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Industrial Policy and Development in the ASEAN Countries

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ABSTRACT

This paper describes the evolution of industrial policy and development in each of the ASEAN countries, indicating also the general thrusts of recent industrial promotion policies in the region. Because trade policies form a part, and in the context of the ASEAN countries a major part, of the overall policy climate affecting the performance of manufacturing industries, the discussion of industrial policy inevitably includes the incentive effects of foreign trade regimes adopted. The discussion then shifts to the Korean industrialization experience from which some lessons are drawn that could provide guidance for ASEAN policymakers. This is followed by an examination of potential areas for industrial complementarity and trade expansion between the ASEAN countries and the Asian NICs, given the rising protectionism in the industrialized countries. The paper ends with some general remarks on the possibilities for promoting mutually beneficial development though trade in manufactures among the NICs and the "near-NICs" (including the ASEAN countries) under the constraint of continuing restrictions in access to industrialized country markets.

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FOREWORD

Industrialization has been an important element of the development strategies pursued by ASEAN member countries. In their desire to diversify and modernize their economies, they have actively implemented industrial promotion policies of varying form, duration and degree. Not so very long ago, the Philippines initiated a package of industrial policy reforms intended to hasten the pace and pattern of industrial development in the country.

To provide broader perspectives and insights into the formulation and implementation of industrial promotion policies, this second publication under the PIDS Monograph Series deals with industrial development in the ASEAN member countries. Aptly written by Romeo M. Bautista, it outlines the pattern of industrial development in each ASEAN country, and emphasizes the evolution and role of industrial promotion policies. The paper further analyzes the Korean industrialization experience from which lessons can be drawn and examines the potential areas for industrial complementarity and trade expansion between ASEAN and the newly industrializing countries (NICs) of Asia.

It is hoped that readers of this Monograph will find it both interesting and useful.

FILOLOGO PANTE, JR.
President

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INDUSTRIAL POLICY AND DEVELOPMENT IN THE ASEAN COUNTRIES*

Romeo M. Bautista

I. INTRODUCTION

Economic growth of the ASEAN countries in the last two decades has been very impressive (see Table 1), especially considering the increased instability of the world economy during the 1970s. The range of average annual GNP growth rates of 6.2 percent to 8 percent for the region during 1970-79 compares favorably with any region elsewhere. Industrial growth rates over the same period are even higher (8.4 percent-11.3 percent) so that the contribution of industry to GDP has increased significantly for each of the ASEAN countries.

By wide agreement, the ASEAN economies are in the next tier of developing countries more or less following the industrial growth path of the advanced developing countries – the so-called NICs (newly industrializing countries). Indeed, the economically most advanced ASEAN member, Singapore, is one of the Asian NICs, which also include Hongkong, Taiwan, and South Korea (from hereon to be referred to simply as Korea). Because these countries are also among the world's fastest growing economies and, in contrast to the resource-rich ASEAN countries (except Singapore), are poorly endowed with natural resources per capita, developments in these two groups of economies will have increasingly significant effects on each other's economic performance, presenting possibilities therefore for cooperation and conflict. Because Korea is the largest of the Asian NICs, an examination of ASEAN countries' economic relations with Korea assumes particular interest.

The objective of the present study is two-fold: (1) to describe the nature of industrial policies and patterns of industrial growth in the ASEAN countries as well as to draw some lessons from the industrialization experience of Korea; and (2) to examine the potential complementarities in the industrial development of ASEAN and the Asian NICs, again paying particular attention to the Korean case. Section II of this paper discusses the evolution of industrial policy and development in each of the ASEAN countries, indicating the general thrusts of recent industrial promotion policies in the region. Because trade policies form a part, and in the context of the

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TABLE I
ASEAN COUNTRIES: SOME ECONOMIC STATISTICS

	Indonesia	Malaysia	Philippines	Singapore	Thailand
Area (thousand sq. km.)	1,919	330	300	1	514
Population, mid-1979 (millions)	142.9	13.1	46.7	2.4	45.5
GNP per capita, 1979 (U.S. dollars)	370	1,370	600	2,830	590
Exports-GDP ratio, 1979 (percent)	30	58	19	187	23
Real GDP growth* (percent)					
1960-70	3.9	6.5	5.1	8.8	8.2
1970-79	7.6	7.9	6.2	8.4	7.7
Industrial growth,* 1970-79	11.3	9.9	8.4	8.6	10.4
Industry share of GDP (percent)					
1960	14	18	28	18	19
1979	33	33	35	36	28
Manufacturing value added per capita (1975 U.S. dollars), 1978	26	180	102	756	83
Export volume growth* (percent)					
1960-1970	4.0	5.8	2.2	4.2	5.2
1970-79	6.5	6.5	6.2	11.0	12.0

*Average annual rate.

SOURCE: *1981 World Development Report* (various tables).

ASEAN countries a major part, of the overall policy climate affecting the performance of manufacturing industries, the discussion of industrial policy inevitably includes the incentive effects of foreign trade regimes adopted. Section III takes up some trade-related aspects of ASEAN industrial policy and development, including the growth of exports of labor-intensive manufactures, the recent promotion of exports of processed primary products, and the role of ASEAN economic cooperation. The discussion then shifts, in Section IV, to the Korean industrialization experience from which some lessons are drawn that could provide guidance for ASEAN country policymakers. Section V follows with an examination of potential areas for industrial complementarity and trade expansion between the ASEAN countries and the Asian NICs, given the rising protectionism in the industrialized countries. The paper ends with some general remarks on the possibilities for promoting mutually beneficial development through trade in manufactures among the NICs and the "near-NICs" (including the ASEAN countries) under the constraint of continuing restrictions in access to industrialized country markets.

II. ASEAN INDUSTRIAL POLICIES AND PERFORMANCE

Historically, as the ASEAN countries (except Thailand) were formerly colonies of Western powers, their economies before independence were very much integrated with those of the colonizing countries. Subsequent efforts to promote industrialization were motivated by the desire to diversify the economy from an overreliance on primary production (in the case of Singapore, on intrepot trade) and, more generally, to redirect the country's production capacity away from the goals of colonialism toward providing a basis for modernizing the economy. Almost inevitably, the concomitant desire for economic independence led to an industrialization strategy based on import substitution, at least initially. As will be evident in the discussion below, the ASEAN countries differed in the extent and duration of import substitution policies adopted before eventually shifting to a more outward-looking approach to industrialization. This would account in part for differences in the current state of their industrial development.[1] It is perhaps not a coincidence that the two ASEAN countries which were earliest to adopt a liberal foreign trade regime (Singapore and Malaysia) have the highest per capita manufacturing value added. Also, throughout most of the last two decades, the level of protection from foreign competition accorded domestic industry has been lowest in these two countries.

In recent years, as part of ASEAN countries' response to the dramatic

[1] Based on World Bank data, manufacturing value added per capita (in 1975 U.S. dollars) in 1978 in Singapore was about 29, 9, 7 and 4 times those of Indonesia, Thailand, the Philippines and Malaysia (cf. Table 1).

developments in the world economy during the 1970s, industrial policy adjustments were deemed necessary to help sustain rapid economic growth in the face of continually changing parameters in the external economic environment. Even before the last decade drew to a close, there were developments signalling a retreat from the vigorous growth of world trade that characterized most of the postwar period. The 1973-74 oil crisis and the subsequent stagflation of the industrialized countries had interrupted the impressive industrial development and export growth of the ASEAN countries. Despite the ensuing upsurge of protectionist measures, rapid expansion of ASEAN countries' manufactured exports appeared to have been restored by 1976-77. Hopes for sustained growth, however, were soon dashed as the external environment again turned adverse. The 1979-80 oil price increases, the resurgence of inflation in 1979 and 1980, the sluggish growth of industrial economies since 1980, and the intensification of protectionism in developed country markets meant, to the ASEAN countries (and indeed most developing countries), a new round of adjustments.

"Industrial restructuring" has taken many forms among the ASEAN countries. For one thing, the increased price of oil has raised different policy concerns for oil-exporting and oil-importing ASEAN countries. For Indonesia especially (less so for Malaysia), an important consideration is how to provide adequate incentives for non-oil production and exports; such a diversification is deemed essential in any successful adjustment to a dynamic post-oil future. For the Philippines and Thailand, both heavily dependent on imported oil (about 85 percent of their energy requirements), the increased cost of oil has made more urgent the need to earn and save foreign exchange efficiently through export expansion and import substitution. Policy efforts in these two countries have been directed at reducing the import requirements of domestic production and replacing more imports by domestically-produced substitutes. There is recognition also that, while it is more difficult to expand exports at a time when world trade is less than buoyant, the deterioration in the balance of payments makes it more important to do so. In the case of Singapore, industrial restructuring — after the phenomenal success in labor-intensive export manufactures — called for the orientation of investment and production activities toward higher skills and technology that would enable the population to sustain high income growth.

The four resource-rich ASEAN countries have also begun to actively encourage the development of basic industries. The underlying motivation for this seems to derive from two sources. One is the perception of natural comparative advantage vis-à-vis foreign suppliers of products of resource-based industries. The other reason is that the establishment of basic industries is regarded as critical to the balanced development of the manufacturing sector, not only producing finished goods but also providing the "basic industrial infrastructure", which is perceived to be necessary, given the increas-

ing uncertainties in the international economy.

1. Indonesia

Of the five ASEAN countries, Indonesia is the largest in terms of both population and land area, but also has the lowest per capita GNP (Table 1). Its present low level of industrial development needs to be viewed in the light of the country's economic stagnation in the 1950s and the greater part of the 1960s, which began to be reversed only after the Suharto government came to power in 1966.

Under the "New Order", the economy's infrastructure was rehabilitated after years of neglect, particularly the transport, power and communications sectors. Measures were successfully implemented to reduce the country's traditionally high inflation rate. Government regulation of private sector activity was reduced and economic incentives to private enterprise were restored to encourage production (Paauw, 1981) at the same time that participation of the government in manufacturing activities was de-emphasized. The 1967 Foreign Investment Law provided generous fiscal incentives. Access to imported raw materials and capital goods was made easier for both foreign and domestic firms by a more liberal trade policy.

The launching of Repelita I (First Plan, 1969-74) marked a turning point in Indonesian economic growth. The average annual GDP increase of 7.6 percent during the period 1970-79 was almost double that of the 1960-69 figure. Even more impressive was the growth of the industrial sector, which registered an average annual rate of 11.3 percent in the seventies. As documented by Poot (1981), import substitution was the major source of Indonesian manufacturing growth during 1971-75, especially in food processing, wheat flour, textiles, paper and fertilizers; on the other hand, domestic demand expansion was the important source of growth in other food products, cigarettes, transport equipment, wood products, chemicals and metal products. Subsequently, import substitution appeared to have slackened (Anwar, 1980). Although a few manufactured items, particularly wood products, registered vigorous export growth in the second half of the seventies, domestic demand expansion was clearly the major source of industrial growth during that period.

As shown in Table 2, food, beverages and tobacco accounted for more than one-half of manufacturing value added in Indonesia in 1972; chemicals, petroleum and rubber and plastic products contributed about one-fifth, while the share of textiles, clothing and footwear was 11 percent. By 1979, the contribution of the first group had declined to one-third, the second had also become less dominant, while the third group, together with metal products, machinery and transport equipment, had assumed greater significance.

