Chapter XI

Manufacturing

CHAPTER XI

Manufacturing

I. INTRODUCTION

The manufacturing sector, which accounts for one-fifth of Gross Domestic Product (GDP), in 1985 played a relatively modest role in realizing the macro-economic objectives of output growth, the twin objectives of the New Economic Policy (NEP), employment creation, and regional development during the Fourth Malaysia Plan period. During this period, the manufacturing sector achieved a rate of growth of 4.9 per cent per annum. This rate of growth fell short of the Fourth Plan target of 6 per cent, largely due to the world economic recession and inherent structural weaknesses within the sector. The slack in global economic environment had generally affected the performance of the sector, with shortfalls being experienced in the attainment of output, employment, and export targets. The manufacturing sector, which had overtaken the agricultural sector in 1984 to become the largest sector in the economy, could not sustain this position in 1985 due to the poor performance of the export of manufactures and the softening of domestic demand for manufactures.

During the Fifth Malaysia Plan period, 1986-90, much of the overall economic growth for the nation is envisaged to originate from the manufacturing sector, primarily through rapid and accelerated private sector participation in manufacturing industries, and the reemphasis on the development of potentially more efficient and dynamic export-oriented industries. The role expected of the sector will be more demanding during the Fifth Plan period, in the light of the difficulties to be encountered in penetrating the highly protected foreign markets, uncertain growth prospects of the international economy as well as the adjustments needed to redress the existing structural constraints within the sector.

In meeting the challenges of a more difficult period ahead, priority will be accorded to creating an environment conducive to the further expansion of the sector. Efforts will be directed at promoting an efficient and highly competitive, export-oriented manufacturing sector, maximizing existing and potential linkage and multiplier effects within and between sectors, enhancing the financial and marketing support systems for the promotion of exports, and fostering technological development. In this regard, the findings and recommendations of the Industrial Master Plan (IMP) and the Malaysian Industrial Policies Study (MIPS) will provide the major thrust for the further expansion of the sector. The impetus for growth of the manufacturing sector during the Fifth Plan period will be generated by the private sector.

II. PROGRESS, 1981-85

The pace and direction of growth of the sector during the Fourth Plan period was determined by the interaction of several factors, notably the performance of the international and domestic economy as well as existing industrial strategies. The manufacturing sector was able to sustain a respectable growth rate, despite the sluggish downturn of the world economic environment during the first two years, structural adjustment measures in the domestic economy that served to dampen aggregate demand, and the constraints to growth set by the limited size of the domestic market. During the pick-up of the world economy between 1983-84, the sector experienced rapid growth, but this growth was not sustained in 1985.

While the pace of overall growth achieved by the sector was respectable during the Fourth Plan period, the direction of this growth produced less than optimal results. The unevenness of the sector in terms of growth is characterized by a number of outstanding features. One of these is that the main stimulus for growth continued to originate from the electronics industry in Free Trade Zones through the multinationals, while resource-based industries grew only marginally. Another feature of the sector is that capital-intensive heavy industries, including chemical, petroleum, non-metallic and basic metal products dominated manufacturing investment during the period, in contrast to the traditional resource-based labour-intensive industries. A major proportion of foreign investment continued to be concentrated in the petroleum and electronics industries. Disparities in the level of industrial development among regions in the country continued to persist. Industrial strategies pursued had, therefore, achieved varying degrees of success with respect to both growth and distribution within the sector.

Growth of manufacturing output

The momentum of growth achieved by the manufacturing sector during the early years of the Fourth Plan period was not sustainable in 1985 as exports such as textiles, machinery, and rubber products, declined. The growth of the sector had accelerated from 4.6 per cent in 1981 to 11.6 per cent in 1984. In 1985, however, the output of the sector declined by 3.0 per cent. The sector, contributed 16.5 per cent to the growth of GDP during the Fourth Plan period. The share of the sector, in GDP, however, decreased marginally from 20.0 per cent in 1980 to 19.1 per cent in 1985.

Structure of output

One of the major aims underlying the principal strategies outlined during the Fourth Plan period was to change the product-mix of manufacturing activities and the market orientation of manufacturing output simultaneously. Towards this end, strategies were designed to develop export-oriented manufacturing activities, resource-based industries, selective second round import-substitution products, and to establish certain heavy industries that would foster linkages and the expansion of the industrial base. At the same time, activities to develop small-scale industries were also undertaken. While all the strategies were aggressively pursued during the period, the achievements were varied. The implementation of strategies aimed at diversifying exports and expanding export markets was constrained by the economic slowdown experienced during the Fourth Plan period. The development of resource-based industries was hampered by both the economic slowdown and increasingly restrictive external markets. Although the strategies aimed at establishing selected heavy industries and certain import-substitution products were quite successful, the overall industrial structure had not undergone substantial changes over the period.

