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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

INDUSTRIAL DEVELOPMENT REVIEW SERIES

MALAYSIA

Prepared by the
Regional and Country Studies Branch
Division for Industrial Studies

V.85-29474

Preface

Within the framework of UNIDO country surveys and studies, a series of country industrial development reviews on developing countries is prepared by the Regional and Country Studies Branch of the Division for Industrial Studies.

The reviews provide a general survey and brief analysis of each country's industrial development, both as a service to those within UNIDO and other international agencies concerned with industrial policy, planning, project development and implementation, and as a ready source of information for Governments. It is hoped that the reviews will prove useful as well to financial and industrial enterprises, both public and private, to research institutes and to aid agencies in developed countries. The reviews also aim at providing a basis for undertaking in-depth studies of specific aspects of industrial policies, strategies and programmes in the developing countries and at providing a basis for informed discussion and analyses of industrial development trends and policies.

The reviews draw on information provided by the UNIDO data base, material available from national and international statistical publications, and other sources. While up-to-date national statistics are not always available on every aspect of industrial development, the reviews will be updated periodically and efforts are being made to improve the UNIDO data base and to monitor industrial progress and changes in industrial policy on a regular basis.

The preparation of the present review was finalized in May 1985 on the basis of information available at UNIDO headquarters. It is divided into two rather distinct parts. Chapters 1 and 2 are analytical in character, giving first a brief overview of the country's economy and its manufacturing sector and then a more detailed review of the structure and development of its manufacturing industries. Chapter 3 contains various kinds of reference material - which it is hoped will be useful to readers - on national plans and policies relevant to industrial development, on the country's natural, human and financial resources for industrial development and on the more important governmental and other institutions involved in industrial development. The

document also contains an "executive summary", relevant basic indicators, graphical presentation of manufacturing trends as well as a statistical appendix and annexes.

It should be noted that the reviews are not official statements of intentions or policy by Governments or by UNIDO, nor do they represent an official assessment by UNIDO of industrial development in the countries concerned. Readers are invited to comment on the findings and analyses and thereby assist UNIDO in improving and updating the reviews.

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Regional classifications, industrial classifications, trade classifications and symbols used in the statistical tables of this report, unless otherwise indicated, follow those adopted in the United Nations Statistical Yearbook.

Dates divided by a slash (1970/71) indicate a crop year or a financial year. Dates divided by a hyphen (1970-71) indicate the full period, including the beginning and end years.

In tables

Three dots (...) indicate that data are not available or are not separately reported;

A dash (-) indicates that the amount is nil or negligible;

A blank indicates that item is not applicable;

One dot (.) indicates that there is insufficient data from which to calculate the figure.

The following abbreviations are used in this document:

CGC	Credit Guarantee Corporation
EPU	Economic Planning Unit (in the Prime Minister's Department)
FIC	Foreign Investment Committee
FRDB	Forest Research Development Board
FRI	Forest Research Institute
GDP	gross domestic product
HICOM	Heavy Industries Corporation of Malaysia
ISIC	International Standard Industrial Classification
ITI	Industrial Training Institute
ITM	MARA Institute of Technology
MARA	Council of Trust for Indigenous People (Majlis Amanah Ra'ayat)
MARDI	Malaysian Agricultural Research and Development Institute
MDB	Manpower Development Board
MIDA	Malaysian Industrial Development Authority
MIDF	Malaysian Industrial Development Finance
MIDFIC	MIDF Industrial Consultancy
MIEL	Malaysian Industrial Estates Sendivian Berhard (Subsidiary of MIDF)
MIM	Malaysia Institute of Management
MPIB	Malaysian Pineapple Industry Board
MRRDB	Malaysian Rubber Research and Development Board
MVA	manufacturing value added
NDPC	National Development Planning Committee

NEC	National Economic Council
NEP	New Economic Policy
NICS	Newly Industrializing Countries
NPC	National Productivity Centre
PERNAS	National Corporation
PETRONAS	National Oil Corporation
PORIM	Palm Oil Research Institute of Malaysia
RRIM	Rubber Research Institute of Malaysia
SEATRAD	Southeast Asia Tin Research and Development Centre
SEDC	State Economic Development Corporation
SIRIM	Standards and Industrial Research Institute of Malaysia
SITC	Standard International Trade Classification

Plan periods

First Malaysia Plan 1960-70
Second Malaysia Plan 1971-75
Outline Perspective Plan 1971-90
Third Malaysia Plan 1976-80
Fourth Malaysia Plan 1981-85

BASIC INDICATORS 1

The economy

GDP (1982):	US $25,870 million					
GDP per capita (1982):	US $ 1,860					
Population Total (1984):	15.3 million persons[a/]					
Density (1984):	46.3 inhabitants per sq. km.					
Labour force (1984):	5.8 million					
Average annual growth rate of population (per cent):	1970-82: 2.5					
Distribution of GDP by sector: (per cent)					1960	1984
	Agriculture				29.1	21.3
	Manufacturing				11.5	18.4
	Mining				9.4	4.9
	Services				50.0	55.4
	1970-82	1981	1982	1983	1984	1985[b/]
Average annual growth rate of GDP (per cent)	7.7	7.1	5.2	5.9	7.3	5-6.7
Inflation rate (per cent):	1960-70: -0.3	1970-80: 7.2	1984: 3.9			
Currency exchange rate (Malaysian $ equivalents to US $1)	1980: 2.18	1982: 2.34	1983: 2.32	end-1984: 2.42		

a/ The most recent census (1980) has shown that the population comprises 55.3 per cent bumiputra (Malays and other indigenous peoples), 33.8 per cent Chinese and 10.2 per cent Indian.

b/ Official and other estimates.

BASIC INDICATORS 2

Resources and transport infrastructure

Resources (1982):

Main crops:	Rubber, palm oil, palm kernels, pepper, rice, cocoa, pineapple, tobacco, tea, coffee, sugar
Livestock:	Cattle (538,000), buffaloes (181,000), goats (328,000), sheep (69,000), pigs (2,111,000)
Fisheries: (Total catch)	0.7 million tons (1984, est.)
Forestry:	Saw logs production 31.5 million cubic metres (1984, est.)
Mining:	Tin (41,000 tons), copper (120,000 tons), bauxite, iron ore (1984, est.)
Energy, major resources:	Oil, liquified natural gas, coal
Share of total energy consumption:	Oil - 95 per cent (1980)

Transport:

Roads:	Peninsular Malaysia: 25,709 km (4,830 main roads) Sabah: 2,720 km; Sarawak: 1,600 km
Railways:	Peninsular Malaysia: 1,666 route km; Sabah: 154 route km.
Main ports:	Peninsular Malaysia: Klang (principal port), Penang, Johor, Kuantan, Tanjung Berhasa (in the process of being completed) Sabah: Kota Kinabalu, Sandakan, Tawau, Lahad Datu, Kudat, Semporna, Kunak Sarawak: Bintulu, Kuching
Main airports:	Peninsular Malaysia: Kuala Lumpur (principal), Penang Sabah: Kota Kinabalu; Sarawak: Kuching.

BASIC INDICATORS 3

Foreign trade and balance of payments

Exports (1984)	total value:	M$ 37,900 million
	main goods:	Crude petroleum, palm oil, rubber, electrical machinery (electronics assembly), saw logs, tin
	main destinations:	Japan, Singapore, India, United States, Thailand
Imports (1984)	total value:	M$ 31,600 million
	main goods:	Machinery and transport equipment, wheat, rice, sugar, dairy products
	main origins:	Japan, United States, Federal Republic of Germany, United Kingdom, Australia, Thailand
Balance of payments (current account):		M$ 7,594 million deficit (1982), M$ 7,120 million deficit (1983), M$ 5,213 million deficit (1984, est.)

	1974	1980	1983	1984
Public/publicly guaranteed debt (US $ billion)	0.8	3.9	10.6	15.0
Debt service:				
as percentage of GNP:	1.3	1.6	3.5	...
as percentage of exports:	2.5	2.5	5.8	11.9

BASIC INDICATORS 4

The manufacturing sector

Manufacturing value added (at constant 1970 prices):	M$ 5,659 million (1983) M$ 6,185 million (1984, est.)		
MVA per capita:	M$ 380 (1983) M$ 405 (1984, est.)		
Annual average growth rate of MVA: (per cent)	1970-82 10.6	1983 6.6	1984 9.3
Sectoral composition of MVA[a/]: (per cent)	1973	1982	
Mainly consumer goods:	35.6	32.7	
Mainly intermediate products:	43.9	37.9	
Mainly capital goods:	20.5	29.4	
Employment in manufacturing:	800,300 (1983) 833,300 (1984, est.)		
as percentage of total labour force:	14.3 per cent (1983) 14.7 per cent (1984, est.)		
Trade in manufactures[b/] exports:	M$ 9,554 million (1983) M$ 11,628 million (1984, est.)		
imports:	M$ 18,056 million (1983) M$ 20,365 million (1984, est.)		
Share of manufactures[b/] in total exports:	29.1 per cent (1983) 30.4 per cent (1984, est.)		
in total imports:	58.8 per cent (1983) 60.1 per cent (1984, est.)		

a/ Covers industries in West Malaysia.
b/ SITC 5-8 less 68.

BASIC INDICATORS 5

Trade in manufactured goods

In 1982

MANUFACTURED EXPORTS — Total value (SITC 5-8 plus 421/2 less 68) US $4,080 million

SITC	Principal manufactured exports (US $ million)		Destination (in per cent)				
			Developing countries	Developed market economies			Centrally planned economies
				EEC	USA	Japan	
72	Electrical machinery	1,592.5	22.4	16.9	53.7	5.1	0.02
421/2	Vegetable oils and fats	1,332.6	59.1	16.9	5.7	5.4	8.4
841	Clothing	174.2	6.6.	41.8	32.5	2.4	2.2
631	Veneers, plywood	167.7	62.4	17.8	3.6	11.9	0.0
7241/2	Television and radio sets	64.2	8.7	43.4	34.5	6.7	0.4
654	Woven textile fabrics	63.3	47.6	22.4	1.8	0.6	0.4
711	Power generating machinery, non-electric	52.9	17.1	37.1	16.6	2.2	0.0

MANUFACTURED IMPORTS — Total value (SITC 5-8 less 68) US $8,372 million

SITC	Principal manufactured imports (US $ million)		Origin (in per cent)				
			Developing countries	Developed market economies			Centrally planned economies
				EEC	USA	Japan	
7321	Passenger motor cars (less 732)	345.8	0.1	14.3	0.1	82.1	0.0
732	Commercial road vehicles	302.3	2.0	16.8	8.3	69.4	0.5
674	Iron and steel minerals, plates and sheets	283.5	14.8	2.2	0.4	73.2	0.4
722	Electrical power machinery and switch gear	267.6	18.1	24.5	15.6	31.2	0.2
673	Shapes sections	223.9	12.8	8.1	0.1	63.4	0.1
711	Power generating machinery, non-electric	202.0	3.8	32.8	29.5	25.0	0.0
581	Plastics, cellulose and artificial resins	188.8	15.9	21.7	17.9	27.7	1.5
641	Paper and paper board	180.8	10.2	7.8	7.6	26.9	1.1
513/4	Organic chemicals, iron and steel bars, rods	150.3	11.8	25.5	26.6	23.3	0.6
653	Woven textile fabrics	141.4	43.2	4.5	0.5	33.4	0.2

BASIC INDICATORS 6

Inter-country comparison of selected indicators

	Unit	Indonesia	Malaysia	Philippines	Singapore	Thailand	Middle-income countries Upper	Middle-income countries Lower
I. Demographic indicators								
Population (mid-1983)	million	155.7	14.9	52.1	2.5	49.2		
Population growth (1973-83)	per cent per annum	2.3	2.4	2.7	1.3	2.3	2.3	2.5
Infant mortality (1983)	per 1000	101	29	49	11	50	59	87
Area	'000 km^2	1,919	330	300	1	514		
Density (1983)	persons/km^2	81	45	174	2,500	95.7		
II. Economic indicators								
GDP (1983)	$ billion	78.3	29.3	34.6	16.6	40.8		
GNP per capita (1983)	$	560	1,860	760	6,620	820	2,050	750
GDP growth (1973-83)	per cent/annum	7.0	7.3	5.4	8.2	6.9	4.9	4.1
Agriculture (1983)	per cent of GDP	26	21	22	1	23	11	22
Industry (1983)	per cent of GDP	39	35	36	37	27	37	33
Manufacturing (1983)	per cent of GDP	13	19	25	24	19	24	16
Services (1983)	per cent of GDP	35	44	42	62	50	52	45
Exports of goods and non-factor services (1983)	per cent of GDP	25	54	20	176	22	25	21
Gross domestic investment (1983)	per cent of GDP	24	34	27	45	25	22	22
External public debt (1983)	per cent of GNP	28.9	38.6	30.4	7.6	18.0	31.7	33.6
III. Industrial indicators								
MVA (1982)	million $ at constant 1975 prices	6,072	3,287	5,510	2,431	4,837		
Share of MVA in GDP (1983)	per cent	13	19	25	24	19		
Growth of MVA (1973-83)	average annual per cent	12.6	10.6[a/]	5.0	7.9	8.9		
MVA share in world manufacturing value added (1981)	per cent	0.29	0.13	0.28	0.13	0.23		
Share of manufactured [b/] exports in total exports (1982)	per cent	3.6	22.8	22.9[c/]	48.2	25.9		

a/ 1970-82.
b/ SITC 5-8 less (67 + 68).
c/ Excluding export processing zones.

EXECUTIVE SUMMARY

Malaysia is one of the high-growth countries of southeast Asia, with a *per capita* income and growth rate during the 1970s second only to Singapore among the five original ASEAN countries. It owes its outstanding economic performance, exceeded by few countries in the Third World, to a combination of factors - an ample endowment with land and other natural resources, a literate workforce, a generally efficient administration, an enterprising business community, and skilful political leadership and economic management. One symptom of the latter is a remarkably open economy, with an export/GDP ratio of almost 50 per cent.

Malaysia consists of two separate and in many respects distinct areas; relatively highly developed West or Peninsular Malaysia (although with its eastern parts clearly less developed) and less densely populated and industrially developed East Malaysia (Sarawak and Sabah). Another important feature is the country's ethnic heterogenity between the politically dominant Malay majority and the economically dominant Chinese minority. To remedy both kinds of imbalance - the former by regional development, the latter by the New Economic Policy which since 1971 aims at increasing the role of the *bumiputra* (Malays and other indigenous peoples) in the economy - remain major objectives of national policy.

After a decade of export-oriented industrial development, Malaysia was hit by the international recession, aggravated by protectionist policies overseas. The resultant slowdown of economic growth led to a rethinking of development strategy, incorporated in the Fourth Malaysia Plan (1981-85), which sought to sustain an overall rate of growth of 7 - 7.5 per cent through rising oil production and fast growth of regionally balanced manufacturing centred in an ambitious heavy industry programme. The recession, however, lasted longer than expected and lavish spending programmes and heavy overseas borrowing in an unfavourable external environment caused large budget and balance of payments deficits. The Government reacted by curbs on current spending and a review of the Plan which scaled down targets and spending plans.

Malaysia's export-oriented industrial development of the 1970s brought about a significant change in the country's industrial structure. The contribution of manufacturing to GDP rose from 12 to 19 per cent, the share of labour-intensive industry in manufacturing value added from 12 to 20 per cent and the share of manufactures in exports also to one-fifth. In 1984 manufacturing value added accounted for 18.4 per cent of GDP, which shows a marginal decline from its contribution in 1980. Manufacturing remains highly concentrated in Peninsular Malaysia, and especially in and around Kuala Lumpur. Foreign investment continues to be important, but the share of foreign ownership has declined considerably under the impact of the New Economic Policy.

The notable performance of Malaysia's manufacturing sector during the 1970s, in terms of growth of both output and exports, may in itself be taken as evidence of international competitiveness. There is also direct evidence of the effectiveness of the strategy of the 1970s in generating employment. Between 1974 and 1980, employment in manufacturing in Peninsular Malaysia increased twice as fast as in the economy as a whole and contributed almost two-thirds to the 11.4 per cent annual growth of output - labour productivity contributing about one-third, a ratio unusually favourable to employment among developing countries. With rapidly rising real wages, however, Malaysia may be losing some of its comparative advantage in labour-intensive products. The early 1980s also demonstrated the vulnerability of export specialization to external events and led to some concern about the narrow base of the manufacturing sector.

The heavy industry programme which was the first reaction of policy-makers to these concerns has recently, in turn, given way to a sharper focus on resource-based industries which would also help regional dispersal of industry. At the same time, a conviction has spread among Malaysian policy-makers that the public sector has been allowed to grow too large, with consequent bureaucratization, excessive financial burden of subsidies and taxes, and stifling of private initiative and competition. Part of the answer, spelled out in the 1984 Mid-Term Review of the Fourth Plan, is seen to

be 'privatization', the gradual transfer to private ownership of certain public enterprises; and closer co-operation between Government and business.

During the last three years the Malaysian economy has benefited both from domestic policy adjustment and economic recovery abroad. GDP growth recovered to about 5.9 per cent in 1983 and grew by 7.3 per cent in 1984. Manufacturing value added rose by 6.6 per cent in 1983 and by 9.9 per cent in 1984 (est.). Exports were expected to show a growth rate of 19 per cent in 1984. The prospects for 1985 clearly depend on whether rapid economic recovery in the USA is sustained and followed by vigorous recovery also in other OECD areas.

The directions of manufacturing growth during the next 10 years are presently being charted out in an Industrial Master Plan. The approach paper to the Plan, which is expected to be completed during 1985, will provide a blue print for sectoral development plans, policies, strategies and programme to be incorporated in the Fifth Malaysian Plan 1986-1990. The policy agenda is expected to include changes in industrial incentives, investment guidelines, and foreign equity participation rules as well as foreign investment guarantees.

1. THE ECONOMY OF MALAYSIA

1.1 Economic structure

Malaysia is one of the high-growth countries of southeast Asia, often described as belonging to the third generation of newly industrializing economies in Asia (after Japan and the NICs of the second generation - Republic of Korea, Hong Kong and Singapore). With a per capita income in 1982 of US $1,860, it is classified by the World Bank as an upper middle-income country, next only to Singapore among the five original ASEAN countries.

Table 1 presents some key statistics about the Malaysian economy in comparison with those of its four original ASEAN partners and the Republic of Korea . Malaysia has the smallest population (next to Brunei and Singapore) and the lowest population density among the ASEAN countries. Its per capita income is more than twice that of the other ASEAN countries (other than Brunei and Singapore) and of the average of lower middle-income developing countries. Its economic growth rate during the period 1973-83 was much above the average of upper middle-income developing countries. It has a remarkably open economy, with an export/GDP ratio of 54 per cent, but in degree of industrialization, as measured by the contribution of manufacturing to GDP, it is equal to that of Thailand but behind the Republic of Korea, the Philippines as well as Singapore and barely above the average of lower middle-income countries.

Table 1. Malaysia: Some comparative indicators for selected Asian countries, 1983

	Population, mid-1983 (million)	Area ('000 km^2)	Density (persons per km^2)	GDP			Exports /GDP ratio (per cent)	Manufacturing/GDP ratio (per cent)
				1983 (US $ billion)	average annual growth 1973-83 (per cent)	per capita (US $) 1983		
Republic of Korea	40.0	98	408	76.6	7.3	1,915	37	27
Indonesia	155.7	1,919	81	78.3	7.0	505	25	13
Malaysia	14.9	330	45	29.3	7.3	2,092	54	19
Philippines	52.1	300	174	34.6	5.4	665	20	25
Singapore	2.5	1	2,500	16.6	8.2	8,300	176	24
Thailand	49.2	514	96	40.8	6.9	832	22	19

Source: World Bank, World Development Report 1985.

Malaysia owes its outstanding economic record, exceeded by few countries in the Third World, to a combination of factors - an ample endowment with land and other natural resources, a literate work force, a generally efficient administration, an enterprising business community, and skillful political leadership and economic management which have overcome what fifteen years ago seemed formidable problems of ethnic diversity and political fragility.

Malaysia consists of two separate and in many respects distinct areas: West or Peninsular Malaysia and East Malaysia, separated by some 600 km of the South China Sea. Politically, Malaysia is a federation comprising 13 states. These states are Johore, Malacca, Negri Sembilan, Selangor, Pahang, Trengganu, Kelantan, Perak, Penang, Kedah and Perlis in Peninsular Malaysia, and Sabah and Sarawak in East Malaysia.

Table 2 summarises in a few figures the contrasts between the two parts of the country. Peninsular Malaysia, with two-fifths of the land area but 83 per cent of the population, accounts for 86 per cent of GDP and enjoys a significantly higher per capita income. The contribution of agriculture and

Table 2. West Malaysia (Peninsular) and East Malaysia: Economic structure, 1983

		West (Peninsular) Malaysia	East Malaysia
Population (1983)	(per cent of total)	82.9	17.1
GDP (1983) (M$ in 1970 prices)	(per cent of total)	86.4	13.6
Area	(per cent of total)	39.5	60.5
Sectoral composition of GDP (1983)			
Agriculture	(per cent)	22.7	37.4
Mining	(per cent)	3.7	10.7
Manufacturing	(per cent)	21.1	6.1
Other	(per cent)	52.5	45.8
Growth rate of GDP (annual average 1981-83)	(per cent)	6.1	7.2
GDP per capita (1983)	M$ (in 1970 prices)	2,207	1,695

Source: Mid-Term Review of the Fourth Malaysia Plan 1981-85.

mining to GDP is lower but that of manufacturing very much higher in Peninsular than in East Malaysia; the latter, however, has had a slightly higher rate of economic growth in recent years.

Traditionally, rubber and tin have been Malaysia's leading exports. In recent years, rubber has been almost matched by palm oil as a foreign exchange earner, and both have been overtaken by crude oil and timber. Between them, these five commodities accounted for 70 per cent of exports in value in 1982. Most of the balance (26 per cent) consisted of manufactures, more than half of which in the electrical machinery category (mostly electronics).

1.2 Recent economic trends

The 1970s were a period of remarkable economic progress for Malaysia. The gross domestic product grew at an average annual rate close to 8 per cent. Agricultural production attained an average growth rate of 5 per cent, and manufacturing nearly 12 per cent. In the last two years of the decade, however, the international recession aggravated by protectionism began to affect Malaysia's exports, and in the three years 1981-83 growth slowed down markedly. As Table 3 shows, the growth rate of GDP fell to between 5 and 6

Table 3. Malaysia: Growth rates of GDP by sector, 1970-84

(per cent)

	Agriculture	Manufacturing	GDP
1970-82 (annual average)	5.1	10.6	7.7
1976	12.2	18.5	11.6
1977	2.4	10.6	7.8
1978	1.6	9.2	6.6
1979	8.2	9.5	9.3
1980	3.1	9.0	7.8
1981	4.2	4.9	7.1
1982	6.3	3.6	5.2
1983	-1.0	6.6	5.9
1984	3.1	(9.3)a/	7.3

Sources: World Bank, World Development Report 1984; Ministry of Finance, Economic Report 1984/85; Financial Times, 1 April 1985.

a/ Forecast.

per cent and that of manufacturing to 3.6 per cent in 1982 (and increased again to 6.6 per cent in 1983), while the value of agricultural production, depressed by low world prices of major export commodities, actually declined by 1 per cent in the following year.

The Government responded to the international recession by a countercyclical policy of increased government spending, especially in public investment financed to a considerable extent by overseas borrowing. To sustain a high rate of economic growth seemed particularly important for the New Economic Policy which since 1970 had aimed at increasing the role of bumiputra (Malays and other indigenous peoples) in the economy without any absolute deterioration in the economic well-being of other ethnic groups in the community. The Fourth Malaysia Plan which was launched in 1981 was designed to maintain an overall growth rate of 7-7.5 per cent. This was to be led by rising oil production and by manufacturing growth at an annual rate of 11 per cent. The contribution of manufacturing to GDP was to rise to 27 per cent by 1985. A heavy industry programme, including large car, cement, sponge iron, methanol, paper, engineering, steel and petrochemical plants, several located in industrially less developed states, was to give a major impetus to regionally balanced development.

The international recession, however, lasted longer than expected, and by 1983 a review of Plan targets and revision of policy had become urgent. Ambitious spending programmes and heavy overseas borrowing in an unfavourable external environment were causing massive budget and balance of payments deficits. The overall public sector deficit rose to M$ 11.2 billion in 1982 and M$ 9.2 billion in 1983. Development spending (net) was in 1983 running at a rate of M$ 9.4 billion of which only M$ 4.3 billion was financed by loans from the domestic market, the rest by overseas borrowing. The level of borrowing in 1983 represented a decrease of 18 per cent compared to the 1982 level of M$ 10.9 billion. Rising imports and depressed exports caused the first ever deficit in Malaysia's balance of trade in 1982. This, together with a large deficit on account of invisibles including debt service, resulted in a current account deficit of M$ 7.6 billion. This adverse trend was, however, immediately broken in 1983 when over M$ 2 billion export receipts in excess of imports was recorded as a result of an export growth of 16.8 per cent (and import growth of 6.1 per cent). For 1984 a positive trade balance

of M$ 6.3 billion was recorded as a result of 19 per cent exports increase and 3 per cent imports increase.

The Government reacted by curbs on current expenditure in the October 1982 budget, chiefly through slower recruitment to the civil service and withdrawal of price subsidies on rice and kerosene. The Mid-Term Review of the Fourth Plan, published in March 1984, conceded that, in view of adverse international trends, the growth targets of the Fourth Plan could not be reached. The ambitious programme for new heavy industries had to be scaled down. Spending by the off-budget agencies, including the Heavy Industries Corporation (HICOM), which had contributed substantially to the public sector deficit and overseas borrowing, needed to be cut back. A beginning was made in this direction with a M$ 1 billion reduction in development spending in 1983. The Mid-Term Review also foreshadowed shifts of policy emphasis from heavy industry towards 'downstream' industries based on rubber, palm oil and timber, towards revitalization of the agricultural sector, towards a much greater role for private enterprise and towards reform of the New Economic Policy.

By 1984, the economy measures had contributed to a narrowing of the deficit in the balance of payments on current account to M$ 5.2 billion (est.) though cumulative overseas borrowing had pushed up the external public debt to constitute over 387 per cent of GNP (highest among the ASEAN countries) and the foreign debt servicing ratio[1/] to 5.8 per cent in 1983 and to 11.9 per cent in 1984. This ratio is, on the other hand, lowest among the ASEAN countries, except for Brunei and Singapore. The current account benefited from a strong surge in export revenues, reflecting higher commodity prices especially for rubber and palm oil, and a sharp rise in crude oil production, more than off-setting price declines.

1.3 Overview of the manufacturing sector

The industrial development of Malaysia in its early stages concentrated on processing of natural resources. By 1970 industries processing food,

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1/ Defined as service payments on external public debts as a percentage of exports.

rubber and timber accounted for nearly half of all value added in manufacturing. During the 1960s, import substitution of consumer goods began to be promoted by moderate tariff protection. With the adoption of the New Economic Policy in 1970 which aimed at increasing the bumiputra share in ownership and control of economic activity through maximum growth, regional dispersal and promotion of employment, emphasis in industrial policy was placed on encouragement of labour-intensive export industries. The main policy instruments were a system of industrial incentives (pioneer status, investment tax credit, labour utilization relief), industrial estates and export processing zones, and participation in industrial ventures by government-aided bumiputra institutions such as the bumiputra investment company, PERNAS.

By 1978, this policy had brought about a significant change in the country's industrial structure. The share of labour-intensive manufacturing industries (chiefly electronics assembly, textiles and garments) had risen from 12 to 20 per cent of value added and the share of manufactures in exports also to one-fifth. By 1982, the three branches were estimated to generate two-thirds of manufactured exports, to employ about two-fifths of full-time employees and to pay about one-third of wages and salaries in manufacturing.

Meanwhile, however, with the onset of international recession, the vulnerability of these export-oriented industries to external events had become very apparent. To widen the industrial base of the economy, the Fourth Plan (1981-85) aimed at generating a heavy industry sector. The Heavy Industries Corporation of Malaysia (HICOM) was set up to develop the more capital-intensive projects, with the Malaysian Industrial Development Authority (MIDA) to indicate priorities and stimulate investment, domestic and foreign. The programme, as has been noted, has had to be pruned somewhat in the face of the overall economic situation, but the development of heavy industries to reduce dependence on foreign countries for the supply of machinery and intermediate inputs, remains one of the objectives of industrial policy in the revised Plan, together with the New Economic Policy, regional dispersal of industry, and promotion both of high-technology precision-based industries, at one end, and small-scale industry, at the other end of the spectrum.