The Investment Coordinating Board (BKPM) is the government agency

TABLE 2
INDONESIA: COMPOSITION OF MANUFACTURING VALUE ADDED, 1972 and 1979
(in percent)

	1972	1979
Food, beverages and tobacco	50.8	33.6
Textiles, clothing and footwear	10.9	15.4
Wood and furniture	2.9	4.6
Paper, printing and publishing	2.3	3.5
Chemicals, petroleum, rubber and plastic products	21.3	17.4
Non-metallic mineral products	4.0	8.8
Basic metals	–	1.3
Metal products, machinery and transport equipment	6.8	15.1
Other manufactures	1.0	0.3
TOTAL	100.0	100.0

SOURCE: Table 3.8 in Wong (1979); *Statistik Industri 1979* (Biro Pusat Statistik, Indonesia).

overseeing foreign investment and domestic industrial projects eligible for incentives according to a priorities list prepared annually by the Board. The incentives available to existing projects include carry-over losses for the first six year, accelerated depreciation to a maximum of 25 percent, exemption from dividend tax, investment allowance of 20 percent for four years, and exemption from property tax and some fees. For new projects, the following additional fiscal incentives are offered: (1) exemptions from import duties and restrictions on imported machinery and raw materials; (2) exemption from the corporate income tax, dividend tax and company tax on reinvestments for at most five years. BKPM incentives have been judged to have a capital cheapening effect, serving to promote large-scale, capital-intensive industries (Poot, 1981); together with a highly protective tariff structure[2] and an increasingly overvalued domestic currency (until the rupiah devaluation in late 1978), they presented severe biases against the development of labor-intensive industries into a high-growth export sector.

The oil boom since 1974, which raised the share of oil in total exports from 50 percent to 70 percent, had adversely affected Indonesia's manufactured exports as well as import-substituting industries, giving rise to pressures

[2] The 1973 tariff reform, which extensively revised the tariff system and simplified its administration, even resulted in higher *effective* protection rates to several consumer goods industries (cf. Poot 1981).

for structural change. Recent policy adjustments have been aimed at reducing dependence on oil exports while maintaining high growth. Industrial export expansion is deemed necessary to maintain a relatively high growth rate for the manufacturing sector in the face of a slower expansion of domestic demand due to the anticipated decline in GNP growth rates and reduced opportunities for import substitution in the coming years. Rapid expansion in manufacturing in turn would contribute substantially to employment generation, which is an overriding policy concern in Indonesia.

Some product categories of manufactured exports considered to hold great promise are: (1) processed wood products, including sawn timber, plywood, veneer and moldings; (2) mineral-based products such as tin, alumina and aluminum, and nickel products; (3) labor-intensive products like textiles, batik garments and leather products; and (4) food products such as shrimp and tapioca chips.

Following years of debate, exporting of logs is being phased out and a complete ban is scheduled to take effect in 1985. It is expected that this would boost exports of processed products like sawn timber, plywood, veneer and perhaps even furniture, and that the increased value added would offset the fall in export proceeds from logs and at the same time provide additional employment and earnings to Indonesian workers.

A number of heavy industry projects have been identified for public investment, some already being constructed. These include the $2 billion aluminum smelter project in North Sumatra with an initial production capacity of 75,000 metric tons, a $900 million alumina plant in the bauxite-rich Bintang Island which would supply the aluminum smelter 450,000 tons of alumina by mid-1986 and export the remaining 150,000 tons of the plant's annual output, and a planned $780 million expansion of a steel complex operated by state-owned Krakatau Steel to produce cold-rolled steel sheets meant to replace imports. Among other large scale industrial projects to be implemented in the near future are a one million-ton capacity cement plant, two urea fertilizer plants, a $1.7 billion olefin center and a 90,000-ton newsprint plant.

The competitiveness of Indonesian exports of labor-intensive manufactures and processed food products, which suffered as a result of the oil boom, appeared to have been greatly improved by the large devaluation of the rupiah in late 1978 (cf. Paauw, 1981) and the slight but sustained depreciation against the U.S. dollar since early December of 1981. However, a major trade liberalization effort and other export promotion measures, including improvements in infrastructure and labor skills, are widely considered to be necessary for boosting the longer term prospects of Indonesian manufactured exports.

The latest World Bank annual study of the Indonesian economy is reported to share the view of government technocrats "that current difficul-

ties, resulting most immediately from world recession and the oil glut, may provide an unexpected opportunity to carry through some of the more painful adjustments such as improving tax collection and removing subsidies."[3] For the longer term, the policy adjustments involve: a change in the country's trade regime towards greater encouragement of exports; an improvement of the investment and regulatory environment; an improvement in the efficiency of financial intermediation; and adjustment of domestic prices to reflect economic costs.

The package of policy measures recently adopted is designed to increase the competitiveness of Indonesian products in world markets. This included cheaper export credits, export credit insurance, relaxation of some foreign exchange controls and lower port charges. Also a part of the package is the controversial counter-purchase trade policy which requires foreign companies winning government-sponsored contracts to buy back Indonesian goods other than oil and gas equivalent in value to the equipment and materials they bring into the country.[4] The government is also considering the establishment of export promotion centers abroad and the creation of trading companies. Finally, there is also a need for greater effort in improving ports and shipping services, export marketing and quality control, and incentives for all stages of production of export goods.

2. Malaysia

In Malaysia, conscious efforts by the government to promote industrialization started after independence with the introduction of the Pioneer Industries Ordinance in 1958. It provided incentives to firms with pioneer status, exempting them from the 40 percent company income tax, among other fiscal incentives, and providing subsidies for infrastructure services such as electricity, water and transport in industrial estates. The Malaysian Industrial Development Finance Berhad was created in 1960 to extend medium and long-term loans and technical assistance to manufacturing enterprises, and in 1965, the Federal Industrial Development Authority[5] was established to oversee the country's industrialization drive.

Malaysian manufacturing developed at a fast pace from 1959 to 1968 under a system of modest tariff protection and liberal investment incentives. The average annual growth rate of real value added in the entire manu-

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[3] Quoted from the *Far Eastern Economic Review*, June 11-17, 1982 issue, p. 110.

[4] This has not been popularly received, critics claiming that it could lead to serious distortions in the government choice of business partners and to an artificial overpricing of foreign imports such as capital equipment. It is recognized, however, that the benefit of the counter-purchase policy is limited since the value of experts linked to state-sponsored contracts is less than 3 percent of Indonesia's total trade.

[5] Later renamed the Malaysian Industrial Development Authority (MIDA).

facturing sector was 17 percent, while that of pioneer companies was understandably more impressive at 58 percent (Lim, 1981). Table 3 shows a significant decline in the share of agriculture-based processing activities, while the newer industries, especially those producing intermediate and investment goods such as chemicals, non-metallic mineral products, basic metal products, machinery and transport equipment, apparently grew much faster and substantially increased their contribution to total manufacturing output.

TABLE 3
MALAYSIA: COMPOSITION OF MANUFACTURING VALUE ADDED, 1959, 1968 AND 1980
(in percent)

	1959	1970	1980
Processing of estate-type agricultural products	28.9	10.5)	28.4
Food, beverages and tobacco	24.1	28.3	
Textiles, clothing and footwear	–	2.9	9.9
Wood and furniture	18.7	13.0	15.0
Paper, printing and publishing	–	7.6	
Chenicals, petroleum, rubber and plastic products	16.5	17.9	11.0
Non-metallic mineral products	3.9	8.2	6.9
Basic metals and metal products	4.4	6.6	8.1
Machinery	1.8	2.2	3.4
Transport equipment	1.7	2.9	4.9
Other manufactures	–	–	12.4
TOTAL	100.0	100.0	100.0

SOURCE: Table 7-1 in Lim (1981): *Fourth Malaysian Plan 1981-85.*

In 1968, the Investment Incentives Act was passed which in effect superseded the 1958 ordinance, making important changes in economic incentives and coverage of firms beyond those obtaining pioneer status; in particular, export-oriented industries were accorded specific benefits. Among other means of export infrastructure support, free trade zones and export processing zones were set up in selected parts of Malaysia, and a National Export Advisory Council and an export insurance system were created to assist export development.

Subsequent industrial growth was rapid, manufacturing output having expanded more than three-fold between 1968 and 1980. As shown in Table

3, textiles and clothing, transport equipment and machinery posted substantial gains in their contribution to total manufacturing production. These industries also accounted for an increasing proportion of Malaysia's manufactured exports in the 1970s (see below).

The granting of "pioneer status" remains the most important and frequently given incentives to MIDA-approved projects (Lim *et al.* 1981). Upon approval under the pioneer status, the project is exempted from company tax (40 percent on profits) for two to five years depending on the amount invested; the period can be extended by a maximum of three years – one year for meeting each of the following conditions: (1) the firm is located in a 'development area"; (2) its products are "priority products"; and (3) its output meets certain domestic content requirements.

The Investment Tax Credit incentive is granted to export firms not enjoying pioneer status. Tax credit is given in the amount equivalent to 25 percent of the total capital cost, which percentage is increased by 5 percent for each of the conditions given above, that the firm is able to satisfy. Additionally, export firms benefit from accelerated depreciation allowance, relief from income tax including payroll tax and export allowances.

A third form of fiscal incentives is the Labor Utilization Relief, which is attractive to firms with low capital-labor ratios. This is similar to pioneer status except that the period of exemption from the company tax is based on the number of full-time paid employees, i.e., 2 years for firms employing from 51 to 100 workers, 3 years for employment size of 101-200, 4 years for 201-350 and 5 years for more than 351 workers.

Other fiscal benefits include tax-free importation of machinery, equipment and industrial raw materials required to make the project operational, and tariff protection to selected industries granted by the Tariff Advisory Board.

It appears from recent evidence that export-oriented projects have availed widely of industrial incentives under pioneer status, while most import-substituting industries received approval without obtaining incentives. The role of government in promoting exports is also important in the setting up of four free trade zones specifically for export-oriented industries, as shown by the electronics export boom in the second half of the 1970s. It has been shown, however, that there is a redundancy of incentives for many industries catering to the domestic market already receiving substantial protection (Teh, 1977).

The diminishing labor surplus in major industrial areas has made the active encouragement of labor-intensive manufactured exports (.e.g, electronic products) less compelling, although incentives are being provided to increase the attraction of dispersal to new areas of lower wage costs. At continuing source of disappointment among Malaysian officials is the low value added in these export industries, in view of the heavy reliance on imported

inputs (about 60 percent of sales value in the electronics industry) and associated lack of investments in ancillaries and dissemination of technology and skills. Finally, there is also a perception of the uncertain prospects of these major manufactured exports for the 1980s and of the need to further diversify the country's export structure.

The *Fourth Malaysia Plan 1981-85* envisages the further development of resource-based industrial projects,particularly in the processing of cocoa, palm oil and crude petroleum as well as in the manufacture of rubber and wood-based products for both export and home consumption. The number of resource-based industrial projects licensed by the Malaysian Industrial Development Authority had increased from 493 in 1971-75 to 685 in 1976-80; of the latter, 139 were approved in 1980 involving a total investment of M$696 million.

The "new dimension" which recent industrial policy in Malaysia has added, concerns "the promotion of investment in heavy industries," and the objective is "to strengthen the linkages and the structure of industrial development." The manufacture of capital goods is explicitly cited in the Plan as the next phase of industrialization that Malaysia will enter and this is considered to constitute the second "import substitution wave" following the exhaustion of import substitution opportunities in the consumer goods sector.

To initiate, plan, implement and manage heavy industry projects, the government established the Heavy Industries Corporation of Malaysia (HICOM) in 1980 with an initial allocation of M$125 million under the Fourth Malaysia Plan. HICOM has identified several projects for study and evaluation which, if found viable, will be implemented during the Plan period. These projects involve a wide range of products including basic metals, general engineering, transport equipment, other equipment and machinery, building materials, paper and paper products and petrochemical products.

A broad-ranging review of the structure of industrial incentives in Malaysia, including incentives for regional dispersal, rapid technology transfer and upgrading of labor skills, is being conducted by a government committee. Changes to be made will "reflect the priorities of industrial development" in the 1980s. Additionally, improvements in the administrative machinery for granting incentives and protection are being considered in order to shift the system away from the case-by-base approach and streamline administrative procedures.

Malaysian industrial policy for the 1980s seeks to accelerate growth in the manufacturing sector and to achieve the objectives of the New Economic Policy (NEP). The NEP was introduced in 1971 to redress the economic imbalance of Malaysian society and "eliminate the identification of race with economic function." Accordingly, greater *bumiputra* (mainly Malay) participation in industries is being encouraged to ensure that the NEP's targets, especially with respect to equity ownership, employment, distribution of

goods produced and use of professional services in the manufacturing sector, will be attained (Lew Sip Hon, 1981).