The contribution of major industries to growth in industrial production and the composition of the product-mix of the sector is shown in Table 11-1. The index of industrial production is compiled from data collected from the Monthly Surveys of Manufacturing Industries. The base year for the average annual production growth rate of manufactures index was changed from 1978 to 1981, and therefore, any comparison with the performance during the Third Malaysia Plan period would be difficult. The impetus for growth of production came mainly from industries related to electrical machinery, oils and fats, petroleum refining, iron and steel, and fabricated metal products. The subsectors of processed foods, beverages and tobacco, textiles, wood products, others, and non-ferrous metal basic industries, however, decelerated during the Fourth Plan period. With the exception of the textile subsector that was adversely affected by world economic recession, the other subsectors, mainly import-substitution industries, experienced lower growth rates due to the saturation of the domestic market.

The performance of the resource-based industries was weak as a result of the softening of both domestic and external demand, increasingly protected foreign markets, and competition from other lower-cost producers. With the exception of the oils and fats, petroleum products, and non-ferrous metal industries, other resource-based industries like processed foods, sawmill and wood products, and non-metallic mineral products stagnated. The impetus for growth continued to be derived mainly from the non-resource-based industries of electronics and electrical machinery, petroleum refineries, and ferrous metal subsectors.

Strategies aimed at expanding the industrial base through the promotion of intermediate and capital goods were implemented with the establishment of selected heavy industries. The Heavy Industries Corporation of Malaysia Berhad

TABLE 11-1

PENINSULAR MALAYSIA: AVERAGE ANNUAL PRODUCTION OF MANUFACTURES, 1982-85 (1981 : 100)

Industry	Production index[1]				Average annual growth rate (%)				
	1982	*1983*	*1984*	*1985*	*1982*	*1983*	*1984*	*1985*	*1982-85*
Processed foods	91.9	95.4	95.8	106.3	- 8.2	3.8	0.4	11.0	1.5
Oils and fats	119.2	114.7	135.3	141.8	19.2	- 3.8	18.0	4.7	9.1
Other foods	93.4	105.3	108.3	108.8	- 6.6	12.7	2.8	0.3	2.1
Beverages and tobacco	101.8	94.5	97.8	99.8	1.8	- 7.2	3.5	2.0	- 0.5
Textiles and wearing apparel	95.9	95.2	104.4	102.7	- 4.1	- 0.7	9.7	-1.6	0.7
Sawmill and wood products	108.4	121.4	99.9	108.3	8.4	12.0	- 17.7	8.4	2.0
Industrial chemicals	86.4	88.7	101.4	113.1	- 13.6	2.7	14.3	11.5	3.1
Other chemical products	96.0	100.9	103.6	116.7	- 4.0	5.1	2.7	12.0	3.8
Petroleum refineries	109.2	139.8	149.0	137.2	9.2	28.0	6.6	- 7.9	8.2
Rubber processing and rubber products	105.7	108.4	109.5	113.0	5.7	2.6	1.0	3.2	3.1
Non-metallic mineral products	94.8	99.9	111.3	102.7	- 5.2	5.4	11.4	- 7.7	0.7
Iron and steel basic industries	104.5	123.1	164.3	132.5	4.5	17.8	33.4	- 19.3	7.2
Non-ferrous metal basic industries	114.8	99.3	135.5	87.6	14.8	- 13.5	- 12.6	0.9	- 3.2
Fabricated metal products	100.9	90.8	135.5	132.2	0.9	- 10.0	49.2	-2.4	7.2
Electrical machinery	126.7	148.3	201.6	161.8	26.7	17.0	35.9	- 19.8	12.8
Transport equipment	96.0	111.1	119.7	128.8	- 4.0	15.7	7.7	7.6	6.5
Other establishments	93.1	93.4	94.3	100.2	- 6.9	0.3	1.0	6.3	- 0.1
Total	106.8	111.1	125.4	121.6	6.8	4.0	12.9	-3.0	5.0

Source: Department of Statistics, *Monthly Surveys of Manufacturing Industries (1981-85)*.

Note: [1] Data used for the Fourth Plan are not comparable because the base year was 1968.

(HICOM) established several projects which included a cement plant in Kedah, a steel billet plant in Terengganu, two small engine projects, and the Malaysian car project during the Fourth Plan period. Another cement plant was also established in Perak by the Perak State Economic Development Corporation. In addition, a methanol and a hot briquette iron plant were implemented in Sabah, while a liquified natural gas and a fertilizer plant were established in Sarawak. In view of the recent establishment of these plants, their output did not contribute significantly to overall growth in manufacturing output during the period.

Industrial development in the Fourth Plan was guided by an export-led growth strategy. Despite the provision of a series of export incentives, the sector was still inclined towards production for the domestic market. This was largely due to the overall incentives being relatively more attractive to import-substitution activities. In addition, the general performance of exports was generally weak during the Fourth Plan period which was attributed principally to the economic slowdown and domestic structural constraints. The average annual growth rate of the export of manufactures was 14.3 per cent for the 1981-85 period, falling short of the Fourth Plan target of 19.1 per cent per annum. Exports accelerated from 0.9 per cent in 1981 to about 28.0 per cent in 1983 and 1984, but decelerated in 1985.