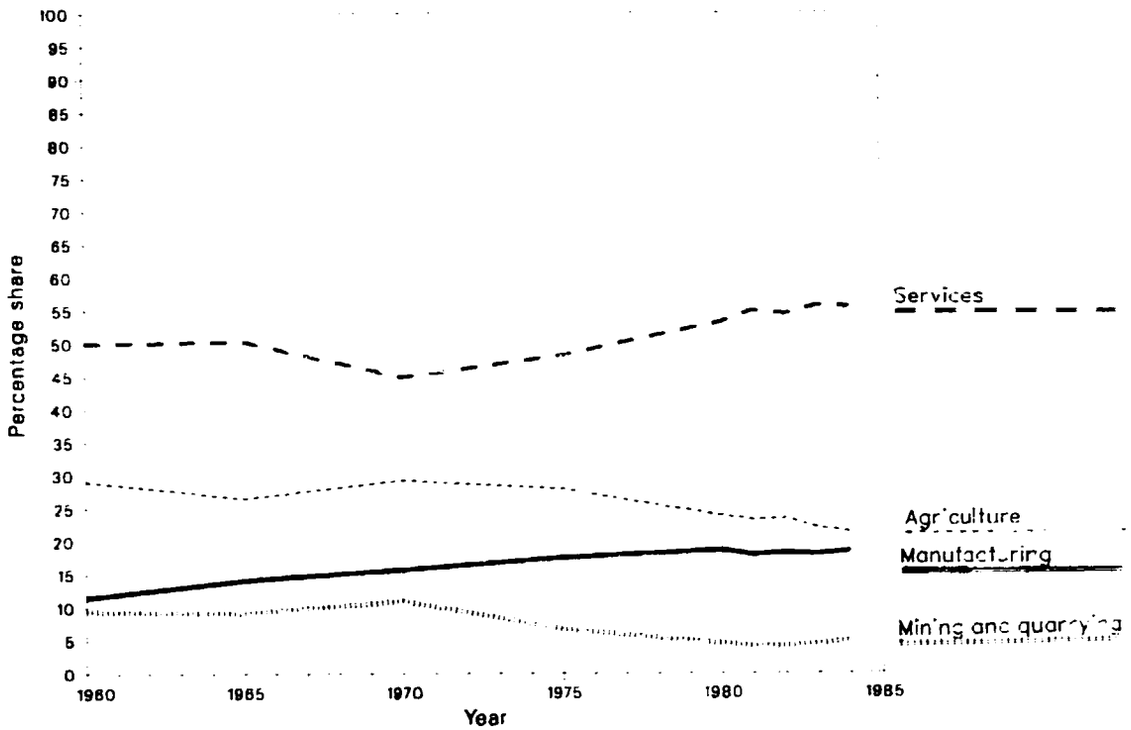
While there is a good deal of small-scale enterprises in Malaysian manufacturing, as in trade and construction, large- and medium-scale enterprises constitute an important part of manufacturing output and employment to a somewhat greater degree than in the other ASEAN countries (except Singapore) and Malaysia compares well with them in average labour productivity and international competitiveness in manufacturing. Not surprisingly in view of the labour-intensive character of the main growth industries during the 1970s, growth of employment appears to have contributed about two-thirds and growth in labour productivity only one-third to growth of value added. Indeed, labour productivity declined during the two recession years 1981 and 1982 as employees in many firms were retained despite declining output, but productivity recovered rapidly with rising output in 1983.

The manufacturing sector remains highly concentrated in Peninsular Malaysia. In 1979, food and timber processing accounted for almost two-thirds of the modest value added of manufacturing in the two states of East Malaysia, while their share in the labour-intensive export industries (except for some handicrafts) was negligible.

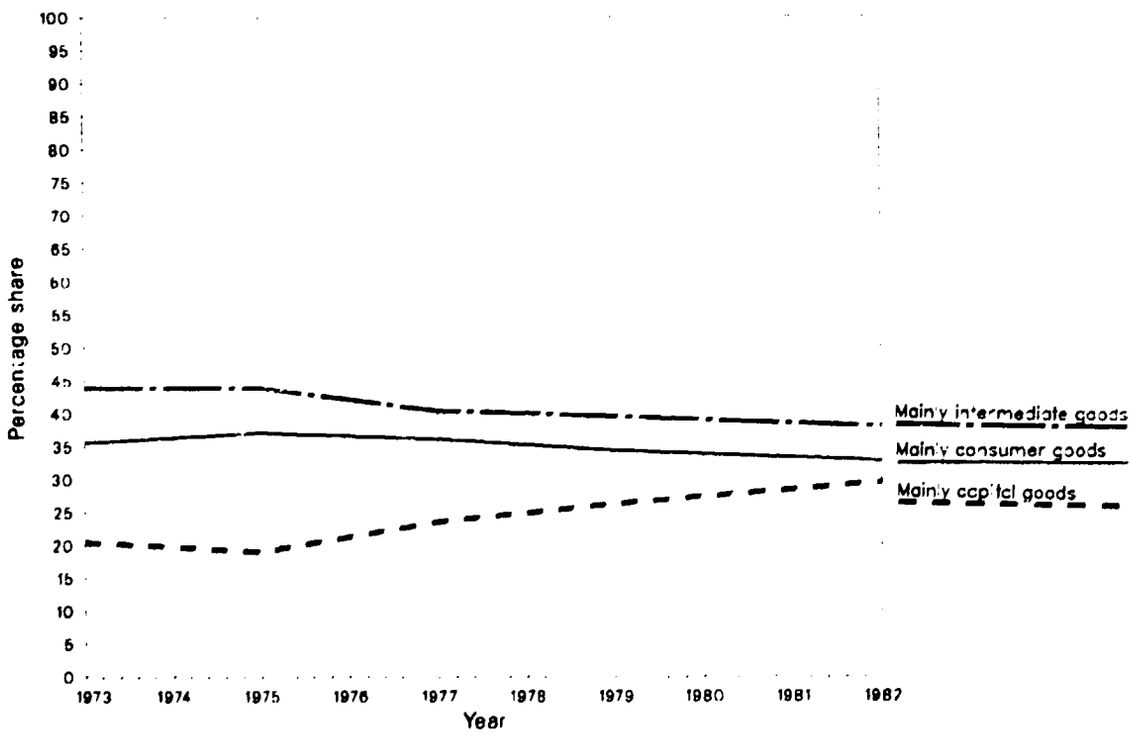
Foreign investment has remained important, especially in pioneer industries, with Japan, United Kingdom, United States and Australia together with Singapore and Hong Kong as the chief sources of capital. But foreign ownership has declined considerably in the past fifteen years under the impact of the New Economic Policy.

MANUFACTURING TRENDS

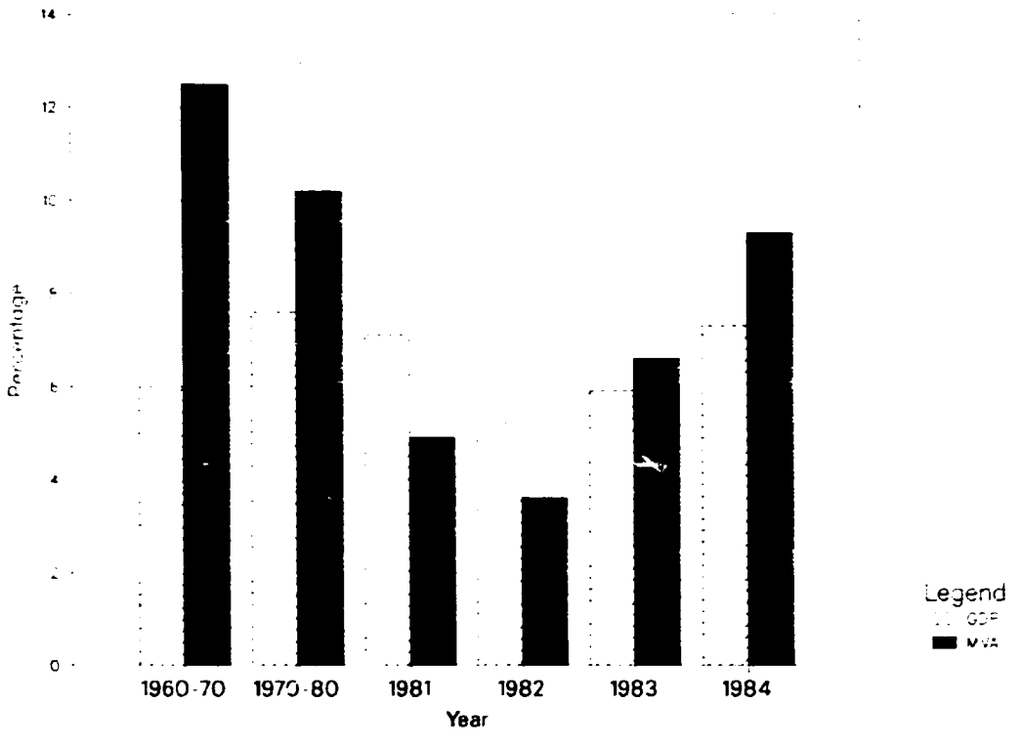
GDP BY ECONOMIC SECTOR, 1960-1984



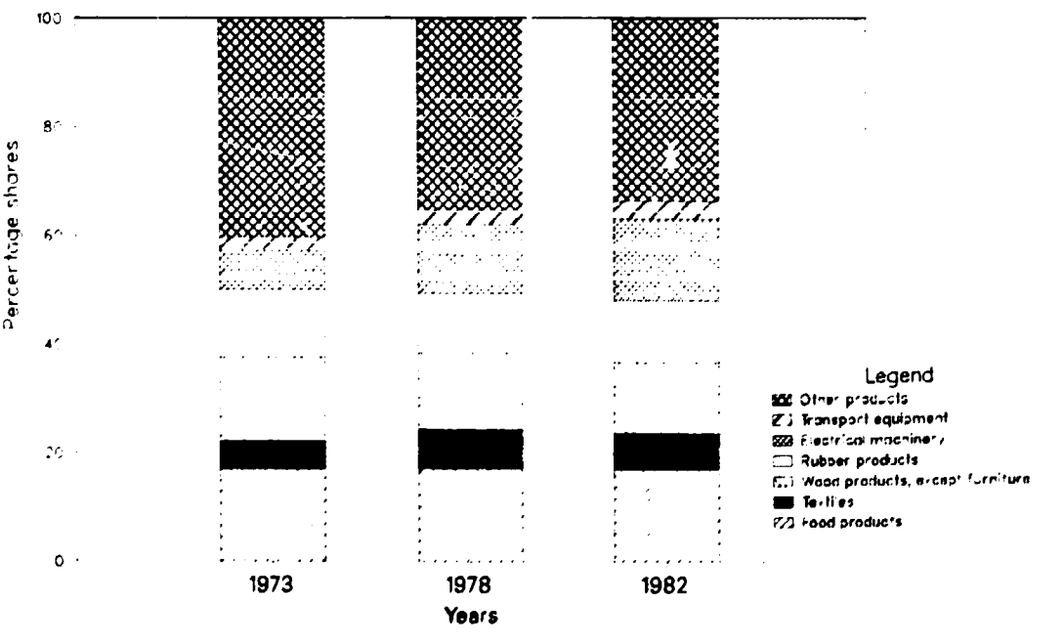
MANUFACTURING VALUE ADDED BY END USE, 1973-1982



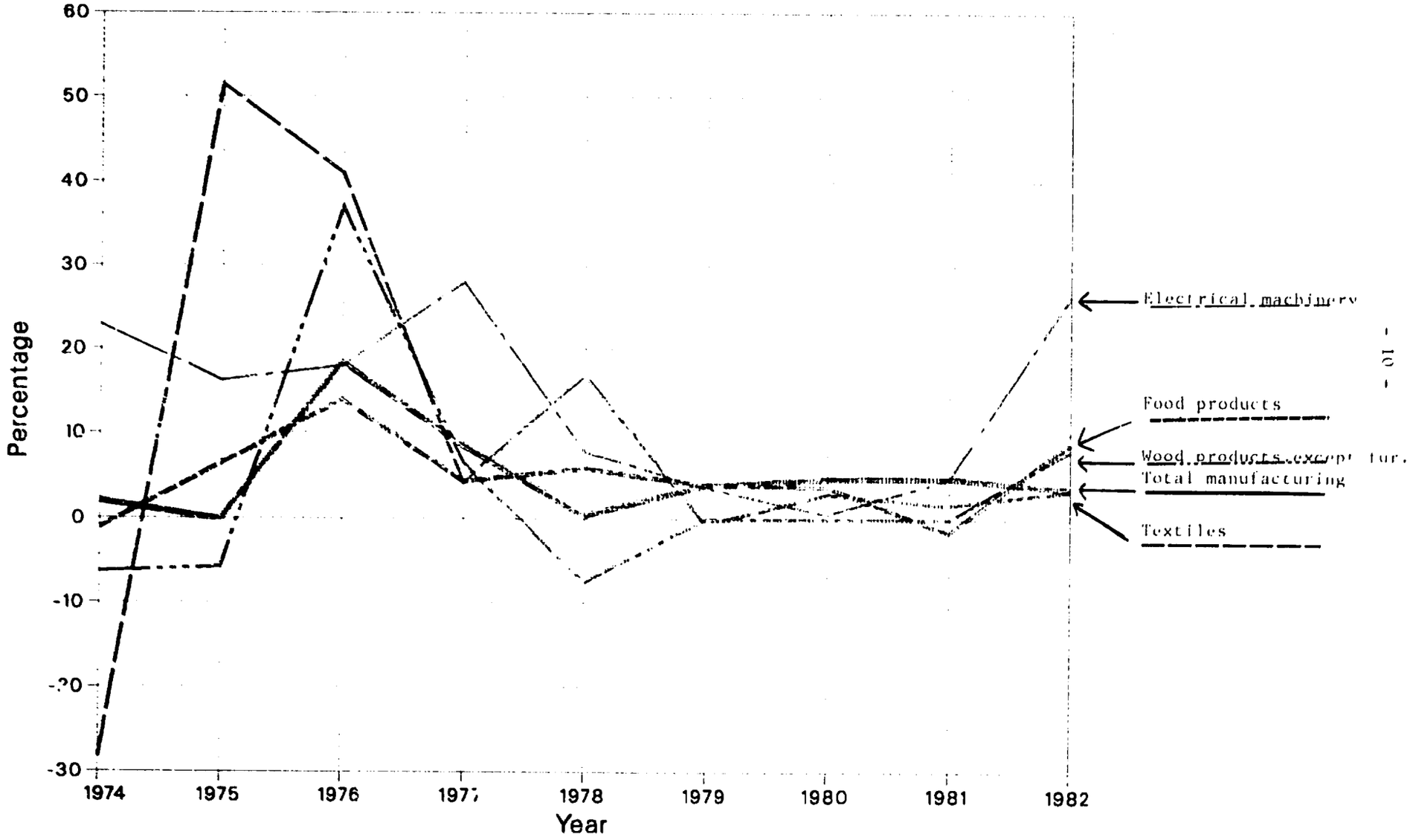
ANNUAL RATES OF GROWTH OF GDP AND MVA, 1960-1984



COMPOSITION OF MVA BY MAIN BRANCHES, 1973,1978 and 1982

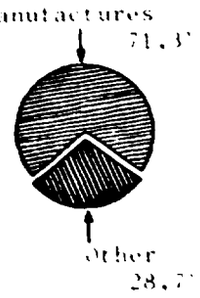


MVA GROWTH OVER PREVIOUS YEAR BY MAIN BRANCHES, 1974-1982

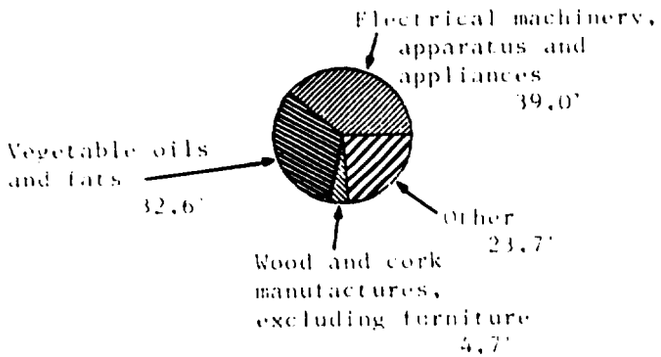


MANUFACTURED EXPORTS AND IMPORTS IN 1982

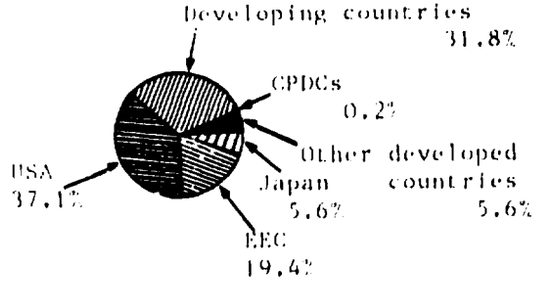
SHARE OF MANUFACTURES IN TOTAL EXPORTS



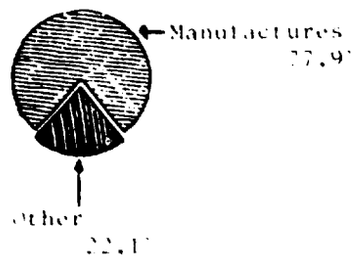
COMPOSITION OF MANUFACTURED EXPORTS



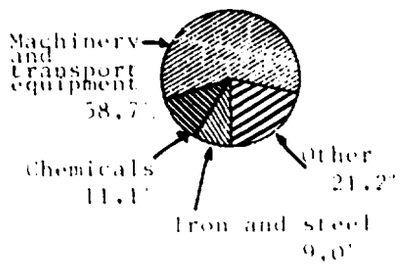
DESTINATION OF MANUFACTURED EXPORTS



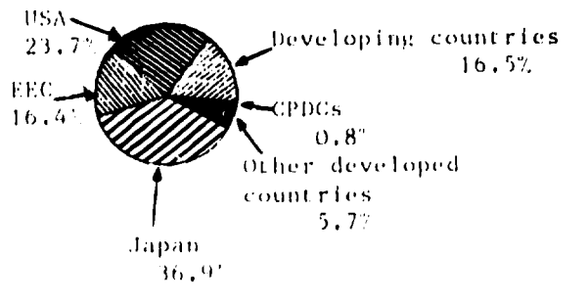
SHARE OF MANUFACTURES IN TOTAL IMPORTS



COMPOSITION OF MANUFACTURED IMPORTS



ORIGIN OF MANUFACTURED IMPORTS



2. STRUCTURE AND PERFORMANCE OF THE MANUFACTURING SECTOR

2.1 Growth and structural change

Table 4 shows the remarkable change in the structure of the Malaysian economy which resulted from a decade of growth of GDP at an annual rate of 8 per cent and of manufacturing at 11 per cent. Between 1970 and 1980, the contribution of the agricultural sector to GDP fell from 29 to 24 per cent, that of services (including construction) rose from 45 to 53 per cent and that of manufacturing from 15.7 to well ever 18 per cent. The change in the structure of employment was no less striking. The share of agriculture fell from 54 to 37 per cent, that of services rose from 35 to 53 per cent and of manufacturing from 9 to 16 per cent. These trends have continued, though very much more slowly in the low-growth years of the early 1980s.

Table 4. Malaysia: Sectoral composition of GDP, 1960-84

(per cent)

	Agriculture		Mining		Manufacturing		Services (including construction)	
	Share of GDP	Employment	Share of GDP	Employment	Share of GDP	Employment	Share of GDP	Employment
1960	29.1		9.4		11.5		50.0	
1965	26.5		9.1		14.1		50.3	
1970	29.2	53.5	10.9	2.6	15.7	8.7	44.8	35.1
1975	27.9	49.3	6.7	2.2	17.5	10.1	48.1	38.4
1976	27.8		4.9		17.4		49.9	
1977	26.4		4.6		18.0		51.0	
1978	25.2		4.7		18.3		51.8	
1979	24.9		4.9		18.4		51.8	
1980	23.8	39.6	4.5	1.7	18.6	15.5	53.1	53.2
1981	23.2		4.1		17.9		54.8	
1982	23.4		4.1		18.2		54.3	
1983	22.0	37.2	4.4	1.4	18.0	15.7	55.6	
1984	21.3a/		4.9a/		18.4a/		55.4a/	

Sources: 1960-75 UNIDO data base; 1976-84 Malaysia, Ministry of Finance, Economic Report, 1984/85.

a/ Estimate.

Growth in the relative importance of the manufacturing sector has been accompanied by considerable change in its internal structure. Table 5 shows that between 1973 and 1982 the share of electrical machinery in total manufacturing value added in West Malaysia had doubled from 7.2 to 15.1 per cent, while wood and rubber products seem to have suffered a marginal decline in their share of MVA. In fact, the chief trend of change during the 1970s was in favour of labour-intensive manufactures for export.[1/] Appendix Table A-22 illustrates structural change indices for 16 manufacturing sub-sectors in West Malaysia.

Table 6 shows that during the decade of the 1970s as a whole, and especially in the latter half of the decade, it was mainly the labour-intensive export industries, which here are defined as including palm oil processing, that experienced high rates of growth (though high rates were also registered by some branches which started from a small base, such as transport equipment). During the early 1980s (Table 7), electronics assembly continued to expand rapidly despite the recession, but other export-oriented industries suffered a setback; in the case of textiles and clothing there was an actual decline in output during the years 1981-83. Construction-related industries, such as cement, did well because of a domestic boom in non-residential (office, etc.) construction while output of vegetable oil processing was sustained by strong domestic demand. No aggregative statistical evidence is as yet available to reflect the heavy industry programme of the Fourth Malaysia Plan.

2.2 Performance and efficiency

The notable performance of Malaysia's manufacturing sector during the 1970s, in terms of growth of both output and exports, may in itself be taken as evidence of relative overall efficiency. Estimates[2/] made some years ago

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1/ A breakdown, by main ISIC category, of gross output and value added in manufacturing for the (industrial census) years 1973, 1979 and 1981 is given in the Statistical Appendix, Tables A-1, A-2, and A-3.

2/ Industrial Development Profile of Malaysia, UNIDO/ICIS.107, 9 April 1979.

Table 5. West Malaysia: Composition of manufacturing value added (at 1975 prices), 1973-1982

(percentages)

Description (ISIC)	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
TOTAL MANUFACTURING(300)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Food products(311)	17.1	16.6	17.6	17.0	16.3	17.2	17.2	17.0	16.1	17.1
Beverages(313)	2.0	2.3	2.2	2.1	2.3	2.7	3.1	3.2	2.8	2.6
Tobacco(314)	3.6	3.9	3.9	3.4	3.4	3.4	3.6	3.4	3.3	3.5
Textiles(321)	5.1	3.6	5.4	6.4	6.2	7.2	6.9	6.7	6.6	6.6
Wearing apparel,except footwear(322)	1.2	0.8	1.2	1.5	1.4	1.7	1.6	1.6	1.5	1.4
Leather products(323)	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Footwear,except rubber or plastic(324)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0
Wood products,except furniture(331)	15.5	14.3	13.5	15.6	15.3	14.1	13.5	12.9	12.4	13.1
Furniture,except metal(332)	1.0	0.9	0.9	1.0	1.0	0.9	0.9	0.8	0.8	0.0
Paper and products(341)	1.0	1.0	0.9	1.1	1.0	1.2	1.3	1.4	1.5	1.4
Printing and publishing(342)	4.9	5.1	5.0	4.7	4.6	0.0	0.0	0.0	0.0	0.0
Industrial chemicals(351)	2.7	2.7	2.3	2.1	1.9	2.2	2.5	2.5	2.5	2.1
Other chemicals(352)	3.5	3.7	3.3	3.2	3.1	3.5	3.8	3.9	3.8	3.2
Petroleum refineries(353)	2.0	1.9	2.0	1.8	1.6	1.6	1.7	1.7	1.7	0.0
Misc. petroleum and coal products(354)	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2
Rubber products(355)	12.5	11.8	12.0	11.5	11.1	11.0	10.7	10.6	11.1	11.4
Plastic products(356)	1.8	1.7	1.7	1.6	1.5	0.0	0.0	0.0	0.0	0.0
Pottery,china,earthenware(361)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4
Glass and products(362)	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.6
Other non-metallic mineral prod.(369)	4.0	4.2	4.3	4.3	4.1	5.1	5.2	5.3	5.9	5.5
Iron and steel(371)	2.7	2.8	2.7	2.4	2.6	3.0	2.8	3.1	2.9	3.0
Non-ferrous metals(372)	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5
Fabricated metal products(381)	4.2	4.5	3.2	3.0	3.1	3.8	3.7	3.9	4.4	4.3
Machinery,except electrical(382)	3.6	3.9	2.7	2.5	2.6	3.3	3.2	3.3	3.8	3.7
Machinery electric(383)	7.2	8.7	10.1	10.1	11.9	12.7	12.7	12.2	12.2	15.1
Transport equipment(384)	2.4	3.2	2.5	2.1	2.3	2.7	2.8	3.6	3.5	3.3
Professional & scientific equipm.(385)	0.3	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.6	0.6
Other manufactured products(390)	0.2	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5
TOTAL MANUFACTURING IN MILLIONS US $	1221	1246	1244	1473	1600	1606	1670	1755	1826	1875

Source: Statistics and Survey Unit, UNIDO.Based on data supplied by the UN Statistical Office, with estimates by the UNIDO Secretariat.

Note: TOTAL MANUFACTURING is the sum of the available components and does not necessarily correspond to ISIC 300 total.

Table 6. Malaysia: Average annual growth of value added by branch of manufacturing, 1971-83
(per cent)

Manufacturing Sub-sector	Average annual growth rate		
	1971-80	1976-80	1981-83
Processed food	4.5	6.9	-0.3
Other foods	n.a.	6.3	4.8
Oils and fats	26.0	15.4	9.1
Beverages and tobacco	6.9	9.5	-3.3
Textiles and clothing	13.3	11.9	-2.6
Sawmills and furniture	8.7	8.6	0.4
Paper and printing	7.6	16.4	6.2
Industrial chemicals	2.0	10.8	-11.6
Chemical products	6.5	9.9	2.9
Petroleum products	3.5	10.4	18.6
Rubber products	5.5	4.4	-3.3
Cement	7.0	10.1	10.7
Other non-metallic products	4.7	15.4	-4.4
Basic metal products	10.3	9.5	3.2
Fabricated metal products	7.2	11.7	3.8
Electrical machinery	10.8	11.0	10.7
Transport equipment	8.6	15.6	4.9
Other manufactures	36.4	13.3	-2.4
Total	11.6	11.3	4.4

Sources: Fourth Malaysia Plan 1981-85; Mid-Term Review of the Fourth Malaysia Plan 1981-85.

Table 7. Peninsular Malaysia: Growth of manufacturing production, 1980-83[a/]
(percentage change over previous year)

	1980	1981	1982	1983
Off-estate processing	3.8	11.4	27.0	-9.3
Food products	4.4	-2.0	-0.4	10.1
Beverages	9.2	-6.9	-2.2	-8.7
Tobacco products	-0.2	1.4	2.4	-2.4
Textiles	2.6	1.7	-4.8	-4.6
Wood products	2.5	5.6	-5.2	20.4
Paper and paper products	12.6	13.1	-5.2	8.4
Rubber products	3.9	9.2	-12.6	-4.1
Chemicals	6.7	3.6	-13.8	6.2
Petroleum products	-2.1	-3.1	-3.4	10.0
Non-metallic mineral products	7.1	15.8	-0.4	5.8
Basic metals	13.9	0.4	7.5	7.1
Metal products	8.9	18.2	-2.1	-1.7
Electrical and electronic products	0.7	4.7	45.8	40.2
Transport equipment	39.0	2.9	-8.7	21.5
All manufacturing industries	6.2	3.3	3.3	3.6

Source: Bank Negara, Quarterly Economic Bulletin, June 1984.

a/ Based on Bank Negara industrial production index for Peninsular Malaysia, 1968 = 100.

of rough indicators of relative unit labour costs in manufacturing in selected comparable countries for 1976 show Malaysian manufacturing to have compared well in international competitiveness with the majority of countries in the list.

Since then, however, Malaysia may have lost some of its comparative cost advantage in labour-intensive industries. Real wages in Malaysian manufacturing rose rapidly during the 1970s, at an average annual rate of 7 per cent. Average labour productivity also rose at a quite respectable rate of about 4 per cent a year. But the net result has been a significant rise in unit labour costs. This is one reason why there have been second thoughts in recent years about the focus on labour-intensive export industries - electronics assembly, textile and clothing - of the industrial development of the 1970s.