3. Philippines

Among the ASEAN countries, the Philippines has the longest history of conscious policies to encourage industrial development. Import substitution as an industrialization strategy started in 1949 when controls on imports and foreign exchange were instituted as an *ad hoc* response to a severe balance of payments problem. What was initially viewed as a curb on the consumption of less essential imports soon became a protective device to encourage production of their substitutes. Decontrol and devaluation in the early 1960s did not alter very much the incentive structure favoring import-substituting industries that mainly produced consumer goods at the finishing stages. Heavy protection was accorded domestic industries by a "cascading" tariff structure which served to maintain the qualitative biases of the pre-decontrol policy regime against backward integration, export expansion and labor absorption.

Sluggish manufacturing growth from the late 1950s[6] by which time the exuberant phase of import substitution had been exhausted, led to a new comprehensive approach to stimulating investment, based on the Investment Incentives Act of 1967. The Board of Investments (BOI) was created to centralize the process of assigning industrial priorities and to administer the incentives available to local and foreign enterprises in accordance with such priorities. The benefits to BOI-registered firms included such capital-cheapening incentives as: (1) tax exemption on imported capital equipment within seven years from the date of registration of the enterprise; (2) tax credit on domestic capital equipment equivalent to 100 percent of customs duties and compensating tax that would have been paid on imports of such items; (3) accelerated depreciation allowances, as a deduction of taxable income, permitting fixed assets to be depreciated up to twice as fast as the normal rate if expected life is 10 years or less or depreciated over at least 5 years if expected life is more than 10 years; (4) tax deduction of expansion reinvestment to the extent of 25 to 50 percent in the case of non-pioneer projects and 50 to 100 percent in the case of pioneer projects; and (5) preference in grant of government loans, permitting BOI-registered firms to have preferential access to low interest credit.

There is one incentive provision that appears to favor labor employment, namely, the deduction from taxable income of one-half of the expenses on labor training (but not exceeding 10 percent of direct labor wage).

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[6] In contrast to the impressive growth (averaging 12.6 percent annually) during 1949-57, manufacturing value added increased at an average annual rate of only 5.7 percent in real terms from 1957 to 1969.

But this would be true only in cases where the labor skill acquired can substitute for, rather than be complementary to, capital services (Bautista, 1981).

Other benefits afforded BOI-registered enterprises relate less directly to the relative costing of factors. The following additional incentives seem neutral with respect to factor use: (1) deduction from taxable income of all organizational and pre-operating expenses; (2) deduction of net operating loss incurred in any of the first 10 years of operations; (3) exemption from all internal taxes, except income tax, to a diminishing extent over time; and (4) for pioneer enterprises, post-operative tariff protection up to 50 percent of the dutiable value of imported items similar to those being produced.

By the end of the 1960s, the economy was again facing a balance of payments crisis, precipitated by the need to service short-term foreign credit which had financed the trade deficits of the second half of the decade. The peso was floated in February 1970, the exchange rate moving from 3.9 to about 6.4 pesos per U.S. dollar by the end of the year. The Export Incentives Act of 1970 recognized the need to orient local industries toward the export market and to expand non-traditional manufactured exports in order to counter the economy's chronic balance of payments difficulties. The new incentives provided for the first time a direct incentive to employment through a wage subsidy equal to the labor cost in the manufacture of exports (not to exceed 25 percent of the export revenue generated). The other principal export incentive – a tax credit equal to the sales, compensation, and specific taxes and duties on supplies and materials used in the manufacture of products for export – was neutral with respect to factor use.

The *de facto* devaluation of the domestic currency accompanied by discriminatory "stabilization measures" favoring non-traditional (manufactured) exports[7] and the enactment of the Export Priorities Act significantly improved the incentive structure for manufactured exports. Several measures were also adopted in line with export infrastructure development, including the establishment of an export processing zone and a government trading corporation to serve as the central clearing house for bulk trading and financing, and efforts at simplifying export documentation and procedures.

The remarkable response of manufactured exports, which expanded at an average annual rate of about 50 percent (in current U.S. dollar prices) during 1970-73, provided the stimulus for the acceleration of manufacturing growth (from 3.7 percent in 1969 to 14.8 percent in 1973) before being interrupted by adverse external conditions in 1974 and 1975 (cf. Bautista, Power and Associates, 1979; p. 26). A slow recovery was underway in the

[7] The floating of the Philippine peso resulted in an exchange rate change from 3.9 to 6.4 pesos per U.S. dollars within the year. Exporters of traditional export products, however, were required to convert 80 percent of their foreign exchange earnings at the old rate; this dual exchange rate arrangement was later replaced by taxes on traditional exports at rates ranging from 4 to 10 percent *ad valorem*.

following years, the manufacturing sector growing at a 6.2 percent annual average during 1975-80.

The policy bias in the 1950s and 1960s toward import-substituting industries is reflected in the changing composition of manufacturing value added. As may be discerned from Table 4, such industries as textiles, paper products, plastic products, electric appliances and transport equipment expanded relatively rapidly. These products were mainly import-replacing consumer goods. In the 1970s, rising exports of clothing and footwear, electronic products, automotive parts and chemicals enabled the industries producing such products to increase their share in manufacturing value added.

Recent efforts at industrial restructuring in the Philippines aims primarily to improve the country's manufacturing capability in providing a broader and more competitive export base, and promote "the development of an efficient domestic intermediate goods industry." Towards this end, the government has recently adopted major policy changes relating to: (1) tariffs and import licensing; (2) export promotion; (3) investment incentives and administration; (4) industrial revitalization; and (5) implementation of "major industrial projects." Some of these policy changes are being implemented in relation to the industrial structural adjustment loan ($200 million) granted by the World Bank in September 1980.

The tariff system in the Philippines had been heavily protective of domestic industry. However, its structure had effectively discriminated against export-oriented industries which offsetting incentives granted in the 1970s by the Board of Investments did not fully neutralize. As a result of a comprehensive review of the tariff system during 1979-80, Executive Orders have been issued calling for tariff changes that will reduce the overall level of effective protection and making the rates more uniform across industries. Realignment of tariff rates for 14 important industries[8] over a 5-year period began on January 1, 1981. The peak tariff rates for other industries were reduced from 70 percent and 100 percent to 50 percent in two stages on January 1, 1981 and January 1, 1982. Based on the schedule of tariff rates changes for 1981 to 1985, the average nominal protection for the manufacturing sector will be reduced from 43 percent and 28 percent; consumer good industries face the largest decline in *effective* tariff protection rate — from 77 percent to 39 percent over the 5-year period (Bautista, 1982). To complement the tariff reform program, import licensing is also being gradually liberalized.

In 1979 and the early part of 1980, improvements in export incentives and promotional measures were instituted through (1) strengthening and

[8] These are: food processing and feed milling, textiles and garments, leather products, pulp and paper, automotive, cement, ceramics and glass appliances, electrical and electronic furniture, iron and steel, machineries and the capital equipment, motorcyles and bicycles, and wood and wood products.

TABLE 4
PHILIPPINES: COMPOSITION OF MANUFACTURING
VALUE ADDED, 1948, 1959, 1971 and 1980
(in percent)

	1948	1959	1971	1980
Food, Beverages & Tobacco	60.6	42.2	38.6	38.2
Textiles	2.6	4.8	7.4	6.6
Clothing and Footwear	6.8	5.4	1.8	4.1
Wood and furniture	11.5	5.0	5.4	3.0
Paper, printing and publishing	3.7	5.1	5.2	4.7
Chemicals, rubber and plastic products	3.5	12.9	14.9	16.0
Non-mineral metallic products	2.1	3.4	5.4	4.1
Basic metals and metal products	3.8	5.5	5.7	6.6
Non-electrical machinery	0.5	1.4	0.8	1.2
Electrical machinery	0.5	3.5	3.1	5.0
Transport equipment	1.0	3.7	2.7	4.4
Other manufactures (including petroleum products)	5.7	7.1	9.0	6.1
TOTAL	100.0	100.0	100.0	100.0

SOURCE: Table 8-6 in Bautista (1981): *1981 Philippine Statistical Yearbook* (National Economic and Development Authority)

broadening of fiscal incentives for export production and trading; (b) improvement of export financing facilities; (c) simplification of import and export procedures; and (d) liberalization of bonded manufacturing warehouse arrangements. Moreover, twelve export processing zones (EPZs) and industrial estates were planned to be developed during 1981-85, in addition to the three EPZs already in existence.

A review of the overall system of investment incentives is currently being undertaken with a view of reducing distortions which affect relative labor use, firm size and location of industries and improving resource allocation. Simplication of Board of Investments procedures and increased automaticity in incentive availment are being considered. A significant step toward promoting competition is the phasing out of "over-crowded industries" At present, there are only five industries remaining in the list (which included some 30 industries in the early 1970s).

Trade liberalization and investment incentive rationalization are being accompanied by a "revitalization program" designed to assist existing industries to produce at lower cost and improve their competitiveness, based on "positive" (e.g., technical assistance and financing) rather than "negative" (protective) measures. The modernization and expansion of the textile industry, involving 30 existing textile mills and one entirely new mill, are being implemented under the $450 million program for the industrly partly financed by the World Bank. The conversion to coal as fuel for ten cement plants has been completed, and there are plans for general rehabilitation and expansion of the cement industry. Work is also underway on the details of revitalization programs for other important industries, whose implementation will be assisted by financing packages to be arranged by the World Bank.

Eleven major industrial projects have been identified for implementation up to 1987 that would "produce vital commodities and intermediate inputs at internationally competitive prices, induce the establishment of downstream labor-intensive industries and enhance the country's technological capabilities."[9] These projects are highly capital intensive and include the following: copper smelter phosphate fertilizer plant, diesel engine manufacturing, cement industry rationalization, coco-chemical plant, aluminum smelter, integrated pulp and paper, petrochemical complex, heavy engineering industries, integrated steel project and alcogas distillery. The first five of these projects are likely to be completed by mid-decade; the prospects of the others are dimmed by problems of financing and commercial viability. The aluminum smelter and petrochemical project, currently both in the feasibility study stage, have been acknowledged as "two of the most difficult projects."

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[9] Quoted from the *Five-Year Philippine Development Plan, 1978-1982* (Updated for 1981 and 1982).

A key component of the structural adjustment program in the Philippines relates to energy conservation, substitution and resource development, aimed at substantially reducing the country's dependence on imported oil. An Energy Priorities Program has been developed to encourage industries, through fiscal and other incentives, to shift to coal and non-conventional sources of energy and to invest in the manufacture of necessary equipment. The *National Energy Program 1981-86* projects a decline in the share of imported oil in total energy consumption from 87.5 percent to 45.8 percent over the Program period due to higher contributions by coal, geothermal and hydroelectric energy, the program requiring at least ₱43 billion at 1981 prices. Financial assistance will be provided in part from the second World Bank structural adjustment loan (also $200 million) to be granted in August 1982. A third loan of the same amount is being negotiated and will finance mainly energy-related projects.

4. Singapore

When it became a self-governing state in 1959, Singapore had an economy heavily dependent on intrepot trade which was showing signs of decline and was unable to employ a large segment of the labor force (Pang and Tan, 1981). To cope with the unemployment problem, the newly-elected government embarked on an industrialization program aimed at generating 214 thousand new jobs by 1970, of which 78,000 would be directly in the manufacturing sector. There was recognition that the limited size of the home market could not provide a long-term basis for industrial development. However, it was realized that protection to infant industries, mainly of the import-substituting type, was necessary. Import duties and quotas on manufactured products began to be imposed in 1960, expanding the coverage to 157 imported items by 1965. Even earlier, in 1959, fiscal incentives were made available in the form of tax holidays from 2 to 5 years for pioneer industries, various tax concessions for existing firms and accelerated depreciation allowance. Industrial growth during 1960-65 was modest (in part because of the political uncertainty in the early 1960s), manufacturing share in real GNP rising from13.2 percent to 15.6 percent.

