital inflows	60.8	110.4	236.4

Source: International Monetary Fund, *International Financial Statistics*, various years.

The currency has been slightly overvalued. According to a study of the Bank of Thailand (Wibulswadi et al. 1979), the baht was found to be overvalued by 17 percent in 1970–71, 7 percent in 1972, ±2 percent in 1973, 3–6 percent in 1974–76, and ±2 percent in 1977. When adjusted for purchasing power parity, the over (under) valuation ranged from 20 percent (1970) to −9 percent (1977). My own calculations using the Bacha and Taylor (1971) approach, which includes tariffs and export taxes (not considered by Wibulswadi et al.), place the overvaluation at about 20 percent. Considering capital flows in response to real interest differentials, currency overvaluation is probably not significant relative to that found in many developing countries.

9.1.3 The Structure of Production

Table 9.5 shows in detail the structure of trade and domestic production of manufactures in 1973, using the product classification followed in my analysis of protection and of factor proportions in the following sections. Instead of using value added, the value of total output is here used to measure production, so that the figures can be compared directly with the value of exports and imports. Products have been divided into seven subgroups: processed foods, beverages and tobacco, construction materials, intermediate products, consumer nondurables, consumer durables, and machinery and transportation equipment. The column on the far right gives the trade classifications of these activities.

The bulk (56 percent) of manufacturing output is produced by import substitution industries, most of which (83 percent) are located in Bangkok. About 40 percent of manufacturing output is produced by exportable industries, and the rest (4 percent) is produced in industries classified as not competing with imports.

While imports consist mainly of intermediate products, machinery, and transportation equipment, domestic production is more widely spread over all product categories. Since we are using gross value here, not value added, it should be noted that the concentration in the value of some products may be due to the high value of their inputs. If we were using value added, we would see larger shares of domestic production in beverages and tobacco, processed food, and construction materials and a smaller share in machinery and transportation equipment.

About 50 percent of production of importable activities consisted of processed foods, beverages, and consumer goods in 1973; the remainder was roughly evenly divided between intermediate and capital goods production. Those activities that faced greater import competition belong largely to the intermediate products and consumer nondurable groups. Some of these products are rubber tires and tubes, glass products, yarn and thread, chemical products, chemical materials, paper products, plastic materials and products, metal products, pharmaceuticals, and foot-

Table 9.5 **Domestic Production, Imports and Exports of Manufactures, 1973 (Million Baht and Percentage)**

Product	SITC	Output	Percentage of Total	Imports	Percentage of Total	Exports	Percentage of Total	Trade Category[b]
Processed foods		6,129	8.2	662	2.3	1,621	15.3	—
Dairy products	02	1,575	2.1	521	1.8	41	0.4	M
Cereal preparations	048	663	0.9	135	0.5	14	0.1	M
Tapioca flour	055.465	1,146	1.5	—	—	397	3.8	X
Sugar	061	2,272	3.0	—	—	1,161	11.0	X
Confectionery	062	122	0.2	5	—	4	—	M
Monosodium glutamate	099.0(4)	351	0.5	—	—	3	—	X
Beverages and tobacco		8,357	11.2	37	0.1	19	0.2	—
Nonalcoholic beverages	111	199	0.3	—	—	—	—	X
Alcoholic beverages	112	4,249	5.7	28	0.1	10	0.1	M
Cigars and cigarettes	122	3,909	5.2	9	—	9	0.1	M
Construction materials		4,169	5.6	103	0.4	351	3.3	—
Cement and concrete	661	2,619	3.5	29	0.1	336	3.2	X
Nonmetallic construction materials	662, 226	1,549	2.1	74	0.3	15	0.1	M
Intermediate products		32,205	43.0	13,255	46.2	6,978	66.0	—
Shaved wood	243	4,974	6.6	95	0.3	644	6.1	X
Vegetable oils and fats	42	392	0.5	14	—	31	0.3	X
Chemical materials	51–53	2,563	3.4	2,184	7.6	56	0.5	M
Leather	611	1,554	2.1	2	—	105	1.0	M
Yarn and thread	651	2,691	3.6	683	2.4	161	1.5	M
Cordage and rope	655.6	633	0.8	52	0.2	96	0.9	X
Glass products	664–65	780	1.0	57	0.2	3	—	M
Iron and steel	67	1,680	2.2	3,928	13.7	135	1.3	NC

Table 9.5—*continued*

Product	SITC	Output	Percentage of Total	Imports	Percentage of Total	Exports	Percentage of Total	Trade Category[b]
Nonferrous metals	68	50	0.1	1,052	3.7	11	0.1	NC
Chemical products	56, 57, 59	2,097	2.8	2,500	8.7	91	0.9	M
Plastic products	58	595	0.8	139	0.5	48	0.5	M
Materials of rubber[a]	621	4,944	6.6	122	0.4	4,578	43.3	X
Articles of rubber	629	59	0.1	130	0.4	19	0.2	M
Rubber tires and tubes	629.1	433	0.6	58	0.2	22	0.2	M
Wood manufactures	632	284	0.4	29	0.1	259	2.4	X
Paper and paperboard	641	329	0.4	597	2.1	29	0.3	M
Paper products	642	178	0.2	125	0.4	30	0.3	M
Textiles	652–55	6,478	8.6	339	1.2	507	4.8	X
Textile articles	656–57	437	0.6	47	0.2	42	0.4	M
Metal manufactures	69	1,056	1.4	1,104	3.8	112	1.1	M
Consumer nondurables		11,648	15.5	2,242	7.8	1,411	13.3	—
Pharmaceuticals	54	2,061	2.7	950	3.3	64	0.6	M
Essential oils, perfume, and toiletries	55	1,717	2.3	332	1.2	18	0.2	M
Leather products	612–13	262	0.3	5	—	105	1.0	X
Pottery and china	666	73	0.1	14	—	4	—	M
Batteries and electric bulbs	729.1–.2	611	0.8	135	0.5	7	0.1	M
Clothing	84	2,466	3.3	73	0.3	703	6.6	X
Footwear	85	576	0.8	8	—	4	—	M
Miscellaneous manufacturing necessities	89	2,530	3.4	626	2.2	202	1.9	M
Printed matter	892	1,186	1.6	101	0.4	302	2.9	X
Matches	899.3(2)	166	0.2	—	—	2	—	M

Table 9.5—*continued*

Product	SITC	Output	Percentage of Total	Imports	Percentage of Total	Exports	Percentage of Total	Trade Category[b]
Consumer durables		1,860	2.5	740	2.5	47	0.5	—
Radio, television, and household appliances	724–25	1,023	1.4	731	2.5	17	0.2	M
Furniture	82	837	1.1	8	—	30	0.3	X
Machinery and transportation equipment		10,595	14.1	11,675	40.7	149	1.4	—
Nonelectrical machinery	71	765	1.0	5,941	20.7	68	0.6	NC
Agricultural machinery	721.5	1,362	1.8	255	0.9	16	0.2	M
Electric wires, cables, and machinery	723.1	822	1.1	1,819	6.3	22	0.2	M
Passenger car assembly	732.1	2,484	3.3	544	1.9	8	0.1	M
Bus and truck assembly	732.2–.4	3,607	4.8	1,080	3.8	5	—	M
Vehicle parts	732.8	392	0.5	1,656	5.8	22	0.2	NC
Motorcycle and nonmotorized vehicles	732.9, 733	1,162	1.6	381	1.3	8	0.1	M
Total		74,962	100.0	28,713	100.0	10,584	100.0	

Source: Exports and imports are from Customs Department, *Statement of Foreign Trade of Thailand*, 1973, Bangkok; Output data are from the NESDB.

[a]This item consists almost entirely of processed natural rubber. It was included here because it is classified under SITC 621.

[b]Code: X, exportable; M, importable; NC, noncompeting production (see section 9.2 for a description of the categories).

wear. In other product groups there were also some import-competing items such as passenger cars, buses and trucks, electric wires and cables, and agricultural machinery in the machinery and transportation equipment category, and radio, television, and household appliances in consumer durables. Products in the processed foods, beverages and tobacco, and construction materials groups had little import competition. Thus most of them may be considered to be "competitive" with imports in the sense that they did not need protection to survive in the market. Some of these products, however, were exported to such an extent that they are classified as export industries.

Manufactured exports are a recent phenomenon in Thailand. Most of the export products developed from being import substitution industries in the 1960s or earlier, and some consist of the processing of domestic primary products to higher levels of production. Thus, manufactured exports are found in the processed foods, construction materials, intermediate products, and consumer nondurables groups. The more important manufactured exports are sugar, tapioca flour, cement, shaved wood and wood products, textile fabrics and products (including clothing), and leather products (see table 9.2).

9.1.4 The Labor Market

Table 9.6 gives some data on population and the labor force. Thailand's population growth rate is high, even for a developing country. It has averaged at least 3 percent annually since 1950. Reflecting this high rate, the fraction of the population under fifteen years of age has been rising and in 1970 stood at 45 percent.