Two other reasons have been the vulnerability of these industries to decline in external demand which became apparent in the international recession of the early 1980s, leading to the marked slowdown in growth of industrial production and absolute decline in labour productivity shown in Table 8 for the years 1981 and 1982. The second has been increasing concern that such industrial development, concentrated in free trade zones, had relatively weak linkages with the rest of the economy, essentially creating, as a World Bank report has put it: "value added through direct employment, but not through generating demand for local products and thereby assisting in the deepening and widening of domestic industrial development".1/

There can be no doubt about the effectiveness of the strategy of the 1970s in generating direct employment. During the period 1974-80, employment in manufacturing in Peninsular Malaysia increased at an average annual rate of 7.4 per cent, more than twice as fast as employment in the economy as a whole (3.5 per cent). Over the whole decade of the 1970s employment contributed almost two-thirds to the 11.4 per cent annual growth of output, and labour productivity a little more than one-third, a ratio unusually favourable to employment among developing countries. Indeed, in the second half of the decade, 1975-79, growth of employment appears to have accounted for as much as

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1/ World Bank, Malaysia: Structural Change and Stabilization, November 1983.

Tabel 8. Peninsular Malaysia: Labour productivity in manufacturing, 1976-83

(per cent increase on preceding year)

Year	Production	Employment	Labour productivity
	(1)	(2)	(3)
1976	18.9	9.5	9.4
1977	10.6	6.4	4.2
1978	7.8	9.8	-1.2
1979	9.2	6.3	2.9
1980	8.3	6.2	2.1
1981	3.3	3.9	-0.6
1982	2.0	2.1	-0.1
1983	7.8	3.6	4.2
1984	12.2		
Average 1976-80	11.4	7.4	4.0

Sources: (1) Index of industrial production: World Bank, Malaysia: Structural Change and Stabilization, 1983; Economic Report 1984/85, Ministry of Finance; Mid-Term Review of the Fourth Malaysia Plan 1981-85; Business Asia, 10 May 1985.

(2) Employment: World Bank, Malaysia: Structural Change and Stabilization, 1983; Economic Report 1984/85; ILO Yearbook of Labour Statistics, 1984.

89 per cent of growth of output. It is unlikely that this could have been achieved with less emphasis on labour-intensive industries. But in the recession years, growth of employment declined sharply (though not as much as output) and fell below the rate of growth of the labour force (3.4 per cent). The unemployment rate which had been around 5 per cent in the 1970s rose to 6 per cent in 1983, though it was expected to fall back towards 5 per cent in 1984 as industrial production recovered. The recovery in 1983 may, in fact, have been more substantial than suggested by the 3.6 per cent figure in Table 8 (column 2), which is based on the old index of industrial production, with 1968 weights. A revised index, with 1981 weights which more adequately reflect the changed structure of Malaysian manufacturing industry, especially the leading growth industries, puts the increase in 1983 at 6.6 per cent.

Malaysia's employment problems are less serious than those of some of her ASEAN partner countries, especially Indonesia and the Philippines, because there is little endemic rural and urban underemployment; indeed Malaysian

agriculture has been suffering from intermittent labour shortage. But with an annual growth rate of the labour force projected at 3 per cent through the 1980s the burden of job creation on the two leading growth sectors, manufacturing and construction, remains considerable, especially if employment in the civil service, and in the public sector generally, expands more slowly. If current plans for a greater emphasis on heavy industry materialize, growth of output will need to be so much more rapid to generate enough jobs.

2.3 Exports and imports of manufactures

Table 9 summarizes the strong growth of Malaysian exports during the 1970s and early 1980s. Manufactured exports maintained an average annual rate of growth through the decade of almost 30 per cent and thus increased their share in total exports from 12 to 22 per cent, even though total exports were themselves growing at a rate of over 20 per cent a year. During the early 1980s, the rate of growth of total exports slowed down - with an absolute decline in 1981 - before rising sharply by 17 per cent in each of the years 1983 and 1984. A further increase by 8 per cent is projected[1/] for 1985. But this lower growth rate is chiefly due to weak world markets for Malaysia's

Table 9. Malaysia: Exports of principal commodities, 1971-84

(M$ billion)

	1971	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984a/
Rubber	1.5	2.0	3.1	3.4	3.6	4.5	4.6	3.7	2.7	3.7	3.8
Tin	0.9	1.2	1.5	1.7	2.0	2.3	2.5	2.1	1.5	1.7	1.2
Timber	0.8	1.1	2.4	2.4	2.5	4.2	4.0	3.6	4.6	4.0	4.2
Palm oil	0.4	1.3	1.2	1.8	1.9	2.5	2.6	2.8	2.8	3.0	4.7
Petroleum	0.4	0.9	1.7	2.0	2.3	4.2	6.7	6.9	7.7	7.9	8.5
Manufactures	0.6	2.0	2.5	2.8	3.6	4.8	6.1	6.4	7.4	9.6	11.6
Other	0.4	0.7	1.0	1.1	1.2	1.7	1.7	1.5	1.6	2.6	4.3
Total	5.0	9.2	13.4	15.0	17.1	24.2	28.2	27.1	28.1	32.8	38.3

Sources: World Bank, Malaysia: Structural Change and Stabilization, 1983; Ministry of Finance, Economic Report 1984/85.

a/ Estimates.

1/ Ministry of Finance, Economic Report, 1984/85.

traditional exports, especially rubber, tin and timber. Exports of manufactures continued to rise and increased their share to over 30 per cent in 1984.

Table 10 gives a commodity group breakdown of exports of manufactures. It shows that during the 1970s the pace was set by two categories - textiles and clothing and especially 'electrical machinery' - which increased their share at the expense of all other categories. In the following years 1980-84, the share of textiles and clothing declined while there was some gain in the share of chemical products and transport equipment and the dominance of electrical machinery increased further, so that already by 1982 it accounted for more than half of Malaysian exports of manufactures. The figures attest

Table 10. Malaysia: Exports of manufactures, by commodity group, 1970-84

(per cent)

	1970	1977	1978	1979	1980	1981	1982	1983	1984[a/]
Food, beverages, tobacco	18	10	8	7	9	9	7	6	6
Textiles, clothing	7	12	13	12	13	12	11	10	9
Wood products	14	11	10	10	8	7	6	5	4
Rubber products	3	2	2	2	1	1	1	1	1
Chemicals and petroleum products	32	7	5	5	6	7	7	9	12
Manufacture of metals	4	3	3	3	4	3	3	4	3
Electrical machinery etc.	3	31	43	46	47	47	52	52	52
Other machinery and transport equipment	11	6	7	6	5	7	7	7	7
Other	8	18	10	9	8	6	6	6	6
Total	100	100	100	100	100	100	100	100	100

Sources: Ministry of Finance, Economic Report 1984/5; Mid-Term Review of the Fourth Malaysia Plan 1981-85.

a/ Estimates.

to the resilience of the electronics assembly industry which proved relatively immune to declining demand and protectionism overseas because it is largely operated by multinationals on an intra-firm basis. But they also demonstrate the high degree of specialization, and consequently narrow base, of Malaysian exports of manufactures.

Table 11 presents a breakdown of Malaysian exports of manufactures by destination (but the inclusion of palm oil exports distorts the picture as

Table 11. Malaysia: Exports of manufactures, selected products by destination, 1982

SITC		Total	of which to (per cent)			
		US$ million	Developing countries	USA	EEC	Japan
243	Wood shaped or simply worked	499	39	2	43	5
421/2	Vegetable oils	1,333	59	6	17	5
5	Chemicals	101	65	15	7	5
63	Wood products (excl. furniture)	193	55	10	18	11
65	Textiles	135	42	4	20	4
72	Electrical machinery, etc	1,593	22	53	17	5
84	Clothing	174	7	32	42	2
	Other	1,690				
	Total	5,718	38	20	25	8

Source: UNIDO data base.

compared with 'manufactures' covered in other Tables). Somewhat surprisingly, nearly two-fifths of Malaysian exports of manufactures were in 1982 sold to other developing countries, including more than one-half of exports of chemicals, vegetable oils and wood products (other than furniture). The United States was a small market, except for electronic assembly products (where the US market accounted for more than half) and textiles. The EEC countries collectively provided the largest market for garments and timber. Japan accounted for less than 10 per cent of the market for Malaysian exports of manufactures, in total and of all major product groups except wood products.

Throughout the 1970s, Malaysia enjoyed substantial surpluses in her balance of merchandise trade, although these were largely offset by a growing

invisibles deficit. But in 1981 and 1982 there was a deficit even on merchandise account and the deficit on current account reached the large figures of M$ 5.6 billion in 1981 and M$ 7.6 billion in 1982. The reason was partly the effect of the international recession on Malaysia's exports but mainly a continuing steep rise in imports of both goods and services. The surplus in merchandise trade has been regained from 1983 (and a M$ 6 billion surplus achieved in 1984) and it has been possible to successively lower the deficit on current acount to M$ 7.1 billion in 1983 and M$ 5.2 billion in 1984. A further diminishing of the current account deficit is expected in 1985 when a quite substantial trade surplus of nearly M$ 6 billion is foreseen.[1/]

Table 12 shows the trend in merchandise imports during the period 1971-80. Throughout the decade, imports increased at an average annual rate of 20 per cent but the rate of growth rose to 22 per cent in the second half of the decade. The fastest growing categories were industrial raw and intermediate materials (especially mineral fuels and chemicals) and capital

Table 12. Malaysia: Imports by commodity group, 1971-80
(per cent)

Commodity group	Shares			Growth (average)	
	1971	1975	1980	1971-75	1975-80
Food and live animals	16.6	16.4	10.5	17.6	11.7
Beverages and tobacco	2.5	1.3	0.9	2.4	13.1
Crude materials (inedible)	6.0	6.5	4.5	20.1	15.9
Mineral fuels	13.1	12.0	15.2	15.3	35.1
Other oil and fats	0.5	0.3	0.1	2.6	2.7
Chemicals	7.7	8.3	8.6	20.1	24.0
Machinery and transport equipment	30.2	32.5	38.8	20.1	28.9
Manufactures (classified by materials)	17.6	16.3	16.4	15.5	25.4
Miscellaneous manufactures	4.4	5.5	4.2	24.3	16.0
Other	1.2	0.8	0.8	4.4	24.0
Total	100.0	100.0	100.0	18.0	22.0
M$ million	4,416	8,530	23,451		

Source: World Bank, Malaysia: Structural Change and Stabilization, 1983.

1/ Ministry of Finance, Economic Report 1984/85.

goods, especially machinery and transport equipment, imports of which rose at an annual rate of 30 per cent in the years 1975-80. Between 1971 and 1980 the share of this category in total imports had risen from 30 to 39 per cent. In the following years, the rate of growth of merchandise imports slowed down somewhat, and the shares of the major categories did not change much (except for a decline in the share of mineral fuels as Malaysia's domestic production of crude oil increased). But the invisibles deficit rose further, to M$ 8.5 billion in 1983 and M$ 9.9 billion in 1984, largely because of rapidly growing payments in investment income and freight and insurance. Net payments of investment income more than doubled from M$ 1.8 billion in 1981 to M$ 4.8 billion in 1984.

The development of Malaysia's imports of goods and services helps explain the policy decision in the Fourth Malaysia Plan to shift the emphasis in industrial development towards heavy industry, especially import substitution in intermediate and capital goods. But it also demonstrates the risks entailed in such a policy in the short run. The short-run effect of the emphasis on heavy industry was to accelerate the rate of growth of imports of capital goods, while the concomitant heavy overseas borrowing quickly added to the debt service burden on the balance of payments.

2.4 Ownership and investment patterns

A major objective of national policy in Malaysia incorporated in the New Economic Policy launched in 1970 is to correct what are perceived as wide imbalances in income, employment and ownership between the bumiputra majority and other Malaysian residents (chiefly ethnic Chinese) and foreigners. Table 13 shows that when the New Economic Policy was launched in 1970, bumiputra ownership accounted for only 2.4 per cent of share capital in the corporate sector. Through a variety of measures, including restructuring of foreign companies on the initiative of the Foreign Investment Committee and the operations of special institutions such as the National Corporation (PERNAS) and the State Economic Development Corporations, there has been a substantial increase in ownership of shares by and on behalf of bumiputra since then.

Table 13. Malaysia: Ownership of share capital in corporate sector, 1970-83

(per cent)

	1970[a/]	1975	1980	1983
Malaysian residents				
Bumiputra individuals and trust agenies	2.4	7.8	12.5	18.7
Individuals	1.6	2.3	5.8	7.6
Trust agencies	0.8	5.5	6.7	11.1
Other Malaysian residents	34.3	37.3	44.6	47.7
Chinese	27.2	27.9		
Indian	1.1	1.2		
Other[b/]	6.0	8.2		
Foreign residents	63.3	54.9	42.9	33.6

Sources: Third Malaysia Plan 1976-80; Mid-Term Review of the Fourth Malaysia Plan 1981-85.

a/ Peninsular Malaysia only.
b/ Including nominee.

The Table suggests that bumiputra ownership reached 18.7 per cent in 1983, and that this increase was entirely at the expense of foreign ownership, while the share of 'other Malaysian residents' actually increased. But this may understate the growth of bumiputra ownership because the latter category includes nominee company holdings which are believed to represent substantial bumiputra interests. The figures therefore do not show conclusively what has happened to the share of Chinese and other non-bumiputra individuals. No official statistics are available which give a breakdown of ownership in manufacturing companies. According to one unofficial source bumiputra has taken up more than 15 per cent of manufacturing capital.

While Malaysia has since 1970 pursued a policy of reducing the extent of foreign ownership and control of industrial and other activity, with a target ceiling of 30 per cent by 1990, it remains government policy to attract foreign direct investment by a variety of incentives and there is evidence even of some relaxation of guidelines to encourage foreign participation in major resource-based industrial projects. Table 14 shows foreign investment in approved projects, by country and industry in 1982 and 1983 and cumulative

Table 14. Foreign investment in approved projects, by country and industry, 1978-83

(M$ million)

		Cumulative total 1978-83	1982	1983
A.	Country			
	Japan	457.3	139.9	37.8
	United Kingdom	337.5	80.2	70.2
	Singapore	179.2	9.4	32.2
	USA	168.5	22.9	22.1
	Australia	145.4	62.2	7.7
	Hong Kong	125.9	4.9	49.6
	Germany, F.R.	92.9	22.7	5.3
	Korea	92.6	0.3	1.1
	Thailand	35.9	26.7	2.8
	Philippines	31.1	27.3	1.1
	Indonesia	29.6	28.2	0.2
	Other	641.5	102.9	163.4
	Total	2,273.6	527.6	329.1
B.	Industry			
	Chemicals and products	376.9	301.1	13.8
	Non-metallic products	286.2	13.0	27.5
	Electrical machinery, etc.	278.5	24.1	43.8
	Petroleum and coal	271.9	0.8	54.5
	Food manufacture	163.9	26.9	5.0
	Basic metals	149.2	77.2	7.4
	Fabricated metals	103.6	10.3	5.0
	Rubber and products	91.8	9.7	12.0
	Transport equipment	81.7	5.4	22.0
	Textiles and products	66.5	5.3	6.8
	Paper and printing, etc	59.6	0.8	1.0
	Other	343.6	53.0	130.3
	Total	2,273.6	527.6	329.1

Source: Ministry of Finance, Economic Report 1984/85.

totals for the years 1978-83.[1/] The range of countries which supply direct investment capital to Malaysia is very wide, as much as one-quarter being accounted for by the residual category of 'others'. A full list shows 25 source countries. By far the largest (in terms of cumulative totals) has been Japan, followed by the United Kingdom, Singapore, USA and Australia and Hong

1/ See also Table A-20 of the Statistical Appendix.

Kong. But most recently, the other ASEAN countries have also figured significantly.

The distribution by industry is not very informative because the highly aggregated categories hide some large lumpy investments and do not pinpoint particular industries. But it is apparent that petroleum and electronics assembly, as well as chemicals and non-metallic products (cement, glass, etc.) have been the most important fields. It should be noted that direct foreign investment has made only a marginal contribution to total gross fixed capital formation. The total for 1983 of M$ 0.3 billion compares with M$ 13.2 billion of private and M$ 9.5 billion public investment. Its contribution to management and technology may of course have been as significant as the capital brought into the country.

2.5 Size and geographical distribution of manufacturing enterprises

As in other developing countries, the economy of Malaysia retains a measure of dualism, between a modern and a traditional sector. But in Malaysian manufacturing industry the medium- and large-scale modern plants have come to dominate to a greater extent than in comparable countries of Asia. An industrial survey conducted in 1975 in Peninsular Malaysia found 16 per cent of establishments with more than 100 employees and nearly 50 per cent with 20-99 employees. These figures understate the importance of small-scale industry since the survey omitted firms with fewer than 10 (or in some cases 5) employees in some industries. Small-scale and cottage industries undoubtedly remain more important, particularly in East Malaysia.

The relative predominance of modern medium- and large-scale industries in Peninsular Malaysia is confirmed by the data in Table 15. The fact that only one industry (furniture) is shown as having fewer than 10 employees per firm is probably misleading, for similar statistical reasons as in the 1975 survey. But it is noteworthy that only six out of 29 industry groups are shown to consist of firms averaging fewer than 20 employees each. As would be expected, four of these are in the category of 'labour-intensive' industries (proxied by a low value added per employee); but one (food products) is in the 'capital-intensive' category and one (fabricated metals) in the intermediate category. More surprising is the fact that the industries consisting of large

Table 15. Malaysia: Manufacturing industries by value added per employee and number of employees per establishment, 1973 and 1979

		Value added per employee M$ '000		Number of persons per establishment
		1973	1979	1973
A.	Mainly capital intensive (M$ 18,000 +)			
	Petroleum refining	201.5	401.7	122
	Industrial chemicals	21.3	40.2	53
	Beverages	20.2	33.0	43
	Petroleum and coal products	20.1	30.0	20
	Food products	10.2	25.5	14
	Tobacco	18.9	26.5	54
	Other chemicals	17.1	24.7	26
	Rubber products	9.2	21.8	45
	Glass and products	7.9	19.5	45
	Non-ferrous metals	14.2	18.6	78
	Iron and steel	12.6	18.1	35
	Non-metallic minerals	9.8	18.0	34
B.	Mainly intermediate (M$ 13-17,000)			
	Transport equipment	7.3	15.9	51
	Machinery (except electrical)	6.7	15.1	17
	Fabricated metal product	6.5	13.8	13
	Printing and publishing	8.2	13.7	31
	Wood products (except furniture)	7.6	13.2	42
C.	Mainly labour intensive (M$ 13,000)			
	Professional & scientific equipment	5.9	12.5	66
	Machinery electric	7.4	11.6	237
	Paper and products	4.9	11.0	26
	Textiles	4.7	10.5	95
	Plastic products	5.1	9.9	31
	Pottery, china, etc	6.3	9.4	27
	Other manufactures	4.5	8.8	16
	Furniture	3.7	6.6	8
	Footwear	3.4	6.4	12
	Leather	4.0	5.6	16
	Garments	2.9	5.7	50

Sources: Value added per employee: UNIDO data base;
Number of persons per establishment: Industrial Development Profile of Malaysia, 1979, (UNIDO/ICIS.107).

firms (more than 50 employees) are evenly divided between the 'capital-intensive' and 'labour-intensive' categories. In effect, the labour-intensive sector appears to exhibit (or at any rate to have exhibited in 1973) a kind of dualism: four industries (electronics assembly, textiles, garments and scientific instruments) typically consisted of large firms, while four other (furniture, footwear, leather and others) typically of small firms.

It may be noted in passing that, as shown in columns 1 and 2 in Table 15, there was remarkably little change in the ranking of industries by value added per employee between 1973 and 1979. The only industries that moved from one of the three categories to another were glass and fabricated metals which moved to a higher category and printing and (interestingly) electrical machinery which moved to a lower category.

Economic activity, and manufacturing in particular, tend in most countries to be concentrated in relatively developed regions of the country, and especially near the national capital or other urban centres. In the case of Malaysia, this tendency is accentuated by the disparity in economic development between Peninsular and East Malaysia. Table 16 illustrates this disparity by means of a few indicators. In 1983, East Malaysia had 17 per

Table 16. Malaysia: Geographical distribution of economic activity, 1983

(per cent)

	Peninsular Malaysia			East Malaysia	Malaysia
	Selangor, Federal Territory	Other	Total		
Population	18.9	64.0	82.9	17.1	100.0
GDP (based on 1970 prices)	30.2	56.2	86.4	13.6	100.0
of which					
Agriculture	8.5	70.3	78.8	21.2	100.0
Mining	14.9	50.2	65.1	34.9	100.0
Manufacturing	40.0	56.3	96.3	3.7	100.0

Source: Mid-Term Review of the Fourth Malaysia Plan 1981-85.

cent of the country's population, but contributed only 14 per cent to its GDP and less than 4 per cent to its manufacturing value added. Its economic strength, such as it was, lay in agriculture and forestry and in minerals (chiefly oil). The Table also shows the degree to which economic and manufacturing activity within Peninsular Malaysia is concentrated in and around the national capital. The Federal Territory and Selangor together accounted for only 19 per cent of the country's population, but for 30 per cent of GDP and 40 per cent of manufacturing value added; by contrast, the rest of Peninsular Malaysia had 64 per cent of the country's population, but contributed only 56 per cent to GDP and 56 to manufacturing value added.

Table 17 gives some indication of the distribution of manufacturing employment between Peninsular and East Malaysia.[1/] The only industries in which East Malaysia's share in manufacturing employment exceeded its share in total population were wood products (saw milling etc.) and beverages; the share was close to the population share in two other industries, printing and transport equipment. It was zero or negligible in the major growth industries, such as electrical machinery, textiles, garments, rubber products and chemicals.

Considerable efforts have been made in recent years to promote a better geographic spread of Malaysian manufacturing, especially through dispersion of industrial estates, new investment in resource-based projects and improved infrastructural facilities. One example is the major new port with modern container facilities which has just been completed in Kuantan on the East Coast of Peninsular Malaysia. However, the port is little used due to the as yet limited industrial activity in the area.

Table 18 gives some indication of this policy emphasis. It shows that East Malaysia has been favoured both in the allocation of industrial estates and in approved investment projects, and that to a less extent the same is true of the less developed states of Peninsular Malaysia.

1/ See also Tables A-4, A-5 and A-6 in the Statistical Appendix.

Table 17. Malaysia: Regional distribution of manufacturing employment by industry, 1979
('000 persons)

	Peninsular Malaysia	East Malaysia
Food products	51.4	4.8
Beverages	5.0	1.0
Tobacco	6.6	..
Textiles	37.3	..
Garments	16.1	..
Leather products	0.9	0.2
Footwear	2.2	..
Wood products	50.5	13.9
Furniture	7.0	1.0
Paper and products	5.8	..
Printing and publishing	17.6	2.6
Industrial chemical	4.4	0.1
Other chemicals	9.4	0.1
Petroleum refining	0.6	0.1
Petroleum and coal products	0.1	..
Rubber products	30.1	1.1
Plastic products	13.0	0.5
Pottery, china, etc.	1.7	0.1
Glass and products	2.2	..
Other non-metallic mineral	15.3	1.7
Iron and steel	8.0	0.1
Non-ferrous metals	1.4	..
Fabricated metal products	18.6	1.5
Non-electrical machinery	13.8	0.4
Electrical machinery	72.7	..
Transport equipment	15.0	2.3
Professional and scientific equipment	4.0	..
Other	4.0	0.2
Total	414.7	32.0

Source: UNIDO data base.

Table 18. Malaysia: Geographical distribution of industrial estates and approved projects, 1980-83

(per cent)

	Peninsular Malaysia			East Malaysia	Malaysia
	Selangor, Federal Territory	Other	Total		
Industrial estates (allocated area)					
1980	28.8	59.0	87.8	12.2	100.0
1983	21.5	64.3	85.8	14.2	100.0
Approved projects (proposed investment)					
Cummulative 1981-83	17.1	57.1	74.2	25.8	100.0

Source: Mid-Term Review of the Fourth Malaysia Plan 1981-85.

2.6 Recent development and prospects

Malaysian industrial development is at present in a stage of transition. After a decade of very rapid growth led by labour-intensive export industries, the early 1980s demonstrated the vulnerability to external events of such a narrowly-based industrial sector. But the first reaction to this in the Fourth Malaysia Plan of trying to broaden the industrial base by an ambitious heavy industry programme has also proved to be difficult. The burden on the balance of payments of steeply rising imports and external debt service became unsustainable and led to further reconsideration of industrial strategy in the 1984 Mid-Term Review of the Plan.

The new strategy continues to place emphasis on the national objectives of the New Economic Policy of 1970, though the targets for bumiputra ownership have been revised marginally downward. It also continues to pursue a better regional balance of manufacturing activity through dispersal. The new thrust of policy takes two main forms. On the one hand, a stronger focus on industrial development which, even if relatively capital-intensive, takes

advantage of Malaysia's natural resources. On the other hand, 'privatisation', a conscious attempt to reduce the relative size of the public sector and to promote a new relationship between Government and business, is strongly influenced by what is perceived as the Japan (and Republic of Korea) 'model'.

Of the major heavy-industry projects in the Fourth Plan, the plan for a national car (to be produced by a joint venture between HICOM and Mitsubishi) is well under way; the first units are to be produced by July 1985. Other products likely to be confirmed include several large decentralized resource-based projects, such as a large cement plant on the island of Langkawi, a sponge-iron plant in Trengganu, and in Sabah a second sponge-iron plant and a methanol plant (both based on natural gas) and a paper and pulp mill. But a number of other large projects are being reconsidered and may be shelved or at least deferred. They include a second paper and pulp mill, an engineering complex, a steel pipe plant and cold rolling mill, a refinery and a petrochemical plant.

A conviction has spread among policy-makers that the public sector has been allowed to grow too large, with consequent bureaucratisation, excessive financial burden of subsidies and taxes, and stifling of private initiative and competition. Part of the answer, spelled out in the Mid-Term Review, is seen to be 'privatisation', the gradual transfer to private ownership and management of such public enterprises as railways, ports, airlines, telecommunications and other infrastructure services, such as car parks and housing schemes. Two other areas, education and health, are being examined for the potential of selective privatisation.

Another part of the answer is to promote closer co-operation between Government and business, sometimes epitomized by slogans such as 'Look East' and 'Malaysia Inc'. One element in this thinking is an interest in the establishment of Malaysian trading companies to handle export promotion more efficiently, on the model of the Japanese sogo shosha. How, and how far, these ideas will impinge on Malaysia's manufacturing sector and industrial development remains to be seen.

During the last two years the Malaysian economy has benefited both from policy adjustment at home and recovery abroad. Growth of GDP recovered to about 5.9 per cent in 1983 and to 7.3 per cent in 1984. Manufacturing production, on the basis of the revised (1981=100) index, rose by 12.7 per cent in 1983, and by 11.9 per cent in 1984 (est.). Exports were expected to show a growth rate of more than 19 per cent in 1984, yielding, in conjunction with much more restrained growth of imports, a surplus of merchandise trade of about M$ 6.3 billion, a marked improvement on the deficit in 1982. But the invisibles deficit continues to grow. The prospects for 1985 clearly depend greatly on whether rapid economic recovery in the USA is sustained and followed by vigorous recovery also in other OECD areas.

3. PLANS, RESOURCES AND INSTITUTIONS FOR INDUSTRIAL DEVELOPMENT

3.1 Industrial development plans, strategies and policies

Characterized by a favourable resource endowment, and an open economy with a relatively large share of foreign capital, the first stage of Malaysian industrialization was centered around the exploitation of its natural resources through processing activities. Import substitution-based industrial development was promoted by means of relative moderate tariff protection during the 1960s and resulted in the building up of new and diversified production lines, particularly consumer goods. From the late 1960s rising emphasis was given to export diversification and export expansion with the development of secondary stage processing, textiles and electronic products industries. The main policy instruments were a rather liberal set of incentives, including special export incentives under the Investment Incentives Act of 1968, (and subsequent amendments) and a rapid development of industrial estates, including export processing zones, particularly in the less developed areas of the country.

Regional imbalances in the distribution of industrial investment and growing disparities in community ownership patterns induced the Government to formulate in 1970 a new long-term economic policy, the New Economic Policy (NEP). In the NEP, industrial development was expected to promote national unity through a two-pronged strategy of: (i) reducing poverty by raising income levels and increasing employment opportunities for all Malaysians; and (ii) accelerating the process of restructuring Malaysian society so as to reduce and eventually eliminate the identification of ethnic groups with economic functions.

The Outline Perspective Plan 1970-90 presented the broad socio-economic framework within which the objectives of the NEP were being pursued. The objectives and principles of the NEP may be summarized as follows:

(i) Achievement of rapid economic growth and the removal of economic imbalances among the ethnic groups within the country and between Malaysian and foreigners;

(ii) A long-term target was set, whereby ownership in the corporate sector would be 70 per cent Malaysian (including 30 per cent bumiputra) and 30 per cent foreign by 1990;

(iii) Present imbalances in the ownership of equity in individual enterprises would be corrected mainly through growth;

(iv) In the development of the industrial sector there would be a need to import technology, management expertise as well as to obtain assistance in the establishment of export outlets, particularly through foreign participation;

(v) Maximum benefit should accrue to Malaysians when industrial projects depend greatly on the domestic market or where the project involves extraction and primary processing of non-renewable domestic resources.