The import substitution industrialization program gave way in the mid-1960s, in the aftermath of Singapore's separation from Malaysia, to an outward-looking strategy emphasizing export-oriented industries. Government policies and infrastructure support initially concentrated on the promotion of labor-intensive industries. The Economic Expansion Incentives Act of 1967, which modified the 1959 tax incentives and introduced new ones, served to reorient the incentive structure favoring export industries. These benefits included: (1) a 4 percent concessionary tax rate on approved export profits; (2) tax exemption on interest payments on approved foreign

loans; (3) a 20 percent concessionary tax rate on royalties and fees paid to foreigners; (4) double tax deductions for export promotion expenses; and (5) accelerated depreciation allowance.

Largely due to the "rapid success of export industrialization and mass employment creation",[10] economic policy since 1970 had placed increasing emphasis on industries requiring higher levels of skill, capital and technology[11] at the same time that diversification of the Singaporean economy into traded services, i.e., tourism, transport and communication, and financial services was taking place.[12] Thus, the tax holiday period for approved pioneer firms was extended in 1970 to a maximum of 10 years, and in 1975 financial support for capital-short, high technology firms was provided under the Capital Assistance Scheme.

The manufacturing sector of Singapore underwent rapid growth since the mid-1960s, its contribution to real GDP rising from 15.6 percent in 1965 to 19.7 percent in 1970 to 24.1 percent in 1980. An average annual growth rate in industrial production of 12 percent was registered, and manufactured direct exports as a proportion of manufacturing output increased from 11.9 percent in 1960 to 59.5 percent in 1970 to 65.5 percent in 1980. Domestic exports grew at phenomenal annual rates of 27 percent during 1960-69 and 42 percent during 1970-79. Undoubtedly, favorable external conditions, i.e., a booming international economy and rapid growth of world trade as well as the expansion of multinational investment in offshore sites, played a critical role in ensuring the success of Singapore's export-led industrialization strategy. It also bears emphasis that the government has consistently adopted a liberal policy toward foreign investment, actively promoting the participation of foreigners in the economy by developing an investment climate that allows foreign investors to fully exploit profit-making opportunities. Among the ASEAN countries, Singapore and Malaysia have attracted the bulk of direct foreign investment in the region (about 72 percent of the average annual value of $US1.64 billion during 1977-79). In the case of Singapore, about 85 percent of direct export sales in recent years have been contributed by foreign firms.

Table 5 gives some indication of the shifts in Singapore's industrial structure since 1960. The share of textile, clothing and footwear which are labor-intensive production activities in manufacturing value added is seen to have increased from 1960 to 1970 but not from 1970 to 1980. Also, the

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[10] According to Pang (1982), Singapore, whose unemployment rate was over 10 percent in the early 1960s, reached full employment in the early seventies.

[11] This was interrupted briefly by the world recession in the mid-1970s but was intensified since 1979.

[12] The share of these sectors in Singapore's GDP increased from 38.8 percent in 1970 to 45.5 percent in 1980.

TABLE 5
SINGAPORE: COMPOSITION OF MANUFACTURING VALUE ADDED, 1960, 1970, 1981
(in percent)

	1960	1970	1981
Food and beverages	25.6	10.2	4.5
Textiles	3.1	2.2	1.7
Wearing apparel	3.1	3.0	2.9
Wood products	7.1	5.5	1.8
Furniture	1.0	1.0	1.0
Paper Products and printing	18.5	5.8	4.7
Chemical products	6.8	4.5	4.8
Petroleum	6.8	19.2	18.4
Rubber and plastic products	2.6	2.9	2.4
Non-metallic minerals	3.8	3.0	2.6
Fabricated metal products	7.6	6.6	4.6
Machinery and appliances	10.1	14.2	32.3
Transport equipment	5.8	14.6	13.8
Precision equipment	6.7	0.3	1.4
Other products	6.7	5.0	1.6
TOTAL	100.0	100.0	100.0

SOURCE: *Report on the Census of Industrial Production*, 1960 (Department of Statistics, Singapore); *Yearbook of Statistics. Singapore, 1978-79* (Department of Statistics, Singapore); *Economic Survey of Singapore, 1981* (Ministry of Trade and Industry, Singapore).

contributions of the metal and wood industries declined over the two decades but more rapidly in the seventies. By 1980, three major industries had emerged, namely, electrical machinery, petroleum and transport equipment. Together, they accounted for close to two-thirds of manufacturing production. In view of the capital intensive character of these industries, their employment contribution of about 45 percent was much smaller.

As indicated above, industrial policy in Singapore began to shift to the promotion of higher value industries in the early 1970s. This was de-emphasized, however, in the mid-1970s in view of the recession in the international economy. In 1979, the government adopted three sets of measures heralding what has been termed a "Second Industrial Revolution" (Pang, 1982). First, a wage correction policy was introduced in an effort to restore wages to market levels; it was felt that since 1972, National Wages Council (NWC) guidelines on wage increases were relatively modest, effectively suppressing wage rates and encouraging excessive use of labor services which in turn led to labor shortages and slow productivity growth. Large wage in-

creases averaging 20 percent annually over the three-year period from 1979 to 1981 were recommended by the Council, designed to force firms to improve efficiency of labor use. It has also been announced that future wage increases will be closely tied to increases in productivity.

A second set of new industrial policy measures entailed changes in investment incentives and the reorientation of incentives toward the promotion of a more limited number of priority industries; these favored industries are highly skill- and capital-intensive, producing technologically sophisticated products. Some of these products are: computers and peripheral equipment, instrumentation and industrial controls, precision machine tools and accessories, photographic and optical equipment, oil field equipment, aircraft components and specialty industrial chemicals. The new investment incentives are designed to foster rapid technology transfer, allowing for the accelerated depreciation of machinery and equipment for R and D, double deduction for R and D expenditures and writing off of lump sum payments for manufacturing licenses. On the other hand, tariff protection has been removed for some industries catering mainly to the domestic market, e.g., automotive assembly and other consumer durables-producing industries (airconditioners, television sets, refrigerators); this is aimed at promoting their efficiency or, in the case of internationally uncompetitive industries like automotive assembly and related industries, at phasing out such activities.

A final component of Singapore's industrial restructuring strategy has to do with the expansion of training and educational facilities for both prospective and already employed industrial workers, providing complementary support for the upgrading of skill and technology in industry. Manpower training, especially in the technical and professional fields, has been given emphasis since 1979, and this is reflected in sharply increased enrollments not only in professional faculties at the National University of Singapore but also in the technical and vocational schools, and in the establishment of industrial training centers (sometimes jointly with private industry, international companies and/or industrialized country governments). A national computerization campaign has also been launched, aimed at laying a base for the development of a computer-software industry to spearhead the country's long-term effort to move away from labor-intensive to high-technology industry (*Economic Survey of Singapore*, 1981).

5. Thailand

Modern industrialization in Thailand began only in the early sixties. The *First Development Plan* (1961-66), although vague on the role of industry, was specific in declaring that the government would promote industrialization through the provision of economic infrastructure such as electri-

city, transportation and communication facilities to private enterprises. With the introduction of the New Investment Promotion Act in 1962, a policy of import substitution was adopted, relying on protective tariffs and indirect subsidization under the industrial promotion scheme. Three classes of industries promoted by the Board of Investments (BOI) were distinguished. Industries classified under Group A, Group B and Group C were given full, one-half and one-third exemption, respectively, from import duties and business taxes on imported raw materials and intermediate inputs. Except for those in Group C, nearly all industries included in the promotion list were import-substituting. Industries producing for the domestic market continued to be promoted under the *Second Five-Year Plan* (1967-71), which however gave importance to industries utilizing domestic materials as the exemptions from tariff and business taxes on imported inputs were reduced to one-third, effectively doing away with the earlier distinction among promoted industries.

The specification of minimum plant sizes in the BOI-promotion list led to the establishment of large-scale manufacturing firms, which in general were found to be more capital intensive and import dependent than smaller-sized firms (Tambunlertchai and Loohawenchit, 1981). As in the Philippine case, Thailand's manufacturing industries which were promoted in the 1960s were unable to absorb much of the country's unemployed and underemployed labor force.

By the early 1970s, government policy began to place greater emphasis on export industries. In 1972, the Export Promotion Act was introduced providing for a rebate of import duties and business taxes on imported inputs, among other incentives. An Export Promotion Committee was established in the same year tasked with coordinating export promotion efforts. The Board of Thailand began to offer rediscount facilities with preferential interest rate for commercial banks to provide short-term financing to exporters. Nonetheless, import substitution policies, especially tariff protection persisted through the decade even as manufactured exports were actively being promoted. Average effective protection rates have been observed to be particularly high for consumer goods, both durable and nondurable, and appear to have increased significantly from 1974 to 1978 (World Bank, 1980).

Manufacturing value added in Thailand grew at an average annual rate of 11 percent at constant prices in the 1960s and 1970s. Next to domestic demand, import substituion was the major source of growth in the sixties, while export expansion became the second most important source in the seventies (World Bank, 1980).

Processed food, beverages and tobacco heavily dominated Thai manufacturing in the early 1960s (see Table 6). This sector's share diminished through the sixties and seventies with the growth of import-replacing indus-

TABLE 6
THAILAND: COMPOSITION OF MANUFACTURING VALUE ADDED, 1962-1972, 1979
(in percent)

	1960	1972	1979
Food	36.4	18.6	15.3
Beverages	10.7	9.0	11.6
Tobacco and snuff	13.4	9.3	6.6
Wearing apparel and make-up textile goods	3.9	6.1	10.0
Textiles	2.6	12.2	14.3
Wood and cork	4.7	2.5	1.4
Furniture and fixtures	1.3	1.1	0.9
Paper and paper products	0.3	0.7	1.2
Printing, publishing and allied industries	2.0	2.5	2.6
Leather and leather products (and footwear)	1.6	1.1	0.5
Rubber and rubber products	2.8	1.8	2.6
Chemicals and chemical products	6.3	5.7	6.6
Petroleum, refining and coal	–	8.6	5.9
Non-metallic mineral products	5.7	5.7	5.9
Basic metals	0.2	1.8	1.2
Electrical machinery and supplies	0.5	1.4	1.7
Non-electrical machinery	3.3	2.2	1.7
Transport equipment	3.3	5.0	7.8
Other manufactures	4.3	4.4	3.0
TOTAL	100.0	100.0	100.0

SOURCE: *National Income of Thailand* (1966 edition) and Table 8.3 in World Bank (1980).

tries (petroleum products, transport equipment and non-durable consumer goods) and the expansion of non-traditional manufactured exports (textiles, clothing and electronic products).

Thailand, which like the Philippines, is a recipient of the World Bank's structural adjustment loan amounting to US$150 million and approved in March 1982, is in the process of introducing a wide range of fundamental reforms not only in industry and energy but also in agriculture, fiscal policy and development administration. According to the *Fifth Five-Year Plan* (1982-86), Thailand will face very serious and complex economic problems and social tensions "if structural adjustments and policy redirections are not timely made and effectively implemented." The objectives of the adjustment program are to reduce the fiscal and current account deficits in the

short term while raising the longer term productivity of the agricultural and industrial sectors.

The industrial strategy aims to increase production and productivity in manufacturing, which sector is targeted to grow at an annual rate of 7.6 percent during the Plan period 1982-86. It includes policy efforts to reduce protection to domestic industry and encourage manufactured exports and promote regional dispersal of industry. Investment incentives are to be improved in ways that would promote a sustained growth of industrial investments directed toward the most efficient uses. Expanded infrastructure support will be provided, among others, by the establishment of five industrial estates in addition to the four already existing.

Some policy measures recently adopted are consistent with the objective of reducing the existing biases against manufactured exports. Rebates on taxes and tariffs paid on imported intermediate inputs used in export production have been liberalized by eliminating the budget constraint and authorizing the calculation of *ad valorem* rebates by category. Some steps have also been taken toward the implementation of comprehensive tariff changes which will lower effective protection rates for import-substituting industries and raise those for export industries. Apparently, levels of protection had risen since the mid-1970s due to government efforts to stimulate domestic investment. The 1977 Investment Promotion Law, which gave the Board of Investment additional promotional and discretionary powers, appeared to have effectively reinstituted the import substitution strategy for Thai industrialization (Akrasanee, 1980).