Population growth at such a high rate would itself indicate the need for rapid creation of new jobs. But the situation in Thailand is further confounded by the fact that the country has a large rural population (79 percent in 1970), a high (5 percent) rate of urban population growth, and a high urban unemployment rate (currently placed at 9.4 percent in official documents).

Thus, employment opportunities in Thailand must grow both to provide for expansion of the labor force and to permit some part of the expanding rural population to shift into nonagricultural activities. In view of these needs, Thailand's performance has not been satisfactory. Despite an annual average growth rate of 10 percent for manufacturing output, manufacturing employment has grown at an average annual rate of only 4 percent.

There is, unfortunately, very little reliable information on workers and their characteristics; so inferences about the functioning of the labor market and distortions in incentives that affect the choice of technique are hard to draw. The minimum wage in Thailand does not appear to have been set high enough to affect firms' employment decisions: the

Table 9.6 Labor Force and Employment in Thailand, 1960–77

Year	Population, Midyear (Millions of Persons) (1)	Manufacturing Employment (Thousands of Persons) (2)	Total Employment (Millions of Persons) (3)	Unemployment Rate (Percentage of Labor Force) (4)	Manufacturing Real Wage (1970 = 100) (5)
1960	26.40	n.a.[a]	n.a.	0.6	
1961	27.20	n.a.	n.a.	n.a.	104.1
1962	28.05	n.a.	n.a.	n.a.	92.4
1963	28.92	n.a.	n.a.	n.a.	111.9
1964	29.82	n.a.	n.a.	n.a.	127.8
1965	30.74	n.a.	n.a.	n.a.	123.9
1966	30.96	n.a.	n.a.	n.a.	94.7
1967	31.79	n.a.	n.a.	n.a.	92.1
1968	34.04	n.a.	n.a.	n.a.	99.4
1969	35.11	n.a.	n.a.	n.a.	101.2
1970	36.4	n.a.	n.a.	1.1	100.0
1971	37.5	n.a.	n.a.	n.a.	121.8
1972	38.6	1,411.4	16.06	n.a.	98.5
1973	39.7	1,353.8	16.75	6.7	108.6
1974	40.8	1,909.5	15.40	8.7	68.3
1975	41.9	1,958.9	14.17	n.a.	66.3
1976	43.0	1,514.0	18.19	5.3	72.2
1977	44.0	n.a.	19.7	5.7	n.a.

Source: (1) East Asia and Pacific Regional Office, Thailand, *Toward a Development Strategy of Full Participation: A Basic Economic Report*, report no. 2059–TH, 1 September 1978, table 1.1, p. 137.

(2) (5) ILO.

(3) ILO for 1972–75 and the Bank of Thailand for 1976–77.

(4) The same source as (1) for 1960, 1970, and the Bank of Thailand for 1973, 1974, 1976, and 1977.

[a]n.a. = not available.

legal minimum has been well below the wage paid to unskilled workers in all industries. There do not appear to be any other significant government interventions with employment in the private sector. Real wages have tended to fall in recent years (see table 9.6). However, the government has subsidized credit, placed legal ceilings on interest rates, and permitted the importation of machinery at implicitly overvalued exchange rates. All these policies have undoubtedly encouraged the use of more capital-intensive techniques and the introduction of more capital-intensive industries than would have occurred in their absence.

Wage data by occupation or other category are lacking except for 1971 and 1973. Even for those years, few data are available. As will be seen in section 9.4, there are no reliable indicators of the training, ex-

perience, and skill of labor force members. As a consequence, sex is the only characteristic against which wage differentials could be examined. Although wage differentials seem wide, the male/female dichotomy seems highly significant, and it is difficult to draw any firm conclusions about the nature of the labor market in Thailand without further evidence. Nonetheless, the small fraction of the population that is now urbanized, the increasing number of young persons who will enter the labor force, and the pressure on urban areas all suggest that pressures will arise in the future, either upon the level of real wages or on unemployment, unless the rate at which industrial jobs are created increases.

9.1.5 Summary

Thailand has had an impressive record of growth since 1960. GDP grew at an annual average rate of about 7 percent, while manufacturing output grew at an even faster rate of about 10 percent. However, the economy remains rural-based, with NRB production representing one-third of GDP and the rural population constituting 79 percent of total population. Growth in the manufacturing sector was due in part to policies promoting import substitutes. These policies included tariff protection, implicit subsidization of capital goods, and various other direct interventions. However, despite these high rates of growth, employment creation continues to be a major problem. The rate of rural-urban migration has been high, and urban unemployment is increasing.

9.2 The Trade Regime and the Structure of Protection in the Early 1970s

9.2.1 The Trade Regime in the Early 1970s

Thailand has had no clear-cut focus to its trade policies. Responsibility for trade matters is scattered over a range of agencies, and changes in policies are more often than not a response to changing balance of payments situations.

In principle, the Ministry of Commerce administers all foreign trade matters. In practice, responsibility is widely diffused. For NRB exports, policies are formulated under the jurisdiction of the Ministry of Agriculture and Cooperatives and the Ministry of Industry; the Ministry of Commerce has only partial control on rice and sugar exports through the rice premium and sugar export surcharge;[11] export taxation is under the authority of the Ministry of Finance. For manufactured exports, both the Ministry of Commerce and the Ministry of Finance promote exports directly, while the Bank of Thailand has a credit facility to assist exporting.

For imports, the Ministry of Commerce exercises control through quantitative restrictions, and the Ministry of Finance administers control

through import duties and other forms of taxation. But, since imports are mostly investment goods, their importation depends upon decisions to invest, which in turn depend partly upon the policy of the Board of Investment. Furthermore, the Bank of Thailand may regulate credit to finance imports and, together with the Ministry of Finance, may change the exchange rate.

In the early 1970s, the three major trade policy instruments affecting manufacturing activities were tariffs and domestic taxation, tax incentives, and a variety of other measures affecting specific industries (e.g., price controls and legal barriers to entry). The various tariff, tax, and "subsidization"[12] policies of the Ministry of Finance appeared to have the largest effect upon trade in manufactured goods. The next most important were the various promotional activities of the Board of Investment and the Ministry of Finance. Activities of the Ministry of Commerce, the supposed administrator of foreign trade matters, were relatively unimportant, since its major policy instrument (quantitative restrictions) was not extensively used during the period under review.[13] The various policy instruments are discussed below.

Tariffs and Taxation

The 1960 tariff schedule, based upon the four-digit BTN and consisting of 1,097 items, is in use today, although rates have been changed to make it more escalated. Tariffs were initially imposed to raise revenue. Hence rates were not high in the early 1960s except for a few luxury consumer goods. Nonetheless, they did provide some protection for domestic production. Throughout the 1960s a number of upward adjustments were made, and there were major revisions in 1964 and 1970.[14] However, protection of domestic production was not the main objective assigned to tariff policy in Thailand. The stated purpose of these adjustments was to check the balance of payments deficit.[15] Finally, a tariff revision in 1974 responded to demands for greater tariff protection after the reduction in tax incentives under the investment promotion scheme.

Thus Thailand's tariff structure has evolved to be more of a protective device than it was in the 1960s. Although the highest rates have been on processed food, alcoholic beverage, and tobacco imports, these rates do not really reflect Thailand's tariff policies, since domestic production in these industries usually does not compete with imports—that is, domestic production is different in nature from imports.

The escalation is seen by analyzing the evolution of tariff protection in other commodity groups. In 1964 rates were about 25–30 percent for intermediate products and 15–20 percent for machinery and transportation equipment. In 1970 rates for durable and nondurable consumer goods were increased to range between 30 and 55 percent, but

rates for intermediate products and machinery and equipment were unchanged. Finally, in 1974 rates on imports of consumer goods that did not compete with domestic production were cut to as little as one-tenth of the old rate. Likewise, rates for a large number of raw materials and intermediate products were reduced to one-tenth of the old level, while those for machinery and mechanical appliances, both for agricultural and for industrial uses, were reduced from 15–20 percent to 10 percent. The rates for other consumer goods remained the same (Akrasanee 1973, 1975). The net result is an escalated tariff structure providing greatest protection to activities producing finished products.

In addition to tariffs, several other taxes provide some protection. One, the business tax, is imposed on both imports and domestic production. On imports, business tax rates are a percentage of the estimated market value, which is equal to the c.i.f. price plus tariff plus a (predetermined) standard profit rate, and the tax is collected by the Customs Department. On domestic products the manufacturer pays the tax if the goods are destined for the domestic market.[16] Before 1961, business tax rates were very low, most items being subject to a rate of 2 percent. The general rate for finished products has increased gradually, rising to 5 percent in 1961 and to 7 percent in 1970, while the rate for raw material and intermediate products has remained at 1.5 percent. The rates for goods considered luxuries have always been high, ranging from 10 or 15 percent to 30 or 40 percent. The rates were the same for both domestically produced goods and imports until 1973 and had no nominal protective effect. In December 1973 the business tax rates on many domestically produced goods were reduced as a move to check inflation (Akrasanee 1975). Those on imports remained unchanged. For example, rates on several items of domestic raw materials and food fell to zero, and for others the rates were reduced if they used purchased inputs. Thus the new business tax now has a protective effect.