The strategy followed has been to link a socio-economic policy of regional distribution with a long-term maximization of national growth. The strategy encompasses policies pertaining to decentralization of industry, regional dispersal of manufacturing activities and the promotion of local small- and medium-scale industries.

The Industrial Co-ordination Act of 1975 (and subsequent amendments) was enacted to provide the legal framework within which the private sector was encouraged to develop manufacturing industries under the NEP. The main instruments developed for carrying out this strategy, administered by the Malaysian Industrial Development Authority (MIDA) and the State Economic Development Corporations (SEDCs), consisted of a set of investment incentives under the Investment Incentives Act of 1968 and subsequent amendments. Within the general system of industrial incentives (pioneer status, investment tax credit, labour utilization relief) an additional year of the tax holiday or additional 5 per cent of investment tax credit could be granted if projects were located in "designated development areas". Other incentives include an export refinancing facility and special incentives for research and development, training of manpower and for small-scale businesses.

Thus, in the Third Malaysia Plan 1975-80 continued emphasis was laid on rapid industrial growth and the development of labour-intensive export-oriented industries while the incentive system was directed towards private manufacturing sector. The launching of the Fourth Malaysia Plan 1981-85 signalled a major policy shift in so far as it included an active promotion by the Government of a programme of heavy industries development through public sector investment. This was necessitated by: (1) the need to create new domestic industries; (2) the attention focused on the importance of

strong backward and forward linkages; (3) Government involvement in huge investments; (4) and the potential of heavy industries to create and absorb structural change, particularly those stemming from the application of new technologies. The main project was the Heavy Industries Corporation (HICOM). However, the Government also initiated direct public sector participation in a number of other industrial ventures, through bumiputra institutions such as the National Corporations (PERNAS) and MARA[1/] as well as State Economic Development Corporations with the basic aim that such enterprises be ultimately turned over to individual bumiputra ownership and management.

The heavy industries were to include cement plants, sponge iron plants, a cold rolling mill, a methanol plant, an ammonia-urea plant, a pulp and paper plant, a petro-chemical complex, an automobile plant and energy related projects to service these industries. Linkages to the domestic economy was to be generated, especially through the utilization of natural resources and saving of foreign exchange. The heavy industries, particularly basic metal and engineering industries, were to provide the basis for developing an indigenous technology and the development and acquisition of skills which could be utilized in other industries. The development of the large heavy industries would also provide opportunities for developing skil' ; and capacities for managing large-scale industrial establishments.

In order to maximize benefits from the development of heavy industries the links with supportive industries, including small-scale industries, would be programmed. The location and growth of some of these industries in some of the less developed states would help raise the growth and income of these states. As noted in the preceeding chapter, the schedule for the implementation of the heavy industries programme as given in the Fourth Plan has been obstructed somewhat in the light of the economic recession.

In parallel with the heavy industries programme, the export promotion strategy was reinforced during the Fourth Plan in the light of the constraints imposed by the limited domestic market. Efforts were made to make import-substitution industries more competitive and re-oriented towards exports. Malaysia's own trading companies of Japanese model (sogo shosha)

1/ Majlis Amanah Ra'ayat (Council of Trust for the Indigenous People).

were to assist in the marketing of the country's manufactured exports. The trading companies would also be major contributors in acquiring market intelligence and information on export markets.

In March 1984, in the Mid-Term Review of the Fourth Malaysia Plan it was argued that a shift in the Government's and the private sector's approach to promoting manufactured exports on a large-scale would be necessary for effective export promotion and export-led growth. This would require a greater Government involvement in promoting the country's manufactured exports. The importance of promoting the supporting services for assisting the growth of trade, especially for freight and insurance, was emphasized. The Ministry of Trade and Industry would develop specialization on exports; the private sector would be encouraged to become more aggressive in seeking new markets and to depend less on intermediaries.

While the strong emphasis on export-led growth for manufacturing represented a reinforement of prevailing strategy, opportunities for selectively promoting import-substitution industries would continue to be sought. The Mid-Term Review, envisaged that " a second round of import substitution" would significantly contribute towards strengthening the resilience of the manufacturing sector. The development of resource-based industries, particularly those using rubber, wood, palm oil and petroleum-based products, were accorded high priority.

For charting out in detail the directions of growth for manufacturing industries for the forthcoming 10-year period, an Industrial Master Plan is being prepared by a research team at MIDA to which technical assistance is provided by UNIDO. The Master Plan is intended to produce two sets of outputs: Firstly, industrial sectoral development plans consisting of specific development objectives, strategies and policy programmes for each of the major manufacturing sectors;[1/] and secondly, a set of special study reports on supporting development policies and issues such as resource assessment; linkage effects; industrial institutional infrastructure; industrial

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1/ The sectoral studies cover following industries: food processing, palm oil-based, rubber-based, textiles, wood-based, building materials, petrochemicals/chemicals, pharmaceuticals, ferrous metals, non-ferrous metals, machinery, electronics, automotive and shipbuilding.

incentive policies;[1/] industrial R and D policies; industrial manpower assessment and development strategy. The approach paper to the Master Plan is to be completed during 1985. It is expected to provide the basis for a blue print and agenda for action to be incorporated in the policies, strategies and programmes of the Fifth Malaysia Plan 1986-90. The policy agenda is expected to include far-reaching changes in industrial incentives, investment guidelines, foreign equity participation rules and foreign investment guarantees.

3.2 Natural resources for industrial development

(i) Agricultural resources

Malaysia is rich in agricultural resources. Although export earnings are concentrated on a few crops, the country's agricultural base is well diversified. Table 19 shows the production of major agricultural commodities and products during 1980-84.

(a) Natural rubber

Malaysia has long been the world's leading producer of natural rubber; its output during the last few years has been around 1.5 million tons, which is about 40 per cent of world production. Intensive programmes of replanting with high yielding trees are continuously being implemented. New processes and techniques are being developed for the production of the high quality Standard Malaysian Rubber (SMR) through the joint efforts of the Rubber Research Institute of Malaysia (RRIM) and the Malaysian Rubber Producers Research Association (MRPRA). Active research is also being carried out in respect of the end-uses of rubber and wood. The consumption of rubber by the domestic tyre industry and other manufacturers of rubber products reached an estimated 60,000 tons in 1982. It is envisaged that domestic consumption will rise to 300,000 tons annually in the 1990s. Achievement to date indicates that Malaysia has the potential and capability to expand and diversity its rubber-based industries. Hitherto these have been latex-based (rubber gloves,

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1/ Drawing upon results of the UNDP/World Bank technical assistance project DP/MAL/83/001 'Malaysian Industrial Policy Studies'.

Table 19. Malaysia: Agricultural production by volume of major products, 1980-84

('000 tons)

	1980	1981	1982	1983	1984
Rubber	1,530	1,526	1,517	1,562	1,580
Crude palm oil	2,576	2,825	3,511	3,020	3,350
Palm kernel oil	248	265	410	370	415
Pepper	32	29	25	19	22
Cocoa	33	48	62	69	90
Rice	1,361	1,409	1,340	1,171	1,134
Pineapple	185	154	153	148	158
Fisheries	744	767	694	720	727
Sawlogs[a/]	27,915	30,653	32,824	32,600	31,500

Sources: Mid-Term Review of the Fourth Malaysia Plan 1981-85; Economic Report 1984/85, Ministry of Finance.

a/ Measured in thousand cubic metres.

ballons) or focused on tyre production of the domestic market. In the future Malaysia's industry envisages good export potentials not only for tyres but also for other rubber products like hot water bottles, industrial hoses and engine mountings, as well as rubber sport goods.

(b) Palm oil

Since 1966 Malaysia has emerged as the world's largest producer of palm oil and now accounts for more than 65 per cent of global trade. Malaysia produced over 3.3 million tons of crude palm oil in 1984. Production is projected to be close to 4 million tons by 1985 and 5.6 million tons by 1990. Production of palm kernels was over 400,000 tons in 1983. Domestic consumption of crude palm oil has increased significantly during the last few years. There is presently a shortage of the supply of crude palm oil to the refineries resulting in surplus refining capacity. However, new manufacture of further downstream products such as margarine, vegetable ghee etc., is actively promoted. The use of palm oil in the chemicals industry (e.g. detergents, shampoo and perfume industries) as well as in the production of

cooking oil and soap is also assigned high priority. This illustrates the need for well co-ordinated development of complementary programmes between the agricultural and manufacturing sectors.

As an illustration of efforts to promote the wider usage of palm oil for edible purposes it may be noted that the Palm Oil Research Institute of Malaysia (PORIM) has succeeded, on an experimental basis, in recovering vitamin E from palm fatty acid distillate. Preliminary evaluation has indicated that palm oil has great potential for becoming a new and relatively cheap source of vitamin E, traditionally obtained from soybean oil refining. PORIM is also building a pilot plant to convert palm oil into diesel fuel. It is expected to be able to produce 3,000 tons of palm oil diesel per year from 1985 onwards.

(c) Coconut

The total area under coconut cultivation declined by around 5 per cent in 1984 following continued conversion of coconut cultivated land into more profitable crops and an increasing tendency towards planting of coconuts as an intercrop. Production of copra was 264,000 tons and of coconut oil 156,000 tons in 1983. In anticipation of a general increase in world demand for vegetable oils and fats, marginal increases in Malaysia's production of copra and coconut oil were forecast in 1984.

(d) Food crops

Rice production has slightly decreased from around 1.4 million tons in 1980 and 1981 to 1.1 million in 1984, owing to adverse weather conditions and disease problems. A steady growth is projected for the next few years as major new padi schemes come into operation. In 1984 rice imports of 0.5 million tons were required.

Vegetable production has fluctuated during the last four years between about 300,000 tons (1980 and 1983) and 180,000 tons (1981 and 1982), due largely to the varying extent of land use for vegetable production in response to changes in prices.

Domestic output of raw sugar was about 76,000 tons in 1983, and marginally higher in 1984. In 1985 domestic production of raw sugar is expected to reach 84,000 tons; sufficient to meet only about 15 per cent of domestic requirements. Production of refined sugar by the country's three major sugar refining mills is estimated at 585,000 tons for 1985 compared with 578,000 tons in 1984.

Production of pineapples was estimated to reach 156,000 tons in 1984. In response to sharply increased demand for Malaysian canned pineapples and pineapple juice in the world market, exports of these items were estimated at 47,000 tons in 1984, an increase of over 19 per cent compared with the 1983 figures.

(ii) Forest resources

Reforestration and efficient exploitation are cornerstones in the Government's strategy to ensure continued availability of forest resources. In line with the forest conservation policy, sawlog production was estimated to reach 31.5 million cubic metres in 1984 which would mean a decline by some 3.5 per cent compared with 1983. A marginal decline of output of sawlogs to just over 30 million cubic metres is expected in 1985. Sabah is estimated to produce 11 million cubic metres, Sarawak 10.76 million cubic metres and West Malaysian 9.8 million cubic metres in 1984. With the improved efficiency of the domestic sawmilling industry the production of sawn timber is expected to increase by 3.6 per cent in 1984 compared to 7.4 million cubic metres, whereof 5.8 cubic metres from West Malaysia and only 1.2 million and 0.4 million cubic metres, respectively, from Sabah and Sarawak.

Despite strong competition from suppliers in the international market the production of plywood was also expected to increase significantly by 4.9 per cent in 1984. Plywood production by 39 mills in West Malaysia (operating at approximatly 83 per cent of installed capacity) accounts for about 88 per cent of the country's total production. Moreover, the production of veneer was expected to rise by some 15 per cent in 1984 mainly as a result of expectations of continued favourable demand from Japan and the Republic of Korea.

In the long term, policy-measures are envisaged towards curbing exports of sawn logs and plywood in favour of finished and semi-finished products, such as furniture products or goods for the growing do-it-yourself markets in Europe and the US.

(iii) Mining resources

Malaysia's mining sector chiefly comprises crude petroleum, liquified natural gas, tin and copper deposits. Table 20 shows the production volume of major minerals during 1980-84.

Due to the current world market situation the growth of Malaysia's crude petroleum output in 1984 was limited to less than 440,000 barrels per day having reached an average of about 458,000 barrels per day during the first half of 1984.

Table 20. Malaysia: Production of minerals by volume, 1980-84

('000)

	1980	1981	1982	1983	1984
Crude oil (barrels per day)	275	258	303	383	440
Liquified natural gas (tons)	-	-	-	1,690	2,990
Tin-in-concentrates (tons)	61	60	52	41	41
Copper concentrates (tons)	114	120	129	123	120
Bauxite (tons)	920	701	589	502	...
Iron ore (tons)	371	533	340	144	...

Sources: Mid-Term Review of the Fourth Malaysia Plan 1981-85; Economic Report 1984/85. Ministry of Finance; Department of Mines.

Malaysia is endowed with a considerable quantity of natural gas resources. In 1981 recoverable reserves of non-associated and associated gas amounted to 39 trillions and 9 trillions of cubic feet respectively. In view of these sizeable reserves the National Oil Corporation (PETRONAS) has prepared a Gas Utilization Master Plan. Recent discoveries of oil and gas off the coasts of Sabah and Trengganu have added importance to this resource base.

Malaysia is the world's leading tin producer. Its share of world production has, however, decreased during the first half of the 1980s from 31.4 per cent in 1979 to 24.7 per cent in 1984 largely as result of restrictive export quotas imposed by the International Tin Council (ITC). The Government is pursuing a policy of encouraging domestic consumption of tin through a rebate of M$700 per ton for tin consumed locally. This policy contributed almost a doubling of total domestic consumption of tin in 1984 (to 1,500 tons) with the pewter manufacturers and the sole tin-plating plant (the Malaysian Tin-Plate Corporation - PERSTIMA) being the major consumers.

Concern for the long-run viability of the tin mining industry has called for an intensification of efforts in R and D, particularly in the processing and end-uses of tin. The Government is supporting research activities related to tin-plating, soldering and coating, conducted by the International Tin Research Institute in the UK. The Southeast Asia Tin Research and Development Centre at Ipoh is also active in this field of production research ranging from mineral exploration to ingot production.

Plans are being developed for an aluminium industry in Trengganu on the Peninsular east coast. Two bauxite mines have been identified for the project which will involve smelting bauxite into alumina and later into aluminium. The scheme is one of several planned under the so called 'heritage fund', to be set up in 1986 when 20 per cent of the State's annual oil royalties will be credited to it to finance projects.

Other minerals mined in Malaysia, include copper, iron-ore, and wolfram. Output of quarrying, which includes limestone and other rocks, sand and clay, has steadily increased with the rapid growth of the domestic construction sector.

(iv) Energy resources

Malaysia's energy policy has two major objectives. First, the Government intends to lower the country's dependence on oil as reserves are limited. Second, in light of the NEP objective of poverty eradication and restructuring of society, rural energy supply with emphasis on electricity, has become a priority concern. The "Four Fuel Strategy" aims at providing Malaysia with an

adequate and secure supply of energy by developing non-oil energy sources, such as, hydro, gas and coal. Malaysia has large gas reserves, as noted above and hydro power potential, particularly in Sarawak. Coal reserves, though extensive, are of low quality.[1/] It is envisaged that by 1990 the share of oil should be substantially lower than the 95 per cent of the local energy supply registered in 1980.

Projects are being undertaken for developing non-conventional sources for generating electricity, such as solar and biomass. In addition pilot schemes are under way to enable the extraction of energy from waste products, such as rice husks. Research is also carried out by Standards and Industrial Research Institute of Malaysia (SIRIM), the Palm Oil Research Institute of Malaysia (PORIM) and the universities in areas such as biogas production and the conversion of palm oil effluent as a source of electricity and substitute for diesel.

3.3 Human resources for industrial development

Table 21 shows the growth and structure of the labour force, which is estimated to have grown at a rate of 3.1 per cent per annum from 5.11 million in 1980 to about 5.95 million by 1985. The high growth rate is due to an increase in the working age population and in the participation rate of the labour force, particularly women.

Table 22 shows projections of sectoral employment for the period 1981-85. The manufacturing sector is expected to be a major source of employment growth during this period. Small-scale industries will continue to play an important role in job creation, particularly in the less developed regions.

With the anticipated recovery and accelerated growth of the economy by the mid-1980s and the associated increase in employment the demand for trained

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1/ Coal deposits in Selatik, Sarawak, are to be exploited; most of the output of 0.5 million tons/year will be used for a cement factory with the balance being exported. Exploitation of lignite resources in West Malaysia, near the Thai border, is under consideration.

Table 21. Malaysia: Estimates of labour force growth, 1980-85

Age group	1980		1985		Average annual growth rate 1981-85
	('000)	(per cent)	('000)	(per cent)	(per cent)
15 - 19	676	13.2	696	11.7	0.6
20 - 34	2,452	48.0	2,897	48.7	3.4
35 - 44	994	19.5	1,204	20.3	3.9
45 - 54	656	12.8	772	13.0	3.3
55 - 64	331	6.5	379	6.3	2.8
Total	5,109	100.0	5,947	100.0	2.8

Source: Mid-Term Review of the Fourth Malaysia Plan 1981-85.

Table 22. Malaysia: Employment estimates for selected sectors, 1980-85

Age group	1980		1985		Average annual growth rate 1981-85
	('000)	(per cent)	('000)	(per cent)	(per cent)
Agriculture, forestry, livestock & fishing	1,911	39.7	1,981	35.5	0.7
Mining & quarrying	81	1.7	63	1.1	-4.7
Manufacturing	751	15.6	876	15.7	3.2
Total employment	4,317	100.0	5,576	100.0	3.0
Labour force	5,109		5,947		
Unemployment	292		371		

Source: Mid-Term Review of the Fourth Malaysia Plan, 1981-85.

manpower is expected to increase sharply. The manufacturing sector is expected to be the leading generator of new jobs. In the development of skills required for the industrialization process, which is attuned to high technology-intensive industries, the Industrial Training Institutes, MARA's Vocational Institutes, the National Productivity Centre (NPC) under the Ministry of Trade and Industry as well as universities, colleges and the vocational schools of the Ministry of Education play important roles.

The private sector is complementing the efforts of Government in the training of skilled manpower at the enterprise level. Integration of the various training efforts is being promoted by the Manpower Development Board (MDB) (established in 1978) with representation from the Government, employers and workers. The Board is acting as a co-ordinating body for all national training programmes which, inter alia, encompass the following specific activities:

- The Centre for Industries and Advanced Skill Training (CIAST), to be established in 1985, will offer advanced training and upgrading of skills in automobile, machine operation, die making, foundry, fabrication and instrumentation skills.

- The Standards and Industrial Research Institute of Malaysia (SIRIM) will attach particular attention to the training requirements for use of more modern technology in the fields of machinery and equipment.

- The Heavy Industries Corporation of Malaysia (HICOM) is to carry out a study to identify the manpower requirements and appropriate training programmes for its manpower needs.

- The Malaysian Administration Modernization and Manpower Planning Unit (MAMPU) in the Prime Minister's Department is (besides co-ordinating manpower planning) entrusted with providing consultancy services and introducing new management techniques and innovations to the public sector.

- At the management and supervisory levels, the National Productivity Centre (NPC) plays an important role in the field of management development and training at the enterprise level.

- Under Malaysia's co-operation programme with Japan assistance will be provided in connextion with the establishment of a National Computer Institute, aimed at meeting Malaysia's needs for training programme on computer technology.

- The private sector Malaysian Institute of Management (MIM) also provides training courses on various aspects of management attuned to changing technology.

3.4 Financial resources for industrial development

The commercial banks are the largest and most important group of institutions providing industrial finance. There are 38 commercial banks operating in the country of which 22 are domestic banks. There are also 41 finance companies constituting the second largest mobilizers of deposit funds as well as the second most important institutional source of private sector credit. The finance companies operate in the short-to-medium term credit

market. Furthermore, there are 12 merchant banks with a full range of specialized financial services relating to all aspects of corporate financing. The merchant banks have a role in helping to promote new investments (including foreign investments) in the country. They are permitted to invest in corporate equity in order to provide 'venture capital' or 'seed money' to assist in the growth of new industrial ventures. All the 12 merchant banks are joint ventures of existing commercial banks (and other financial institutions) in Malaysia with foreign banking institutions.

A major source of medium- and long-term industrial credit is provided by the Malaysian Industrial Development Finance Berhad (MIDF). MIDF was established in 1960 with the support of the Government. Its present shareholders include the Bank Negara Malaysia (Central Bank of Malaysia), the IFC of the World Bank Group, and a number of commercial banks and other financing institutions. Apart from its own loan operations, MIDF is also providing financial assistance to large-scale industries by participating with commercial banks in extending loans on consortium basis. A Special Bumiputra Development Division in MIDF was established in 1974 to provide loans and other services to promote bumiputra business. A wholly-owned subsidiary, the MIDF Industrial Consultants Sendirian Berhad (MIDFIC) provides consultancy services to small- and medium-scale industries. Another subsidiary is the Malaysian Industrial Estate Sendirian Berhad (MIEL). MIEL is engaged in the construction and financing of standard factory buildings on selected sites within existing government-sponsored industrial estates.

Intensified efforts to increase credit for small enterprises with special emphasis on the needs of the Malays and other indigenous people are being made. Government agencies involved include MARA, MIDF, the SEDCs and BKPMB (Development Bank of Malaysia, Ltd). As a result of these efforts the share of the bumiputra in the total institutional credit has increased from about 14 per cent in 1971 to almost 30 per cent in 1983.

A World Bank loan worth M$ 210 million was approved in 1984 for development of the country's small-scale industrial sector during a period of three years. The loan will be used in a project which will provide management and technical support to small business, particularly those in food processing, light engineering and metal working, wood-, bamboo- and cotton-

based industries. Loans to the small industries are to be made by MIDF and Bank Pembangunan Malaysia Berhad who will also act as intermediaries for disbursement of the World Bank loan.

The Ministry of National and Regional Development announced in late 1984 that 42 sites in various states had been identified for small- and medium-sized factories under a 5-year programme to promote rural industries. The largest concentration was on the east coast of Peninsular Malaysia. The Ministry is currently carrying out in-depth studies on the suitability of the sites. Bank Rakyat was providing loan funds for these industries. It was hoped that some 50 factories would be in operation by the end of 1985 with the bulk of the products destined for the export market.[1/]

2.5 Institutional infrastructure for industry

The planning machinery at the federal level comprises the Economic Planning Unit (EPU) and the Socio-Economic Research Unit (SERU) and the Implementation and Co-ordination Unit (ICU) in the Prime Minister's Department and planning cells in key agencies such as the Treasury and Bank Negara Malaysia. The Department of Statistics provides the statistical information. The EPU serves as secretariat to the National Development Planning Committee (NDPC), an inter-agency committee comprising civil service heads of all major economic development Ministries. The NDPC in turn reports to the National Economic Council (NCE) - a committee of the Federal Cabinet under the chairmanship of the Prime Minister. At the state level, the State Economic Planning Units (SEPUs) and State Development Offices (SDOs) are responsible for formulating state development strategies and co-ordinating the preparation of state development projects.

The Malaysian Industrial Development Authority (MIDA)[2/] under the Ministry of Commerce and Industry, provides the central machinery for the promotion and co-ordination of industrial development in the country. It

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1/ Asia Research Bulletin, 31 October 1984.

2/ Established in 1967 under the name of the Federal Industrial Development Authority (FIDA).

shares the principal responsibility for planning the nation's overall approach to industrial development with the Economic Planning Unit (EPU).

MIDA is responsible for evaluating applications for manufacturing licences under the Industrial Co-ordination Act of 1975 and for granting incentives under the Investment Incentives Act of 1968. It also advises the Minister of Trade and Industry in the formulation of industrial policies. MIDA's main tasks include investment in priority areas from both foreign and local sources. At the same time, MIDA is assisting investors in speeding up the implementation of their projects. A Central Unit has been set up within MIDA in order to reduce the need for investors having to deal with several government agencies in the course of establishing their projects. Investors now only need to approach this Unit to obtain assistance in getting clearance, licences and permits for their operations. MIDA is also working closely with the state Governments to ensure proper co-ordination of industrial development and the development of industrial estates. MIDA has established regional centres in several states - Sabah, Sarawak, Pahang, Kedah, Kelantan, Perak and Trengganu. As part of its efforts in attracting foreign investment, MIDA has established promotion offices overseas - in New York, Los Angeles, Chicago, Cologne, London, Paris, Berne, Tokyo, Osaka, Sydney, Hong Kong, Singapore, Bahrain and Seoul.

It is expected that the Industrial Master Plan (see section 3.1 above) will enable MIDA to reorient its investment promotion activities abroad away from selling Malaysia more generally as an investment location towards attracting pre-selected companies to set up specific projects which would fit into the Plan.

Table 23 shows the distribution of Malaysia's 96 industrial estates. In general it can be said that while the industrial estates in the relatively well developed western part of Peninsular Malaysia are quite quickly being filled to capacity, the promotion of industries for the industrial estates in other, less developed parts of the country requires considerable efforts.

Of the 468 new industrial projects approved by MIDA in 1982 (see Appendix Table A-17) 246 were to be located in industrial estates developed by the State Economic Development Corporations and Regional Development Authorities.

ORGANIZATION CHART

MALAYSIAN INDUSTRIAL DEVELOPMENT AUTHORITY

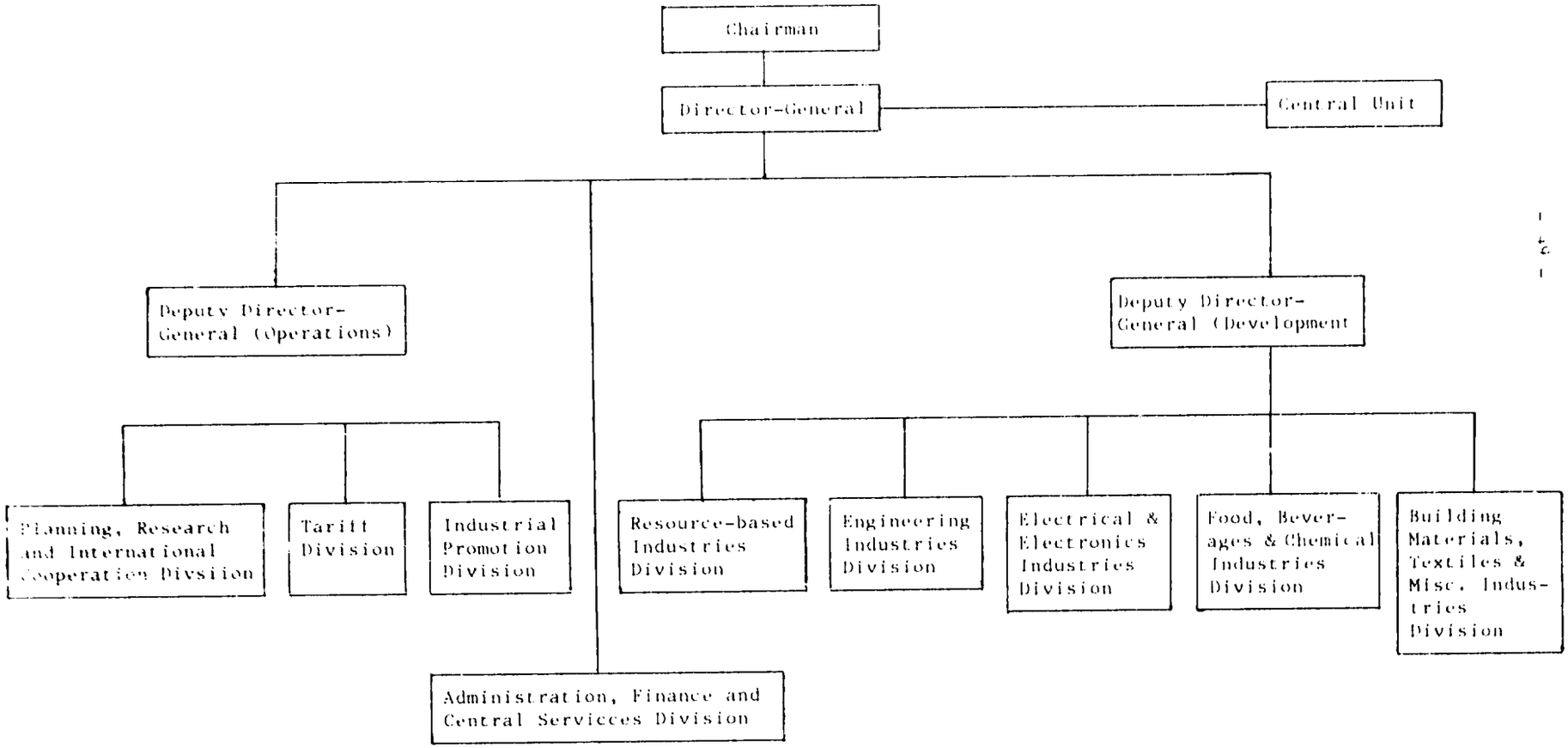

Table 23. Malaysia: Distribution of industrial estates by state as at 31 December 1982

State	Number of industrial estates	Total planned area (excluding housing) (hectares)	Total hectares developed
Johore	12	1,656.11	1,126.46
Malacca	7	344.84	266.66
Negeri Sembilan	5	280.05	280.05
Selangor and Federal Territory	16	2,407.09	1,698.57
Perak	8	822.19	706.05
Penang	8	1,356.00	708.08
Kedah	5	478.20	471.80
Perlis	1	13.68	14.16
Pahang	8	1,304.50	739.59
Trengganu	9	596.61	351.59
Kelantan	6	621.26	305.20
Sarawak	5	713.44	713.44
Sabah	6	290.84	215.87
Total	96	10,884.81	7,597.28

Source: MIDA.