It is now widely recognized that expansion of manufactured exports could contribute significantly not only to employment creation, because Thai export industries tend to be relatively labor-intensive, but also to the alleviation of the country's severe current account deficits which in the last five years averaged more than $1 billion. In a longer term context, it is also expected to promote a more efficient production structure and hasten future industrial growth.

The development of "basic industries," including iron and steel, fertilizer, soda ash and newsprint, has received increasing attention in recent years, especially with the expected production of natural gas. To the Ministry of Industry, the establishment of basic industries represents the next stage of Thai industrialization (Akrasanee, 1980). There has also been some recent initiatives to support large-scale, capital-intensive projects by the Board of Investment, which is known to favor the setting up of an integrated steel plant. The Ministry of Finance and the Bank of Thailand have also expressed readiness to assist in the financing of basic industrial projects, using both domestic and foreign funding sources. It appears likely, therefore, that Thai industry, as in the Philippine case, would also move significantly toward import substitution in intermediate products in the 1980s.

In the field of energy, the country is not expected to break its dependence on imported oil during the decade. This is despite the recent discoveries of natural gas, production of which is planned to reach at least 525 million cubic feet per day in 1986, and the expanded production capacity of lignite beginning 1984. For the Plan period, the target for oil imports is a zero growth rate in volume; this would require "that domestic oil price must be frequently and realistically adjusted," and that "energy saving measures must be seriously implemented." In the past, Thailand had not adequately adjusted domestic prices of refined petroleum products, slowing down conservation efforts and reduction of the energy intensity of the country's economic structure (World Bank, 1980).

III. TRADE AND INDUSTRIAL DEVELOPMENT

1. Trade in manufactured products

The discussion in the preceding section on ASEAN countries' industrial policy and development indicates that trade has been an important component of the industrialization strategy. Although the early phase of their industrial development gave emphasis to the replacement of imports, the ASEAN countries sooner or later moved toward more manufacturing for export. Lacking a sizable domestic market, Singapore and Malaysia quickly shifted to exporting of manufactured goods in the mid-sixties and late sixties, respectively. The Philippines and Thailand began to focus on exports of manufactures in the early 1970s. More recently, the Indonesian government has recognized the need to expand non-oil exports, including manufactured exports during the Repelita III period (1978/79-83/84) owing to the uncertain prospects of oil production and exports.

As evident from Table 7, there was rapid growth of ASEAN manufactured exports through the 1970s, despite adverse conditions in the world economy.[13] Manufactured exports were almost unheard of in the early sixties, except in Singapore (where slightly over one-fourth of total exports in 1960 were products of light industry); by the late seventies, manufacturers comprised more than one-third of Philippine exports, one-fourth of Thailand's and one-fifth of Malaysia's (Table 8). Industrial market economies accounted on the average for 58 percent of ASEAN countries manufactured exports in 1978,[14] ranging from 47 percent for Indonesia to 78 percent for the Philippines (Table 9); slightly less than 40 percent to other developing countries while capital-surplus oil exporters accounted for less than 3 percent.

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[13] See also Appendix Tables 1a to 1c.

[14] About 23 percent went to the EEC countries, another 23 percent to the United States and 10 percent to Japan.

TABLE 7
ASEAN COUNTRIES: EXPORTS OF MANUFACTURERS*, 1965-1978
(current U.S. million dollars)

	1965	1970	1975	1978
Indonesia	10.9	11.9	75.0	226
Malaysia	67.8	151.7	664.4	1714
Philippines	65.8	78.4	258.9	1136
Singapore	300.4	427.6	2232.6	4679
Thailand	12.1	38.6	332.0	1039

*SITC 5 to 8, Series 68. Includes re-exports to Singapore.
SOURCE: Table 12.5 in Hughes (1980), Table 12 in *World Development 1981.*

There are some differences in the commodity composition of ASEAN manufactured exports (see Appendix Table 1a to 1c). Singapore, the largest exporter of manufactured products among the ASEAN countries, has had remarkable success in exporting engineering goods (such as electrical machinery and telecommunications equipment) and chemicals. At the other extreme, Indonesia, whose exports of manufactures is smallest in the region, has wood products as the most important industrial export category. Manufactured exports of Malaysia have the largest concentration in electronic products, wood manufactures and processed food. For Thailand, exports of textiles, garments, jewelry and processed food have grown most rapidly. Finally, in the Philippines, the bulk of manufactured exports has been contributed by garments, electronic products, food manufactures and handicrafts.

These patterns of export product concentration appear to conform to the ASEAN countries' comparative advantage in international trade. All the ASEAN economies except Singapore have rich natural resources and, in the early 1970s, also had abundant labor. Their factor endowments therefore favored the production and export of natural resource-based products (e.g., processed food, wood products, jewelry) and labor-intensive goods (e.g., garments, textiles, electronic products) requiring low levels of capital and technology. The latter type of products had been the concentration of Singapore's exports in the 1960s when the labor force was underutilized and wages were low; this gave way to more technology- and capital-using export products (e.g., electrical machinery, telecommunications equipment, chemicals) in the seventies as full employment was reached and labor cost increased.

TABLE 8
ASEAN COUNTRIES: STRUCTURE OF MERCHANDISE EXPORTS
(in percent)

	Indonesia	Malaysia	Philippines	Singapore	Thailand
Fuels, mineral and metals					
1960	33	20	10	1	7
1978	72	27	14	31	11
Other primary products					
1960	67	74	86	73	91
1978	26	52	52	23	64
Manufacturers					
1960	0	6	4	26	2
1978	2	21	34	46	25
Textiles and clothing					
1960	0	(.)	1	5	0
1978	(.)	2	6	5	10
Machinery and transport equipment					
1960	(.)	(.)	0	7	0
1978	1	11	2	25	3
Other manufacturers					
1960	(.)	6	3	14	2
1978	1	8	26	16	12
TOTAL	100	100	100	100	100

NOTE: (.) means less than 1 percent.
SOURCE: Table 9 in *World Development Report 1981*.

TABLE 9
ASEAN COUNTRIES: DESTINATION OF MANUFACTURED EXPORTS
(in percent)

	1973	1979	1973	1977	1972	1978	1973	1979	1973	1978
ASEAN	15.1	34.7	17.4	16.5	9.2	7.0	23.9	26.2	13.4	12.2
Hongkong	0.6	3.4	2.1	2.8	5.2	7.4	5.5	5.0	5.0	6.3
Korea	0.1	0.0	0.6	0.7	0.3	0.3	0.1	0.7	0.3	0.8
Taiwan	n.a.	1.0	n.a	1.5	n.a	2.3	0.9	0.7	n.a	6.0
Japan	27.3	12.6	19.6	13.0	8.7	10.0	4.1	3.8	22.8	12.9
United States	12.9	2.4	24.0	31.8	51.2	37.9	26.7	22.3	23.0	21.7
EEC	37.4	23.4	19.8	22.3	7.9	19.0	15.7	14.4	21.7	31.3
OPE*	1.5	1.3	1.9	1.9	0.0	0.9	0.6	2.1	0.1	0.4
Middle East	1.7	3.4	1.0	1.5	0.1	2.2	1.9	7.1	1.7	5.2
Others	3.4	17.8	13.6	8.0	17.4	13.0	20.6	17.7	12.0	3.2
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Centrally planned economies.
SOURCE: United Nations, *Commodity Trade Statistics* (various issues).

As far as ASEAN imports are concerned, machinery and equipment constitute the most important product category, increasing significantly its share in total merchandise imports of all but one of the ASEAN countries in the 1960s and 1970s, as shown in Table 10. Other manufactures, presumably in the high technology field, are also seen in the table to account for a major share of ASEAN imports in the late seventies. These manufactured imports were sourced mainly from developed countries, the major contributors being Japan, (38 percent), the United States (18 percent) and EEC countries (20 percent). In the Philippines and Thailand, the observed doubling of the fuel share from 1960 to 1978 largely reflects the difficulty of developing and substituting indigenous energy sources for imported oil after the drastic oil price hike in 1973-74.

Producer goods categories, especially capital equipment, have increasingly dominated each ASEAN country's list of ten largest imports (Appendix Tables 2a-2e), reflecting a heavy reliance on external sources for the physical capital and intermediate good requirements of ASEAN's expanding manufacturing sector. This pattern of import concentration seems compatible with prevailing comparative advantage as the principal suppliers are high income (wage) countries exporting products of low labor intensity.[15]

2. Promotion of basic industries

As pointed out earlier, an emerging new component of ASEAN industrial policy except in Singapore, is the active encouragement of basic (heavy, major) industries. Some of these industries are natural resource-based, and the four ASEAN countries have understandably viewed the possible increases in domestic value added of their resource-based products and expansion of processed exports as an additional means of promoting industrialization. One could discern also from official pronouncements[16] some element of economic nationalism seeking to correct what is perceived to be an existing colonial trade pattern.

Processing of primary products for exports should of course be evaluated by the same criteria as those applied to other industrial projects. It is possible that in some cases, the very high capital-, scale- or energy-intensity of the existing technology could offset completely the country's advantage of already producing the primary or semi-processed commodity. Moreover, the need to import intermediate inputs could significantly reduce the net foreign exchange gain from exporting processed rather than primary pro-

[15] Based on Garnaut-Anderson's (1980; p. 411) listing of 3-digit SITC manufacturing industries by labor intensity of production.

[16] As in the following quotation: "Only then can we take our legitimate place in the ranks of the newly-industrialized countries and thus fulfill the aspirations of developing nations within the new economic order as promulgated by the United Nations" (Lew Sip Hon, 1981).

TABLE 10
ASEAN COUNTRIES: STRUCTURE OF MERCHANDISE IMPORTS
(in percent)

	Indonesia	Malaysia*	Philippines	Singapore	Thailand
Food					
1960	23	29	15	21	10
1978	18	17	8	10	4
Fuels					
1960	5	16	10	15	11
1978	9	13	21	24	21
Other primary commodities					
1960	10	13	5	38	11
1978	6	7	7	9	9
Machinery and transport equipment					
1960	17	14	36	7	25
1978	36	34	27	29	31
Other manufactures					
1960	45	28	34	19	43
1978	31	29	37	28	35

*1977 instead of 1978 figures.
SOURCE: Table 10 in *World Development Report 1981.*

ducts. Finally, questions might also arise concerning market prospects.

Not all the basic industries being promoted in the ASEAN countries are resource-based, and in some instances, even those of the latter type would not be linked to domestic primary production (e.g., alumina for the planned aluminum smelter plant of the Philippines is to be imported). In such cases, it is far from clear that the ASEAN countries will have comparative advantage, considering the large capital requirements and highly capital-intensive nature of those industries. Viable levels of production are bound to be very high relative to the domestic market in view of scale economies characterizing heavy industries, in which case, a large amount would have to be exported. For institutional and economic reasons, marketing of such products abroad may prove to be a difficult problem.

Having to promote basic industries for the sole purpose of ensuring a balanced development of the manufacturing sector would seem an economically untenable position for ASEAN countries, given their high degree of openness. The setting up of uneconomic large-scale projects producing internationally uncompetitive intermediate products would effectively hinder rather than stimulate production in downstream industries. It would use disproportionate amounts of scarce investment resources and result in less labor absorption. Overenthusiasm with large-scale, capital- and energy-intensive industrial projects can only lead to increased inefficiency in the manufacturing sector, higher prices for industrial goods and reduced international competitiveness. Politically, it could also make more difficult the full implementation of trade liberalization plans drawn up as part of on-going structural adjustment programs in some ASEAN countries.

3. ASEAN economic cooperation

The high degree of openness of the ASEAN countries[17] makes them vulnerable to the vagaries of foreign markets. Because of the uncertain prospects of expanded exports to extra-regional markets, and also in view of the relatively slow pace and insubstantial achievements thus far of ASEAN economic cooperation, there has been a growing recognition within ASEAN in recent years of the need to more closely integrate the economic activities of member countries.[18]

The economic case frequently made for regional industrial cooperation among developing countries derives from the expected gains from scale

[17] Degree of openness on trade orientation, represented by the ratio of exports to GDP in 1979 (cf. Table 1), is highest for Singapore at 18 percent and lowest for the Philippines at 19 percent which is still high by international standards.