The export performance of the manufacturing sector during the Fourth Plan period is shown in Chart 11-1. The export of manufactures continued to be narrowly based. Petroleum products and electrical machinery and appliances continued to account for almost one half the value of overall exports in the period, while the contribution of resource-based industries to exports was not significant. The wood products, food, beverage, and tobacco subsectors consistently declined during the Fourth Plan period.

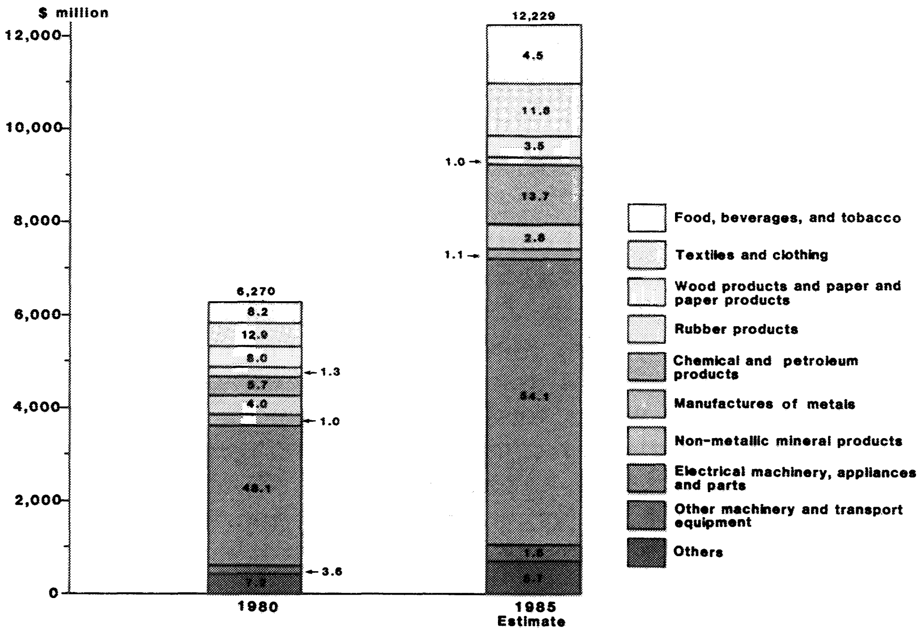
In terms of the average growth rate of exports of manufactures, the subsectors of petroleum products grew rapidly at 40.9 per cent, chemical and chemical products 27.1 per cent, non metallic mineral products 17.2 percent, and electrical machinery and appliances 17.0 per cent. Increases in exports of petroleum products contributed significantly to the overall increase in exports.

Exports of textiles, clothing, and footwear, which slackened during the early years of the Fourth Plan period due to the recession, restrictive trade quotas, and stiff competition from other producers, increased their contribution to the growth of manufactured exports during the period 1983-85. Exports of resource-based products continued to decline over the whole period due to decreasing external demand and increasing trade restrictions with the developed world and also keen competition from low-cost competitors.

CHART 11-1

MALAYSIA: COMPOSITION OF MANUFACTURED EXPORTS, 1980 AND 1985

(%)



Manufacturing investment

During the Fourth Plan period, the number of applications for proposed capital investment registered a steady increase. A total of 2,930 projects with a proposed capital investment amounting to $21,729.3 million was approved out of the 3,335 applications submitted to the Malaysian Industrial Development Authority (MIDA), as shown in Table 11-2. The data indicate that, with the exception of 1985, the number of approvals increased during the period. Proposed capital investment increased from $4,448.4 million in 1981 to $5,434.8 million in 1982, before declining to $3,801.1 million in 1984. In 1985, although the number of approvals registered a decrease, proposed capital investment increased to $5,686.9 million.

Proposed capital investment by the chemical and chemical products subsector constituted the largest share in total proposed capital outlay during the period, although in terms of approvals this subsector only accounted for 17.1 per cent. Projects in this subsector were generally large and consumed a major proportion of the proposed investment. The ASEAN Ammonia-Urea Project in Bintulu and a methanol project in Sabah were the two major projects undertaken during the period. The non-metallic product industries subsector accounted for 15.8 pei cent of total proposed capital investment. This was largely due to the implementation of several large projects including the Kedah Cement and Perak Hanjoong projects.