Of these, 21 projects would be located in Free Trade Zones. The 246 projects were expected to generate 19,740 jobs. A large number of the projects approved for location in the industrial estates would be involved in the manufacture of chemicals and chemical products (33), electrical and electronic products (33), fabricated metal products (22), wood and wood products (17) and rubber products (17).

The Free Trade Zones (FTZs) are areas specially designed for manufacturing establishments producing or assembling products essentially for export. Nine FTZs have as yet been established. They are located in the states of Penang, Selangor, Malacca and Johor. Companies which can be considered for location in a FTZ are those which produce exclusively for export (in exceptional circumstances, companies exporting not less than 80 per cent of their products) and whose imported raw materials/components are exempted from customs duty. In order to encourage the dispersal of industries and to enable companies to establish factories for the manufacture of products mainly for exports, in cases where the establishment in a FTZ is not

practical, the Government has allowed for the setting up of licensed manufacturing warehouses.

The Malaysian Export Trade Centre (MEXPO) has been established primarily to disseminate information on export markets for Malaysian products. The activities of the Centre are to be expanded to include the organization of seminars on export promotion and incentives. The Centre has also published a directory of Malaysian exporters which includes information on types of products, production and export capacity.

The Malaysian Handicraft Development Corporation has recently been established as an extension of MARA's former Handicrafts Division. The Corporation has strongly urged the establishment of an industrial design centre, possibly along the lines of the design centre in the Philippines, to contribute to an upgrading of product design and quality of handicraft and small-industry consumer goods.

The Government also provides financial assistance to encourage the development of export-oriented industries. The Malaysian Export Credit Insurance Berhad (MECIB), a joint public/private venture was established in 1977. As noted earlier, the Government is also examining the feasibility of establishing special trading corporations to supplement the public sectors' promotional efforts towards increasing exports.

The Ministry of Trade and Industry opened a special countertrade unit in 1983. The unit has set up a register of private local companies interested in participating in countertrade deals with foreign companies. The idea is to provide a contact mechanism only; the unit itself will not act as an intermediary. In July 1984 the Treasury Department released a circular directing all departments to incorporate countertrade in Government tenders (except for Government purchaser financed by the Asian Development Bank or the World Bank). M$ 500,000 is set as lower limit in determining whether countertrade will be required. Five products are 'off limits' for countertrade deals: items produced in EPZs, crude palm oil, timber in raw log

form, tin ore concentrate and natural rubber.[1/]

A great number of Ministries and agencies are directly involved in one way or another with small-scale enterprise development programmes. The programme implementation of these agencies is being co-ordinated by the Ministry of Trade and Industry through the Co-ordination Council for the Development of Small-Scale Enterprise. The Small Enterprise Division within the Ministry of Trade and Industry is playing a major role in developing programmes and formulating strategies for the country's small-scale industry development. One specific programme is the support for application of modern and appropriate technology among small-scale industries through the activities of the recently established Technology Centre for Small-Scale Enterprises (the Technology Display and Resource Centre for SSE).

The Ministry of Science, Technology and Environment is responsible for the co-ordination and promotion of science and technology and is assisted in this task by the National Council for Scientific Research and Development and the Co-ordinating Council for the Transfer of Technology.

Efforts of many years of research in science and technology have contributed to making Malaysia a leading producer of rubber, palm oil and pepper. Continuous research on a wide area of resource-related issues is being carried out by the Malaysian Agricultural Research and Development Institute (MARDI), the Rubber Research Institute of Malaysia (RRIM), the Palm Oil Research Institute of Malaysia (PORIM), the Forest Research Institute (FRI), the Mines Research Institute and institutions of higher learning. The private sector is also carrying out a considerable amount of research and is often able to draw upon research programmes of parent companies abroad.

1/ Examples of recent deals include the bilateral trading and payments agreement between the Malaysian International Trading Corporation and the Philippines International Trading Corporation for the export of M$ 11.5 million worth of products both ways. These included imports of household items, fashion wear and accessories, garments and textiles, and assorted foodstuffs, while exports consisted of refined palm oil, rubber manufactures and compound fertilizers (Asia Research Bulletin, 31 December 1984). Another example refers to ITI's subsidiary in the Federal Republic of Germany recently won a M$ 450 million telecommunications contract that contains offset provisions for local firms and for training Malaysian technicians in Germany (Business Asia, 18 January 1985).

The Standards and Industrial Research Institute of Malaysia (SIRIM) was set up in 1975 to meet the need for applied industrial research and transfer of appropriate technology and to ensure production according to established standards. It comprises a Science and Industrial Research Division (formerly known as NISIR - National Institute of Scientific and Industrial Research) and a Standards Division (formerly known as SIM - Standards Institute of Malaysia).

The Federation of Malaysian Manufacturers (FMM) provides valuable services to the Malaysian industry. FMM and the Singapore Manufacturers' Association (SMA) co-operate through the FMM/SMA Joint Committee on Investment, for instance, in following areas:

- identification of partners and areas for joint ventures (including ASEAN joint ventures);[1/]
- exchange of publications;
- exchange of economic intelligence and information;
- assistance in the relocation of Singapore industries in Malaysia.

3.6 Technical assistance to industry

Malaysia actively seeks both technical and financial development assistance. The total net Official Development Assistance (ODA) from the Development Assistance Committee (DAC) of the OECD, multilateral organizations and OPEC to Malaysia increased from US $135 million in 1980 to US $176.8 million in 1983. Malaysia's share in the geographical distribution of bilateral concessional assistance from OPEC countries increased from 9.6 per cent in 1980 to 16.4 per cent in 1983. The industrial sector received 19 per cent of the total amount externally financed under technical co-operation in 1983. In that year UNDP contributed US $481,600 to various technical co-operation projects to promote industrial development. For the preparation of the medium- and long-term Industrial Master Plan, UNDP has sanctioned UNIDO assistance amounting to US $1,769,944 during the period 1984-85.

1/ Examples of identified possible joint ventures are in the areas of precision engineering services, steel fabrication, plastic mould and dies, garments, polyester flowers and plants, plastic packaging products and trade systems. (Singapore Business, April 1985.)

The World Bank's first industry-related assistance is focused on the small-scale sector. The main objective of the proposed project is to develop those small-scale enterprises in Malaysia which presently do not receive adequate institutional credit and quality technical assistance. The project comprises a credit component of US $46.6 million and a technical assistance component of US $5.4 million. Under technical assistance the project will provide staff training for the participating agencies, equipments for workshops, laboratories and classrooms. It also makes provisions for expanding physical facilities and recruiting experts and advisers. Technical assistance under this scheme concentrates mainly on food processing, light engineering and metal working, wood, bamboo and ratten-based industries, and selected construction materials. As part of the scheme, the World Bank intends to monitor and evaluate all technical assistance programme.

Annex 1 lists the approved and/or operational technical co-operation projects of UNIDO in Malaysia. A project initated in 1980 trained the professional staff of the Standards and Industrial Research Institute of Malaysia. In 1982 two projects were initiated: one for designing an integrated programme for developing small-scale enterprises; and another project for assisting the Ministry of Industry in assessing royalty payments in the automotive industry. In December 1983 UNIDO organized a national workshop on technology transfer, policies and planning. UNIDO has also been assisting the Government of Malaysia in the preparation of an Industrial Master Plan, particularly in promotional efforts in industrial sub-sectors and regions.

The Industrial Master Plan, which is expected to be finalized in 1985, will constitute a most comprehensive basis for identification of technical co-operation inputs. The main areas for prospective technical co-operation are: techno/economic support for monitoring the implementation of the industrial development strategy in relation to international trends and development; guidance for reducing import dependence (machinery and intermediate inputs), e.g., exploiting forward and backward linkages, creating spin-off effects for the growth of small and medium industries and developing technological capabilities; technical support for diversification of energy resources; and special technical assistance in high technology precision-based industries.

STATISTICAL APPENDIX

Table A-1. West Malaysia: Gross output and value added in manufacturing, 1973 and 1981

(in M$ at current prices)

Description (ISIC)	Gross output (thousands)		Gross output share in total (percentage)		Value added (thousands)		Value added share in total (percentage)	
	1973	1981	1973	1981	1973	1979	1973	1979
TOTAL MANUFACTURING(300)	7476605	36682000	100.0	100.0	2274699	6743000	100.0	100.0
Food products(311)	1812289	9675000	24.2	26.4	347320	1313000	15.3	19.5
Beverages(313)	121177	662000	1.6	1.8	61108	165000	2.7	2.4
Tobacco(314)	339762	958000	4.5	2.6	129572	175000	5.7	2.6
Textiles(321)	291113	1453000	3.9	4.0	104014	390000	4.6	5.8
Wearing apparel,except footwear(322)	102846	557000	1.4	1.5	29237	86000	1.3	1.3
Leather products(323)	10843	26000	0.1	0.1	2833	5000	0.1	0.1
Footwear,except rubber or plastic(324)	15572	127000	0.2	0.3	5089	14000	0.2	0.2
Wood products,except furniture(331)	815559	2322000	10.9	6.3	301331	668000	13.2	9.9
Furniture,except metal(332)	51237	246000	0.7	0.7	13967	46000	0.6	0.7
Paper and products(341)	58898	321000	0.8	0.9	17209	64000	0.8	0.9
Printing and publishing(342)	234401	846000	3.1	2.3	113104	241000	5.0	3.6
Industrial chemicals(351)	179587	785000	2.4	2.1	60713	177000	2.7	2.6
Other chemicals(352)	237366	824000	3.2	2.2	112652	232000	5.0	3.4
Petroleum refineries(353)	232566	3579000	3.1	9.8	49628	241000	2.2	3.6
Misc. petroleum and coal products(354)	4630	19000	0.1	0.1	2248	3000	0.1	0.0
Rubber products(355)	1129609	2917000	15.1	8.0	218503	657000	9.6	9.7
Plastic products(356)	127659	577000	1.7	1.6	43120	129000	1.9	1.9
Pottery,china,earthenware(361)	10963	52000	0.1	0.1	6294	16000	0.3	0.2
Glass and products(362)	25384	172000	0.3	0.5	11491	43000	0.5	0.6
Other non-metallic mineral prod.(369)	204667	1264000	2.7	3.4	103367	275000	4.5	4.1
Iron and steel(371)	223733	856000	3.0	2.3	75392	145000	3.3	2.2
Non-ferrous metals(372)	21166	127000	0.3	0.3	9742	26000	0.4	0.4
Fabricated metal products(381)	343762	1250000	4.6	3.4	107145	256000	4.7	3.8
Machinery,except electrical(382)	193039	964000	2.6	2.6	82461	209000	3.6	3.1
Machinery electric(383)	411000	4533000	5.5	12.4	188365	843000	8.3	12.5
Transport equipment(384)	231588	1207000	3.1	3.3	61340	239000	2.7	3.5
Professional & scientific equipm.(385)	23102	171000	0.3	0.5	9925	50000	0.4	0.7
Other manufactured products(390)	23087	192000	0.3	0.5	7529	35000	0.3	0.5

Source: Statistics and Survey Unit, UNIDO. Based on data supplied by the UN Statistical Office, with estimates by the UNIDO Secretariat.

Table A-2. Sarawak: Gross output and value added in manufacturing, 1973 and 1981

(in M$ at current prices)

Description (ISIC)	Gross output (thousands)		Gross output Share in total (percentage)		Value added (thousands)		Value added Share in total (percentage)	
	1973	1981	1973	1981	1973	1981	1973	1981
TOTAL MANUFACTURING(300)	544580	1257600	100.0	100.0	114730	258800	100.0	100.0
Food products(311)	56890	177040	10.4	14.1	10960	30740	9.6	11.9
Beverages(313)	21680	26100	4.0	2.1	4450	11830	3.9	4.6
Tobacco(314)	0	...	0.0	...	0	...	0.0	...
Textiles(321)	570	770	0.1	0.1	180	190	0.2	0.1
Wearing apparel,except footwear(322)	7730	14420	1.4	1.1	2210	4800	1.9	1.9
Leather products(323)	0	0	0.0	0.0	0	0	0.0	0.0
Footwear,except rubber or plastic(324)	...	...	...	...	...	...	...	...
Wood products,except furniture(331)	164250	214650	30.2	17.1	76270	73290	66.5	28.3
Furniture,except metal(332)	7340	16420	1.3	1.3	2530	5570	2.2	2.2
Paper and products(341)	0	...	0.0	...	0	...	0.0	...
Printing and publishing(342)	7360	26710	1.4	2.1	3590	13510	3.1	5.2
Industrial chemicals(3511	2920a/	10440a/	0.5a/	0.8a/	430a/	4250a/	0.4a/	1.6a/
Other chemicals(352)	...	...	...	...	...	...	...	...
Petroleum refineries(353)	229600	...	42.2	...	...	...	...	...
Misc. petroleum and coal products(354)	0	0	0.0	0.0	0	0	0.0	0.0
Rubber products(355)	8880	24350	1.6	1.9	1490	4670	1.3	1.8
Plastic products(356)	2850	11830	0.5	0.9	900	3570	0.8	1.4
Pottery,china,earthenware(361)	340	1190	0.1	0.1	200	830	0.2	0.3
Glass and products(362)	0	0	0.0	0.0	0	0	0.0	0.0
Other non-metallic mineral prod.(369)	3300	90500	0.6	7.2	1670	28440	1.5	11.0
Iron and steel(371)	0	2360	0.0	0.2	0	800	0.0	0.3
Non-ferrous metals(372)	0	0	0.0	0.0	0	0	0.0	0.0
Fabricated metal products(381)	10680	40040	2.0	3.2	2930	11670	2.6	4.5
Machinery,except electrical(382)	3270	6140	0.6	0.5	1000	2040	0.9	0.8
Machinery electric(383)	0	2620	0.0	0.2	0	570	0.0	0.2
Transport equipment(384)	8070	50500	1.5	4.0	4090	18290	3.6	7.1
Professional & scientific equipm.(385)	0	0	0.0	0.0	0	0	0.0	0.0
Other manufactured products(390)	8850	541840	1.6	43.1	1830	43740	1.6	16.9

Source: Statistics and Survey Unit, UNIDO. Based on data supplied by the UN Statistical Office, with estimates by the UNIDO Secretariat.

Footnotes: a/ 3510 includes 3520

Table A-3. Sabah: Gross output and value added in manufacturing, 1973 and 1979

(in M$ current prices)

Description (ISIC)	Gross output (thousands)		Gross output Share in total (percentage)		Value added (thousands)		Value added Share in total (percentage)	
	1973	1979	1973	1979	1973	1979	1973	1979
TOTAL MANUFACTURING(300)	96207	355717	100.0	100.0	31996	118932	100.0	100.0
Food products(311)	24011	113313	25.0	31.9	4050	26327	12.7	22.1
Beverages(313)	6102	16993a/	6.3	4.8a/	2305	8844a/	7.2	7.4a/
Tobacco(314)	0	0	0.0	0.0	0	0	0.0	0.0
Textiles(321)	1197	...	1.2	...	220	...	0.7	...
Wearing apparel,except footwear(322)	5263b/	...	5.5b/	...	2159b/	...	6.7b/	...
Leather products(323)	...	0	...	0.0	...	0	...	0.0
Footwear,except rubber or plastic(324)	...	0	...	0.0	...	0	...	0.0
Wood products,except furniture(331)	28080	124046	29.2	34.9	10562	46692	33.0	39.3
Furniture,except metal(332)	4825	8f 9	5.0	2.5	2088	3490	6.5	2.9
Paper and products(341)	0	0	0.0	0.0	0	0	0.0	0.0
Printing and publishing(342)	5519	16335	5.7	4.6	3024	8799	9.5	7.4
Industrial chemicals(351)	6522c/	1403	6.8c/	0.4	2777c/	1079	8.7c/	0.9
Other chemicals(352)	...	580	...	0.2	...	448	...	0.4
Petroleum refineries(353)	...	0	...	0.0	...	0	...	0.0
Misc. petroleum and coal products(354)	...	0	...	0.0	...	0	...	0.0
Rubber products(355)	...	22200	...	6.2	...	5476	...	4.6
Plastic products(356)	...	2746	...	0.8	...	739	...	0.6
Pottery,china,earthenware(361)	1609d/	1251e/	1.7d/	0.4e/	685d/	360e/	2.1d/	0.3e/
Glass and products(362)	...	...	...	...	...	...	...	...
Other non-metallic mineral prod.(369)	...	4955	...	1.4	...	2545	...	2.1
Iron and steel(371)	5763f/	18161g/	6.0f/	5.1g/	1961f/	5644g/	6.1f/	4.7g/
Non-ferrous metals(372)	...	0	...	0.0	...	0	...	0.0
Fabricated metal products(381)	...	...	...	...	...	...	...	...
Machinery,except electrical(382)	...	1653	...	0.5	...	930	...	0.8
Machinery electric(383)	1545	524	1.6	0.1	474	136	1.5	0.1
Transport equipment(384)	1312	22728	1.4	6.4	570	7423	1.8	6.2
Professional & scientific equipm.(385)	0	0	0.0	0.0	0	0	0.0	0.0
Other manufactured products(390)	4459	0	4.6	0.0	1121	0	3.5	0.0

Source: Statistics and Survey Unit, UNIDO. Based on data supplied by the UN Statistical Office, with estimates by the UNIDO Secretariat.

Footnotes: a/ 3130 includes 3210 3220.
b/ 3220 includes 3230 3240.
c/ 3510 includes 3520 3530 3540 3550 3560.
d/ 3610 includes 3620 3690.
e/ 3610 includes 3620.
f/ 3710 includes 3720 3810 3820.
g/ 3710 includes 3810.

Table A-4. West Malaysia: Employment, wages and salaries in manufacturing, 1973 and 1981
(in M$ at current prices)

Description (ISIC)	Employment				Wages and salaries			
			Share in total (percentage)		(thousands)		Share in total (percentage)	
	1973	1981	1973	1981	1973	1981	1973	1981
TOTAL MANUFACTURING(300)	267290	515200	100.0	100.0	574411	2614000	100.0	100.0
Food products(311)	34030	63100	12.7	12.2	68636	317000	11.9	12.1
Beverages(313)	3026	5600	1.1	1.1	10791	41000	1.9	1.6
Tobacco(314)	6853	11300	2.6	2.2	15531	43000	2.7	1.6
Textiles(321)	22349	39400	8.4	7.6	34832	181000	6.1	6.9
Wearing apparel,except footwear(322)	10248	27800	3.8	5.4	11232	87000	2.0	3.3
Leather products(323)	708	800	0.3	0.2	897	3000	0.2	0.1
Footwear,except rubber or plastic(324)	1483	3600	0.6	0.7	2505	13000	0.4	0.5
Wood products,except furniture(331)	39834	61000	14.9	11.8	90029	311000	15.7	11.9
Furniture,except metal(332)	3771	10200	1.4	2.0	7680	40000	1.3	1.5
Paper and products(341)	3511	6500	1.3	1.3	5465	29000	1.0	1.1
Printing and publishing(342)	13790	22500	5.2	4.4	38593	134000	6.7	5.1
Industrial chemicals(351)	2852	4900	1.1	1.0	12246	40000	2.1	1.5
Other chemicals(352)	6591	11700	2.5	2.3	22286	78000	3.9	3.0
Petroleum refineries(353)	489	600	0.2	0.1	6240	13000	1.1	0.5
Misc. petroleum and coal products(354)	112	200	0.0	0.0	313	1000	0.1	0.0
Rubber products(355)	23695	32400	8.9	6.3	51378	164000	8.9	6.3
Plastic products(356)	8432	17200	3.2	3.3	12355	64000	2.2	2.4
Pottery,china,earthenware(361)	997	2000	0.4	0.4	1973	9000	0.3	0.3
Glass and products(362)	1461	2400	0.5	0.5	3212	16000	0.6	0.6
Other non-metallic mineral prod.(369)	10506	22000	3.9	4.3	26662	118000	4.6	4.5
Iron and steel(371)	6001	10000	2.2	1.9	18145	72000	3.2	2.8
Non-ferrous metals(372)	686	1700	0.3	0.3	2530	13000	0.4	0.5
Fabricated metal products(381)	16450	27600	6.2	5.4	34493	137000	6.0	5.2
Machinery,except electrical(382)	12307	20100	4.6	3.9	27315	111000	4.8	4.2
Machinery electric(383)	25326	80900	9.5	15.7	41420	390000	7.2	14.9
Transport equipment(384)	8409	18200	3.1	3.5	22413	136000	3.9	5.2
Professional & scientific equipm.(385)	1685	4900	0.6	1.0	2950	28000	0.5	1.1
Other manufactured products(390)	1688	6600	0.6	1.3	2289	25000	0.4	1.0

Source: Statistics and Survey Unit, UNIDO.Based on data supplied by the UN Statistical Office, with estimates by the UNIDO Secretariat.

Table A-5. Sarawak: Employment, wages and salaries in manufacturing, 1973 and 1979

(in M$ at current prices)

Description (ISIC)	Employment				Wages and salaries			
			Share in total (percentage)		(thousands)		Share in total (percentage)	
	1973	1981	1973	1981	1973	1981	1973	1981
TOTAL MANUFACTURING(300)	16474	21751	100.0	100.0	39247	88004	100.0	100.0
Food products(311)	1853	2951	11.2	13.6	2797	8970	7.1	10.2
Beverages(313)	479	510	2.9	2.3	1141	1980	2.9	2.2
Tobacco(314)	...	...	...	...	0	...	0.0	...
Textiles(321)	40	19	0.2	0.1	44	49	0.1	0.1
Wearing apparel,except footwear(322)	513	641	3.1	2.9	608	1476	1.5	1.7
Leather products(323)	0	0	0.0	0.0	0	0	0.0	0.0
Footwear,except rubber or plastic(324)	...	...	...	...	...	...	...	...
Wood products,except furniture(331)	8484	8541	51.5	39.3	23621	34214	60.2	38.9
Furniture,except metal(332)	648	789	3.9	3.6	1110	2555	2.8	2.9
Paper and products(341)	...	...	...	...	0	...	0.0	...
Printing and publishing(342)	1044	1631	6.3	7.5	2876	7921	7.3	9.0
Industrial chemicals(351)	112a/	193a/	0.7a/	0.9a/	170a/	668a/	0.4a/	0.8a/
Other chemicals(352)	...	...	...	...	...	...	...	...
Petroleum refineries(353)	129	...	0.8	...	1231	...	3.1	...
Misc. petroleum and coal products(354)	0	0	0.0	0.0	0	...	0.0	...
Rubber products(355)	388	535	2.4	2.5	494	1796	1.3	2.0
Plastic products(356)	195	342	1.2	1.6	324	1208	0.8	1.4
Pottery,china,earthenware(361)	52	105	0.3	0.5	89	373	0.2	0.4
Glass and products(362)	0	0	0.0	0.0	0	...	0.0	...
Other non-metallic mineral prod.(369)	597	1630	3.6	7.5	915	7746	2.3	8.8
Iron and steel(371)	0	123	0.0	0.6	0	526	0.0	0.6
Non-ferrous metals(372)	0	0	0.0	0.0	0	0	0.0	0.0
Fabricated metal products(381)	686	1448	4.2	6.7	1108	5535	2.8	6.3
Machinery,except electrical(382)	248	227	1.5	1.0	381	982	1.0	1.1
Machinery electric(383)	0	103	0.0	0.5	0	223	0.0	0.3
Transport equipment(384)	665	1588	4.0	7.3	1776	8910	4.5	10.1
Professional & scientific equipm.(385)	0	0	0.0	0.0	0	0	0.0	0.0
Other manufactured products(390)	341b/	375	2.1b/	1.7	562	2872	1.4	3.3

Source: Statistics and Survey Unit, UNIDO.Based on data supplied by the UN Statistical Office, with estimates by the UNIDO Secretariat.

Footnotes: a/ 3510 includes 3520.
b/ 3900 includes 3410.

Table A-6. Sabah: Employment, wages and salaries in manufacturing, 1973 and 1981

(in M$ at current prices)

Description (ISIC)	Employment				Wages and salaries			
			Share in total (percentage)		(thousands)		Share in total (percentage)	
	1973	1979	1973	1979	1973	1979	1973	1979
TOTAL MANUFACTURING(300)	6291	11838	100.0	100.0	14209	49004	100.0	100.0
Food products(311)	1381	2197	22.0	18.6	2242	7925	15.8	16.2
Beverages(313)	309	550a/	4.9	4.6a/	787	1849a/	5.5	3.8a/
Tobacco(314)	0	0	0.0	0.0	0	0	0.0	0.0
Textiles(321)	35	...	0.6	...	63	...	0.4	...
Wearing apparel,except footwear(322)	622b/	...	9.9b/	...	808b/	...	5.7b/	...
Leather products(323)	...	0	...	0.0	...	0	...	0.0
Footwear,except rubber or plastic(324)	...	0	...	0.0	...	0	...	0.0
Wood products,except furniture(331)	1617	4752	25.7	40.1	4767	20578	33.5	42.0
Furniture,except metal(332)	524	487	8.3	4.1	1291	2019	9.1	4.1
Paper and products(341)	0	0	0.0	0.0	0	0	0.0	0.0
Printing and publishing(342)	539	1043	8.6	8.8	1599	5337	11.3	10.9
Industrial chemicals(351)	272c/	53	4.3c/	0.4	634c/	260	4.5c/	0.5
Other chemicals(352)	...	96	...	0.8	...	191	...	0.4
Petroleum refineries(353)	...	0	...	0.0	...	0	...	0.0
Misc. petroleum and coal products(354)	...	0	...	0.0	...	0	...	0.0
Rubber products(355)	...	517	...	4.4	...	1936	...	4.0
Plastic products(356)	...	85	...	0.7	...	293	...	0.6
Pottery,china,earthenware(361)	212d/	45e/	3.4d/	0.4e/	464d/	181e/	3.3d/	0.4e/
Glass and products(362)	...	...	...	...	...	...	...	...
Other non-metallic mineral prod.(369)	...	538	...	4.5	...	1554	...	3.2
Iron and steel(371)	399f/	527g/	6.3f/	4.5g/	688f/	2093g/	4.8f/	4.3g/
Non-ferrous metals(372)	...	0	...	0.0	...	0	...	0.0
Fabricated metal products(381)	...	...	...	...	...	...	...	...
Machinery,except electrical(382)	...	130	...	1.1	...	507	...	1.0
Machinery electric(383)	43	14	0.7	0.1	220	27	1.5	0.1
Transport equipment(384)	145	804	2.3	6.8	360	4254	2.5	8.7
Professional & scientific equipm.(385)	0	0	0.0	0.0	0	0	0.0	0.0
Other manufactured products(390)	193	0	3.1	0.0	286	0	2.0	0.0

Source: Statistics and Survey Unit UNIDO.Based on data supplied by the UN Statistical Office, with estimates by the UNIDO Secretariat.

Footnotes: a/ 3130 includes 3210 3220.
b/ 3220 includes 3230 3240.
c/ 3510 includes 3520 3530 3540 3550 3560.
d/ 3610 includes 3620 3690.
e/ 3610 includes 3620.
f/ 3710 includes 3720 3810 3820.
g/ 3710 includes 3810.