Besides the business tax, an excise tax has been imposed on a few domestic products and imports. Goods liable to the tax, whether domestically produced or imported, are alcoholic and nonalcoholic beverages, tobacco products, playing cards, and snuff. For these products the excise tax has a protective effect, since the rates on imports and those on domestic products differ slightly. On the other hand, domestic production (and not imports) of cement, petroleum products, matches, and mechanical lighters is subject to the tax; in this case the tax has negative protective effect (Akrasanee 1975).

Finally, Thailand's traditional exports are subject to an export duty, namely (in 1973): rice (5 percent), rubber (7.3 percent), logs and wood (18.7 percent), and raw hides of bovine animals (22.3 percent). Other exports are not subject to export duty, but before 1973 most of them were subject to the business tax of 2 percent. In addition, a special

export tax called "premium" has been imposed on rice (0–30 percent, depending on the year) and sugar, the latter since 1974. On the other hand, there have been subsidies on the export of cement, sugar (during 1961–66), and, since 1972, many other manufactured products.

Tax Incentives and Other Promotional Measures

In 1954 the first Act on Promotion of Industries was passed, and the Board of Investment was established to render assistance to would-be entrepreneurs and investors under the provisions of the 1954 act (Board of Investment 1959). This act was revised in 1962 and again in 1972. Encouragement is provided through both tax and nontax incentives. In addition, the Board of Investment is to coordinate policy measures under the jurisdiction of other government agencies that affect industrial incentives.[17]

The most important provision in the original promotion act was tax concessions on imported machinery, equipment, raw materials, and intermediate inputs needed directly for production. Tax concessions on these inputs depended upon the classification of promoted industries. Initially, industries were classified into three groups according to their "importance" to the national economy (Silcock 1967; Akrasanee 1973). Group A received full exemption from tariffs and business taxes, and groups B and C received one-half and one-third exemption, respectively. Toward the mid-1960s most industries under group A were reclassified into groups B and C, and since 1967 only group C has been left. In 1972 tax incentives were given in relation to location and orientation.[18] Firms granted tax concessions earlier but not meeting the new criteria continued to be entitled to them until their expiration. As these tax incentives were being phased out, they were replaced by tariff increases on some finished products and tariff reductions on some inputs.

Most firms obtaining these concessions until the early 1970s were involved in import substitution production. Export promotion measures were not effective despite official statements and policies to encourage manufactured exports. For example, since the late 1950s exports have been eligible for the partial refund of duties and business taxes on imported inputs. Probably the administrative fragmentation (and lack of an overriding trade policy orientation) caused the ineffectiveness of this policy measure.

Since 1972 manufactured exports have been actively promoted. Measures used include full exemption from tariffs and business taxes on imported inputs, refunds of all taxes assessed in the production process, discounts on short-term loans at the Bank of Thailand, and exemption from business taxes on the products. These incentives are in addition to those provided under the general investment promotion scheme.

Restrictions and Controls on Trade and Industry

Apart from the tariffs, taxes, and concessions listed above, the government intervenes through controls on prices, imports, and exports and through restrictions on various kinds of industries. Although not extensively used previously, these restrictions and controls have been increasing since the latter part of the 1960s. They have been used primarily to protect existing firms or else to stabilize domestic prices.

Price controls were applied on only a few commodities before 1970—rice, meat, rice meal, and ice. In 1971 gunnysacks, condensed and evaporated milk, gasoline, diesel fuel, and kerosene, and in 1972 white sugar were added to the list. The export prices of many commodities increased rapidly in 1973 and pulled domestic prices along with them. The government accordingly imposed price controls on cotton, synthetic thread, and most types of textiles. In 1974 price control over most textiles was lifted, but many other kinds of commodities were put on the list; among them were monosodium glutamate, cement, vegetable oil, detergent, iron rods, and printing and writing paper.[19]

Most of the commodities under price control were exportables whose domestic prices had increased as a result of an increase in foreign prices. Price control, which is usually applied to the producer as well as to consumer prices, is thus a measure intended to stabilize the domestic price level. It is not an integral part of protection policy, but it has the effect of reducing the overall level of incentives for the products concerned. However, price control has not significantly affected exportable production. Probably it is most important in the case of thread and yarn, both of which have small ratios of exports to total sales.

There are quantitative restrictions on some imported commodities. Imports of some commodities for which it is believed there is sufficient domestic production are banned. Most items under control are subject to "approval" that, in practice, is usually not granted. However, these controls are not very pervasive. Often they are imposed on a short-run, ad hoc basis. In 1962 controls were imposed on sugar, old newspaper, paper umbrellas, silk textiles, tinfoil, paper files, and gold, and they are still in effect. During 1966–69, imports of garlic, glass tumblers, truck and bus tires, cotton yarn, corn, sorghum, salt, canvas shoes, and swallows' nests were controlled, but the control lasted only a short time. In 1970 and 1971 many items were added to the list of goods under control—iron gas containers, all kinds of paper, fuel oil, used cars, white cement and clinker, used motorcycles, monosodium glutamate, iron bars and rods, used trucks, and polyester fibers; these controls were in effect in 1973, the year on which this study focuses.

Export controls are also applied ad hoc and are intended to assure an adequate supply for the domestic market and to stabilize domestic

prices. Commodities under control are mostly NRB products such as rice, livestock, sugar, maize, and mineral ores. It was not until 1974 that controls were placed on manufactured products such as gunnysacks, thread and yarn, pig iron, detergent, vegetable oil, polyester fibers, monosodium glutamate, pulp and wood-free paper, insecticides, plastic granules, and oils for mixing paint, including thinners, most of which had only recently begun to be exported. The export of most of these items requires "approval," which is usually granted. Quotas are applied in the case of cattle and buffalo, cement, gunnysacks, maize, aluminum scrap, and pig iron.

Given the objective of promoting manufactured exports, export control is seen by the government as only a temporary device to check domestic prices of the products concerned when export prices are higher. By doing so, however, it automatically discourages production.

There is another measure the government has used to control the export of rice. Known as the reserve requirement, it requires exporters to sell a certain amount of rice to the government at a nominal price when they export rice. This is in addition to the rice premium and the export duty on rice. Since the price set by the government is usually much lower than the f.o.b. price, the measure can be regarded as an additional export tax (Akrasanee and Wattananukit 1976).

The Ministry of Industry can control industries in many ways. It is empowered to permit or to ban new entries and the expansion of existing firms and to establish conditions for new entry. The ban on entry and expansion is applied when the Ministry of Industry thinks that domestic demand for a product can be satisfied by the existing firms or when the producers are in difficulty and ask the ministry to prevent greater competition. Before 1970 there was a ban on entry and expansion in milk products, plastic bags, other plastic products, and ice factories. Later, about ten other industries were added to the list. The controls are designed to be temporary, but in fact have usually remained in effect for as long as four or five years; exceptions were controls on chloric acid, textile fabrics, nails, newsprint and writing paper, and fishing nets, which lasted for only one or two years.

Conditions have been imposed on entry into some industries; namely, fertilizer, ceramics, glass products, motorcycle assembly, and car assembly. Conditions pertain to promotion, equity share, type of product market, size of investment, capacity, and so forth. Another control on industry is local content requirements; that is, some industries are required to obtain a certain percentage of inputs or specified parts from domestic sources. This control of their imports has been applied to milk products, steel wire, electric wire, motorcycles, and automobiles.

The Ministry of Industry is empowered to control even the types and quality of products and the time of production. For example, it can

regulate the models of cars to be produced; it requires new glass-product firms to produce mostly bottles for medicine; it stipulates that sugar mills are to produce 50 percent white sugar and 50 percent raw sugar; and it can decree the time the mills start producing each year.

Summary

Table 9.7 summarizes the incentives to import substitution and export industries in the early 1970s, as well as the various agencies involved in their administration. In general, trade policy in this period favored import substitutes while also attempting to reduce disincentives for exports. The structure of tariffs and taxes favored import substitutes, while exports were encouraged through the various concessions of the promotion acts. A variety of other controls existed. However, my assessment is that these other controls were quantitatively unimportant compared with the other aspects of trade policy.