[18] In his opening statement at the last meeting of ASEAN Foreign Ministers held in June 1982 in Singapore, Philippine Minister Carlos Romulo "urged the development of a new comprehensive framework of cooperation which would make integrated development nearer to ASEAN reach."

economies and increased specialization. Given the state of technology, if large-scale production is required for the economic viability of certain investment projects, at least two difficulties present themselves that may deter inidividual ASEAN countries from undertaking such projects. These are the smallness of the national market and the large amount of capital that is required. The establishment of "ASEAN industrial projects" (AIPs) offers a solution to these problems by assuring access to a regional market through preferential arrangements and by sharing the capital cost of any regional project among the cooperating countries. On the other hand, under the ASEAN industrial complementation (AIC) scheme, cooperating manufacturers would be able to specialize more narrowly and to produce at lower prices parts and components at high optimum output levels for the regional market, again with preferential access within the region relative to non-ASEAN competing products.

Preferential trading arrangements of course entail some sacrifice in economic efficiency. Under certain conditions, though, this would be justifiable. Regional infant industries producing intermediate and capital goods may need protection from outside suppliers as they cannot, in general, be expected to be immediately competitive internationally. If the alternative is import substitution of these products at the national level (which is probably the case for each of the ASEAN countries except Singapore) involving high-cost industrial plants, then the regional projects would be economically worthwhile even in the short run. ASEAN countries collectively may also wish to have a more diversified industrial structure that could provide better protection against external instabilities and greater autonomy for the region in dealings with the rest of the world. Such non-economic goals will have to be reconciled with the real need to advance the economic well-being of the region's population.

As pointed out, ASEAN industrial cooperation so far has been rather limited and slow-moving. Of the five ASEAN industrial projects initially identified, the diesel engine plant has been dropped by Singapore while the Philippines' phosphatic fertilizer project has been replaced first by a newsprint project and more recently, by a copper fabricator plant (which received approval from the ASEAN Economic Ministers only in early 1982). While the two urea projects based in Indonesia and Malaysia have taken off the ground, Singapore appears to have lost interest in contributing a regional project. As to industrial complementation, progress to date has been made in deciding on the first batch of AIC products covering automotive products, but the precise nature of preferential arrangements has yet to be worked out.

An even more distressing observation is the apparent lack of coordination of national projects, especially large-scale projects, among the ASEAN countries. Singapore had to give up the diesel engine plant as a regional pro-

ject because at least two of the other ASEAN countries have firm plans of their own to produce diesel engines as national projects. Also, the Philippines' copper fabricator project is not assured of the Malaysian market in view of the latter's own production of copper wire rods. Furthermore, there is the unresolved issue of an Indonesian national project competing with Thailand's soda ash project.

Despite the recent overproduction of aluminum worldwide and of falling prices in part due to expanding capacities, Indonesia, Malaysia and the Philippines have plans to set up aluminum smelters as national projects. Uncoordinated national planning of heavy industries seems to be the case also in the cement,[19] fertilizer, petrochemical, newsprint, steel and other industries, indicating a lack of serious effort among ASEAN national governments to exploit the benefits of specialization in large-scale industries within the region. Self-reliant industrialization in this context is aimed at reducing dependence on foreign suppliers of what are perceived to be critical intermediate products of heavy industries. The inability to foster a more coordinated and rational planning of these industries among the ASEAN countries betrays a lack of confidence in one's regional trade partners as reliable suppliers of such products. This necessarily entails some economic cost to each of the ASEAN countries which, given the financial requirements of the projects, can be very substantial.

It is clear that there are potential complementarities within ASEAN based on differences in natural resources endowment. The development of resource-based industries in the region, if not basic industries in general, will benefit greatly from a harmonization of national projects among the ASEAN countries, which however would require a greater degree of political goodwill than has been displayed in the past.

In the area of preferential trading arrangements (PTA), the large number of products now eligible for intra-ASEAN tariff preferences (8,529 items) is rather misleading in view of the high degree of disaggregation used (e.g., distinguishing various kinds of bread, various categories of matches based on the number contained in each box, etc.). The margin of preference on existing duty is normally 10 percent, but goods having an import value of $1 million or less in 1978 qualify for a 20-25 percent cut in tariffs.

The impact of trade liberalization efforts has yet to be felt by the ASEAN countries, since most of them are unwilling to open up their domestic markets to regional competition and have kept trade concessions to strictly marginal imports. Until intra-ASEAN trade liberalization begins to involve import commodities directly competing with local products, it is dif-

[19] Total supply in the ASEAN countries of cement, a commodity widely acknowledged to have high transport protection within the region, has been projected to be about 47 million tons by 1985, exceeding total ASEAN demand by 7 million tons, with each country except Malaysia facing a surplus in the national cement market.

ficult to see how gains from the PTA can become important for the rationalization of the industrial structure of the ASEAN countries, promoting efficient intra-industry specialization within the region. This would apply especially to the non-traditional manufactured exports whose capacity to respond to economic incentives has already been well demonstrated. Expansion of the intra-ASEAN trade in manufactures will also offset, at least partially, the adverse effects of the increasing restrictions faced by ASEAN manufactured exports in their principal markets (the OECD countries).

The PTA, to be meaningful, has to move away from the cumbersome inter-governmental negotiations on a product-by-product basis towards a system of scheduled across-the-board tariff reductions with increasing depth of tariff cuts (cf. Bautista, 1980). The important point is that the lowering of intra-ASEAN trade barriers, both tariff and non-tariff barriers, must be accelerated if the member countries are to reap substantial benefits from increased specialization and trade. It is also difficult to envisage significant, sustained advances in the other major instruments of ASEAN industrial cooperation (i.e., the AIP and AIC schemes) unless the resistance to a more meaningful reduction of intra-ASEAN trade restrictions is overcome.

If the ASEAN countries seemed not overly aggressive in promoting intra-regional trade as suggested above, it is presumably because of the relative succes that they have enjoyed, until very recently, in expanding exports to non-ASEAN countries, especially non-traditional manufactured exports to the OECD countries. But with the recent slowing down of world economic activity, increasing protectionist sentiments, and resulting substantial reduction in demand for ASEAN exports.[20] it might be expected that intra-ASEAN trade cooperation efforts would pick up. Indeed, wider product coverage and deeper tariff cuts are forthcoming with the recent ministerial approval to extend the automatic eligibility for ASEAN preferential treatment to import items which had a total import value of US$2.5 million or less in 1978. Moreover, the eventual establishment of an ASEAN free trade area has been formally proposed and is now under study.

IV. LESSONS FROM KOREAN INDUSTRIALIZATION

Like Singapore, South Korea turned to export promotion at a relatively early phase of the industrialization process. During the second half of the 1950s and early 1960s, import substitution, mainly in non-durable consumer goods, was the major source of Korea's industrial expansion. As the growth

[20] As reflected in the recent reversal of trade balances or increasing size of trade deficits, namely: Indonesia – $2.5 billion in fiscal year 1981-82 (from a surplus of $2.4 billion in 1980-81); Malaysia – $30 million in 1981 (from a surplus of $2.1 billion in 1980); Philippines – $2.5 billion in 1981 (from $1.9 billion in 1980); Singapore – $6.6 billion in January-May 1982; and Thailand – $3.1 billion in 1981.

impetus from import substitution showed signs of faltering, however, Korean industrial policy began to shift, from about 1962, toward the promotion of labor-intensive manufactured exports. By 1965, trade liberalization and other major policy reforms were practically completed, marking a "turning point" in the country's export and industrial growth (Westphal and Kim, 1977).

Korea's merchandise exports grew at a phenomenal average annual rate of about 35 percent at constant prices from 1962 to the later seventies, contributing to the achievement of one of the world's highest annual growth rates in GNP per capita of nearly 8 percent during the period (Hong, 1979). The share of manufactured exports to total exports rose from 14 percent in 1960 to 82 percent in 1975. Rapid growth of manufactured exports was largely responsible for the marked expansion of manufacturing output which posted an average annual rate of 18 percent, raising its share in GNP from 9 percent in the early 1960s to about 32 percent in 1978. Because Korea's export-led industrial development was labor intensive, it led to a decline in unemployment rate from 9 percent in the early sixties to 3.2 percent in 1978, and to an average annual increase in real wages by more than 7 percent during the period (Park, 1981). From all indications, Korea has been able to exploit successfully its initial comparative advantage in labor-intensive products, transforming the country to an industrialized, internationally competitive economy, with one of the largest manufacturing sectors among present-day developing economies.

Several aspects of Korean industrial policy and development are of direct relevance to ASEAN industrialization efforts. First, the Korean experience demonstrates that the benefits from specialization and trade along lines of comparative advantage can be very substantial even for moderately sized economies. As has been documented by Westphal and Kim (1977), manufactured exports of Korea during the 1960s were more labor-intensive than manufactured imports; indeed, the degree of labor intensity in export production had increased as manufacturing industries catering to the domestic market became more capital intensive over time. The extent to which labor-intensive manufactured exports had contributed to the solution of Korea's employment problem and the associated improvement in income distribution is remarkable, and provides a living model for labor-surplus developing countries seeking to industrialize as a means of promoting national income growth as well as distributive equity.

Export-led growth in Korea has also contributed to the mobilization of both domestic and foreign resources without which the vigorous development of the industrial sector could not have been sustained (Park, 1981). Domestic savings rose from less than 1 percent of GNP in 1960 to 19 percent in 1969 to 26 percent in 1978, assuming therefore an increasingly important role in financing investment. Foreign capital inflows to Korea were substan-

tial in the form of official development assistance (foreign aid) until the early sixties and subsequently in the form of private foreign capital. During 1960-1975, about 40 percent of total investment in Korea was financed from abroad (Westphal and Kim, 1977).

The role of foreign capital inflows should not be overstated, however. Their availability, especially private foreign capital, has been due in large part to Korea's favorable export performance and, hence, cannot be considered "exogenous". Likewise, foreign capital inflows appear to have been used efficiently, at least, by the standards of developing countries.

Direct foreign investment cannot be said to have played a dominant part in Korea's industrial and export growth; its share in manufacturing capital stock was less than 5 percent in 1970, while accounting for only 11 percent of exports (Westphal and Kim, 1977). Korea did not also have to rely on its "special relationship" with Japan and the United States in expanding its export sales; the importance of these two countries as export markets diminished significantly since the early 1960s.[21] Furthermore, Korea has been successful in establishing an indigenous base of technological know-how and marketing expertise (Westphal *et al.*, 1981).

Perhaps the most important aspect of Korean industrial policy, and the one most relevant to the ASEAN countries, is the success with which a relatively uniform incentive structure within the manufacturing sector has been, for the most part, sustained since major policy changes were made in the first half of the 1960s. According to Westphal and Kim (1977), "by maintaining the exchange rate near the free trade level and granting exporters free access to imported inputs, the government has, overall, been able to provide, on the average, roughly equal incentives to production for domestic sale and for export." This contrasts with the strong tendency among developing countries to overvalue the domestic currency and to deny exporters the benefit of a free trade regime, effectively protecting the domestic market but discriminating against export sales.

Korean industrial policy served to protect domestic industries from foreign competition in the domestic as well as foreign markets. Under the various Five-Year Plans, the government has granted price incentives to some import substitution industries (mostly in producer goods and consumer durables), including tariff exemptions on imported raw materials and capital goods, access to preferential credit, reduced direct tax rates and accelerated depreciation allowances. But in most sectors, the only price incentive to domestic sales has been the protection potentially afforded by tariffs and import controls which were gradually relaxed after the 1964 devaluation. Indeed, by making sales to a profitable domestic market depend on satisfac-

[21] Their combined share in Korea's merchandise exports declined from 70.1 percent in 1960 to 55.6 percent in 1975.

tory export performance, import substituting industries from the beginning have been encouraged to export. Until recently, however, import substitution was a highly selected policy, permitting the concentration of scarce resources in a few sectors at a time[22] which provided greater opportunity to exploit scale economies and linkages among closely related production activities.