Table A-7. West Malaysia: Selected industrial indicators, by branch of manufacturing, 1973 and 1979

(in M$ at current prices)

Description (ISIC)	Value added per employee		Wages and salaries per employee		Share of value added in gross output (percentage)		Share of wages and salaries in value added (percentage)	
	1973	1979	1973	1979	1973	1979	1973	1979
TOTAL MANUFACTURING(300)	8510	16260	2149	4066	30.4	27.3	25.3	25.0
Food products(311)	10206	25545	2017	3988	19.2	19.0	19.8	15.6
Beverages(313)	20194	33000	3566	5200	50.4	48.2	17.7	15.8
Tobacco(314)	18907	26515	2266	4091	38.1	30.4	12.0	15.4
Textiles(321)	4654	10456	1559	3137	35.7	32.5	33.5	30.0
Wearing apparel,except footwear(322)	2853	5342	1096	2484	28.4	31.9	38.4	46.5
Leather products(323)	4001	5556	1267	2222	26.1	33.3	31.7	40.0
Footwear,except rubber or plastic(324)	3432	6364	1689	2727	32.7	40.0	49.2	42.9
Wood products,except furniture(331)	7565	13228	2260	4317	36.9	33.7	29.9	32.6
Furniture,except metal(332)	3704	6571	2037	3286	27.3	38.0	55.0	50.0
Paper and products(341)	4901	11034	1557	3448	29.2	32.3	31.8	31.3
Printing and publishing(342)	8202	13693	2799	5398	48.3	45.8	34.1	39.4
Industrial chemicals(351)	21288	40227	4294	6591	33.8	29.3	20.2	16.4
Other chemicals(352)	17092	24681	3381	5745	47.5	40.3	19.8	23.3
Petroleum refineries(353)	101489	401667	12761	16667	21.3	14.2	12.6	4.1
Misc. petroleum and coal products(354)	20071	30000	2795	10000	48.6	33.3	13.9	33.3
Rubber products(355)	9221	21827	2168	3920	19.3	27.4	23.5	18.0
Plastic products(356)	5114	9923	1465	3154	33.8	32.6	28.7	31.8
Pottery,china,earthenware(361)	6313	9412	1979	2941	57.4	53.3	31.3	31.3
Glass and products(362)	7865	19545	2198	5455	45.3	45.7	28.0	27.9
Other non-metallic mineral prod.(369)	9839	17974	2538	4641	50.5	44.6	25.8	25.8
Iron and steel(371)	12563	18125	3024	5375	33.7	28.7	24.1	29.7
Non-ferrous metals(372)	14201	18571	3688	6429	46.0	30.2	26.0	34.6
Fabricated metal products(381)	6513	13763	2097	3978	31.2	31.6	32.2	28.9
Machinery,except electrical(382)	6700	15145	2219	4783	42.7	34.2	33.1	31.6
Machinery electric(383)	7438	11596	1635	3645	45.8	26.8	22.0	31.4
Transport equipment(384)	7295	15933	2665	5133	26.5	35.3	36.5	32.2
Professional & scientific equipm.(385)	5890	12500	1751	4500	43.0	42.0	29.7	36.0
Other manufactured products(390)	4460	8750	1356	3500	32.6	35.7	30.4	40.0

Source: Statistics and Survey Unit, UNIDO.Based on data supplied by the UN Statistical Office, with estimates by the UNIDO Secretariat.

Note: TOTAL MANUFACTURING is the sum of the reported ISICs and does not necessarily correspond to ISIC 300 total.

Table A-8. Sarawak: Selected industrial indicators, by branch of manufacturing, 1973 and 1979

(in M$ at current prices)

Description (ISIC)	Value added per employee		Wages and salaries per employee		Share of value added in gross output (percentage)		Share of wages and salaries in value added (percentage)	
	1973	1981	1973	1981	1973	1981	1973	1981
TOTAL MANUFACTURING(300)	6964	11898	2382	4046	21.1	20.6	34.2	34.0
Food products(311)	5915	10417	1509	3040	19.3	17.4	25.5	29.2
Beverages(313)	9290	23196	2382	3882	20.5	45.3	25.6	16.7
Tobacco(314)	...	...	...	...	...	...	...	...
Textiles(321)	4500	10000	1100	2579	31.6	24.7	24.4	25.8
Wearing apparel,except footwear(322)	4308	7488	1185	2303	28.6	33.3	27.5	30.7
Leather products(323)	...	...	...	...	...	...	...	...
Footwear,except rubber or plastic(324)	...	...	...	...	...	...	...	...
Wood products,except furniture(331)	8990	8581	2784	4006	46.4	34.1	31.0	46.7
Furniture,except metal(332)	3904	7060	1713	3238	34.5	33.9	43.9	45.9
Paper and products(341)	...	...	...	...	...	...	...	...
Printing and publishing(342)	3439	8283	2755	4857	48.8	50.6	80.1	58.6
Industrial chemicals(351)	3839a/	22021a/	1518a/	3461a/	14.7a/	40.7a/	39.5a/	15.7a/
Other chemicals(352)	...	...	...	...	...	...	...	...
Petroleum refineries(353)	...	...	9543	...	...	...	...	...
Misc. petroleum and coal products(354)	...	...	...	...	...	...	...	...
Rubber products(355)	3840	8729	1273	3357	16.8	19.2	33.2	38.5
Plastic products(356)	4615	10439	1662	3532	31.6	30.2	36.0	33.8
Pottery,china,earthenware(361)	3846	7905	1712	3552	58.8	69.7	44.5	44.9
Glass and products(362)	...	...	...	...	...	...	...	...
Other non-metallic mineral prod.(369)	2797	17448	1533	4752	50.6	31.4	54.8	27.2
Iron and steel(371)	...	6504	...	4276	...	33.9	...	65.7
Non-ferrous metals(372)	...	...	...	...	...	...	...	...
Fabricated metal products(381)	4271	8059	1615	3823	27.4	29.1	37.8	47.4
Machinery,except electrical(382)	4032	8987	1536	4326	30.6	33.2	38.1	48.1
Machinery electric(383)	...	5534	...	2165	...	21.8	...	39.1
Transport equipment(384)	6150	11518	2671	5611	50.7	36.2	43.4	48.7
Professional & scientific equipm.(385)	...	...	...	...	...	...	...	...
Other manufactured products(390)	...	116640	...	7659	20.7	8.1	30.7	6.6

Source: Statistics and Survey Unit, UNIDO.Based on data supplied by the UN Statistical Office, with estimates by the UNIDO Secretariat.

Note: TOTAL MANUFACTURING is the sum of the reported ISICs and does not necessarily correspond to ISIC 300 total.

Footnotes: a/ 3510 includes 3520.

Table A-9. Sabah: Selected industrial indicators, by branch of manufacturing, 1973 and 1979

(in M$ at current prices)

Description (ISIC)	Value added per employee		Wages and salaries per employee		Share of value added in gross output (percentage)		Share of wages and salaries in value added (percentage)	
	1973	1979	1973	1979	1973	1979	1973	1979
TOTAL MANUFACTURING(300)	5086	10047	2259	4140	33.3	33.4	44.4	41.2
Food products(311)	2933	11983	1623	3607	16.9	23.2	55.4	30.1
Beverages(313)	7460	16080a/	2547	3362a/	37.8	52.0a/	34.1	20.9a/
Tobacco(314)	...	...	...	...	...	...	...	...
Textiles(321)	6286	...	1800	...	18.4	...	28.6	...
Wearing apparel,except footwear(322)	3471b/	...	1299b/	...	41.0b/	...	37.4b/	...
Leather products(323)	...	...	...	...	...	...	...	...
Footwear,except rubber or plastic(324)	...	...	...	...	...	...	...	...
Wood products,except furniture(331)	6532	9826	2948	4330	37.6	37.6	45.1	44.1
Furniture,except metal(332)	3985	7166	2464	4 16	43.3	39.5	61.8	57.9
Paper and products(341)	...	...	...	...	...	...	...	...
Printing and publishing(342)	5610	843C	2967	5117	54.8	53.9	52.9	60.7
Industrial chemicals(351)	10210c/	20349	2331c/	4909	42.6c/	76.9	22.8c/	24.1
Other chemicals(352)	...	4669	...	1990	...	77.2	...	42.6
Petroleum refineries(353)	...	...	...	...	...	...	...	...
Misc. petroleum and coal products(354)	...	...	...	...	...	...	...	...
Rubber products(355)	...	10592	...	3744	...	24.7	...	35.4
Plastic products(356)	...	8694	...	3447	...	26.9	...	39.6
Pottery,china,earthenware(361)	3231d/	8000e/	2189d/	4022e/	42.6d/	28.8e/	67.7d/	50.3e/
Glass and products(362)	...	...	...	...	...	...	...	...
Other non-metallic mineral prod.(369)	...	4730	...	2888	...	51.4	...	61.1
Iron and steel(371)	4915f/	10710g/	1724f/	3972g/	34.0f/	31.1g/	35.1f/	37.1g/
Non-ferrous metals(372)	...	...	...	...	...	...	...	...
Fabricated metal products(381)	...	...	...	...	...	...	...	...
Machinery,except electrical(382)	...	7154	...	3900	...	56.3	...	54.5
Machinery electric(383)	11023	9714	5116	1929	30.7	26.0	46.4	19.9
Transport equipment(384)	3931	9233	2483	5291	43.4	32.7	63.2	57.3
Professional & scientific equipm.(385)	...	...	...	...	...	...	...	...
Other manufactured products(390)	5808	...	1482	...	25.1	...	25.5	...

Source: Statistics and Survey Unit, UNIDO.Based on data supplied by the UN Statistical Office, with estimates by the UNIDO Secretariat.

Note: TOTAL MANUFACTURING is the sum of the reported ISICs and does not necessarily correspond to ISIC 300 total.

Footnotes: a/ 3130 includes 3210 3220.
b/ 3220 includes 3230 3240.
c/ 3510 includes 3520 3530 3540 3550 3560.
d/ 3610 includes 3620 3690.
e/ 3610 includes 3620.
f/ 3710 includes 3720 3810 3820.
g/ 3710 includes 3810.

Table A-16. Malaysia: Product mix of traded manufactured goods, 1973, 1981 and 1982. */

SITC	DESCRIPTION OF TRADE GOODS	EXPORTS 1973 PERCENT IN TOTAL MANUFACTURES	EXPORTS 1981 PERCENT MANUFACTURES	EXPORTS 1982 PERCENT MANUFACTURES	EXPORTS 1982 (1000 US $)	IMPORTS 1973 PERCENT IN TOTAL MANUFACTURES	IMPORTS 1981 PERCENT MANUFACTURES	IMPORTS 1982 PERCENT MANUFACTURES	IMPORTS 1982 (1000 US $)
01	Meat and meat preparations	0.053	0.027	0.060	3407	0.574	0.499	0.601	64613
02	Dairy products and eggs	0.471	0.369	0.326	18626	2.492	1.631	1.291	138742
032	Fish n.e.s. and fish preparations	0.244	1.162	0.901	51534	0.402	0.314	0.312	33580
0422	Rice,glazed or polished not otherwise worked	0.122	...	0.066	3765	4.137	1.341	1.315	141352
046	Meal and flour of wheat or of meslin	0.029	0.077	0.064	3666	0.223	0.020	0.002	177
047	Meal and flour of cereals,except above	0.002	0.004	0.005	264	0.090	0.089	0.105	11306
048	Cereals preparat. & starch of fruits & vegetab.	0.204	0.173	0.246	14081	1.215	0.898	0.655	70376
052	Dried fruit	0.003	0.002	0.002	97	0.043	0.071	0.068	7296
053	Fruit,preserved and fruit preparations	1.383	0.492	0.503	28774	0.254	0.238	0.227	24440
055	Vegetables,roots & tubers,preserved or prepared	0.396	0.158	0.134	7671	0.327	0.227	0.220	23686
06	Sugar,sugar preparations and honey	0.244	0.603	0.206	11783	3.441	2.301	1.381	148467
0713	Coffee extracts,essences,concentrates & similar	0.001	0.004	0.004	252	0.111	0.276	0.259	27803
0722	Cocoa powder,unsweetened	0.006	0.019	0.016	930	0.046	0.006	0.002	206
0723	Cocoa butter and cocoa paste	0.105	0.317	0.322	18413	0.003	0.005	0.005	509
073	Chocolate and related food preparations	0.028	0.031	0.020	1124	0.055	0.033	0.027	2945
074	Tea and mate	0.055	0.018	0.014	812	0.120	0.092	0.096	10303
081	Feeding-stuff for animals	0.843	0.582	0.839	47961	1.631	0.699	0.624	67106
09	Miscellaneous food preparations	0.178	0.697	0.446	25481	0.335	0.233	0.270	29016
11	Beverages	0.275	0.217	0.162	9248	0.964	0.562	0.390	41916
122	Tobacco manufactures	0.375	0.012	0.003	195	0.373	0.338	0.365	39179
2219	Flour and meal of oil seeds,nuts,kernels	0.001	0.001	0.000	4	0.048	0.023	0.007	706
231	Crude rubber,synth. & reclaimed(excl.SITC 2311)	0.000	0.000	0.022	1279	0.083	0.098	0.084	9068
243	Wood,shaped or simply worked	18.140	8.612	8.719	498500	0.091	0.119	0.105	11289
251	Pulp and waste paper	0.001	0.000	0.003	166	0.089	0.042	0.029	3100
2626	Wool shoddy	...	...	0.000	0	0.000	0.000	0.000	0
2627	Wool or other animal hair,carded or combed	...	...	0.000	1	0.000	0.001	0.000	12
2628	Wool tops	...	0.312	0.305	17425	0.006	0.012	0.006	626
2629	Waste of wool and other animal hair n.e.s.	...	0.000	0.000	1	0.001	...	0.000	0
263	Cotton	0.007	0.033	0.032	1814	0.831	0.532	0.420	45154
266	Synthetic and regenerated(artificial) fibres	0.000	0.338	0.228	13030	0.206	0.160	0.143	15318
267	Waste materials from textile fabrics(incl.rags)	0.003	0.003	0.007	384	0.030	0.029	0.032	3425
332	Petroleum products	4.063	2.147	2.546	145562	3.717	10.879	11.213	1205083
4	Animal and vegetable oils and fats	17.616	25.983	24.374	1393597	0.541	0.158	0.145	15621
411	Animal oils and fats	0.004	0.000	0.000	12	0.178	0.010	0.011	1215
421	Fixed vegetable oils,soft(incl.SITC 422)	17.461	25.059	23.307	1332602	0.326	0.129	0.120	12896
431	Animal and vegetable oils and fats processed	0.151	0.925	1.067	60984	0.036	0.018	0.014	1510

Table A-10. Malaysia: Product mix of traded manufactured goods, 1973, 1981 and 1982 (continued)

SITC	DESCRIPTION OF TRADE GOODS	EXPORTS 1973 PERCENT IN TOTAL MANUFACTURES	EXPORTS 1981 PERCENT IN TOTAL MANUFACTURES	EXPORTS 1982 PERCENT IN TOTAL MANUFACTURES	EXPORTS 1982 (1000 US $)	IMPORTS 1973 PERCENT IN TOTAL MANUFACTURES	IMPORTS 1981 PERCENT IN TOTAL MANUFACTURES	IMPORTS 1982 PERCENT IN TOTAL MANUFACTURES	IMPORTS 1982 (1000 US $)
5	Chemicals	2.101	1.479	1.766	100995	10.464	9.618	8.691	934093
51	Chemicals elements and compounds	0.377	0.331	0.404	23105	2.702	2.613	2.443	262561
52	Tar and chemicals from coal,petroleum,nat. gas	0.014	0.002	0.001	38	0.015	0.104	0.091	9731
53	Dyeing,tanning and colouring materials	0.047	0.045	0.042	2410	0.594	0.434	0.416	44710
54	Medicinal and pharmaceutical products	0.415	0.220	0.257	14666	1.416	0.771	0.774	83169
55	Essential oils and perfume materials	0.466	0.296	0.293	16753	0.858	0.698	0.593	63744
56	Fertilizers,manufactured	0.194	0.047	0.064	3633	1.440	1.522	1.129	121312
57	Explosives and pyrotechnic products	0.000	0.016	0.007	389	0.083	0.126	0.098	10489
58	Plastic materials,regenerated cellul. & resins	0.442	0.200	0.207	11809	2.281	1.728	1.757	188844
59	Chemical materials and products n.e.s.	0.146	0.322	0.493	28193	1.075	1.623	1.391	149533
6	Manufactured goods classified by material	41.474	25.126	19.542	1117312	24.882	19.193	19.536	2099551
61	Leather manufactured n.e.s. & dressed fur skins	0.013	0.014	0.024	1387	0.063	0.024	0.023	2434
62	Rubber manufactures n.e.s.	0.662	0.637	0.664	37960	0.537	0.447	0.436	46869
63	Wood and cork manufactures(excl.furniture)	8.602	3.845	3.384	193499	0.175	0.146	0.157	16919
64	Paper,paper board and manufactures thereof	0.308	0.151	0.129	7377	3.206	2.324	1.884	202526
65	Textile yarn,fabrics,made-up articles	1.793	2.312	2.362	135022	6.470	3.020	2.609	280350
66	Non-metallic mineral manufactures,n.e.s.	0.458	0.391	0.541	30908	1.848	1.816	1.768	189965
67	Iron and steel	0.210	0.236	0.207	11844	7.477	6.490	7.026	755130
68	Non-ferrous metals	28.698	16.734	11.371	650140	1.480	1.727	1.698	182539
69	Manufactures of metal,n.e.s.	0.729	0.807	0.860	49175	3.626	3.199	3.934	422818
7	Machinery and transport equipment	4.471	25.538	32.357	1850040	35.548	44.181	45.736	4915386
71	Machinery,other than electric	2.446	2.136	3.008	171991	16.451	15.956	15.421	1657396
72	Electrical machinery,apparatus and appliances	0.862	22.764	27.853	1592513	6.306	17.628	20.125	2162854
73	Transport equipment	1.163	0.638	1.496	85536	12.791	10.597	10.190	1095136
8	Miscellaneous manufactured articles	7.104	5.462	5.760	329354	6.626	5.084	5.638	605894
81	Sanitary,plumbing,heating & lightning fixtures	0.045	0.061	0.041	2370	0.288	0.174	0.180	19353
82	Furniture	0.140	0.298	0.176	10067	0.116	0.107	0.128	13728
83	Travel goods,handbags and similar articles	0.011	0.010	0.009	508	0.123	0.090	0.074	7901
84	Clothing	1.594	2.844	3.048	174271	0.568	0.400	0.391	42046
85	Footwear	0.378	0.568	0.412	23536	0.060	0.099	0.101	10808
86	Professional,scient. & controll. instruments	4.021	0.516	0.735	42046	3.271	1.663	2.112	227011
89	Miscellaneous manufactured articles,n.e.s.	0.915	1.164	1.339	76555	2.197	2.549	2.652	285046
		1973	1981	1982		1973	1981	1982	
	TOTAL MANUFACTURES	1309880	5625187	5717547		2068754	9650237	10747344	
	TOTAL: SITC 5-8 LESS 68 a/	346489	2299119	2747561		1573070	7367827	8372384	
	TOTAL TRADED GOODS: SITC 0-9	3039677	11733881	12026728		2440676	11508077	12363365	

Note:Data and SITC descriptions refer to SITC revision 1
*/ This table is based on the definition of trade in manufactures covering a list of 148 specifically identified SITC 3-digit or 4-digit codes comprising a wide range of processing stages of manufactured goods.
a/ Definition of trade in manufactures SITC 5-8 less 68 is one of the most often found. It covers only items recognized as exclusively manufactured goods,i.e. with a high level of manufacturing content.
Source: UNIDO data base;Information supplied by the United Nations Statistical Office.

Table A-11. Malaysia: Origin of imports of manufactures by branch, 1982[*/]

SITC	DESCRIPTION OF TRADE GOODS	WORLD TOTAL (1000 US$)	DEVELOPING COUNTRIES (PERCENT)	DEVELOPED MARKET ECONOMIES TOTAL (PERCENT)	USA (PERCENT)	EEC (PERCENT)	JAPAN (PERCENT)	CENTRALLY PLANNED DEVELOPED COUNTRIES (PERCENT)
01	Meat and meat preparations	64613	36.32	63.53	10.25	6.93	0.33	0.00
02	Dairy products and eggs	138742	3.34	96.50	0.55	30.33	0.56	0.00
032	Fish n.e.s. and fish preparations	33580	27.54	72.14	0.55	0.55	67.34	0.05
0422	Rice,glazed or polished not otherwise worked	141352	99.51	0.21	0.12	0.00	0.00	0.00
046	Meal and flour of wheat or of meslin	177	53.07	40.54	0.25	0.24	33.17	0.00
047	Meal and flour of cereals,except above	11306	87.41	12.48	0.25	12.02	0.16	0.00
048	Cereals preparat. & starch of fruits & vegetab.	70376	73.12	25.87	2.15	9.74	1.39	0.00
052	Dried fruit	7296	49.08	46.08	35.12	0.32	0.07	0.00
053	Fruit,preserved and fruit preparations	24440	29.84	34.15	20.58	7.24	0.70	0.22
055	Vegetables,roots & tubers,preserved or prepared	23686	31.53	46.75	5.34	3.60	34.27	0.00
06	Sugar,sugar preparations and honey	148467	40.66	59.26	0.82	0.92	0.14	0.00
0713	Coffee extracts,essences,concentrates & similar	27803	2.34	97.66	33.85	3.84	0.01	0.00
0722	Cocoa powder,unsweetened	206	75.64	24.32	0.88	23.43	0.00	0.00
0723	Cocoa butter and cocoa paste	509	17.68	82.32	4.56	46.36	0.00	0.00
073	Chocolate and related food preparations	2945	32.27	67.68	4.04	43.66	1.57	0.00
074	Tea and mate	10303	89.60	7.01	1.80	4.76	0.24	0.00
081	Feeding-stuff for animals	67106	85.77	10.58	2.32	2.37	0.74	0.01
09	Miscellaneous food preparations	29016	29.22	65.90	31.85	18.93	3.87	0.00
11	Beverages	41916	25.02	74.51	5.91	64.12	0.92	0.02
122	Tobacco manufactures	39179	20.83	79.17	74.54	4.47	0 08	0.00
2219	Flour and meal of oil seeds,nuts,kernels	706	85.90	13.87	6.76	0.42	4.92	0.00
231	Crude rubber,synth. & reclaimed(excl.SITC 2311)	9068	2.52	83.00	11.99	19.84	49.47	0.02
243	Wood,shaped or simply worked	11289	93.82	0.92	0.04	0.64	0 24	0.00
251	Pulp and waste paper	3100	20.56	79.43	50.91	0.00	0.01	0.01
2626	Wool shoddy	0	0.00	100.00	0.00	100.00	0.00	0.00
2627	Wool or other animal hair,carded or combed	12	96.59	3.41	3.04	0.37	0 00	0.00
2628	Wool tops	626	92.13	0.43	0.00	0.00	0 42	0.00
2629	Waste of wool and other animal hair n.e.s.	0	0.00	100.00	0.00	100.00	0 00	0.00
263	Cotton	45154	50.50	43.80	40.64	0.74	0.58	0.70
266	Synthetic and regenerated(artificial) fibres	15318	8.49	81.58	2.73	0.21	72 43	0.00
267	Waste materials from textile fabrics(incl.rags)	3425	13.01	86.85	36.42	0.46	49 93	0.00
332	Petroleum products	1205083	98.18	1.78	0.28	0.72	0 26	0.00
4	Animal and vegetable oils and fats	15621	68.75	30.38	2.58	16.05	5 50	0.05
411	Animal oils and fats	1215	7.12	92.51	3.78	13.73	2.51	0.37
421	Fixed vegetable oils,soft(incl.SITC 422)	12896	80.65	18.38	2.22	12.75	3 16	0.00
431	Animal and vegetable oils and fats processed	1510	16.71	82.92	4.64	46.13	27 91	0.19

Table A-11. Malaysia: Origin of imports of manufactures by branch, 1982 (continued)

SITC	DESCRIPTION OF TRADE GOODS	WORLD TOTAL (1000 US$)	DEVELOPING COUNTRIES (PERCENT)	DEVELOPED MARKET ECONOMIES TOTAL (PERCENT)	USA (PERCENT)	EEC (PERCENT)	JAPAN (PERCENT)	CENTRALLY PLANNED DEVELOPED COUNTRIES (PERCENT)
5	Chemicals	934093	17.52	75.96	21.08	26.09	18.59	4.00
51	Chemicals elements and compounds	262561	13.33	83.18	24.85	24.09	25.81	1.43
52	Tar and chemicals from coal,petroleum,nat. gas	9731	92.28	7.72	1.42	1.37	1.60	0.00
53	Dyeing,tanning and colouring materials	44710	13.11	84.51	6.00	38.05	29.35	0.39
54	Medicinal and pharmaceutical products	83169	29.59	67.07	9.46	33.71	5.37	0.45
55	Essential oils and perfume materials	63744	40.53	56.72	19.98	21.56	10.27	0.00
56	Fertilizers,manufactured	121312	6.37	68.90	11.96	29.94	7.58	24.59
57	Explosives and pyrotechnic products	10489	44.15	51.77	10.84	26.52	0.94	0.45
58	Plastic materials,regenerated cellul. & resins	188844	15.95	76.71	17.86	21.73	27.74	1.47
59	Chemical materials and products n.e.s.	149533	14.01	84.78	39.38	27.69	13.30	0.27
6	Manufactured goods classified by material	2099551	23.97	67.44	4.09	11.01	42.84	0.85
61	Leather manufactured n.e.s. & dressed fur skins	2434	43.51	44.41	2.70	26.10	6.12	0.09
62	Rubber manufactures n.e.s.	46869	14.11	82.86	10.89	20.43	49.32	0.16
63	Wood and cork manufactures(excl.furniture)	16919	65.43	26.12	1.66	8.98	9.24	0.31
64	Paper,paper board and manufactures thereof	202526	13.14	79.97	8.80	9.42	25.22	0.96
65	Textile yarn,fabrics,made-up articles	280350	44.59	39.50	3.18	5.49	26.89	0.28
66	Non-metallic mineral manufactures,n.e.s.	189965	34.29	55.50	3.82	23.49	24.43	0.17
67	Iron and steel	755130	12.95	77.23	0.80	6.54	66.56	1.82
68	Non-ferrous metals	182539	21.74	71.89	6.68	10.26	23.47	0.00
69	Manufactures of metal,n.e.s.	422818	30.81	65.99	6.66	17.10	36.96	0.23
7	Machinery and transport equipment	4915386	11.13	87.27	31.94	15.67	36.07	0.22
71	Machinery,other than electric	1657396	5.92	91.50	20.31	25.41	39.88	0.41
72	Electrical machinery,apparatus and appliances	2162854	18.41	80.36	46.14	10.00	21.70	0.08
73	Transport equipment	1095136	4.62	94.50	21.51	12.12	58.68	0.20
8	Miscellaneous manufactured articles	605894	27.18	68.32	12.83	16.96	30.34	0.15
81	Sanitary,plumbing,heating & lightning fixtures	19353	27.30	66.48	4.36	43.83	10.01	0.22
82	Furniture	13728	30.70	56.52	5.66	28.22	18.84	0.27
83	Travel goods,handbags and similar articles	7901	53.06	18.62	2.54	5.80	8.89	0.00
84	Clothing	42046	79.12	16.71	3.54	5.13	6.34	0.07
85	Footwear	10808	45.87	47.97	1.90	34.68	4.97	0.18
86	Professional,scient. & controll. instruments	227011	9.21	88.79	18.76	19.51	38.98	0.05
89	Miscellaneous manufactured articles,n.e.s.	285046	32.22	62.48	11.04	13.94	30.49	0.24
	TOTAL manufactures	10747344	28.13	68.38	18.88	13.58	28.72	0.63
	TOTAL: SITC 5-8 LESS 68 a/	8372384	15.99	80.00	22.91	15.87	35.68	0.80
	TOTAL traded goods: SITC 0-9	12363365	33.46	63.30	17.45	12.16	25.11	0.55

Note:Data and SITC descriptions refer to SITC revision 1
*/ This table is based on the definition of trade in manufactures covering a list of 148 specifically identified SITC 3-digit or 4-digit codes comprising a wide range of processing stages of manufactured goods.
a/ Definition of trade in manufactures SITC 5-8 less 68 is one of the most often found. It covers only items recognized as exclusively manufactured goods,i.e. with a high level of manufacturing content.
Source: UNIDO data base;Information supplied by the United Nations Statistical Office.
Note: Percentages may not add to 100.0 due to the fact that countries report trade to/from "unspecified areas".