TABLE 11-2
MALAYSIA: PROJECTS GRANTED APPROVAL BY INDUSTRY, 1981-85

Industry	*Number of applications received*	*Number of approvals*							*Total proposed capital investment[1] ($ million)*						
	Cumulative, 1981-85	*1981*	*1982*	*1983*	*1984*	*1985*	*Cumulative, 1981-85*	*%*	*1981*	*1982*	*1983*	*1984*	*1985*	*Cumulative, 1981-85*	*%*
Food,	316	59	34	41	50	57	241	*8.2*	323.9	184.4	61.0	258.1	578.7	1,406.1	*6.5*
Beverages and tobacco	41	8	10	8	8	5	39	*1.3*	47.0	142.7	13.8	15.8	28.6	247.8	*1.1*
Textiles and textile products	241	60	29	39	68	50	246	*8.4*	106.2	29.9	65.2	125.5	123.0	449.8	*2.1*
Leather and leather products	11	1	4	2	3	1	11	*0.4*	0.6	6.9	0.8	6.6	1.3	16.2	*0.1*
Wood and wood products	224	59	51	37	42	28	217	*7.4*	258.1	257.6	81.5	169.4	117.0	883.6	*4.1*
Furniture and fixtures	60	10	12	10	16	7	55	*1.9*	14.7	18.3	9.0	36.6	23.3	101.9	*0.5*
Paper, printing, and publishing	146	18	20	15	46	35	134	*4.6*	248.4	38.1	14.1	231.7	1,815.5	2,347.8	*10.8*
Chemicals and chemical products	266	56	45	23	47	39	210	*7.2*	371.5	2,249.6	95.9	799.3	195.0	3,711.3	*17.1*
Petroleum and coal	60	9	15	11	12	11	58	*2.0*	48.6	396.9	201.6	32.3	23.7	703.1	*3.2*
Rubber products	116	38	25	24	28	24	139	*4.8*	152.7	66.6	96.6	65.3	96.3	477.5	*2.2*
Plastic products	203	21	24	37	46	42	170	*5.8*	46.3	40.9	98.4	90.8	105.4	381.8	*1.8*
Non-metallic products	387	87	57	60	84	84	272	*12.7*	1,586.6	374.1	447.5	494.4	533.4	3,436.0	*15.8*
Basic metal products	148	22	17	17	30	32	118	*4.0*	545.2	1,149.1	90.4	266.2	621.4	2,672.3	*12.3*
Fabricated metal products	263	49	32	33	70	53	237	*8.1*	98.9	107.6	87.1	243.3	268.1	696.3	*3.7*
Machinery	127	17	22	31	36	41	149	*5.1*	150.6	107.0	317.8	121.1	136.7	833.2	*3.8*
Electrical and electronics products	325	45	46	53	72	62	278	*9.5*	207.2	163.6	356.4	353.3	240.9	1,321.4	*6.1*
Transport and equipment	295	24	11	31	70	33	169	*5.8*	224.2	62.2	278.5	447.4	681.0	1,693.7	*7.8*
Science and measuring equipment	29	5	4	3	2	5	19	*0.6*	8.3	5.6	4.5	-	21.4	39.8	*0.2*
Miscellaneous	77	8	10	15	19	16	68	*2.3*	9.4	38.0	34.8	44.0	76.2	201.0	*0.9*
Total	3,335	596	468	490	749	625	2,930	*100.0*	4,448.4	5,434.8	2,358.6	3,801.1	5,686.9	21,729.3	*100.0*

Source: MIDA.
Note: [1] Includes loan capital and paid-up capital.

During the Fourth Plan period, 36.4 per cent of all approved projects were granted investment incentives, as shown in Table 11-3. These projects constituted 71.9 per cent of total proposed capital investment as compared with the 28.1 per cent contributed by projects not enjoying any tax incentives, indicating that the projects which were granted incentives, were relatively large in size and consumed a higher proportion of capital investment. The different types of incentives which include Investment Tax Credit, Locational Incentives, and Pioneer Status accounted for 71.8 per cent of proposed capital investment.

Foreign paid-up capital in approved projects amounted to $1,891.5 million during the period, 1981-85. Japan, the United Kingdom, and Australia as shown in table 11-4 took the lead with a paid-up capital amounting to $392.8 million, $201.7 million, and $138.7 million, respectively. Overall foreign paid-up capital declined during the Fourth Plan period due principally to adverse world economic conditions, uncertainties in the export market, and general tightening of international financial resources.

The banking system as a whole, directed 15.5 per cent of its credit to the manufacturing sector as at the end of 1985. The total outstanding loans to the manufacturing sector by banks, finance companies, and industrial development finance institutions, as at December, 1984 totalled $10,017 million, as shown in Table 11-5. The contribution of banks and finance companies amounted to 92.4 per cent of the total. Lending by financial institutions grew at an average rate of 14.8 per cent, fluctuating from year to year from 4.6 per cent to 30.0 per cent.

Industrial dispersal

Measures continued to be undertaken to disperse industries to the less developed states, in order to achieve a more balanced growth among regions, through the establishment of industrial estates. A total of 8,744.1 hectares of land was developed into industrial estates as at June, 1985 as compared with 6,500 hectares in 1980, representing a 28 per cent increase. Of the 21 new industrial estates established during the period, about one half were located in the states of Kedah, Kelantan, Pahang, Perlis, Sabah, Sarawak, and Terengganu, states which enjoyed tax relief under the Locational Incentive Scheme. In terms of the income status of states in which they were located, four were located in high-income states, 15 in middle-income states and two in the low-income states. Two industrial estates in Sabah and one in Kedah ceased to function during the period.