9.2.2 The Structure of Protection in the Manufacturing Sector

Data and Methodology

I used production coefficients for 1971 obtained from the Manufacturing Survey of that year (National Statistical Office 1971) to calculate

Table 9.7 **Comparison of Incentives for Import Substitution and for Exports, by Government Agency, 1972–76**

	Incentives	
Government Agency	Import Substitution	Exports
Board of Investment	1. Full exemption from import taxes and local taxes on machinery and equipment.	1. Full exemption from import taxes on machinery and equipment.
	2. No exemption from taxes on imported or local raw materials, parts and components, except firms in promoted areas, which received up to 50 percent deduction on import taxes.	2. Full exemption from taxes on imported and local raw materials, parts, and components.
	3. No exemption from business tax on sales, except firms in promoted areas, which received up to 90 percent deduction for 5 years.	3. Full exemption from export duty and business tax on exports, for promoted exports.
	4. Income tax holiday for 3–8 years.	4. Income tax holiday for 3–8 years.

Table 9.7—*continued*

Government Agency	Incentives	
	Import Substitution	Exports
	5. Other nontax incentives for promoted firms. 6. Temporary import surcharge and import ban (not used very much).	5. Other nontax incentives for promoted firms.
Ministry of Finance		
Customs Department	1. Escalated tariff structure.	1. Full exemption from import taxes on raw materials, parts, and components.
	2. Lower business tax rates for domestic production than for imports for some products (since 1973).	2. Full exemption from export and business taxes on some products.
Fiscal Policy Office	—	1. Tax refund for the total amount of taxes in the cost of production.
Ministry of Commerce	1. Import control for about 40 manufactured items (disaggregated at the seven-digit level)	1. Export control for about 20 manufactured items (disincentives).
	2. Price control for about 20 manufactured items (disincentives).	2. Export Service Center (to provide miscellaneous service to exporters).
Ministry of Industry	1. Control on entry, expansion, and local contents for about 25 industries.[a] 2. National committees to promote basic industries.[b]	—
Industrial Estate Authority	1. One industrial estate.	1. Export processing zone (to be built).
Bank of Thailand	1. Rediscount facility at 5% interest rate for 180-day promissory notes issued by commercial banks.[c]	1. Rediscount facility at 5% interest rate for 180-day promissory notes issued by commercial banks.[c]

Source: Information from agencies indicated in the table.

[a]Control on entry creates incentives for existing firms; effect of control on expansion is unclear; requirement of local contents creates disincentives.

[b]Committees were mostly set up in 1974–76, but only a few have been active.

[c]Commercial banks charge 7 percent interest on these notes.

ERPs by the Corden method.[20] International value added (IVA) was calculated by deflating the value of output and material inputs by appropriate NRPs, taking into consideration tax rebates under the investment promotion scheme.[21] Two different sets of NRPs are given in the tables below. "Potential" protection refers to protection implied by the tariff and tax rates. "Realized" protection is derived from price comparisons and measures the actual protection used by domestic producers.[22] The presentation of these two NRP estimates is interesting in its own right for, as we see, protection actually "realized" is typically less than that implied by the tariff and tax rates.

Activities are classified into trade categories following the T_i statistic method outlined in chapter 1. Exportables had a T_i statistic less than zero; importables had T_i statistics between zero and 0.6 to 0.9. The variable value to separate importable from noncompetitive production was due to the level of aggregation in each activity. The cutoff point was 0.6, 0.7, 0.8, or 0.9 depending on whether the activity was classified at a two-, three-, four-, or five-digit SITC level.

Importables were next classified into protected and competitive subgroups, depending on whether their estimated ERPs were relatively high or low. Exports of manufactures were further broken down between those processing NRB goods and those processing other goods. Note, however, that the latter distinction is not without problems. Some of the products in the processed NRB group (e.g., cement) might have been excluded altogether as essentially natural resource based (NRB) products rather than HOS manufactures. Others in the group—especially shaved wood, wood products, and cordage and rope—might have been assigned to the non-NRB manufactures category on the ground that their inputs are internationally traded so that production is not bound to local availability of materials.

The Structure of Protection

Nominal rates and effective rates as of 1973, both potential and realized in each case, are shown in tables 9.6 to 9.8, classified according to the trade orientation of each industry. Table 9.9 summarizes ERPs by trade category. For export industries, rates are shown separately for domestic and export sales. Primary interest focuses on the last column of table 9.6 and table 9.7 and the last two columns of table 9.8 that show realized effective rates.

For importables, noncompeting importables, and domestic sales of exportables, the nominal potential rates were all positive with the exception of petroleum refining and tapioca flour, for which the rates were zero and minus 2 percent, respectively. Generally the potential nominal rates were quite high, especially for consumer products.

For export sales of export industries, nominal rates were zero, unless there was an export tax on the product, in which case the nominal rates were negative (e.g., shaved wood and tapioca flour). Many of the nonprocessed NRB export industries sold a large proportion of their products in the domestic market, where they were protected by generally very high tariff rates (though, as noted below, realized rates were usually much lower).

From tables 9.6 to 9.8, we see that the difference between potential and realized nominal rates depends on the trade category of the industry. In protected importable and noncompeting importable industries, the difference is usually not large. In fact, in most cases the rates are similar. Exceptions where the realized rates are lower include alcoholic beverages, sheet glass, sweetened condensed milk, pharmaceuticals, footwear, rubber products, and radio, television, and electrical household appliances. In such cases, the lower realized rates indicate tariff redundancy caused by number of firms producing a growing proportion of total domestic demand. Alternative explanations are preferences for imported products and price control. The factor of preference is particularly true for radio, television, and electrical household appliances. In these cases imports sell at prices above those of domestic production. Price control was imposed on condensed milk, and prices of sheet glass were agreed upon with the Board of Investment as a condition for promotion privileges.

For importable industries that are competitive without needing protection, and industries that are able to export but still rely largely on the domestic market, realized nominal rates in 1973 (for the latter, of domestic sales) were much lower than the potential rates. In fact, in most cases the rates were zero, either because the difference in prices was negligible if quality differences are considered or because the domestic and imported products were different in nature.

Effective rates of protection ranged from minus 42.6 percent for wood shavings to very high levels for alcoholic beverages, passenger cars, sweetened condensed milk, cigars and cigarettes, and domestic sales of many exportables. As expected, products with very high potential effective protection belong to the importable group.

For products in the exportable group, their high potential effective rates on domestic sales were the result of high tariff rates on imports of like products. But when the products were exported, the potential effective rates were zero in most cases because of the tax refund and tax exemptions on their inputs.[23] This was the case except for a few traditional exports, such as tapioca flour and shaved wood, that were not entitled to such benefits.

When realized effective protection is considered for the importable category, the rates for some products were lower than potential rates,

Table 9.8 **Nominal and Effective Rates of Protection: Importable Industries, 1973**

Products	Nominal Rates		Effective Rates	
	Potential	Realized	Potential	Realized
Protected				
Alcoholic beverages[a]				
Beer	272.8%	35.7%	9,803.2%	35.6%
Whiskey	309.2	79.1	3,204.8	147.4
Passenger cars	91.2	91.2	236.4	236.4
Buses and trucks	40.0	40.0	95.3	95.6
Electric wires and cables	20.9	20.9	21.0	21.0
Rubber tires and tubes	26.9	26.9	25.2	25.2
Glass and glass products				
Glass products	40.7	n.a.	54.1	n.a.
Glass sheet	48.0	16.2	101.0	18.2
Dairy products (sweetened condensed milk)	40.0	13.4	273.2	2.4
Textile yarn and thread				
Synthetic	20.0	20.0	25.5	25.5
Cotton	24.6	24.6	39.3	39.3
Essential oils and perfume materials	95.0	n.a.	209.5	n.a.
Chemical products	28.0	28.0	25.0	25.0
Paper and paperboard	20.3	20.3	33.3	33.3
Paper products	39.4	39.4	55.4	55.4
Motorcycles and nonmotorized vehicles				
Motorcycles	37.8	37.8	56.7	56.3
Bicycles	30.0	30.0	6.8	16.6
Pharmaceuticals	53.4	36.8	101.2	48.8
Chemical materials	31.4	31.4	31.4	31.4
Agricultural machinery (tractors)	4.5	4.5	5.3	5.3
Plastic materials	50.0	n.a.	88.6	n.a.
Metal products				
Finished structural	23.4	23.4	24.9	24.9
Household equipment	32.8	n.a.	103.5	n.a.
Furniture	50.0	n.a.	104.5	n.a.
Footwear	57.0	48.0	85.0	60.1
Iron rods	15.0	15.0	21.5	21.5
Textile articles	37.0	37.0	44.1	44.1
Pottery, china, and earthenware	47.8	47.8	71.8	71.8
Radio, television, and electrical household appliances		25.0	52.3	22.8
Radio assembly and parts	39.8	25.0	52.3	22.8
Television and household appliances	52.9	41.7	166.7	58.6
Competitive				
Cigars and cigarettes[a]	86.0	n.a.	378.9	n.a.
Petroleum refinery	0	0	−0.8	−0.8
Nonmetallic construction materials	33.0	n.a.	41.4	n.a.
Rubber products	49.4	0	107.5	−12.4

Table 9.8—*continued*

Products	Nominal Rates		Effective Rates	
	Potential	Realized	Potential	Realized
Cereal preparations	60.7	0	1,044.0	−5.5
Confectionery	81.1	0	—[b]	−13.3
Soap, detergent	50.1	25.4	65.5	20.7

Source: Tariff and taxes are from Customs Department; For the computation, see text.