In allowing exporters unrestricted access to imported inputs as well as exemption from tariffs and indirect taxes, a virtual free trade regime was accorded export producers, placing them at least on equal footing with competitors in foreign markets. Additionally, explicit subsidies were provided to exporters that might even have overcompensated them for any apparent bias of incentives against exporting (e.g., due to tariff and import restrictions that raise the domestic prices of inputs and import substitutes). This took the form of direct tax until 1973 and credit subsidies, generous wastage allowances for imported inputs, accelerated depreciation and reduced rates on public utilities.

As discussed above, the ASEAN countries have had varying experiences in the promotion of manufactured exports. With the exception of Singapore and, to some extent, Malaysia, heavy protection of the domestic market, especially the consumer goods market, had effectively prevented the full development of export-oriented industries, the incentive structure tending to favor domestic sales and giving less encouragement to sales in the world market. Promotion of import-substituting industries was less than selective and did not aim generally to prod newly-established enterprises to export immediately. This would largely explain the protracted period of import substitution and wavering commitment to export promotion in the Philippines, Thailand and Indonesia.

Some of the current efforts at industrial restructuring in the ASEAN countries are aimed at making incentives more favorable to and infrastructure facilities more supportive of exporting vis-à-vis domestic sales. But it remains to be seen whether a virtual free trade regime similar to that enjoyed by Korean exporters of manufactured products would evolve from the recent shifts in ASEAN industrial policies.

Turning now to the "other side" of Korean industrial policy, there has been growing concern in recent years of the declining role of market forces in the allocation of resources among industries. It has been "subject to priorities established by the government", resulting in "a lopsided distribution of limited resources in favor of large enterprises and heavy and chemical industries (Economic Planning Board, 1981; p. 8). Policy efforts in the second half of the 1970s to rapidly deepen the industrial and export struc-

[22] After 1960, import-substituting investment concentrated first on fertilizer and cement, then on petrochemical derivatives and electrical products, and more recently, on basic petrochemicals, iron and steel, and transport equipment.

ture also contributed to expansionary demand management and high inflation rates (19.3 percent annual average from 1974 to 1980). While the evolution of Korea's dynamic comparative advantage warranted a shift toward more capital-and technology-intensive production and exports, it has been officially acknowledged that the country in recent years moved too quickly and indiscriminately into heavy industries. More recently, plans for further heavy industry development have been shelved, postponed or modified. Industrial restructuring away from overly energy-intensive heavy industries is being undertaken, and "aside from a limited number of large-scale projects, investment choices will be left to the initiative of the private sector . . . while the government will play a larger role in social development and technological and manpower development" (Economic Planning Board, 1981; pp. 10-11).

The lesson that this recent Korean industrialization experience offers to ASEAN policymakers is that moving hastily and massively into heavy industry development could lead even an advanced developing country like Korea into economic difficulty. This is particularly of contemporary relevance to the ASEAN governments, given the apparent enthusiasm at the present time with the promotion of heavy (basic, major) industries, as discussed above. It would be very useful for ASEAN industry planners and policymakers to study carefully not only the recent experience of Korea in heavy industry development including export marketing, but also those of India and China which emphasized heavy industries relatively early in their industrialization process but are now turning their attention to light industries, as well as the experiences of some Latin American countries (e.g., Brazil, Mexico, Argentina and Colombia) which had gone heavily into capital-intensive industrialization and seem to be experiencing difficulties at this time.

In conclusion, the important point that should not be missed by ASEAN policymakers, especially in Indonesia, Thailand and the Philippines where unemployment and underemployment continue to be a major area of development concern, is that Korea's export-led industrial development along lines of comparative advantage yielded a high payoff not only in terms of high income growth rates but also, in view of its labor intensity, rapid employment growth. Real wages rose significantly in response to labor market conditions, and this was achieved even without having organized labor become a powerful interest group. Korea is no longer a labor surplus economy and, indeed, since the early 1970s, has begun to exploit its emerging comparative advantage in skill-intensive manufactured products. At the same time, however, import substitution in producer goods and consumer durables has taken place, initially on a selective basis but later on, as indicated above, rather extensively and in some cases of heavy industry development, prematurely. The latter has been attributed not to the influence of

market forces but to government priorities. It would be interesting for policymakers in the ASEAN countries to see how Korea makes out in its current efforts at industrial restructuring ostensibly aimed at increasing the role of the market mechanism in the allocation of resources among industries.

V. INDUSTRIAL COMPLIMENTARITY AND TRADE WITH ASIAN NICS

Given the pro-trade perspective that appears to have been adopted by the ASEAN countries as part of their development strategies, especially in view of recent efforts at industrial restructuring, industrial development in the region will be shaped to a significant extent by the access to foreign markets. At the present time, there is a great deal of uncertainty on whether or not the industrialized countries (ICs), currently the primary destination markets of ASEAN manufactured exports, are prepared to accommodate the shifts in comparative advantage that are underway.

Since the mid-1970s, ASEAN countries' exports of labor-intensive manufactures have faced increasing protectionist measures in the OECD countries. Apart from garments and textiles for which bilateral trade agreements have been negotiated under the Multi-fiber Arrangement (MFA) since 1974, exports of footwear, electronic products, processed food items, wood products and handicrafts have been increasingly subject to a plethora of import restrictions in the OECD countries. The more common "safeguard measures" being taken against ASEAN manufactured products are in the form of orderly marketing arrangements and tariff increases in the United States and unilateral quantitative restrictions in the EEC and Japan.

The severest case of protectionism against developing countries has been pursued under the MFA, especially since the second MFA protocol, adopted in 1977, which tightened up on imports from low-cost countries.[23] The third MFA, which was agreed on in December 1981, represents "another turn of the protectionist screw." Of particular concern to ASEAN exporters are the new feature of an "anti-surge mechanism" to limit full utilization of previously unutilized quotas and further restrictions in use of the flexibility provisions.

The increasing restrictiveness of the MFA and of similar trade barriers relating to other labor-intensive manufactured goods makes it unlikely that the performance of the so-called newly-industrializing countries (NICs) in the 1960s could be repeated by the ASEAN and other countries in the second tier of developing economies. Among the ASEAN countries, the Philippines and Thailand seem highly vulnerable, given on-going efforts to pro-

[23] According to Wolf (1981), "the renegotiation of the MFA in 1977, in which the EEC was the leader but other industrialized countries soon followed, changed the characteristics of the Arrangement in fundamental and damaging ways."

mote domestic industry along lines of comparative advantage and declared reliance on the growth of labor-intensive manufactured exports to contribute substantially to the solution of their employment problem.

The other avenue for increased industrial export growth being pursued by the ASEAN countries (except Singapore) is in the expansion of exports of processed primary products. However, as already indicated, there are questions that can be raised concerning the economic viability and market prospects of a sudden shift to processed exports. Moreover, the tariff structure in industrialized countries tends to discriminate against imports of processed commodities. Based on the study of Yeats (1979) involving 21 agricultural and mineral products, IC tariffs add only 3 percent to the cost of imported materials but increase to more than 20 percent along the "processing chain". These higher rates serve to encourage domestic firms in the industrialized countries to import raw materials and process them there. Considering their strong interest in increasing the domestic value added of primary products exports, ASEAN countries could exert common efforts toward the elimination of IC tariff distortions of discriminating against processed exports from primary product producers. Such tariff changes would facilitate the phasing out of uneconomic processing industries in the industrialized countries.

Future ASEAN industrial development will be significantly influenced by the decisions concerning trade and industrial policies to be made not only in the ICs, which happen to be the region's leading trade partners at the present time, but also in the NICs. ASEAN success in expanding manufactured exports in the medium term is contingent, among other things, on the continued evolution of the NICs' comparative advantage into more sophisticated industrial products. The shift in relative factor supplies away from the abundance of low-wage labor in the NICs requires them to move on to more skill-and capital-intensive industries. In the process, their contribution to the world market for labor-intensive manufactures will be reduced and demand for such products will be created in their own markets. In fact, such countries as Taiwan and Korea have been shifting their resources toward the production and export of more skill- and capital-intensive goods since the early 1970s.

In the case of Korea, government planners made public in 1972, and pursued vigorously thereafter, major shifts in production and exports in favor of skill and technology intensive products such as machinery, sophisticated electronics, shipbuilding and chemicals. This redirection in industrial strategy was prompted by the rapid rise in Korean wage rates, increasing competition in labor-intenstive manufactured exports from other developing countries, and the rising protectionism in developed country markets (Park, 1981). As pointed out, heavy and chemical industries have been promoted not only to cater to the domestic market but also, and almost

from the beginning, to exports, which would justify setting up plants large enough to exploit scale economies. Under the Five Year Plan 1982-86, the government is encouraging the further development of the machinery industry, including parts manufacturing, shipbuilding and the automobile industry; "the development of industrial electronic machineries such as semi-conductors, computers, and communications equipment which will be stressed more than that of consumer electronics;" and finally, the belief that while "the light manufacturing industry will continue to play the role of a major export industry during the Plan period, . . . its share in total exports is expected to decline" (Economic Planning Board, 1981; pp. 68-70). It is expected that the export share of the skill- and capital-intensive industries such as industrial machinery, finished metal products, electronics and shipbuilding and steel products will increase significantly.[24]

It should be noted also that the Asian NICs are relatively poorly endowed with natural resources. This provides additional scope for complementary production and trade in resource-intensive goods between them and the ASEAN countries. As has been pointed out by Akrasanee (1981) however, industries which are both resource- and technology-intensive have to be constructed as integrated plants (or "complexes") present some difficulties for complementarity. Also, because they are often basic industries, individual countries may want to develop them, seeking to be self-reliant in the production of so-called critical products. Harmonization of industrial plans and trade policies among the ASEAN countries and the Asian NICs would be essential if problems inherent in this field are to be overcome.

More generally, the relationship between the foreign trade regime adopted and degree of access to the domestic market of the NICs needs to be investigated. As indicated in Table 9, even in the late 1970s, Korea and Taiwan were absorbing only a very small proportion of ASEAN manufactured exports.[25] By contrast much larger percentages, from 2.8 percent to as much as 7.4 percent, had gone to Hongkong, which is presumably related to its open door policy on imports from all sources. A relaxation of import restraints, especially non-tariff barriers, by the NICs at this time would not only reduce a source of friction but also "contribute to a more stable world trading system by signifying the readiness of the more advanced developing countries to progressively adhere to the roles and obligations applying to the more mature trading nations" (Frank, 1981).

In Korea, although the average tariff rate (and also tariff collection as a percentage of import value) declined in the 1970s, import controls had been

[24] In the aggregate, machinery exports are projected to increase from 20.9 percent to 32.6 percent of total exports during the Plan period.

[25] In the case of Korea, exports to the ASEAN countries as a percentage of total exports more than doubled from 1971 to 1980; by contrast, the share of Korean imports from ASEAN even decreased slightly (see Appendix Table 3).

tightened. In the second half of 1981, the number of restricted import items as a percentage of the total number of 4-digit CCCN commodities was about 25 percent. During the Fifth Plan Period, imports are to be liberalized such that the percentage will be lowered "to the level maintained by most industrialized countries by 1986. . . Tariff reductions will accompany import liberalization for those commodities not produced in Korea. On the other hand, temporary tariff increases may be inevitable for some items whose import is newly liberalized and meet stiff competition with domestic counterparts." (Economic Planning Board, 1981; p. 44.) Whether ASEAN country exporters of manufactured products will benefit from this or not remains to be seen.

The degree to which the NICs are willing to open up their internal markets will have implications not only on the industrial development prospects of the ASEAN countries and other "near-NICs" (the second tier of developing countries) but also on the NICs' own future growth. Thus, increased access to such market by the ASEAN countries, viewed in conjunction with these countries' structural adjustment efforts which could lead to expanded NICs' exports to ASEAN,[26] could provide the stimulus necessary to sustain rapid industrial growth in these two developing country groups which between them have the world's fastest growing national incomes. Such a situation may well approximate the conditions which prevailed in the 1950s and 1960s when postwar trade liberalization undertaken by the ICs not only expanded the market for themselves but also opened their market to the NICs. It is worth remembering that the openness of the IC markets to international competition and the rapid expansion of intra-industry trade were a critical ingredient in the unprecedented growth of both IC and NIC economies in that period.