The high and middle-income states continued to receive the most number of potentially viable projects. During the period 1981-85, Selangor and the Federal Territory of Kuala Lumpur received 642 and 144 of the approved projects which were expected to generate 43,500 and 6,260 jobs, respectively. These approvals accounted for 37.8 per cent of proposed capital investment during the period. The low-income states of Kedah and Kelantan received 195 approved projects that were expected to create 20,600 job opportunities when fully implemented and $1,427 million in proposed capital investment. With regard to distribution of

TABLE 11-3

MALAYSIA: PROJECTS GRANTED APPROVAL BY TAX INCENTIVE, 1981-85

Incentive	*Number of approvals*							*Total proposed capital investment ($ million)*						
	1981	*1982*	*1983*	*1984*	*1985*	*Cumulative, 1981-85*	*%*	*1981*	*1982*	*1983*	*1984*	*1985*	*Cumulative, 1981-85*	*%*
With incentives	200	164	170	303	229	1,066	*36.4*	2,679.3	4,676.6	1,385.1	2,646.9	4,227.1	15,615.0	*71.9*
Pioneer status	93	79	84	97	78	431	*14.7*	862.2	998.3	710.6	618.1	596.2	3,785.4	*17.4*
Investment tax credit	94	78	74	193	143	582	*19.9*	1,228.5	1,663.6	507.1	1,343.1	3,540.3	8,282.7	*38.1*
Labour utilization relief	1	2	1	1	–	5	0.2	2.0	10.3	0.2	0.1	-	12.6	*0.1*
Locational incentive	12	5	11	12	8	48	*1.6*	586.6	2,004.3	167.2	685.6	90.6	3,534.3	*16.3*
Without incentives	395	304	319	446	396	1,860	*63.6*	1,769.1	758.2	973.0	1,154.2	1,459.8	6,114.3	*28.1*
Total	595	468	489	749	625	2,926	*100.0*	4,448.4	5,434.8	2,358.1	3,801.1	5,686.9	21,729.3	*100.0*

Source: As in Table 11-2.

TABLE 11-4

MALAYSIA: SOURCES OF FOREIGN EQUITY IN APPROVED PROJECTS, 1981-85 ($'000)

Country	*1981*	*1982*	*1983*	*1984*	*1985*	*Cumulative, 1981-85*	*%*
Australia	57,870	62,091	7,742	3,736	7,310	138,749	*7.3*
Austria	6,089	11,600	-	-	-	17,689	*0.9*
Bahamas	-	-	-	3,846	1,021	4,867	*0.3*
Belgium	450	5,545	300	-	235	6,530	*0.3*
Brunei	69	-	-	75	-	144	-
Canada	-	13,625	120	-	1,095	14,840	*0.8*
Denmark	1,075	123	1,200	2,247	554	5,199	*0.3*
Federal Republic of Germany	27,552	22,684	5,300	9,185	2,570	67,291	*3.6*
France	-	-	-	7,131	2,675	9,806	*0.5*
Holland	518	1,178	-	5,028	-	6,724	*0.4*
Hong Kong	35,096	4,869	49,629	9,508	18,415	117,517	*6.2*
India	11,437	1,022	4,735	3,033	538	20,765	*1.1*
Indonesia	1,000	28,168	153	-	5,135	34,456	*1.8*
Italy	3,810	3,000	1,900	1,214	4,605	14,529	*0.8*
Japan	69,132	136,874	37,754	67,321	81,748	392,829	*20.8*
New Zealand	300	800	165	3,850	49	5,164	*0.3*
Norway	4,800	1,610	-	1,620	1,635	9,665	*0.5*
Pakistan	-	-	-	-	1,419	1,419	*0.1*
Philippines	2,470	27,283	1,135	1,688	140	32,716	*1.7*
Republic of Korea	3,540	300	1,118	7,448	10,410	22,816	*1.2*
Saudi Arabia	11,979	750	850	3,973	11,770	29,322	*1.6*
Singapore	40,269	9,431	30,009	38,487	47,185	165,381	*8.7*
Sweden	370	200	3,900	705	9,163	14,338	*0.8*
Switzerland	380	1,410	5,500	13,390	300	20,980	*1.1*
Taiwan	8,275	1,619	4,958	14,018	14,674	43,544	*2.3*
Thailand	4,305	26,700	2,790	2,783	302	36,880	*1.9*
United Kingdom	31,288	80,172	70,250	9,320	10,700	201,730	*10.7*
United States	47,034	22,852	22,053	21,281	36,760	149,980	*7.9*
Others	106,821	55,099	44,757	44,542	54,452	305,671	*16.2*
Total	475,929	519,005	296,318	275,429	324,860	1,891,541	*100.0*

Source : Table 11-2.

projects by type of industry and region, the less-developed areas, by virtue of proximity to and availability of raw materials, continued to attract resource-based projects such as wood and wood products, and petroleum products.