[a]Alcoholic beverages and cigars and cigarettes are included under import-competing because their T statistics, although very small, are positive. For both products the recorded value of trade is small, but the availability of foreign alcoholic beverages in Thailand is obvious. It is also well known that without protection domestic alcoholic beverages cannot compete with foreign ones. Foreign brands of cigarettes are sold at prices competitive with local brands.

[b]Negative value added at world prices.

but products classified as "protected" remained the more protected products. For this group the realized rates were close to, or the same as, the potential rates, implying that protection was fully utilized. This was also true for products in the noncompeting importable group. For these industries, high realized effective rates mean that they were either making excessive profits or were very inefficient. However, there was no industry in this group with negative value added at world prices. On the whole, we may say that substantial inefficiency or excessive profits are indicated in about fifteen or sixteen industries for which the calculation was made (i.e., those with realized effective rates exceeding 35 percent). These include beer, whiskey, passenger cars, buses and trucks, cotton yarn and thread, paper products, motorcycles, pharmaceuticals, footwear, textile articles, pottery, china, and earthenware, and four products for domestic sales in the group of export industries—parquet flooring, veneer and plywood, textiles (noncotton), and leather products. Most

Table 9.9 **Nominal and Effective Rates of Protection: Noncompeting Importables, 1973**

Products	Nominal Rates		Effective Rates	
	Potential	Realized	Potential	Realized
Iron and steel	13.5	13.5	18.4	18.4
Nonferrous metals	10.5	10.5	4.1	4.1
Vehicle parts	38.4	38.4	68.7	68.7
Nonelectrical machinery	15.9	15.9	4.2	4.2
Sewing machines	20.0	n.a.	4.3	n.a.

Source: See table 9.8.

Table 9.10 **Nominal and Effective Rates of Protection: Export Industries, 1973**

Products	Nominal Rates			Effective Rates[a]		
	Domestic Sales		Export Sales	Domestic Sales		Export Sales
	Potential	Realized		Potential	Realized	
Primary-commodity based						
Cement, concrete products						
Cement	17.5	0	0	10.6	−16.3	0
Concrete products	26.1	n.a.	0	40.7	n.a.	0
Vegetable oils and fats	44.2	n.a.	0	274.7	n.a.	0
Materials of rubber	33.0	0	0	*	−0.5	0
Sugar	115.5	0	0	*	2.9	0
Tapioca flour	−2.0	−2.0	−2.0	−29.8	−29.8	−29.8
Wood products						
Parquet flooring	30.0	0	0	*	68.90	0
Veneer and plywood	60.0	0	0	*	43.2	0
Shaved wood	—	−18.7	−18.7	—	−42.6	−42.6
Cordage and rope	27.7	27.7	0	26.3	26.3	0
Non-primary-commodity based						
Nonalcoholic beverages	69.6	0	0	47.2	−20.9	0
Monosodium glutamate	101.6	0	0	537.5	−17.5	0
Textiles, noncotton	44.2	44.2	0	64.0	64.0	0
Cotton fabrics	41.5	19.65	0	59.4	7.6	0
Printed matter	5.3	0	0	−13.2	−20.3	0
Furniture	50.0	0	0	152.3	−2.1	0
Matches	66.0	0	0	23.3	−9.5	0
Clothing	54.3	20.0	0	86.2	−7.1	0
Leather products	44.2	44.2	0	48.6	48.6	0

Source: See table 9.8.

[a]An asterisk means negative value added at world prices.

of them are important industries in terms of their output value, as can be seen from table 9.6.

In the exportable group, except for products produced specifically for exports, the realized effective rates were calculated mostly for domestic sales, since these industries still sold a large part of their products in the domestic market. As may be seen from table 9.10, and also for competitive industries in the importable group in table 9.8, the calculated realized effective rates were much lower than the potential rates. In fact, they are mostly negative. The results are due to the relatively low realized nominal protection together with the use of import-competing

inputs, prices of which were inflated by the extent of tariff and taxes.[24] But when the products were exported they were entitled to the tax refund and tax exemptions on their inputs. Thus the effective rates in the latter case are estimated to be zero.

Table 9.11 gives a summary of the structure of protection in existence in the early 1970s. The system provided greatest incentives to protected importable industries and to domestic production similar to the noncompeting imports, whereas industries in the exportable group were clearly discriminated against, having low or negative ERPs. In general, though, protection was relatively moderate in comparison with many other LDCs.

9.3 Factor Proportions of Trade and Domestic Production

In this analysis I measure factor proportions by labor requirements (in number of workers) per unit of value added. Two measures are used—direct labor requirements and direct plus indirect in home goods labor requirements.[25] Nonmaterial inputs, such as electricity and water, maintenance costs, and other services are treated as home goods. Data on number of workers, value added (net of indirect taxes), and the value of home goods used are from the Manufacturing Survey of 1973. Indirect labor and value added in home goods are estimated from the NESDB 1971 input-output table, the national income accounts statistics, and information from the electricity and water authorities.[26]

The results are presented first for each activity and then according to the trade categories defined above and employed in tables 9.8 to 9.11. I also computed labor intensities according to the direction of

Table 9.11 **Average ERPs by Trade Category, 1973**

Category	Realized ERPs
Importables	53%
Protected	69
Competitive	28
Noncompeting importables	42
Exportables[a]	2 (−10)
Processed NRBs	−18 (−18)
Other	26 (0)
Total	35

Note: ERPs are weighted by DVA of domestic production.

[a]Values in parentheses refer to protection on export sales.

trade. But since Thailand's trade in manufactures is overwhelmingly with developed countries, the labor coefficients on trade with LDCs are ambiguous and thus are not reported here.

9.3.1 Factor Proportions of Different Activities

The direct and direct plus indirect labor requirements, shown in table 9.12, have a wide range of values for direct requirements (col. 2). The ten least labor-intensive industries in 1973 were alcoholic beverages, cigars and cigarettes, cement and concrete products, passenger car assembly, iron and steel, bus and truck assembly, electric wires and cables, rubber tires and tubes, glass products, and vegetable oils and fats. The ten most labor-intensive were the pottery, china, and earthenware group, confectionery, cordage and rope, textile articles, footwear, leather products, clothing, cereal preparations, nonelectrical machinery (small), and rubber products.

The most and the least labor-intensive industries had labor requirements differing by a factor of about 25; compare the direct labor requirement of 118.2 workers (confectionery) to 4.9 workers (alcoholic beverages) per one million baht of value added in current domestic prices. However, the majority of industries clustered within the range of 14 to 30 workers per one million baht of value added.

The variation in labor requirements among industries can also be seen from the direct plus indirect requirements (col. 4), which provide a similar picture with some small changes in the ranking. This measure, which indicates total employment effects, indicates that the labor intensity of the less labor-intensive industries is sharply increased when home goods are included, whereas that of the more labor-intensive industries shows little change. This change occurs because home goods are relatively labor-intensive, though not as much as the most labor-intensive industries. When this indirect effect is taken into consideration, therefore, differences in labor coefficients among industries are reduced but still remain significant.

9.3.2 Factor Proportions by Commodity Category

We next calculated weighted averages of factor requirements for the exportable and importable categories, using domestic value added in production as weights and subdividing exportables and importables as was done earlier (section 9.2). These calculations are given in table 9.13.