The benefits from the international trading system would of course be larger if the industrialized countries were to participate in the removal of import restraints and rationalization of industrial and trade structures. The gains might even turn out to be largest for the ICs — in terms of lower prices and increased consumption of labor-intenstive commodities and of higher growth rates because competition from developing country imports would speed up the structural adjustment and indeed the growth process in IC economies (Krueger, 1979). Industrialized countries would also benefit from the increased exports of manufactured goods that can be expected with the sustained growth of the NICs and near-NICs. Developing countries are in fact much larger buyers than sellers of manufactured goods, and the best developing country customers of IC products have been those with most rapidly

[26] As pointed out earlier, ASEAN imports have mainly concentrated in producer goods, especially capital equipment. The fact that Korea's export structure has been shifting to machinery and equipment in recent years would seem to imply a potential for expanded exports of such industrial products to the ASEAN countries.

growing exports (Fishlow *et al.*, 1981).[27]

The final point to make is that, regardless of how IC governments respond to domestic pressures for protectionist action, it would be desirable and prudent for developing countries to actively promote trade among themselves. Within ASEAN, expansion of intraregional trade as well as trade with other developing countries, especially the NICs and other near-NICs, would confer special dynamic, learning and competitive benefits. The ASEAN countries, however, should be alert to the likelihood of trade diversion effects and should seek to minimize them. Expanded trade with other developing countries should supplement, but not supplant, ASEAN trade with the industrialized countries.

[27] IC trade balances in manufacturers with developing countries increased from U.S. $15.8 billion in 1963 to $43.7 billion in 1973 to $132.1 billion in 1979. Western European (EEC and EFTA) exports the most manufacturers to, and enjoys the largest absolute surplus with, developing countries (including or excluding the oil exporters). Also, the oil importing developing countries were a larger market for European exports of manufacturers than Japan and North American taken together in the three years cited above.

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APPENDIX TABLE 1a
INDONESIA, MALAYSIA, SINGAPORE: MANUFACTURED EXPORTS BY PRODUCTS GROUPS, 1972-74 AND 1976-78
(thousand U. S. dollars)

EXPORT BY CATEGORY	INDONESIA		MALAYSIA		SINGAPORE	
	1972-74	1976-78	1972-74	1976-78	1972-74	1976-78
1. Clothing	680	8,126	19,846	70,322	111,849	229,631
2. Engineering (electronics)	21,079	52,928	137,324	596,869	746,307	1,919,098
3. Textiles	4,011	4,038	23,713	62,245	125,092	215,318
4. Miscellaneous light manufactures	663	15,995	11,576	35,090	80,333	173,482
5. Wood products	16,937	78,716	272,840	503,934	164,921	294,571
6. Processed food	15,808	10,566	35,687	84,206	71,650	136,295
7. Leather and footwear	2,278	3,742	6,261	17,535	9,320	17,666
8. Other manufactures	22,245	70,805	70,740	133,287	392,867	714,282
1) Drink and tobacco	1,607	972	9,136	8,723	17,241	29,808
2) Rubber products	44	300	9,787	22,749	9,699	21,078
3) Chemicals	18,533	48,031	27,711	68,521	205,749	345,207
4) Pulp, paper board	17	46	3,478	4,063	19,445	30,073
5) Non-metallic manufactures	1,589	665	6,286	12,815	13,971	39,242
6) Iron and steel	455	4,853	5,452	7,422	44,705	120,096
7) Non-ferrous metal	–	14,704	2,383	3,069	5,242	11,623
8) Motor vehicles	–	1,234	6,507	6,025	76,815	117,155
Total manufacturing	83,701	244,916	577,987	1,503,588	1,702,329	2,700,343

SOURCE: Table 6 in Akrasanee (1981).

APPENDIX TABLE 1b
PHILIPPINES: EXPORTS OF NON-TRADITIONAL MANUFACTURERS: 1970-1980
(million U.S. dollars)

	1970	1973	1976	1980
Garments	36.21	57.96	184.66	500.04
Handicrafts	6.52	27.38	94.88	154.27
Electrical and electronic equipment and components	–	11.32	84.98	670.97
Non-metallic mineral manufacturers, particularly cement	3.02	25.16	28.07	58.92
Chemicals	5.42	10.59	27.01	94.94
Builders woodwork and other wood manufacturers excluding plywood, veneer and lumber	3.95	17.23	15.48	23.81
Food products and beverages	8.25	15.01	28.68	170.37
Machinery and transport	1.06	3.43	16.11	46.54
Textile yarn fabrics and other related products	2.81	17.31	15.15	49.32
Cordage, cable, ropes and twines	1.93	4.55	10.35	18.52
Furniture and parts	–	–	9.76	77.16
Footwear	–	–	5.04	67.04
Others	23.35	36.80	53.50	175.00
TOTAL	94.52	226.79	573.67	2,106.90

SOURCE: *1981 Philippine Statistical Yearbook* (National Economic and Development Authority).

APPENDIX TABLE 1c
THAILAND: MANUFACTURED EXPORTS, 1970-1979
(million bahts)

	1970	1973	1976	1979
Canned Pineapple	55	75	561	1,244
Garments	18	660	1,535	3,541
Molasses	45	312	498	528
Cement	83	314	378	33
Petroleum products	36	379	99	191
Spinning	5	159	337	776
Silk, fabrics	34	39	29	39
Textiles	23	1,027	2,040	4,378
Jute yarn, etc.	16	198	430	732
Ganny bags	63	312	116	624
Iron and steel products	41	178	217	684
Household utensils of wood	18	135	238	335
Precious stones and jewelry	137	641	882	2,753
Others	215	1,084	1,620	3,692
TOTAL	808	5,509	8,977	19,570

SOURCE: World Bank Report No. 30679-TH (Demeber 23, 1980).

APPENDIX TABLE 2a
INDONESIA: TEN LARGEST IMPORTS, 1973 and 1979
(million U.S. dollars)

SITC	COMMODITY	VALUE
	1973	
732	Road motor vehicles	195.6
719	Machines, n.e.s., non-electric	192.1
718	Machines for special industries	103.6
651	Textile yarn and thread	100.6
717	Textile, leather machinery	91.5
042	Rice	83.3
722	Electri power machinery switchgear	73.0
673	Iron and steel shapes	71.2
711	Power machinery, non-electric	66.5
674	Iron, steel universals, plate, sheet	66.3
	1979	
042	Rice	596.3
719	Machines, n.e.s., non-electric	493.2
732	Road motor vehicles	477.0
331	Crude petroleum, etc.	443.4
332	Petroleum products	349.9
674	Iron, steel universals, plate, sheet	299.8
512	Organic chemicals	278.6
581	Plastic materials, etc.	236.4
718	Machines for special industries	232.8
711	Power machinery, non-electric	225.4

SOURCE: *Yearbook of International Trade Statistics*, United Nations (various issues).

APPENDIX TABLE 2b
MALAYSIA: TEN LARGEST IMPORTS, 1973 and 1977
(million U.S dollars)

SITC	COMMODITY	VALUE
	1973	
732	Road motor vehicles	224.9
719	Machines, n.e.s., non-electric	124.6
718	Machines for special industries	111.2
042	Rice	85.7
331	Petroleum, crude and partly refined	79.7
332	Petroleum products	76.9
061	Sugar and honey	69.9
674	Universals, plates and sheets of iron or steel	69.3
653	Woven textiles, non-cotton	63.8
641	Paper and paperboard	58.0
	1977	
732	Roadmotor vehicles	408.3
722	Electric power machine switch gear	218.7
719	Machines, n.e.s, non-electric	209.3
718	Machines for special industries	170.7
724	Telecommunications equipment	127.0
729	Electrical machinery, n.e.s	125.2
674	Universals, plates and sheets of iron or steel	120.5
641	Paper and paperboard	84.0
861	Instruments, apparatus	82.2
711	Power machines, non-electric	81.6

SOURCE: *Yearbook of International Trade Statistics*, United Nations (various issues).

APPENDIX TABLE 2c
PHILIPPINES: TEN LARGEST IMPORTS, 1973 and 1980
(million U.S. dollars)

SITC	COMMODITY	VALUE
	1973	
331	Crude petroleum	209.30
719	Machines, n.e.s, non-electric	139.13
732	Road motor vehicles	102.33
041	Wheat, etc., unmilled	58.79
512	Organic chemicals	56.31
718	Machinery for special industries	56.14
674	Universals, plates and sheets of iron or steel	54.44
581	Plastic materials, etc.	51.25
042	Rice	49.77
711	Non-electric power machinery	48.34
	1980	
331	Petroleum, crude and partly refined	1929.70
718	Machines for special industries	395.25
332	Petroleum products	373.26
719	Machines, n.e.s, non-electric	371.30
732	Road motor vehicles	295.44
722	Electric power machinery	208.81
711	Non-electric power machinery	194.38
512	Organic chemicals	185.09
674	Universals, plates and sheets of iron	177.07
672	Iron, steel in primary forms	135.11

SOURCE: *Foreign Trade Statistics of the Philipoines*, 1973 and 1980 (National Census and Statistics Office).

APPENDIX TABLE 2d
SINGAPORE: TEN LARGEST IMPORTS, 1973 and 1979
(million U.S. dollars)

SITC	COMMODITY	VALUE
	1973	
331	Crude Petroleum	461.5
231	Crude rubber	396.6
729	Electrical machinery, n.e.s	275.1
719	Non-electrical machinery, n.e.s.	225.7
653	Woven textiles, non-cotton	217.0
718	Machinery for special industries	166.7
732	Road motor vehicles	160.1
724	Telecommunications equipment	99.2
735	Ships and boats	92.9
711	Non-electric power machinery	87.6
	1979	
331	Crude petroleum	3,824.5
729	Electrical machinery, n.e.s	1,308.8
231	Crude rubber, synthetic and natural	928.4
719	Non-electric machinery, n.e.s.	806.7
332	Petroleum products	622.7
734	Aircraft	458.9
724	Telecommunications equipment	424.9
732	Road motor vehicles	421.9
718	Machines for special industries	403.1
653	Woven textiles, non-cotton	372.5
722	Electric power machinery, switchgear	337.4

SOURCE: *Yearbook of International Trade Statistics*, United Nations (various issues).

APPENDIX TABLE 2e
THAILAND: TEN LARGEST IMPORTS, 1973 and 1978
(million U.S. dollars)

SITC	COMMODITY	VALUE
	1973	
732	Road motor vehicles	181.9
331	Crude petroleun, etc.	172.8
719	Machines, n.e.s, non-electric	106.2
674	Universals, sheets and plates of iron or steel	84.7
717	Textile, leather machinery	74.9
711	Power machinery, non-electric	69.7
581	Plastic materials, etc.	65.9
263	Cotton	64.7
332	Petroleum products	59.2
722	Electric power machinery, switchgear	50.7
	1978	
331	Crude petroleum	812.8
732	Road motor vehicles	421.2
332	Petroleum products	305.3
719	Machines, n.e.s, non-electric	293.3
674	Universals, sheets and plates of iron or steel	180.8
722	Electric power machinery, switchgear	171.1
711	Power machinery, non-electric	170.5
512	Organic chemicals	150.4
581	Plastic materials, etc.	127.8
599	Chemicals, n.e.s	109.4

SOURCE: *Yearbook of International Trade Statistics*, United Nations, (various issues).

APPENDIX TABLE 3
KOREAN TRADE WITH ASEAN COUNTRIES
(million U.S. dollars)

	EXPORTS (fob)		IMPORTS (cif)	
	1971	1980	1971	1980
Indonesia	9	366	41	485
Malaysia	1	184	62	472
Philippines	4	152	44	272
Singapore	10	266	17	161
Thailand	5	165	3	91
ASEAN (A)	29	1,133	166	1,481
World (B)	1,068	17,505	2,394	22,292
A – B (%)	2.7	6.5	6.9	6.6

SOURCE: IMF, *Direction of Trade Yearbook 1980* and *International Financial Statistics* (May 1981).