In line with measures undertaken to disperse industries to the less developed states, concerted efforts continued to be directed at revitalizing and promoting village industries, producing traditional handicraft items from natural materials available locally with the aid of simple technology and traditional skills. These village industries supplemented the incomes of rural households. Various programmes were undertaken by government agencies during the Fourth Plan period to promote these industries. The Malaysia Handicraft Development Corporation assisted 289 craft entrepreneurs during the 1981-85 period and provided similar assistance to 35 craft villages in the states of Kelantan, Pahang, Perak, Sabah, Sarawak and Terengganu. In the same period 521 persons received basic craft skills training, while 434 persons received short-term training in crafts ranging from batik making, weaving and rattan plaiting, woodcraft and earthenware. Technical assistance and support services were also provided by agencies such as the Community Development Department, Batek Malaysia Berhad, Karyaneka Marketing Sendirian Berhad, The Council of Trust for Indigenous People (MARA) and the Village Industries Division of the Ministry of National and Rural Development.

TABLE 11-5

MALAYSIA: OUTSTANDING LOANS EXTENDED TO THE MANUFACTURING SECTOR BY MAJOR FINANCIAL INSTITUTIONS, 1980-84
($ million as at end of year)

Financial institution	*1980*	*1981*	*1982*	*1983*	*1984*
Banks and finance companies	5,442.9	6,990.0	7,289.6	8,822.0	9,253.9
Commercial banks	4,693.8	5,947.1	6,190.0	7,398.8	7,895.4
Merchant banks	569.2	817.3	805.0	973.5	800.2
Finance companies	179.9	225.6	294.6	449.7	558.3
Industrial development finance institutions	328.1	514.2	660.5	757.4	763.1
Malaysian Industrial Development Finance Berhad	217.6	282.1	351.0	399.3	404.4
Bank Kemajuan Malaysia Berhad	11.7	30.1	37.3	50.1	67.7
Bank Pembangunan Malaysia Berhad	48.1	59.7	86.5	134.9	133.3
Sabah Development Bank	49.2	141.0	184.7	172.5	157.1
Borneo Development Corporation	1.5	1.3	1.0	0.6	0.6
Total	5,771.0	7,504.2	7,950.1	9,579.4	10,017.0

Source: Central Bank of Malaysia.

Bumiputera participation

During the period 1981-85, Bumiputera participation in the manufacturing sector in terms of employment, ownership, and entrepreneurship progressed satisfactorily despite the economic slowdown. Bumiputera employment increased from 40.1 per cent in 1980 to 41.6 per cent in 1985 of the total employment in the manufacturing sector during the Fourth Plan period, with major concentration in the electronic components, wood, food, and textile industries. Out of the total number of approved projects and programmes, Bumiputera projects constituted 27.5 per cent. The major concentration of Bumiputera capital investment in the 627 approved projects during the period was in the transport equipment, non-metallic, and wood and wood products subsectors. These approved projects accounted for 17.7 per cent, 16.3 per cent, and 6.7 per cent of the overall proposed paid-up capital of $1,753.2 million, respectively.

Programmes to promote Bumiputera participation in manufacturing, largely through the trust agencies, continued to be implemented during the Fourth Plan period. The expansionary programmes were vigorously pursued during the first two years of the Fourth Plan period. During the 1983-85 period, the pace of programme implementation, however, slackened, due to the financial constraints of the Government and its policy to rationalize and contain the growth of the public sector. Total investment of State Economic Development Corporations (SEDCs) in the manufacturing sector amounted to $1,435.4 million, as at June, 1985. The major portion of this investment was in joint-venture activities in timber, palm oil, cement, and light engineering industries.

The National Corporation (PERNAS) had invested a sum of $1,059.7 million as at the end of 1984. The major concentration of this investment was in hotels and property, plantation, manufacturing, shipping, and banking. PERNAS manufacturing investment accounted for $187.2 million or 18.0 per cent of its overall investment. A major proportion of the $187.2 million was invested in electronic products and building materials subsectors.

During the period 1981-85, MARA investment in manufacturing activities amounted to $18.0 million, undertaken mainly through the MARA Group Management Company and its eight subsidiary companies. The major concentration of these investments was in the subsectors of food, textile, and leather industries.

The Development Bank of Malaysia Limited (BPMB), another important trust agency, granted $199.3 million loans to the manufacturing sector during the Fourth Plan period for the benefit of Bumiputera. A total of 528 small-scale industry loans was granted to Bumiputera to finance various activities to promote their participation in the sector. The programmes benefitted a total of 539 Bumiputera entrepreneurs. In addition, special schemes to train Bumiputera entrepreneurs were introduced by BPMB. A special entrepreneurial training scheme initiated in 1982 for Bumiputera in the public service was introduced and implemented by the Government. Under this programme, 147 and 176

Bumiputera were trained in 1983 and 1984, respectively. In 1984, 36 participants left the public sector to initiate their own enterprises and businesses on completion of their training programmes compared with 33 participants in 1983.