Including alcoholic beverages and cigars and cigarettes in the computations has a significant effect upon the results, since they have large weights in production (see table 9.6) and value added. Treating them as home goods and excluding them completely would, however, be a questionable practice because imports compete with domestic products

Table 9.12 **Direct and Direct Plus Indirect in Home Goods Labor Requirements, by Industries According to Trade Categories, 1973 (Number of Workers per One Million Baht of Domestic Value Added)**

Industry	Trade Categories[a] (1)	L/VA[b] (2)	Rank[c] (3)	L/VAT[b] (4)	Rank[c] (5)
Alcoholic beverages	ICP	4.9	1	12.2	2
Cigars and cigarettes	ICC	5.3	2	6.4	1
Cement and concrete	EP	8.8	3	20.4	4
Passenger car assembly	ICP	9.5	4	22.5	7
Iron and steel	NCI	10.7	5	23.2	9
Bus and truck assembly	ICP	11.5	6	23.0	8
Electric wires and cables	ICP	11.7	7	19.5	3
Rubber tires and tubes	ICP	13.8	8	26.5	17
Glass and glass products	ICP	14.3	9	24.5	12
Vegetable oils and fats	EP	14.3	10	20.5	5
Nonalcoholic beverages	ENP	14.4	11	34.0	30
Dairy products	ICP	14.8	12	25.8	15
Textile yarn and thread	ICP	16.1	13	21.6	6
Essential oils, perfume, and toiletries	ICP	16.2	14	26.8	19
Materials of rubber	EP	18.0	15	24.3	11
Sugar	EP	18.1	16	24.2	10
Chemical products	ICP	19.5	17	39.7	35
Tapioca flour	EP	20.0	18	26.5	18
Paper and paperboard	ICP	20.1	19	27.4	20
Paper products	ICP	21.6	20	25.9	16
Motorcycle and nonmotorized vehicles	ICP	22.7	21	28.7	22
Wood products	EP	23.4	22	25.6	13
Pharmaceuticals	ICP	24.1	23	29.3	23
Miscellaneous manufacturing necessities	ICC	24.5	24	32.1	26
Monosodium glutamate	ENP	24.9	25	25.8	14
Chemical materials	ICP	25.2	26	28.4	21
Agricultural machinery	ICP	28.1	27	36.6	32
Shaved wood	EP	25.5	28	30.6	24
Textiles	ENP	29.4	29	32.3	28
Printed matter	ENP	30.1	30	31.1	25
Plastic materials	ICP	31.4	31	32.3	27
Nonferrous metals	NCI	33.2	32	33.2	28
Furniture	ENP	34.4	33	35.9	31
Nonmetallic construction materials	ICC	34.6	34	37.6	33
Vehicle parts	NCI	36.7	35	38.4	34

Table 9.12—*continued*

Industry	Trade Categories[a] (1)	L/VA[b] (2)	Rank[c] (3)	L/VAT[b] (4)	Rank[c] (5)
Radio, television, and electrical household appliances	ICP	37.4	36	40.1	36
Metal products	ICP	42.0	37	42.5	37
Matches	ENP	45.5	38	45.7	38
Rubber products	ICC	49.2	39	47.9	39
Nonelectrical machinery	NCI	61.8	40	58.4	41
Cereal preparations	ICC	61.9	41	57.7	40
Clothing	ENP	72.3	42	66.1	43
Leather products	ENP	80.2	43	58.8	42
Footwear	ICP	84.4	44	74.3	46
Textile articles	ICP	84.4	45	71.8	44
Cordage and rope	EP	86.5	46	71.9	45
Pottery, china, and earthenware	ICP	89.3	47	74.9	47
Confectionery	ICC	118.2	48	101.3	48

Source: Akrasanee and Chintayarangsan (1976).

[a]ICP = import-competing, protected; ICC = import-competing, competitive; EP = exports, primary-commodity based (PCB); ENP = exports, non-primary-commodity based; NCI = noncompeting imports.

[b]L/VA = workers per one million baht of value added, direct; L/VAT = workers per one million baht of value added, direct plus indirect of home goods.

[c]Ranking from the least labor-intensive industries.

everywhere in the country, even though import statistics show a relatively small value. I therefore computed Thai coefficients both including and excluding these products.

Obviously, these results show that exportables are significantly more labor-using than importables. This is true for direct labor requirements only and also for direct plus indirect requirements. Including indirect requirements in home goods results in only a slightly smaller difference between the degrees of labor intensity of the two categories. According to the latter measure, products belonging to the group of exportable industries are still about 50 percent more labor-intensive than importable industries.

With regard to employment implications, the most meaningful comparison is between the coefficients for the "protected" importables (col. 5), which indicate the employment effects of import substitution, and the coefficients for non-NRB exportables (col. 3), which indicate the employment effect of export expansion. This comparison suggests that employment creation would be much greater through export expansion than through import substitution for the same amount of value added.

This conclusion is true whether we look at different labor requirements only or at direct plus indirect requirements, and whether we include or exclude alcoholic beverages in estimating requirements for "protected" importables. Moreover, the conclusion would be unchanged, though the margin in favor of exports would be slightly reduced, if shaved wood, wood products, and cordage and rope were shifted to the non-NRB manufactures group in line with what was said earlier about the uncertainty attaching to the NRB classifications of these products.

With regard to noncompeting importables, given the limited size and the probable noncomparability of imports and domestic production, the value added and employment data entering into table 9.12 cannot be taken as relevant for imports. I have accordingly not attempted to calculate labor coefficients for the noncompeting import sector.

9.4 Factor Market Policies

Besides the pattern of protection, policies affecting factor prices also affect factor utilization and therefore may have significant employment implications.[27] My purpose in this section is to examine these potential effects in Thailand.

Table 9.13 **Labor Coefficients in Manufacturing Industries, Exports and Import-Competing Goods, 1973 (Number of Workers per One Million Baht of Domestic Value Added—Weighted Averages)**

		Export Industries		Import-Competing Industries[a]		
Measures of Labor Coefficients	Total (1)	NRB Manufacturing (2)	Non-NRB Manufacturing (3)	Total (4)	Protected (5)	Competitive (6)
Labor per direct value added	21.87	16.68	33.72	10.53 (20.53)	10.45 (18.58)	10.72 (29.11)
Direct plus indirect labor per direct plus indirect value added[b]	29.55	25.37	36.28	19.21 (29.51)	21.43 (27.84)	15.21 (35.35)

Source: Labor coefficients for each industry are from table 9.9. Domestic value added weights are from Akrasanee and Chintayarangsan (1976). For computation, see text.

[a]Figures in parentheses show averages excluding alcoholic beverages (from the "protected" group) and cigars and cigarettes (from the "competitive" group).

[b]"Indirect" refers only to home goods as defined in text.

9.4.1 Wage Differentials in Manufacturing

Wage differentials may be caused by a variety of economic and non-economic factors. In Thailand one might expect the labor market to be relatively undistorted, since minimum-wage legislation was introduced only in 1973 and since the government has not otherwise intervened heavily in wage determination.

Data to adequately analyze wage differentials in Thailand are sparse. A limited amount of information was available for twenty-seven industries in 1973. I performed a variety of exercises with these data (for details, see Akrasanee and Chutikul 1977). First, average wages for skilled and unskilled labor were calculated for large and small firms. It was found that there was a large variation in the wages paid by industry and that larger firms tended to pay higher wages. Next, cross-sectional regression analysis was carried out, regressing the average skilled and unskilled wage rates of each industry on various independent variables such as firm sizes (AFS), the male/female worker ratio (MF), profitability (π), foreign share in ownership (FS), and unionization (U). Both linear and log-linear forms were tried. The results, shown in table 9.14, should be interpreted with caution, since no data on the skill characteristics of the labor force were available.

An important feature of these results is that a large portion of the wage variation in 1973 could be explained by a small number of variables. The most important were the male/female ratio, average firm size, and unionization; wages tended to be higher in industries with higher ratios of male-to-female workers, in industries composed of larger firms, and in industries with higher levels of unionization.

To further investigate the significance of the male/female ratio, another regression analysis was made, this time for wages paid in firms of similar size, in order to exclude the influence of the latter variable. The results presented in table 9.15 show clearly, especially for unskilled workers, that firms of a given size with more male workers tend to pay higher wages.

One may argue that wage differentials between male and female workers could be accounted for by skill or physical differentials. That is, male workers may tend to have higher skills or be physically stronger. There may also be other reasons that women are less productive than men. If that is the case, then it cannot be said with certainty that sex discrimination causes distortions in the labor market. However, the evidence suggests that the presence of unions does tend to distort wages.

The question of sex discrimination cannot be answered because of lack of data on skill characteristics. While further research is warranted on this issue, I do feel at this time that only part of male/female variable represents skill differences. This belief stems from the frequent observa-

tion in Thailand that unskilled female workers are paid less than unskilled male workers for similar work to an extent that cannot be fully justified by skill differences.

If, for whatever reasons, this discrimination exists, then there are implications for employment creation. Female-dominated firms, paying lower wages, dominate the exportable category. For example, the male/female ratio (MF) in spinning and weaving is 0.3, in knitting, 0.27, and in garments, 0.18. On the other hand, the male/female ratio in major importable categories is very high. For example, it is 2.39 in rubber products, 6.76 in motor vehicles, and 2.08 in paper products. Thus, the import substitution bias of the trade regime not only has encouraged the production of relatively less labor-intensive industries, it possibly has also discriminated against employment creation for women.

9.4.2 Differentials in the Price of Capital

Compared with the labor market, there are many more policy measures and other forces that may distort the price of capital. We may divide such influences into three groups: those affecting tax liability, those affecting financial capital, and those directly affecting the price of physical capital.