Table V-12. Malaysia: Destination of exports of manufactures by branch, 1982*/

SITC	DESCRIPTION OF TRADE GOODS	WORLD TOTAL (1000 US$)	DEVELOPING COUNTRIES (PERCENT)	DEVELOPED MARKET ECONOMIES TOTAL (PERCENT)	USA (PERCENT)	EEC (PERCENT)	JAPAN (PERCENT)	CENTRALLY PLANNED DEVELOPED COUNTRIES (PERCENT)
01	Meat and meat preparations	3407	91.73	8.27	0.07	8.10	0.01	0.00
02	Dairy products and eggs	18626	77.38	22.60	0.73	0.04	21.68	0.00
032	Fish n.e.s. and fish preparations	51534	6.79	93.21	6.32	43.96	0.06	0.00
0422	Rice,glazed or polished not otherwise worked	3765	99.99	0.01	0.00	0.01	0.00	0.00
046	Meal and flour of wheat or of meslin	3666	100.00	0.00	0.00	0.00	0.00	0.00
047	Meal and flour of cereals,except above	264	99.99	0.01	0.00	0.01	0.00	0.00
048	Cereals preparat. & starch of fruits & vegetab.	14081	96.92	2.96	0.29	0.41	0.00	0.00
052	Dried fruit	97	99.98	0.02	0.00	0.02	0.00	0.00
053	Fruit,preserved and fruit preparations	28774	37.92	61.92	14.12	29.32	8.13	0.06
055	Vegetables,roots & tubers,preserved or prepared	7671	55.31	43.97	2.23	7.92	31.81	0.00
06	Sugar,sugar preparations and honey	11793	95.35	4.57	0.00	3.53	0.70	0.00
0713	Coffee extracts,essences,concentrates & similar	252	99.27	0.73	0.00	0.00	0.04	0.00
0722	Cocoa powder,unsweetened	930	24.12	71.01	59.78	0.00	0.00	0.00
0723	Cocoa butter and cocoa paste	18413	9.66	90.34	35.68	42.45	11.28	0.00
073	Chocolate and related food preparations	1124	97.88	2.12	2.10	0.00	0.00	0.00
074	Tea and mate	812	97.28	2.67	0.00	2.35	0.00	0.00
081	Feeding-stuff for animals	47961	17.24	82.76	0.27	80.00	0.23	0.00
09	Miscellaneous food preparations	25481	95.18	4.39	0.58	1.59	1.17	0.00
11	Beverages	9248	98.87	1.12	0.00	1.11	0.01	0.00
122	Tobacco manufactures	195	54.21	45.79	42.53	3.20	0.00	0.00
2219	Flour and meal of oil seeds,nuts,kernels	4	100.00	0.00	0.00	0.00	0.00	0.00
231	Crude rubber,synth. & reclaimed(excl.SITC 2311)	1279	50.43	47.04	4.63	3.34	35.31	0.00
243	Wood,shaped or s[illegible], worked	498500	39.21	59.34	1.79	42.56	6.48	0.00
251	Pulp and waste paper	166	100.00	0.00	0.00	0.00	0.00	0.00
2626	Wool shoddy	0	0.00	100.00	0.00	0.00	0.00	0.00
2627	Wool or other animal hair,carded or combed	1	100.00	0.00	0.00	0.00	0.00	0.00
2628	Wool tops	17425	14.76	85.24	0.00	1.38	83.12	0.00
2629	Waste of wool and other animal hair n.e.s.	1	100.00	0.00	0.00	0.00	0.00	0.00
263	Cotton	1814	30.04	50.04	0.00	0.00	2.11	0.00
266	Synthetic and regenerated(artificial) fibres	13030	90.64	7.59	0.00	2.13	2.65	0.00
267	Waste materials from textile fabrics(incl.rags)	384	92.79	7.21	0.30	0.00	0.00	0.00
332	Petroleum products	145562	88.37	10.74	0.30	5.98	2.44	0.89
4	Animal and vegetable oils and fats	1393597	58.03	33.47	5.50	18.59	5.16	8.30
411	Animal oils and fats	12	99.91	0.09	0.00	0.09	0.00	0.00
421	Fixed vegetable oils,soft(incl.SITC 422)	1332602	59.12	32.31	5.68	16.87	5.38	8.39
431	Animal and vegetable oils and fats processed	60984	34.28	58.74	1.49	56.15	0.35	6.35

Table A-12. Malaysia: Destination of exports of manufactures by branch, 1982 (continued)

SITC	DESCRIPTION OF TRADE GOODS	WORLD TOTAL (1000 US$)	DEVELOPING COUNTRIES (PERCENT)	DEVELOPED MARKET ECONOMIES TOTAL (PERCENT)	USA (PERCENT)	EEC (PERCENT)	JAPAN (PERCENT)	CENTRALLY PLANNED DEVELOPED COUNTRIES (PERCENT)
5	Chemicals	100995	65.08	31.99	15.32	7.24	5.28	2.04
51	Chemicals elements and compounds	23105	58.17	30.96	15.26	2.59	5.83	8.94
52	Tar and chemicals from coal,petroleum,nat. gas	38	99.90	0.10	0.01	0.05	0.00	0.00
53	Dyeing,tanning and colouring materials	2410	96.25	3.21	0.01	1.77	0.81	0.00
54	Medicinal and pharmaceutical products	14666	74.35	25.57	0.08	16.64	0.03	0.00
55	Essential oils and perfume materials	16753	89.60	10.40	1.38	7.73	0.38	0.00
56	Fertilizers,manufactured	3633	100.00	0.00	0.00	0.00	0.00	0.00
57	Explosives and pyrotechnic products	389	4.74	95.26	0.00	91.98	0.15	0.00
58	Plastic materials,regenerated cellul. & resins	11809	76.81	20.56	15.59	0.45	0.18	0.00
59	Chemical materials and products n.e.s.	28193	40.05	59.56	35.00	8.96	13.75	0.00
6	Manufactured goods classified by material	1117312	27.81	66.05	3.84	38.34	18.36	4.86
61	Leather manufactured n.e.s. & dressed fur skins	1387	82.06	17.94	0.17	15.48	0.00	0.00
62	Rubber manufactures n.e.s.	37960	41.97	56.38	5.11	14.80	14.65	0.19
63	Wood and cork manufactures(excl.furniture)	193499	55.73	42.84	10.13	18.20	11.14	0.00
64	Paper,paper board and manufactures thereof	7377	82.67	17.19	0.54	0.62	14.43	0.00
65	Textile yarn,fabrics,made-up articles	135022	42.44	54.06	3.88	20.36	3.67	0.34
66	Non-metallic mineral manufactures,n.e.s.	30908	79.45	20.37	5.24	7.70	4.56	0.00
67	Iron and steel	11844	86.70	13.15	7.52	1.11	2.08	0.00
68	Non-ferrous metals	650140	8.13	82.61	1.55	54.11	26.02	8.27
69	Manufactures of metal,n.e.s.	49175	70.54	29.05	7.11	11.10	2.40	0.00
7	Machinery and transport equipment	1850040	25.84	73.69	47.62	18.13	4.96	0.02
71	Machinery,other than electric	171991	56.11	42.48	8.54	13.63	5.02	0.00
72	Electrical machinery,apparatus and appliances	1592513	22.48	77.16	53.74	16.98	5.13	0.02
73	Transport equipment	85536	27.58	71.85	12.19	48.67	1.67	0.01
8	Miscellaneous manufactured articles	329354	20.05	78.60	25.08	33.60	5.98	1.17
81	Sanitary,plumbing,heating & lighting fixtures	2370	99.45	0.55	0.03	0.49	0.02	0.00
82	Furniture	10067	30.88	69.09	38.71	4.58	1.12	0.01
83	Travel goods,handbags and similar articles	508	59.78	40.21	0.96	26.28	0.64	0.00
84	Clothing	174271	6.57	91.21	32.48	41.82	2.45	2.19
85	Footwear	23536	32.56	66.63	6.41	20.46	0.08	0.00
86	Professional,scient. & controll. instruments	42046	18.64	81.28	15.18	38.01	20.82	0.03
89	Miscellaneous manufactured articles,n.e.s.	76555	43.50	56.03	18.57	21.40	8.53	0.00
	TOTAL manufactures	5717547	38.20	58.08	19.64	25.21	7.98	3.10
	TOTAL: SITC 5-8 LESS 68 a/	2747561	31.58	67.53	36.83	19.29	5.56	0.24
	TOTAL traded goods: SITC 0-9	12026728	44.36	50.62	11.46	14.94	20.38	2.39

Note:Data and SITC descriptions refer to SITC revision 1
*/ This table is based on the definition of trade in manufactures covering a list of 148 specifically identified SITC 3-digit or 4-digit codes comprising a wide range of processing stages of manufactured goods.
a/ Definition of trade in manufactures SITC 5-8 less 68 is one of the most often found. It covers only items recognized as exclusively manufactured goods,i.e. with a high level of manufacturing content.
Source: UNIDO data base;Information supplied by the United Nations Statistical Office.
Note: Percentages may not add to 100.0 due to the fact that countries report trade to/from "unspecified areas".

Table A-13. Malaysia: Shares of exports and imports classified according to level of processing, 1970 and 1982, and trend growth rates, 1970-1975 and 1975-1982

CLASSES	EXPORTS				IMPORTS			
	CLASS SHARE OF TOTAL (PERCENTAGE)		CLASS GROWTH RATE (PERCENTAGE)		CLASS SHARE OF TOTAL (PERCENTAGE)		CLASS GROWTH RATE (PERCENTAGE)	
	1970	1982	1970-1975	1975-1982	1970	1982	1970-1975	1975-1982
A : Non-processed goods for further processing	53.47	51.06	17.62	22.70	20.06	11.00	18 49	17.72
B : Processed goods for further processing	31.72	23.81	28.18	12.36	11.38	9.75	29 90	16.83
C : Non-processed goods for final use	3.67	1.22	17.19	1.26	3.48	2.43	16 05	19.00
D : Processed goods for final use	11.15	23.91	37.26	23.69	65.08	76.83	28 11	24.80
	1970	1982			1970	1982		
Sum of classes: A+B+C+D in 1000 current US$	1682133	12025102			1400606	12360345		
Total trade SITC 0-9 in 1000 current US$	1686634	12026728			1400606	12363365		

SOURCE: UNIDO data base; Information supplied by the United Nations Statistical Office, with estimates by the UNIDO Secretariat.

Note: Calculations are based on current us dollar prices.
Sum of classes and Total trade figures should be identical. Discrepancies or zero values are due to lack of countrys" trade reporting in general, but especially at the 3-, 4- and 5-digit SITC level.

Table A-14. Malaysia: Composition and value of trade, 1981 and 1982

Description of traded goods (SITC)	Imports (Percentage of total trade)		Exports (Percentage of total trade)		Trade balance (Exports less imports in 1000 current US $)	
	1981	1982	1981	1982	1981	1982
OILS AND FATS						
Animal oils and fats(411)	0.0	0.0	0.0	0.0	-989.5	-1203.8
Fixed vegetable oils and fats(421/2)	0.1	0.1	12.0	11.1	1397110.3	1319705.0
Processed animal and vegetable oils and fats(431)	0.0	0.0	0.4	0.5	50226.5	59474.3
CHEMICALS						
Organic chemicals(512)	1.3	1.2	0.1	0.1	-142693.2	-138688.0
Inorganic chem., oxides and halogen salts(513/4)	0.9	0.9	0.1	0.1	-91934.3	-101975.3
Dyeing, tanning and colouring materials(531)	0.1	0.1	0.0	0.0	-15464.3	-16731.1
Medicinal and pharmaceutical products(541)	0.6	0.7	0.1	0.1	-62044.8	-68502.6
Plastics, cellulose and artificial resins(581)	1.4	1.5	0.1	0.1	-155492.2	-177035.9
FERTILIZERS						
Nitrogenous fertilizers & related materials(5611)	0.5	0.4	0.0	0.0	-61368.1	-42937.5
Phosphatic fertilizers and related materials(5612)	0.1	0.0	0.0	0.0	-5324.4	-4319.7
Potassic fertilizers and related materials(5613)	0.4	0.3	0.0	0.0	-41209.5	-38209.5
PETROLEUM						
Petroleum, crude or partly refined(331)	7.8	5.1	25.5	27.4	2102939.2	2667283.1
Petroleum products(332)	9.1	9.7	1.0	1.2	-929043.9	-1059521.0
RUBBER						
Crude rubber, synthetic and reclaimed(231)	0.3	0.2	13.7	9.5	1569677.5	1112587.4
Rubber materials, e.g.sheets, threads, piping(621)	0.1	0.1	0.2	0.2	9374.4	8597.3
Articles of rubber, e.g. tyres, tubes(629)	0.3	0.3	0.1	0.1	-16665.9	-17506.3
WOOD AND FURNITURE						
Wood, shaped or simply worked(243)	0.1	0.1	4.1	4.1	472976.6	487211.1
Pulp paper, including waste(251)	0.0	0.0	0.0	0.0	-4028.3	-2933.6
Veneers, plywood, improved wood(631)	0.1	0.1	1.6	1.4	177515.9	156015.5
Wood manufactures(632)	0.0	0.0	0.3	0.2	25205.6	21112.9
Paper and paperboard(641)	1.8	1.5	0.0	0.0	-199646.8	-179503.5
Articles of pulp, paper or paperboard(642)	0.2	0.2	0.1	0.1	-16110.5	-15645.5
Furniture(821)	0.1	0.1	0.1	0.1	6405.5	-3661.1
TEXTILES AND CLOTHING						
Wool and other animal hair(262)	0.2	0.1	0.2	0.1	-7300.3	365.7
Cotton(263)	0.4	0.4	0.0	0.0	-49455.7	-43339.4
Jute(264)	0.0	0.0	0.0	0.0	-6.9	4.8
Vegetable fibres, flax and hemp(265)	0.0	0.0	0.0	0.0	-139.8	-503.6
Synthetic and regenerated fibres(266)	0.1	0.1	0.2	0.1	3597.2	-2287.7
Textile yarn and thread(651)	0.3	0.3	0.2	0.2	-14081.8	-10378.8
Woven cotton fabrics(652)	0.5	0.4	0.3	0.3	-13095.2	-9753.9
Woven textile fabrics(653)	1.2	1.1	0.5	0.5	-88743.7	-78144.7
Made-up articles chiefly of textiles(656)	0.1	0.1	0.1	0.1	-9737.8	-9187.6
Travel bags, handbags, etc.(831)	0.1	0.1	0.0	0.0	-8122.0	-7392.9
Clothing, excluding leather(841 less 8413)	0.3	0.3	1.4	1.4	122179.3	132939.7
Calf leather(6113)	0.0	0.0	0.0	0.0	-162.1	-88.4
LEATHER AND PRODUCTS						
Other leather, including artificial(611 less 6113)	0.0	0.0	0.0	0.0	-1199.7	-1196.1
Leather manufactures(612)	0.0	0.0	0.0	0.0	-214.8	302.1
Apparel and accessories of leather(8413)	0.0	0.0	0.0	0.0	-807.5	-707.2
Footwear(85)	0.1	0.1	0.3	0.2	22392.8	12728.9
BUILDING MATERIALS AND GLASS						
Lime, cement, fabricated building materials(661)	0.6	0.6	0.0	0.0	-68540.4	-75861.9
Construction and refractory materials of clay(662)	0.3	0.3	0.0	0.0	-32415.0	-31647.2
Glass(664)	0.2	0.2	0.1	0.1	-11343.3	-12111.2
Glassware and pottery(665/6)	0.3	0.2	0.1	0.1	-22386.6	-19769.7

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Table A-14. Malaysia: Composition and value of trade, 1981 and 1982 (continued)

Description of traded goods (SITC)	Imports (Percentage of total trade)		Exports (Percentage of total trade)		Trade balance (Exports less imports in 1000 current US $)	
	1981	1982	1981	1982	1981	1982
IRON AND STEEL						
Iron ore and concentrates(281)	0.0	0.0	0.0	0.0	-392.7	-676.9
Iron and steel scrap(282)	0.2	0.0	0.0	0.0	-18121.1	-2416.7
Pig iron and sponge(671)	0.1	0.1	0.0	0.0	-6021.2	-6572.3
Ingots and other primary forms(672)	0.4	0.5	0.0	0.0	-46974.5	-61563.0
Bars, rods, shapes, sections(673)	1.1	1.8	0.0	0.0	-129801.8	-220648.3
Universals, plates and sheets(674)	2.3	2.3	0.0	0.0	-266806.2	-281702.5
Hoop and strip(675)	0.1	0.1	0.0	0.0	-13455.0	-12984.1
Iron and steel wire(677)	0.1	0.1	0.0	0.0	-11872.0	-12196.2
Tubes, pipes and fittings(678)	1.2	1.1	0.1	0.0	-132076.6	-135807.6
Unworked castings and forgings(679)	0.0	0.0	0.0	0.0	-2194.3	-4146.9
NON-FERROUS METALS						
Non-ferrous ore and concentrates(283)	1.2	1.3	0.8	0.6	-45956.6	-89586.3
Copper, blister, refined, alloys(6821)	0.0	0.0	0.0	0.0	-79.5	-4884.8
Copper bars, shapes, sections, wire, etc.(6822)	0.5	0.6	0.0	0.0	-57741.4	-70268.6
Aluminium, unwrought or worked(684)	0.6	0.5	0.1	0.1	-54619.7	-55990.2
Lead, unwrought or worked(685)	0.1	0.1	0.0	0.0	-9812.9	-7190.3
Zinc, unwrought or worked(686)	0.1	0.1	0.0	0.0	-17102.4	-15775.3
Tin and alloys, unwrought or worked(687)	0.0	0.1	7.9	5.3	923000.7	626236.5
Wire products, e.g. cables, ropes(693)	0.2	0.2	0.0	0.0	-16770.9	-16720.7
SELECTED CAPITAL GOODS						
Hand tools used in agriculture(6951)	0.0	0.0	0.0	0.0	-1039.6	-2891.7
Tools for use in hand or machine(6952)	0.3	0.3	0.0	0.0	-37680.8	-37121.4
Power generating machinery, non-electric(711)	1.8	1.6	0.2	0.4	-180873.5	-149041.8
Agricultural machinery(7121/2)	0.1	0.1	0.0	0.0	-9720.8	-6714.4
Dairy equipment(7123)	0.0	0.0	0.0	0.0	-573.0	-1130.9
Tractors(7125)	0.2	0.1	0.0	0.0	-23564.9	-16403.5
Office machines(714)	0.6	0.6	0.0	0.0	-69540.3	-63998.7
Metal working machinery(715)	0.5	0.6	0.0	0.0	-51457.9	-68008.1
Textile and leather machinery(717)	0.4	0.3	0.0	0.0	-40311.3	-36859.5
Machines for paper, pulp and paper articles(7181)	0.1	0.1	0.0	0.0	-6001.5	-9091.7
Industrial food-processing machinery(7183)	0.1	0.1	0.0	0.0	-9538.8	-13431.3
Machine tools for working minerals,wood,etc.(7195)	0.4	0.4	0.0	0.0	-48694.6	-51824.3
Electrical power machinery and switchgear(722)	1.8	2.2	0.5	0.5	-152426.9	-212754.1
MAJOR CONSUMER DURABLES						
Commercial road vehicles(732 less 7321)	3.4	2.4	0.1	0.1	-384425.3	-291585.4
Passenger motor cars(7321)	3.6	2.8	0.0	0.0	-416339.0	-343669.7
Television and radio sets(7241/2)	0.7	0.7	0.4	0.5	-38059.0	-17302.8
Domestic electrical equipment(725)	0.4	0.3	0.1	0.0	-36310.3	-31063.0
TOTAL OF ABOVE, IN MILLIONS OF US $	6084	6022	8560	8104	2476	2082
TOTAL TRADE (SITC 0 TO 9), IN MILLIONS OF US $	11508	12363	11734	12027	226	-337

Source: Statistics and Survey Unit, UNIDO.Based on data supplied by the UN Statistical Office, with estimates by the UNIDO Secretariat.

Table A-15. Malaysia: Destination of exports of manufactures by branch, 1982

Description of traded goods (SITC)	World total (in 1000 current US $)	Developing countries	Developed market economies				Centrally planned economies
			Total	USA	EEC	Japan	
		(Percent of world total)					
OILS AND FATS							
Animal oils and fats(411)	11.5	99.9	0.1	0.0	0.1	0.0	0.0
Fixed vegetable oils and fats(421/2)	1332601.5	59.1	32.3	5.7	16.9	5.4	8.4
Processed animal and vegetable oils and fats(431)	60983.9	34.3	58.7	1.5	56.2	0.3	6.4
CHEMICALS							
Organic chemicals(512)	11615.4	54.7	24.8	9.1	4.1	1.6	17.8
Inorganic chem., oxides and halogen salts(513/4)	8181.4	86.5	11.9	3.5	0.9	7.4	0.0
Dyeing, tanning and colouring materials(531)	317.3	82.6	14.5	0.0	7.9	5.2	0.0
Medicinal and pharmaceutical products(541)	14666.0	74.4	25.6	0.1	16.6	0.0	0.0
Plastics, cellulose and artificial resins(581)	11808.5	76.8	20.6	15.6	0.4	0.2	0.0
FERTILIZERS							
Nitrogenous fertilizers & related materials(5611)	2009.9	100.0	0.0	0.0	0.0	0.0	0.0
Phosphatic fertilizers and related materials(5612)	208.1	100.0	0.0	0.0	0.0	0.0	0.0
Potassic fertilizers and related materials(5613)	4.3	99.9	0.1	0.0	0.0	0.1	0.0
PETROLEUM							
Petroleum, crude or partly refined(331)	3293418.4	64.7	33.3	3.6	0.5	27.7	0.0
Petroleum products(332)	145562.0	88.4	10.7	0.3	6.0	2.4	0.9
RUBBER							
Crude rubber, synthetic and reclaimed(231)	1137794.8	41.5	47.0	10.9	24.8	3.3	9.6
Rubber materials, e.g.sheets, threads, piping(621)	20548.8	47.6	50.0	5.0	9.4	12.2	0.0
Articles of rubber, e.g. tyres, tubes(629)	17411.3	35.4	63.9	5.2	21.2	17.5	0.4
WOOD AND FURNITURE							
Wood, shaped or simply worked(243)	498499.8	39.2	59.3	1.8	42.6	6.5	0.0
Pulp paper, including waste(251)	166.1	100.0	0.0	0.0	0.0	0.0	0.0
Veneers, plywood, improved wood(631)	167745.4	62.4	36.0	3.6	17.8	11.9	0.0
Wood manufactures(632)	25748.2	12.6	87.4	52.9	21.0	6.4	0.0
Paper and paperboard(641)	1265.8	96.7	3.3	1.3	0.1	1.7	0.0
Articles of pulp, paper or paperboard(642)	6111.2	79.8	20.1	0.4	0.7	17.1	0.0
Furniture(821)	10067.1	30.9	69.1	38.7	4.6	1.1	0.0
TEXTILES AND CLOTHING							
Wool and other animal hair(262)	17443.6	14.8	85.2	0.0	1.4	83.0	0.0
Cotton(263)	1814.4	30.0	50.0	0.0	0.0	2.1	0.0
Jute(264)	16.7	100.0	0.0	0.0	0.0	0.0	0.0
Vegetable fibres, flax and hemp(265)	6.8	32.7	67.3	67.3	0.0	0.0	0.0
Synthetic and regenerated fibres(266)	13030.1	90.6	7.6	0.0	2.1	2.6	0.0
Textile yarn and thread(651)	21928.3	28.9	69.7	6.0	17.5	13.2	1.0
Woven cotton fabrics(652)	39428.2	35.2	64.1	6.1	23.2	3.6	0.0
Woven textile fabrics(653)	63260.6	47.6	45.9	1.8	22.4	0.6	0.4
Made-up articles chiefly of textiles(656)	6752.1	64.5	35.4	5.1	4.6	2.3	0.0
Travel bags, handbags, etc.(831)	508.5	59.8	40.2	1.0	26.3	0.6	0.0
Clothing, excluding leather(841 less 8413)	174151.8	6.6	91.2	32.5	41.8	2.4	2.2
Calf leather(6113)	18.7	100.0	0.0	0.0	0.0	0.0	0.0
LEATHER AND PRODUCTS							
Other leather, including artificial(611 less 6113)	51.8	87.1	12.9	0.0	6.3	0.0	0.0
Leather manufactures(612)	1306.9	82.2	17.8	0.2	15.5	0.0	0.0
Apparel and accessories of leather(8413)	53.8	46.8	53.2	53.1	0.0	0.0	0.0
Footwear(85)	23536.5	32.6	66.6	6.4	20.5	0.1	0.0
BUILDING MATERIALS AND GLASS							
Lime, cement, fabricated building materials(661)	3551.2	98.1	1.9	0.0	0.8	0.0	0.0
Construction and refractory materials of clay(662)	4375.2	99.4	0.6	0.0	0.3	0.0	0.0
Glass(664)	8111.6	84.6	15.0	0.7	14.0	0.1	0.0
Glassware and pottery(665/6)	8913.7	82.7	17.1	11.0	1.9	0.1	0.0

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Table A-15. Malaysia: Destination of exports of manufactures by branch, 1982 (continued)

Description of traded goods (SITC)	World total (in 1000 current US $)	Developing countries	Developed market economies				Centrally planned economies
			Total	USA	EEC	Japan	
		(Percent of world total)					
IRON AND STEEL							
Iron ore and concentrates(281)	547.1	100.0	0.0	0.0	0.0	0.0	0.0
Iron and steel scrap(282)	1175.0	50.3	49.7	20.1	0.0	29.6	0.0
Pig iron and sponge(671)	75.5	95.6	4.4	0.0	0.0	4.4	0.0
Ingots and other primary forms(672)	10.1	93.9	6.1	0.0	0.0	6.1	0.0
Bars, rods, shapes, sections(673)	3242.0	99.5	0.5	0.0	0.0	0.3	0.0
Universals, plates and sheets(674)	1749.5	99.6	0.4	0.0	0.4	0.0	0.0
Hoop and strip(675)	33.8	100.0	0.0	0.0	0.0	0.0	0.0
Iron and steel wire(677)	988.1	97.2	1.0	0.0	0.0	1.0	0.0
Tubes, pipes and fittings(678)	5060.6	70.0	30.0	17.6	2.4	4.4	0.0
Unworked castings and forgings(679)	246.5	99.9	0.1	0.0	0.1	0.0	0.0
NON-FERROUS METALS							
Non-ferrous ore and concentrates(283)	76944.3	1.1	98.0	0.3	0.6	97.1	0.0
Copper, blister, refined, alloys(6821)	18.9	100.0	0.0	0.0	0.0	0.0	0.0
Copper bars, shapes, sections, wire, etc.(6822)	1384.8	79.2	20.8	0.6	0.7	19.5	0.0
Aluminium, unwrought or worked(684)	10586.0	96.4	3.4	0.1	0.8	2.1	0.0
Lead, unwrought or worked(685)	317.5	88.5	7.4	0.0	0.5	6.9	0.0
Zinc, unwrought or worked(686)	136.5	49.7	37.0	0.0	0.0	36.6	0.0
Tin and alloys, unwrought or worked(687)	636608.1	6.4	84.2	1.6	55.2	26.5	8.4
Wire products, e.g. cables, ropes(693)	3294.2	98.1	1.9	0.1	0.1	1.5	0.0
SELECTED CAPITAL GOODS							
Hand tools used in agriculture(6951)	119.3	97.3	2.7	0.0	0.4	0.1	0.0
Tools for use in hand or machine(6952)	2733.3	62.2	36.9	26.0	4.6	5.7	0.0
Power generating machinery, non-electric(711)	52947.0	17.1	80.1	16.6	37.1	2.2	0.0
Agricultural machinery(7121/2)	1067.9	53.2	46.8	0.0	3.4	2.4	0.0
Dairy equipment(7123)	4.1	89.6	10.4	0.0	0.0	0.0	0.0
Tractors(7125)	535.6	99.7	0.3	0.3	0.0	0.0	0.0
Office machines(714)	5604.8	57.3	42.7	32.3	7.0	0.5	0.0
Metal working machinery(715)	2009.4	83.8	15.2	1.4	3.8	8.7	0.0
Textile and leather machinery(717)	695.0	69.1	30.9	12.3	1.9	15.8	0.0
Machines for paper, pulp and paper articles(7181)	79.7	84.0	15.8	0.0	15.7	0.1	0.0
Industrial food-processing machinery(7183)	1659.7	93.5	2.3	0.2	2.0	0.0	0.0
Machine tools for working minerals,wood,etc.(7195)	1488.9	70.1	28.0	0.8	8.0	1.6	0.0
Electrical power machinery and switchgear(722)	54833.6	57.2	41.7	17.5	9.8	5.2	0.0
MAJOR CONSUMER DURABLES							
Commercial road vehicles(732 less 7321)	10671.9	90.5	9.0	2.5	1.7	0.9	0.0
Passenger motor cars(7321)	2091.8	78.4	21.4	1.8	5.3	0.5	0.2
Television and radio sets(7241/2)	64820.3	8.7	90.8	34.5	43.4	6.7	0.4
Domestic electrical equipment(725)	4912.0	88.7	10.8	0.7	8.5	0.7	0.0
TOTAL OF ABOVE	8103700	51.3	43.8	5.9	16.5	16.8	3.5
TOTAL OF ALL MERCHANDISE (SITC 0 to 9)	12026728	44.4	50.6	11.5	14.9	20.4	2.4

Source: Statistics and Survey Unit, UNIDO.Based on data supplied by the UN Statistical Office, with estimates by the UNIDO Secretariat.

Note: Percentages may not add to 100.0 due to the fact that countries report trade to/from "unspecified areas". Selection of products shown in this table was based on the definition of the manufacturing sector used for production statistics (i.e. the ISIC) and the associated raw material supplies. Thus, not all products are regarded as manufactures according to the conventional definitions of manufactured trade (e.g. SITC 5 to 8 less 68).