The Credit Guarantee Corporation (CGC) guaranteed loans to Bumiputera investors valued at $18.7 million during the period 1981-84. This amounted to 40.0 per cent of the total guaranteed loans extended by the General Guarantee Scheme (GGS) to both Bumiputera and non-Bumiputera investors. In addition, under the Special Loan Scheme (SLS), of the total loans of $1,507.1 million approved for guarantee by CGC, $356.2 million or 23.6 per cent were for Bumiputera investors. These loans guaranteed by the Corporation were mainly for construction, and food and wood-based activities. During the period 1981-84, loans approved by the Malaysian Industrial Development Finance to the Bumiputera community amounted to $167.3 million, accounting for 28.9 per cent of total loans approved.

Employment

The contribution of the manufacturing sector to employment creation during the period 1981-85, was modest. Its share of jobs created during the period was 11.2 per cent or an absolute increase of 72,900 jobs. The growth rate of employment in the sector averaged 1.9 per cent per annum during the period. Employment in a sample of selected manufacturing subsectors reflected changes in output of these subsectors during the Fourth Plan period. Employment in the textile, leather footwear, rubber products, food and beverages, electrical machinery, and wood industries indicated declining trends, while the petroleum refinery, plastic products, basic metal products, transport, and other non-metallic product industries registered increases in their share of manufacturing employment.

III. PROSPECTS, 1986-1990

The prospects for growth of the manufacturing sector during the period, 1986-90, have to be viewed in the light of the anticipated economic performance of the industrialized countries, and rising protectionism. Of more importance is the extent and nature of structural readjustments in industry and the magnitude of response of the private sector to the efforts of the Government to accelerate growth in the sector.

In view of the need to identify and overcome the structural weaknesses and as part of the need to review existing industrial policies and strategies, the Government initiated two major studies in 1983, that is, MIPS and the IMP. The MIPS was undertaken to provide a basis for the rationalization of existing industrial policies in the country. A thorough assessment of investment incentives and export-promotion policies was undertaken, with a view to improving their effectiveness. In particular, the estimates of effective protection were updated in order to provide a basis for rationalizing tariff protection policies. The IMP, on the other hand, was to provide the general industrial development objectives and framework of development strategies as well as to identify the strategies for subsectors with promising growth potential.

The studies highlighted the need for changes in the thrust and direction of past policies and strategies and the reformulation, integration, and adoption of industrial incentives and measures to accelerate growth in the manufacturing sector. The studies provided new approaches and emphasis as well as more effective forms of incentives for raising the level of industrial productivity, efficiency, and growth.

The period 1986-90 will focus on reorientation and structural change for the manufacturing sector. In order to effect this change, strategies will be formulated to accelerate growth in selected industries, more attuned to the current resource availabilities and comparative advantage of the country. Given the limited domestic market, the growth of manufacturing exports will remain crucial. The Fifth Plan will lay the groundwork for an integrated export-oriented manufacturing sector.

In line with the current emphasis on stimulating growth in the manufacturing sector, the incentive system, especially tariffs, will be reformulated to give an explicitly outward-looking dimension, favouring competition, and encouraging entrepreneurial initiative to facilitate the required change. In order to further increase the industrialization effort and maximize the multiplier effect, attention will be focussed on extending existing linkages and promoting new ones, generating increased inter and intrasectoral linkages and facilitating the transfer of technology. These concerted efforts are expected to set the manufacturing sector on the path to greater specialization, vigorous export expansion, keener competition, and higher efficiency.

Sustaining the momentum of growth in manufacturing

It is envisaged that the manufacturing sector has the potential to utilize scarce resources more efficiently to enlarge the productive and wealth-creating capabilities of the economy. The manufacturing sector is expected to expand at 6.1 per cent per annum during the Fifth Plan period, slightly higher than the rate achieved during the Fourth Plan period of 4.9 per cent. This growth rate, however, has to be viewed in the light of uncertainties associated with external demand, rising protectionism, and the structural readjustments required in the sector. The manufacturing sector will continue to be an important means for the creation of opportunities required for the attainment of the NEP objectives.

With the expected moderate rate of expansion, the manufacturing sector will augment its contribution to the total increase in GDP from 19.6 per cent in 1986 to 29.0 per cent in 1990. Manufacturing will consolidate its position in the economy, with its share of GDP rising from 19.1 per cent in 1985 to 20.2 per cent by 1990. The growth of the sector is expected to be generated from both domestic and export-oriented industries.

The achievement of the growth rate of the sector during the Fifth Plan period will hinge fundamentally on a number of factors. The first major requirement is the expansion of private investment at relatively significant rates, the acquisition of technology, and the introduction of substantial changes required to reorientate the structure of manufacturing for more broad-based industrialization. The role of the private sector in manufacturing investment will be even more important as the Government gradually reduces its presence and role in the sector.