The differing income tax treatment of various activities under the various promotion acts distorts the price of capital to the extent that the tax is borne by capital. Tax holidays lower the average tax rate over the life of the investment, thus lowering the price of capital to promoted firms. The textile industry has been the most important recipient of promotion privileges. Other industries taking considerable advantage of these privileges in the early 1970s were chemical products, iron and steel, motor vehicles, thread and yarn, metal products, rubber tires and tubes, and household electrical goods and appliances. The extent to which promotion is selective may have resulted in differential cost advantages to these industries.

Besides tax holidays, promoted firms do receive a clear-cut subsidy through duty-free import of capital goods, thus reducing the original cost of capital goods. In general, duties on capital goods have been much lower than those imposed on consumer goods and intermediate imports at higher levels of fabrication. Therefore, in relative terms, tariff rates increase the price of capital goods less than that of other goods. On the other hand, I believe that the currency was mildly overvalued in 1973 (see discussion in section 9.1). If this is true, the price of capital goods would have been lower because of this overvaluation, and capital-intensive industries would have been generally favored.

Finally, there is really no effective subsidization of financial capital in Thailand except the rediscount facility at the Bank of Thailand. The most important sources of financial capital are the commercial banks.

Table 9.14 Determination of Wages of Unskilled and Skilled Workers: Regression Results, 1973

Dependent Variable	Form of Equation	Intercept	Market Power (MP)	Foreign Share (FS)	Wage Share (WS)	Profitability (π)
W_u	linear	1770.3	−68.598	2.397	249.713	.036
			(−1.33)	(.079)	(2.792)*	(.769)
W_s	linear	12074.1	−161.312	15.317	228.721	.154
			(−1.713)***	(.276)	(1.397)	(1.784)
W_u	linear	4271.1				−.015
						(−.281)
W_u	linear	4638.1				.059
						(1.136)
W_s	linear	14298.0				.074
						(.837)
W_u	log-linear	4.192	−.293	.028	.209	−.272
			(−1.603)	(.735)	(1.731)***	(−2.677)**
W_s	log-linear	6.066	−.318	.061	.046	−.189
			(−1.876)***	(1.711)***	(.414)	(−2.014)***
W_s	log-linear	8.187				−.105
						(−1.098)
W_u	log-linear	8.130				.003
						(.025)
W_s	log-linear	8.862				−.058
						(−.647)

Source: Akrasanee and Chutikul (1977).

Note: W_u = unskilled wages; W_s = skilled wages; MP = the share of gross output originating from the largest producer in the industry; FS = percentage of the industry equity contributed by nonresidents; WS = wage share in total cost; π = profit per employee; VA = value added per employee; LT = number of employees who left employment in percentage of total employees; AFS = average sale volume; MF = ratio of male to female unskilled workers; $NLVA$ = nonwage value added per employee; U = percentage of total employees that are union members.

*$p < .01$.

**$p < .05$.

***$p < .10$.

The interest rates charged vary from about 10.5 percent for "big regular customers" to about 14 percent for small-scale firms. No clear differential exists along industry lines; differential access to finance most likely exists between firms of different sizes, although quantitative evidence cannot be presented because there are problems of disclosure. Small firms whose credit-worthiness is in question resort either to finance companies or to sources outside the organized sector, both of which usually charge considerably higher rates.

Productivity (VA)	Labor Turnover (LT)	Average Firm Size (AFS, or AFS^2)	Male-Female Ratio (MF)	Capital Intensity (NLVA)	Unionization (U)	R^2
.046	369.289	6.558	210.744			.822
(1.285)	(1.032)	(.432)	(4.480)*			
.021	1724.95	.944	442.119			.756
(−.263)	(1.104)	(.101)	(5.136)*			
		9.33	212.54	.067	94.091	.762
		(1.906)***	(4.918)*	(1.251)	(2.315)**	
		10.243	208.893	.007		.698
		(1.838)***	(4.285)*	(.132)		
		1.913	389.343	.001	135.443	.739
		(.244)	(5.640)*	(.012)	(2.086)**	
.703	.021	.104	.188			.764
(3.105)*	(.129)	(1.115)	(2.567)**			
.531	.226	.133	.217			.766
(2.529)**	(1.471)	(1.522)	(3.199)*			
		.155	.301	.088	.140	.723
		(1.779)***	(5.697)*	(.866)	(8.046)*	
		.185	.316	.004		.591
		(1.799)***	(5.062)*	(−.032)		
		.126	.269	.065	.128	.715
		(1.538)	(5.409)*	(.679)	(2.937)*	

All the forces described above indicate that the price of capital tends to be lower than the "market equilibrium" price, although I have not found it possible to measure the difference. But, if this distortion exists, it is probably not very large, for funds are allowed to move rather freely in and out of the country, and trade is not restricted, as I explained earlier. My assessment is therefore that small firms pay the scarcity price of capital, whereas larger firms and promoted firms pay somewhat lower prices.

Table 9.15 Regression Results of Wage Determination by Firm Size, 1973

Dependent Variable	Intercept	Male Female Ratio	Nonwage Value Added (per Employee)	R^2
W^1_s	7,741.3	205.874	.047	.251
		(2.071)***	(.071)	
W^2_s	10,720.9	554.115	.026	.152
		(1.535)	(.586)	
W^3_s	11,816.8	361.728	.047	.233
		(.615)	(2.17)**	
W^4_s	8,927.2	614.833	.137	.729
		(6.991)*	(3.407)*	
W^5_s	20,034	1060.82	.039	.291
		(1.764)***	(1.251)	
W^1_u	3,251.38	118.373	.045	.361
		(2.495)**	(1.332)	
W^2_u	3,931.08	559.404	−.011	.269
		(2.625)**	(.025)	
W^3_u	4,796.09	313.816	.024	.523
		(1.862)***	(3.790)*	
W^4_u	3,910.92	313.631	.067	.797
		(8.511)*	(4.019)*	
W^5_u	10,143.9	797.207	−.002	.406
		(2.941)*	(−1.668)	

Source: Akrasanee and Chutikul (1977).

Note: W^i_s, W^i_u: average wage by industry for skilled and unskilled workers respectively in firms size i, where i is in terms of number of employees as follows: $i = 1$: 10 employees and less; $i = 2$: 11–19 employees; $i = 3$: 20–49 employees.

*$p < .01$.

**$p < .05$.

***$p < .10$.

9.4.3 Factor Prices, Labor Intensities, and Effective Protection

From the analysis above, we can tentatively conclude that there is a small degree of distortion in both labor and capital markets. In general, larger, male-intensive firms tend to pay higher wages than smaller, female-dominated firms. Benefits due to various capital market distortions have accrued to larger promoted firms. Thus the rental rate of capital probably is lower for these activities than for small-scale industries. Both sets of distortions seem to favor capital utilization in larger, male-dominated, and promoted firms, most of which produce importables. On the other hand, smaller, female-dominated, exportable firms probably tend to minimize the use of capital and use even more labor than if labor markets were not distorted.

One would also expect a positive relationship between levels of protection and capital utilization. As a crude test of this hypothesis, I re-

gressed value added per employee, both direct and total (as a measure of capital intensity) upon the rate of effective protection. The results, given below, indicate that this relationship exists for the direct value added equation but not when home goods are included. Therefore, on the whole, the results suggest, at least weakly, that trade policy is biased toward capital-intensive industries and to that extent has hindered employment creation in Thailand.

$$(1) \qquad VA/L = 39.81 + 2.782ERP \qquad R^2 = .136$$
$$(.112) \qquad t = 2.47,$$

$$(2) \qquad VAT/L = 30.26 + .06782ERP \qquad R^2 = .059$$
$$(.0453) \qquad t = 1.50.$$

To summarize, my analysis tends to support the notion that factor market distortions are antiemployment for large-scale, capital-intensive, male-intensive industries and proemployment for small-scale, female-intensive industries. Second, the trade regime has a tendency to be antiemployment, since the *ERP* varies directly with the value added per worker ratio. Probably the latter effect is more important than factor market distortion.

9.5 Conclusion

Based on the foregoing analysis, the effects of trade policies on employment in Thailand may be summed up as follows: First, the policy of promoting manufactured exports, especially exports that are non-NRB related, is generally favorable to employment. Second, the employment pattern of production and trade is consistent with the known factor endowment. Third, there is a positive, though not strong, relationship between the degree of capital intensity of production and effective rates of protection. Protection tends to protect importables with higher capital intensity, whereas labor-intensive exportables receive lower or negative protection.

Since the strategy of export promotion has been found to be more employment-creating, the continued practice of import substitution has meant that employment is being created at higher cost, ceteris paribus, and that more employment could have been generated with an export oriented strategy. However, the bias in the incentive system has not been strong enough to reverse the pattern of factor intensity of production and trade from that predicted on the basis of factor endowments.

Two areas of policy implications regarding trade strategy for employment growth may be distinguished: the overall trade strategy and the incentives policy. If employment creation is one of the major development objectives, then the strategy of export promotion would create em-

ployment at lower cost. An export promotion strategy also means that less protection would be given to importable production. These goods would have to be more competitive and, as I have shown, "competitive" importables are more labor-intensive than "protected" importables; they also would create more employment than a policy of continued adherence to protecting capital-intensive importables.