Table A-1b. Malaysia: Origin of imports of manufactures by branch, 1982

Description of traded goods (SITC)	World total (in 1000 current US $)	Developing countries	Developed market economies				Centrally planned economies
			Total	USA	EEC	Japan	
		(Percent of world total)					
OILS AND FATS							
Animal oils and fats(411)	1215.3	7.1	92.5	3.8	13.7	2.5	0.4
Fixed vegetable oils and fats(421/2)	12896.5	80.7	18.4	2.2	12.8	3.2	0.0
Processed animal and vegetable oils and fats(431)	1509.6	16.7	82.9	4.6	46.1	27.9	0.2
CHEMICALS							
Organic chemicals(512)	150303.4	11.8	85.9	26.6	25.5	23.3	0.6
Inorganic chem., oxides and halogen salts(513/4)	110156.8	15.7	79.2	21.8	22.5	29.3	2.6
Dyeing, tanning and colouring materials(531)	17048.4	4.8	92.9	4.9	42.8	24.4	0.0
Medicinal and pharmaceutical products(541)	83168.7	29.6	67.1	9.5	33.7	5.4	0.5
Plastics, cellulose and artificial resins(581)	188844.4	15.9	76.7	17.9	21.7	27.7	1.5
FERTILIZERS							
Nitrogenous fertilizers & related materials(5611)	44947.3	11.7	50.6	17.5	12.9	17.8	37.7
Phosphatic fertilizers and related materials(5612)	4527.9	38.1	61.8	45.9	1.3	14.6	0.0
Potassic fertilizers and related materials(5613)	38213.8	0.3	66.6	6.7	19.7	0.0	32.7
PETROLEUM							
Petroleum, crude or partly refined(331)	626135.3	100.0	0.0	0.0	0.0	0.0	0.0
Petroleum products(332)	1205083.0	98.2	1.8	0.3	0.7	0.3	0.0
RUBBER							
Crude rubber, synthetic and reclaimed(231)	25207.4	64.8	29.9	4.3	7.1	17.8	0.0
Rubber materials, e.g.sheets, threads, piping(621)	11951.5	8.5	87.7	15.0	21.5	47.0	0.4
Articles of rubber, e.g. tyres, tubes(629)	34917.7	16.0	81.2	9.5	20.1	50.1	0.1
WOOD AND FURNITURE							
Wood, shaped or simply worked(243)	11288.7	93.8	0.9	0.0	0.6	0.2	0.0
Pulp paper, including waste(251)	3099.7	20.6	79.4	50.9	0.0	0.0	0.0
Veneers, plywood, improved wood(631)	11729.9	73.7	19.3	0.8	10.1	6.1	0.1
Wood manufactures(632)	4635.3	50.7	36.2	2.1	6.5	18.0	0.9
Paper and paperboard(641)	180769.3	10.2	82.3	7.6	7.8	26.9	1.1
Articles of pulp, paper or paperboard(642)	21756.7	37.2	61.0	19.0	22.5	11.3	0.1
Furniture(821)	13728.3	30.7	56.5	6.7	28.2	18.8	0.3
TEXTILES AND CLOTHING							
Wool and other animal hair(262)	17077.9	5.0	93.4	0.0	0.3	0.0	0.0
Cotton(263)	45153.8	50.5	43.8	40.6	0.7	0.6	0.7
Jute(264)	11.9	50.0	48.4	0.1	42.9	5.4	0.0
Vegetable fibres, flax and hemp(265)	510.5	96.4	3.4	0.1	1.8	1.5	0.0
Synthetic and regenerated fibres(266)	15317.8	8.5	81.6	2.7	0.2	72.4	0.0
Textile yarn and thread(651)	32307.0	30.6	31.3	1.2	4.8	21.3	0.0
Woven cotton fabrics(652)	49182.2	68.4	18.5	0.4	1.0	16.6	0.1
Woven textile fabrics(653)	141405.3	43.2	42.8	0.5	4.5	33.4	0.2
Made-up articles chiefly of textiles(656)	15939.7	69.5	26.2	7.4	7.5	5.2	1.4
Travel bags, handbags, etc.(831)	7901.3	53.1	18.6	2.5	5.8	8.9	0.0
Clothing, excluding leather(841 less 8413)	41212.1	79.5	16.3	3.5	4.9	6.1	0.1
Calf leather(6113)	107.1	62.6	35.7	2.3	15.3	3.6	0.0
LEATHER AND PRODUCTS							
Other leather, including artificial(611 less 6113)	1247.9	54.3	39.9	2.3	24.6	0.7	0.0
Leather manufactures(612)	1004.9	31.2	46.9	3.5	24.4	13.5	0.2
Apparel and accessories of leather(8413)	761.0	62.7	31.9	3.2	11.2	17.1	0.0
Footwear(85)	10807.6	45.9	48.0	1.9	34.7	5.0	0.2
BUILDING MATERIALS AND GLASS							
Lime, cement, fabricated building materials(661)	79413.2	54.6	25.6	0.6	2.7	21.1	0.1
Construction and refractory materials of clay(662)	36022.4	10.3	87.4	2.1	53.2	24.1	0.2
Glass(664)	20222.9	20.3	74.1	8.9	24.1	35.9	0.3
Glassware and pottery(665/6)	28683.4	28.4	67.8	6.2	38.5	20.4	0.1

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Table A-16. Malaysia: Origin of imports of manufactures by branch, 1982 (continued)

Description of traded goods (SITC)	World total (in 1000 current US $)	Developing countries	Developed market economies				Centrally planned economies
			Total	USA	EEC	Japan	
		(Percent of world total)					
IRON AND STEEL							
Iron ore and concentrates(281)	1224.0	99.4	0.6	0.0	0.6	0.0	0.0
Iron and steel scrap(282)	3591.7	7.1	90.9	74.6	0.6	13.5	0.0
Pig iron and sponge(671)	6647.8	10.3	85.7	3.1	3.6	31.3	0.0
Ingots and other primary forms(672)	61573.1	15.5	49.5	0.0	5.9	42.2	10.1
Bars, rods, shapes, sections(673)	223890.3	12.8	72.3	0.1	8.1	63.4	0.1
Universals, plates and sheets(674)	283452.0	14.8	81.2	0.4	2.2	73.2	0.4
Hoop and strip(675)	13017.9	18.0	81.3	1.6	11.9	62.2	0.0
Iron and steel wire(677)	13184.3	47.4	49.8	1.0	17.9	26.6	0.0
Tubes, pipes and fittings(678)	140868.2	4.3	95.3	2.9	11.6	79.5	0.0
Unworked castings and forgings(679)	4393.4	47.9	51.5	0.5	9.9	23.3	0.0
NON-FERROUS METALS							
Non-ferrous ore and concentrates(283)	166530.6	41.0	58.8	0.0	1.6	0.0	0.0
Copper, blister, refined, alloys(6821)	4903.7	97.4	2.6	0.0	1.0	0.9	0.0
Copper bars, shapes, sections, wire, etc.(6822)	71653.4	13.4	71.5	4.9	11.1	40.5	0.0
Aluminium, unwrought or worked(684)	66576.2	19.8	79.3	6.6	12.3	14.8	0.0
Lead, unwrought or worked(685)	7507.9	13.9	84.6	11.7	12.6	6.5	0.0
Zinc, unwrought or worked(686)	15911.8	9.3	90.6	1.2	3.4	14.4	0.0
Tin and alloys, unwrought or worked(687)	10371.6	75.3	24.6	21.2	1.8	1.5	0.0
Wire products, e.g. cables, pipes(693)	20014.9	20.5	71.8	1.6	20.3	46.4	0.0
SELECTED CAPITAL GOODS							
Hand tools used in agriculture(6951)	3010.9	69.6	28.7	1.3	16.0	9.9	0.1
Tools for use in hand or machine(6952)	39854.7	15.6	81.8	19.5	25.4	24.3	0.2
Power generating machinery, non-electric(711)	201988.8	3.8	95.2	29.5	32.8	25.0	0.0
Agricultural machinery(7121/2)	7782.4	2.9	94.4	9.7	44.5	26.4	0.0
Dairy equipment(7123)	1135.0	9.0	91.0	2.4	51.7	0.0	0.0
Tractors(7125)	16939.1	0.9	94.8	1.1	50.9	33.1	4.3
Office machines(714)	69603.5	17.2	81.9	37.1	19.2	18.2	0.6
Metal working machinery(715)	70017.5	9.0	81.4	8.8	32.3	27.3	0.5
Textile and leather machinery(717)	37554.5	12.0	78.7	5.5	24.0	42.5	0.0
Machines for paper, pulp and paper articles(7181)	9171.4	5.0	83.2	3.6	25.6	44.0	0.3
Industrial food-processing machinery(7183)	15090.9	6.1	86.8	3.6	43.2	18.1	0.0
Machine tools for working minerals,wood,etc.(7195)	53313.2	3.3	90.7	8.1	44.6	33.8	0.0
Electrical power machinery and switchgear(722)	267587.6	18.1	79.4	15.6	24.5	31.2	0.2
MAJOR CONSUMER DURABLES							
Commercial road vehicles(732 less 7321)	302257.3	2.0	96.7	8.3	16.8	69.4	0.5
Passenger motor cars(7321)	345761.5	0.1	99.9	0.1	14.3	82.1	0.0
Television and radio sets(7241/2)	82123.0	28.3	69.6	0.8	2.9	65.7	0.0
Domestic electrical equipment(725)	35974.9	11.1	85.0	3.5	18.5	61.2	0.1
TOTAL OF ABOVE	6021904	42.7	53.0	6.2	11.1	28.0	0.9
TOTAL OF ALL MERCHANDISE (SITC 0 to 9)	12363365	33.5	63.3	17.5	12.2	25.1	0.5

Source: Statistics and Survey Unit, UNIDO.Based on data supplied by the UN Statistical Office, with estimates by the UNIDO Secretariat.

Note: Percentages may not add to 100.0 due to the fact that countries report trade to/from "unspecified areas". Selection of products shown in this table was based on the definition of the manufacturing sector used for production statistics (i.e. the ISIC) and the associated raw material supplies. Thus, not all products are regarded as manufactures according to the conventional definitions of manufactured trade (e.g. SITC 5 to 8 less 68).

Table A-17. Malaysia: Projects granted approval, by industry, 1981 and 1982

Industry	Number of approvals		Potential employment		Total proposed capital investment (M$ Million)	
	1981	1982	1981	1982	1981	1982
Food manufacturing	59	34	3,398	1,469	323.9	184.4
Beverages and tobacco	8	10	374	862	47.0	142.6
Textiles and textile products	60	29	6,927	2,776	106.2	29.9
Leather and leather products	1	4	100	654	0.6	6.9
Wood and wood products	59	51	6,505	6,432	258.1	257.6
Furniture and fixtures	10	12	1,114	957	14.7	18.3
Paper and printing and publishing	18	20	1,639	990	248.4	38.1
Chemicals and chemical products	56	45	2,687	2,989	371.5	2,249.6
Petroleum and coal	9	15	3,827	508	48.6	396.9
Rubber products	38	25	1,071	938	152.7	66.6
Plastic products	21	24	385	1,644	46.3	40.9
Non-metallic mineral products	87	57	7,213	3,456	1,586.6	374.1
Basic metal products	22	17	1,738	1,712	545.2	1,149.1
Fabricated metal products	49	32	2,120	1,448	98.9	107.6
Machinery manufacturing	17	22	3,530	2,559	150.6	107.0
Electrical and electronic products	45	46	8,735	5,777	207.2	163.6
Transport equipment	24	11	3,716	1,610	224.2	62.6
Scientific and measuring equipment	5	4	336	380	8.3	5.6
Miscellaneous	8	10	921	502	9.4	33.4
Total	596	468	56,636	37,663	4,448.4	5,434.8

Source: MIDA.

Table A-18. Malaysia: Export-oriented projects[a/] granted approval, by industry, 1981 and 1982

Industry	Number of approvals		Potential employment		Total proposed capital investment (M$ Million)	
	1981	1982	1981	1982	1981	1982
Food manufacturing	13	10	1,268	359	178.1	154.0
Beverages and tobacco	-	-	-	-	-	-
Textiles and textile products	19	8	4,087	1,377	65.5	12.7
Leather and leather products	1	1	100	408	0.6	5.0
Wood and wood products	26	19	4,024	3,218	148.0	184.3
Furniture and fixtures	5	7	982	710	10.7	13.9
Paper and printing and publishing	2	-	336	-	102.7	-
Chemicals and chemical products	5	11	298	1,375	27.7	1,372.6
Petroleum and coal	-	1	-	156	-	365.0
Rubber products	18	7	2,452	439	131.7	50.6
Plastic products	2	3	170	231	2.6	2.9
Non-metallic mineral products	3	3	359	137	12.1	8.2
Basic metal products	1	-	203	-	446.9	-
Fabricated metal products	7	4	420	235	34.0	20.9
Machinery manufacturing	3	3	95	866	8.6	17.6
Electrical and electronic products	17	17	6,798	4,728	127.7	108.8
Transport equipment	1	-	30	-	1.0	-
Scientific and measuring equipment	3	4	208	380	6.0	5.7
Miscellaneous	3	3	748	185	4.1	6.3
Total	129	101	22,548	14,804	1,308.0	2,320.5

Source: MIDA

a/ Project exporting 80.0 per cent or more of their output.

Table A-19. Malaysia: Foreign investment in companies, by industry, as at 31 December, 1983

Industry	Paid up capital M$ million	Loans M$ million	Total capital investment (M$ Million)
Food manufacturing	571.2	134.4	705.6
Beverages and tobacco	230.6	47.7	278.3
Textiles and textile products	376.1	114.5	490.6
Leather and leather products	17.1	-	17.1
Wood and wood products	100.2	99.4	199.6
Furniture and fixtures	18.9	0.4	19.3
Paper and publishing and printing	26.6	2.4	29.0
Chemicals and chemical products	298.1	29.2	327.3
Petroleum and coal	124.5	-	124.5
Rubber and rubber products	95.8	9.4	105.2
Plastic products	20.7	3.8	24.5
Non-metallic mineral products	297.3	104.3	401.6
Basic metal products	222.3	29.9	252.2
Fabricated metal products	123.3	12.8	136.1
Machinery	58.8	4.9	63.7
Electrical and electronics	320.4	73.7	394.1
Transport equipment	166.4	27.8	194.2
Scientific and measuring equipment	30.7	12.4	43.1
Miscellaneous	28.7	13.8	42.5
Hotel and tourist complexes	149.8	62.8	212.6
Total	3,277.1	783.6	4,050.7

Source: Mohamad Ariff, Industrialization, International Linkages and Factor Proportions: Malaysia, paper presented at Seminar as Population and Demographic Issues in Malaysian Industrialization, 6-8 December 1984.

Table A-20. Malaysia: Foreign investment in companies, by country as at 31 December, 1983

	Paid up capital M$ million	Loans M$ million	Total capital investment (M$ Million)	(%)
Singapore	1,052.2	284.4	1,336.6	32.9
Japan	524.5	179.2	703.7	17.3
United Kingdom	582.3	62.5	644.8	15.9
USA	180.7	46.6	227.3	5.6
Hong Kong	304.1	68.6	372.7	9.2
West Germany	85.8	23.5	109.3	2.7
Australia	79.0	7.9	86.9	2.1
Netherlands	41.7	10.3	52.0	1.3
India	39.2	18.2	57.4	1.4
Others	387.6	82.4	470.0	11.6
Total	3,277.1	783.6	4,060.7	100.0

Sources: Mohamad Ariff, Industrialization, International Linkages and Factor Proportions: Malaysia, paper presented at Seminar as Population and Demographic Issues in Malaysian Industrialization, 6-8 December 1984.

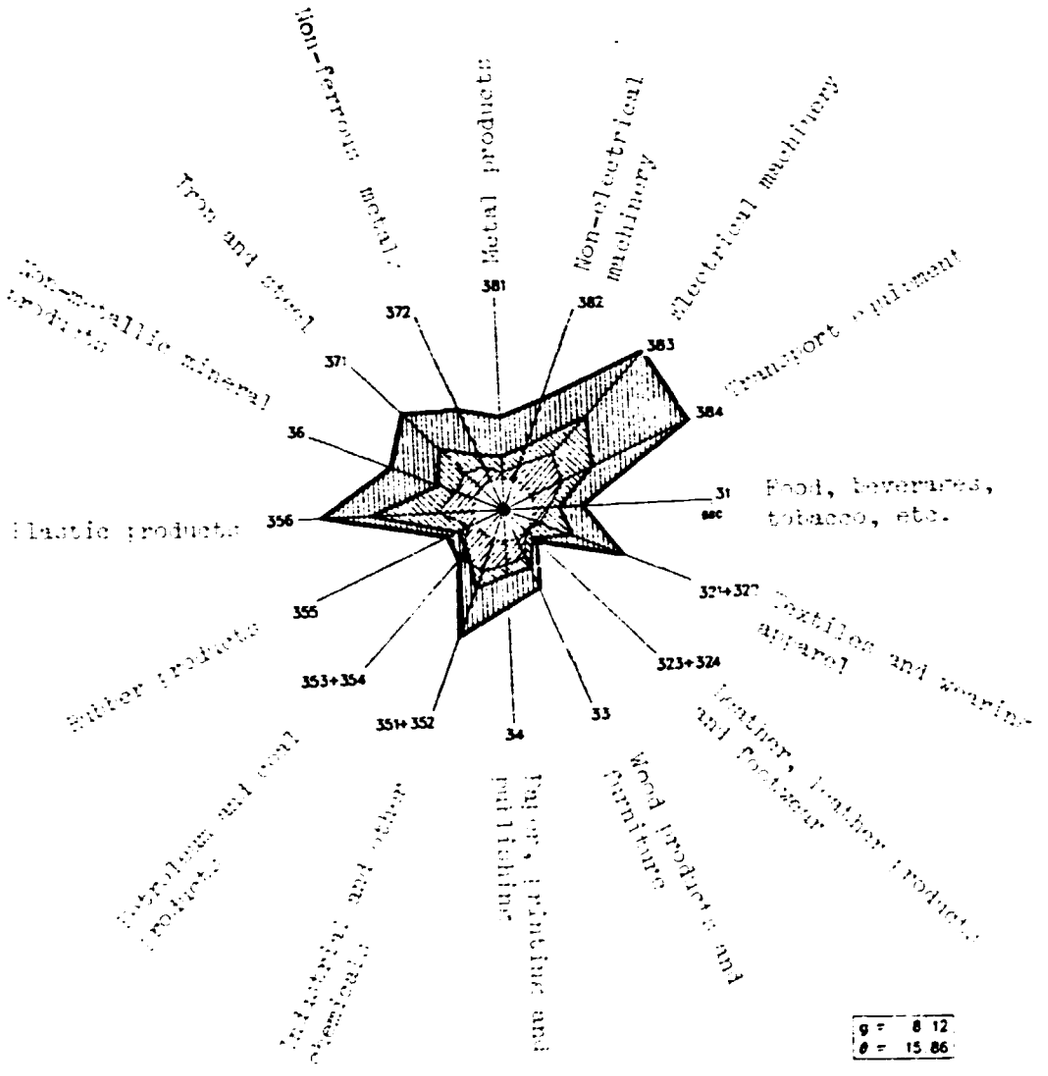
Table A-21. Malaysia: Energy balance, 1982

('000 tons of coal equivalent)

Production		
Crude petroleum and natural gas liquides		19,629
Natural		1,192
Hydroelectricity		743
	Total production	21,564
Transport		
Solid fuels		178
Crude petroleum		5,234
Petroleum products		3,966
Natural gas		989
	Total imports	10,367
Total supply		31,931
Apparent consumption		
Solid fuels		178
Liquid fuels		11,727
Natural gas		2,182
Hydroelectricity		743
	Total consumption	14,830
Exports		
Crude peotroleum		15,049
Petroleum products		153
	Total exports	31,931
Change in stocks, etc.		1,899
Total demand		31,931

Sources: UN Yearbock of World Energy Statistics, 1982; EIU, Quarterly Review 1984.

Table A-22. INDUSTRIAL STRUCTURAL CHANGE, 1965-1980
(Index of value added: 1965=100)



The measure for structural change is defined as:

$$\cos\theta = \frac{\sum_i s_i(t).s_i(t-1)}{\sqrt{\left(\sum_i s_i(t)^2\right).\left(\sum_i s_i(t-1)^2\right)}}$$

where $s_i(t)$ is the share of the i-th branch of value added in total value added in the year t.

The value θ can be interpreted as the angle between the two vectors $s_i(t-1)$ and $s_i(t)$ measured in degrees.

The theoretical maximum value of θ is 90 degrees.

Source: UNIDO, Industry and Development, Global Report, 1985.

ANNEX 1

THE APPROVED AND/OR OPERATIONAL TECHNICAL CO-OPERATION PROJECTS OF UNIDO, 1985

MALAYSIA

DP/MAL/79/001	Preparation of Medium- and Long-Term Industrial Master Plan (IMP) (to be completed by mid-85)
DP/MAL/83/003	Survey of Malaysian Shipbuilding, Maintenance and Repair Industry (completed in June 1984)
DP/MAL/82/005	Integrated National Programme for Small-Scale Enterprise Development (subcontracted to Pertanian University, Kuala Lumpur (completed in September 1984)
DP/MAL/80/001	Training of Professional Staff of the Standards and Industrial Research Institute of Malaysia (SIRIM) (almost completed)
UC/MAL/83/193	National Workshop on Technology Transfer, Policies and Planning (implemented in December 1983)
SI/MAL/82/802	Assistance to the Ministry of Industry on Assessment of Royalty Payments in the Automotive Industry (completed in February 1983)

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Among UNDP projects of direct relevance to industrial development, not executed by UNIDO are:

DP/MAL/83/001	Malaysian Industrial Policy Studies Project (executed by the World Bank)
DP/MAL/84/004	Export Promotion Project (executed by ITC)
DP/MAL/84/003	Strengthening of the Patents Registration (executed by WIPO)
DP/MAL/84/002	Input/output Analysis (in EPU)

ANNEX 2

SELECTED UNIDO REGIONAL AND SUB-REGIONAL STUDIES OF DIRECT RELEVANCE TO MALAYSIA

A number of studies on various aspects of regional industrial co-operation in ASEAN were undertaken by the Regional and Country Studies Branch, UNIDO, in 1982 and 1983. This work is presented in following documents:

UNIDO/IS.282 "ASEAN Industrial Complementation". Study prepared by Mr. Vicente T. Paterno, Manila, 25 January 1982.

UNIDO/IS.329 "The Role of the Private Sector in Industrial and Technological Co-operation in ASEAN". Study prepared by Dr. Pakorn Adulbhan, Bangkok, 9 July 1982.

UNIDO/IS.281 "The Development of the ASEAN Industrial Projects (AIPs)". Study prepared by Professor Mohamed Ariff, Kuala Lumpur, 25 January 1982.

UNIDO/IS.310 "ASEAN Industrial Joint Ventures (AIJVs) in the Private Sector". Study prepared by Dr. Lee Sheng-yi, Singapore, 21 April 1982.

UNIDO/IS.346 "Co-operation in Industrial Financing in ASEAN". Study prepared by Dr. Supachai Panichpakdi, Bangkok, 6 October 1982.

UNIDO/IS/R.9 Report on the ASEAN/Andean Pact Conference and Study Tour on Regional Industrial Co-operation, 11-23 October 1982.

UNIDO/IS. 401 Regional Industrial Co-operation: Experiences and Perspective of ASEAN and the Andean Pact, 12 August 1983.

2. Currently two further ASEAN-level studies are under preparation by the Regional and Country Studies Branch, concerning the automotive industry and the textile and textile products industry.

3. An inter-regional study project, entitled 'Comparative Study on the Advantages Offered on Industrial Investments' (SI/MOR/84/801), covers seven industrially relatively advanced developing countries, including Malaysia. The project which is carried out by the Regional and Country Studies Branch, is to be completed during 1985.

ANNEX 3

LEADING MALAYSIAN COMPANIES, 1984

(values in US $ million)

Rank	company	Type of business	Sales/ turnover	Net profit (loss)	Number of employees	Total assets
1	Petronas[2]	Petroleum	2,150	1,040		5,208
2	Sime Darby[2]	Rubber/oil palm	994.7	24		801.3
3	Shell Refining Co (FOM)[3]	Petroleum	722.4	15.0	273	212.6
4	Esso (M) Bhd	Petroleum	659.6	25.3	768	140.2
5	Malaysian Airline System[3]	Airline	531.2	41.5		684.5
6	Pernas (National Corp Ltd)[1]	Trading	515.7	25.5		225.3
7	United Motor Works (M)	Vehicles	503.1	8.5	2,800	388.5
8	Datuk Keramat Holding	Tin	399.2	3.3		52.5
9	Tan Chong Motor Holding	Vehicles	314.7	15.9		202
10	Magnum Corp Bhd	Betting	294.7	9.9		189.9
11	Malaysian Tobacco	Cigarettes	283.2	22.8	2,000	153.5
12	Tractors Malaysia	Tractors	271.9	17.5	2,022	287.9
13	Sejati Motor	Vehicles	256.5		3,750	21.7
14	Harrison Malaysian Plantation	Rubber oil palm	253.1	22.4		583.1
15	Palmco Holding[2]	Oil palm	212.2	6.0	942	108.7
16	Perlis Plantation	Sugar	204.3	14.4		168.8
17	Malaysian Mining Corp[2]	Tin	166.6	16		461.8
18	Federal Flour Mills	Flour	164.1	6.2	436	102.2
19	Promet Bhd	Engineering	133.5	20.0	2,000	221.2
20	Multi-Purpose Holding[2]	Investment holding	132.3	3		404.2
21	Malaysian United Industries[2]	Investment holding	128.7	14.1		310.6
22	Genting Bhd[2]	Hotels	127	30		370.2
23	Permadolan Nasional Bhd	Investment holding	116.5	62.2	328	243.1
24	Cycle & Carriage Bintang[2]	Vehicles	115.6		940	
25	Hume Ind.(M) Bhd	Building materials	113.8	7.4	1,801	88.8
26	Hong Leong Ind. Bhd	Investment holding	113.1	81.3		151.9
27	Dunlop Malaysian Ind. Bhd	Tyres	105.0	24.5	2,205	87.1
28	Boustead Holding	Rubber/shipping	105.0	4.17		237.6
29	Kuala Lumpur Kepong[3]	Rubber/shipping	103.82	23.4		327.5
30	Guinness Malaysia Bhd	Beer	97.7	8.3	891	61.2
31	East Asiatic Co (M)[3]	Rubber/oil palm	96.5	10.2 (pre-tax)		166.2
32	Penfabric Sdn Bhd	Fabrics	95.6		1,070	34.7
33	Gold Coin	Animal feed	92.0	3.6	410	38.2
34	United Engineering (M) Bhd	Engineering	86.2	19.8	353	75.7
35	Tasek Cement Bhd	Cement	85.1	7.7	798	94.1
36	Cycle & Carriage (M) Sdn Bhd	Vehicle	78.2		568	
37	Chemical Co of Malaysia	Fertilizers	71.7	2.04		51.1
38	North Borneo Timbers	Timber	71.3	3.17		52.7

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Annex 3. (continued)

Rank	company	Type of business	Sales/ turnover	Net profit (loss)	Number of employees	Total assets
39	Supreme Corp Bhd	Mining/property	70.4	3.3		306.6
40	Malaysia Shipyard & Engineering	Ship-repair	69.5		1,833	43.4
41	Felda Oil Products Sdn Bhd	Oil Palm	65.9		158	6.5
42	Matsushita Electric	Electrical appliances	64.2	4.5	1,280	41.8
43	Malayswata Steel Bhd	Steel	63.2	0.36		101.0
44	New Straits Times Press	Publishing	61.7	8.34		60.1
45	Highlands & Lowlands	Rubber/oil palm	60.68	18.33		204.7
46	Malayan United Manufacturers	Sugar cane	59.0	6.5		145.5
47	Carlsberg Brewery	Beer	57.8	5.2	660	41.4
48	Federated Auto Holdings	Vehicles	55.6	2.4		302.0
49	Malayan Flour Mills	Bread	54.5	4.5	348	40.9
50	Amalgamated Steel Mills	Steel	53.4	3.14	720	104.9
51	Keck Seng (M) Bhd	Rubber/oil palm	50.9	3.7		51.0
52	Yeo Hiap Seng	Processed food	49.5	1.4	2,050	41.5
53	UAC Bhd	Asbestos & cement	49.4	66.5		52.1
54	Dutch Baby Milk	Milk	49.0	1.1	340	25.5
55	United Plantations 3/	Oil palm	46.6	13.0		
56	Cement Ind Malaysia 3/	Cement	44.9		348	
57	Timuran Holdings Bhd	Pharmaceuticals	43.8	1.9		31.8
58	Sin Heng Chan (M) Bhd	Animal feed	43.8	1.74	180	22.2

Source: South, June 1985.
1/ 1980.
2/ 1981.
3/ 1983.

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