Factor market policies aimed at employment promotion should seek to reduce wage/rental ratios facing capital-intensive, large-scale industries. This could be done by eliminating duty-free imports of capital, eliminating tax holidays, and subsidizing wages. This, in effect, would mean a change in the promotional activities of the Board of Investment. For labor-intensive industries, especially small-scale industries and firms, the wage/rental ratios facing them are already proemployment. But these ratios have been found to be too low in the sense that small entrepreneurs tend to pay lower wages, while they themselves are exposed to high capital charges (Sa-nguanruang and Tamboonlertchai 1976). If this is the case, higher mobility in the labor and capital markets would raise the wage rate of these workers and lower the price of capital for small-scale industries. Such changes might reduce employment per firm but increase the number of viable firms more than enough to compensate the lower labor intensity effect.

Trade policies have to be directed toward encouraging labor-intensive activities. This could be done by eliminating high protection afforded "protected" importables and by setting protection at uniform rates for all activities. Furthermore, exports might be directly encouraged through subsidization, or at least the elimination of controls on prices and production. The net result of these policies would be an increase in the employment generation capabilities of Thailand's manufacturing sector. This result is vital, given the increasingly difficult problems of finding employment for its rapidly growing urban labor force.

Notes

1. See Ingram (1971) and Sondysuvan (1975) for more detailed descriptions of Thailand's economic development.

2. SITC refers to Standard International Trade Classification, and ISIC refers to International Standard Industrial Classification.

3. The ISIC treats processed food, beverages and tobacco as manufactures; the SITC does not.

4. The remaining imports are classified as "other," which in fact is a very important group because it includes major items such as passenger cars, buses and trucks, and crude oil.

5. This section and the more detailed discussion in section 9.2 are adapted from Akrasanee (1977).

6. The name was later changed to National Economic and Social Development Board.

7. See Akrasanee (1973) for a discussion of that period. The system of taxation in use in the 1970s, which is basically similar to that of the 1960s, is discussed in section 9.2.

8. Tariff rates were increased both to provide additional protection and for revenue and balance of payments reasons; see Akrasanee (1975).

9. National Executive Council Decrees nos. 227 and 329, Bangkok, 1972.

10. After March 1978, the value of the baht was linked to a basket of currencies replacing the earlier fixed parity with the United States dollar.

11. The rice premium, an export surcharge on rice, is used to stabilize the domestic price of rice. Therefore the premium rate is adjusted according to the changing world price of rice. For the most comprehensive history of the rice premium, see Siamwalla (1975). The sugar export surcharge was introduced in 1974, when the world price of sugar was very high, to tax the profits of exporters. The rates are based on a sliding scale with a minimum level below which the rate is zero. In 1977, when the world price of sugar became very low, the surcharge was therefore zero.

12. The term "subsidize" here means only the tax-refund or tax-exemption measures of the ministry.

13. The ministry maintains an ad hoc list of goods under export and import controls, and the list is changed from time to time. In 1973 the import control list and export control list included thirty-five and seventeen items, respectively. In most cases the control is for the purpose of inspecting the goods. See discussion below for details on these controls.

14. Usually changes in tariff rates are made for a few items each year. These changes are announced by the Ministry of Finance and are published in the Bank of Thailand *Monthly Bulletin.*

15. Another interpretation is that the balance of payments deficit was used as a pretext for tariff adjustments that were demanded by domestic producers before the deficit.

16. Most exports are exempt from the business tax. For more detail on the computation of taxes, see Akrasanee (1973).

17. For example, to request tariff protection from the Ministry of Finance, to request restriction on entry of new firms from the Ministry of Industry, and so forth.

18. National Executive Council Decree no. 227, Bangkok, 1972.

19. Information from the Ministry of Commerce.

20. The 1973 coefficients became available later, but I did not recalculate the ERPs.

21. The general formula for the calculation of ERP is given in the introductory chapter. The formula used in this study is from Akrasanee (1973).

22. See Balassa et al. (1971) for more discussion of potential and realized protection. See also Akrasanee (1973) for more detail on the method of calculation for Thailand.

23. With tax exemption and tax refund, output and inputs are valued at their border prices, resulting in domestic value added in the industry approximately equaling the IVA. Note also that in export industries, assuming that producers entitled to tax exemption and tax refund in their export sales claim their privileges, potential rates and realized rates are equal.

24. This was also true for promoted firms, because they were entitled to only one-third of rebates.

25. These requirements were also calculated per unit of nonwage value added. But since the results lead to the same conclusion, they are not reported here.

26. The 1971 I-O table of the National Economic and Social Development Board (NESDB) is still in preliminary stage. I have therefore not used it for other calculations in this study. The national income account statistics are from the NESDB. The electricity and water supply authorities are the Electricity Generating Authority of Thailand, the Metropolitan Electricity Authority, the Provincial Electricity Authority, and the Metropolitan Water Supply Authority. For more detail on the data used, see Akrasanee and Chintayarangsan (1976).

27. See Krueger (1977*a*, *b*) and the introductory chapter for details on this argument.

References

Akrasanee, Narongchai. 1973. The structure of industrial protection in Thailand during the 1960s. *Economic Bulletin for Asia and the Far East* 24, no. 2/3:36–56.

———. 1975. *The structure of effective protection in Thailand: A study of industrial and trade policies in the early 1970s.* Report prepared for the World Bank. Washington, D.C.: World Bank.

———. 1977. Industrialization and trade policies and employment effects in Thailand. In *Trade and employment in Asia and the Pacific*, ed. Narongchai Akrasanee et al. Honolulu: University of Hawaii Press.

Akrasanee, Narongchai, and Chintayarangsan, Rachain. 1976. *Factor proportions in trade.* CAMS Discussion Papers. Manila: Council for Asian Manpower Studies.

Akrasanee, Narongchai, and Chutikul, Siri-laksana. 1977. Wage differentials in manufacturing industries. Mimeographed. Bangkok: Thammasat University.

Akrasanee, Narongchai, and Wattananukit, Atchana. 1976. Comparative advantage in rice production in Thailand. *Food Research Institute Studies* 15:177–212.

Bacha, Edmar, and Taylor, Lance. 1971. Foreign exchange shadow prices: A critical review of current theories. *Quarterly Journal of Economics* 85:197–224.

Balassa, Bela, et al. 1971. *The structure of protection in developing countries.* Baltimore: Johns Hopkins University Press.

Bank of Thailand. 1976. *Annual report, 1976.* Bangkok.

———. Various years. *Monthly bulletin.* Bangkok.

Board of Investment. 1959. *Brief information concerning investment in Thailand.* Bangkok: State Lottery Printing Press.

———. 1971. *Investors manual.* Bangkok: Board of Investment.

Corden, W. M. 1967. The exchange rate system and the taxation of trade. In *Thailand: Social and economic studies in development*, ed. T. H. Silcook. Canberra: Australian National University Press.

Customs Department. Various years. *Customs tariff and business tax.* Bangkok: Ministry of Finance.

Ingram, James C. 1971. *Economic change in Thailand, 1850–1970.* Stanford: Stanford University Press.

Krueger, Anne O. 1977*a*. *Alternative trade strategies and employment—Plan of research for country studies.* NBER Working Paper no. 164. New York: NBER.

———. 1977*b*. *Growth, distortions, and patterns of trade among many countries.* Princeton Studies in International Finance no. 40. Princeton: Princeton University.

Marzouk, Girgis A. 1972. *Economic development policy: Case study of Thailand.* Amsterdam: Rotterdam University Press.

National Economic and Social Development Board. 1963. *First national economic and social development plan, 1961–1966.* Bangkok.

———. 1968. *Second national economic and social development plan.* Bangkok.

National Statistical Office. 1971. Manufacturing survey of greater Bangkok area, 1971. Worksheet.

Sa-nguanruang, Sang, and Tamboonlertchai, Samsak. 1976. *Small and medium scale industries in Thailand.* Report. Bangkok: Industrial Finance Corporation of Thailand.

Siamwalla, Ammar. 1975. A history of rice policies in Thailand. *Food Research Institute Studies* 14:233–48.

Silcock, T. H. 1967. *Thailand: Social and economic studies in development.* Canberra: Australian National University Press.

Sondysuvan, Prateep, ed. 1975. *Finance, trade and economic development in Thailand.* Bangkok: Sompong Press.

Wibulswasdi, C., et al. 1979. Effective exchange rates and equilibrium exchange rates for baht. Mimeographed. Bangkok.

Yang, Shu-chin. 1957. *A multiple exchange rate system: An appraisal of Thailand's experience, 1946–1955.* Madison: University of Wisconsin Press.

This Page Intentionally Left Blank