A second major requirement for the targetted expansion of the sector will be a strong export growth. Rapid increases in the export of manufactures will be necessary to complement domestic demand in the efficient use of scarce resources for income and employment generation. The world economy, which has been forecast to experience slower growth during the initial period of the Fifth Plan, is expected to gather momentum towards the end of the period. This will augur well for manufactured exports during the period.

Reorientating and expanding the structural base of manufacturing

During the Fifth Plan period, major efforts will be directed at improving the growth potential of the sector. The broad directions of growth for the various subsectors have already been indicated by the IMP. In line with efforts to attain an optimal product-mix and to accelerate export expansion for accelerated growth, the Government will boost the development of resource-based industries in which the country enjoys comparative advantage, selectively promote strategic heavy industries, upgrade the development of small-scale industries and undertake to modernize and rationalize existing industries to maximize resource allocation within the sector.

The targetted expansion of production output, as shown in Table 11-6, will bring about considerable changes in the product-mix of the manufacturing sector. The production of consumer goods, such as processed food, oils and fats, beverages and tobacco, and textiles and clothing, will continue to expand substantially as private disposable incomes increase and as greater opportunities for further import substitution become available. The manufacture of intermediate and investment goods will become far more important during the Fifth Plan period. Priority will be accorded to these industries as they are expected to provide further opportunities for the expansion of domestic industry, for technology and skill development as well as for the vertical integration of the sector.

Output of intermediate goods related to chemicals, rubber products, non-metallic products, iron and steel, and non-ferrous products as well as in investment goods originating from the industrial, electrical, and machinery subsectors including the transport equipment subsector is expected to expand at a relatively higher rate. While a significant source of output growth for manufactured

TABLE 11-6

PENINSULAR MALAYSIA: AVERAGE ANNUAL PRODUCTION GROWTH RATE OF MANUFACTURES, 1986-90
(%)

Industry	*1986-90*
Processed food	5.0
Oils and fats	5.0
Other foods	4.0
Beverages and tobacco	4.0
Textiles and clothing	5.0
Wood, wood and cork products	4.0
Paper and printing	8.0
Industrial chemical and chemical products	7.0
Petroleum products	3.0
Rubber processing and rubber products	8.0
Non-metallic products	9.0
Basic metal products and non-ferrous metal products	12.0
Fabricated metal products	9.0
Non-electrical machinery	9.0
Electrical machinery	7.0
Transport equipment	9.0
Others	5.0
Total	6.4

Source: As in Table 11-1.

products will originate from import-substitution activities, the impetus for accelerated expansion will be derived from the growth of export-oriented resource-based industries.

Resource-based manufacturing industries still present high potential in terms of growth, trade balances, and linkages. These industries will promote the development of downstream activities, hence strengthening mutually beneficial links between the manufacturing sector and the other sectors of the economy, especially agriculture. Major gains that can be derived from aggressive expansion of resource-based industries include increases in value added in manufacturing as downstream activities expand, greater employment generation from these activities, and foreign exchange savings. In terms of broad sub sectoral contribution to growth in the sector, resource-based industries, such as rubber processing, and non-metallic mineral products, have been earmarked to play a significant role as shown in Table 11-6.

A subsector that will gain prominence during the Fifth Plan period is non-metallic mineral products. This subsector is targetted to grow at an average annual rate of 9.0 per cent per annum in consonance with the construction sector which is the main consumer of its output, that is, building materials. It will be primarily oriented for the domestic market, although there exists prospects for exporting in the future. Growth will ensue from the major subgroups of ceramic tiles, marble and marble products, float glass products, prefabricated cement and concrete products, cement bricks and concrete hollow blocks, and high grade calcium carbonate or limestone powder.

Another subsector that is expected to contribute significantly during the Fifth Plan period is rubber processing which is expected to register an average annual production growth rate of 8.0 per cent. Efforts will be directed at encouraging greater domestic utilization of natural rubber to increase value added and foreign exchange and to develop further the export potential of the rubber industry. A Rubber Industrialization Task Force has been established for this purpose. Certain selected industries within the subsector, such as rubber tyres and tubes, will be actively promoted during the Fifth Plan period to make the country a major world exporter. These industries possess market potential both domestic and export, high value added, linkages and inherent technological capability. Products such as radial ply steel-belted passenger car tyres, radial ply textile and steel-belted truck tyres, precured retreads, automative components, selected latex products, and fashion footwear will be accorded priority during the period and are expected to provide the sources of growth in this subsector.

Selected non-resource-based industries will continue to be important sources of growth during the period because of their potential to create linkages and to act as catalysts for further industrialization. The four basic industries that will serve to broaden the industrial base have been identified by the IMP as the metal industry, engineering, chemical and processing industries as well as the electronics industry. These subsectors have been targetted to grow at high rates ranging from 7.0 to 12.0 per cent.

In the past, the public sector was instrumental in the establishment and acceleration of growth in the strategic heavy industries. This was due to the inherent potential of these industries to contribute to the creation of more domestic-based activities, to supply skills and modern technology, to earn foreign exchange savings, and to reduce the overdependence on imported inputs as well as to create more extensive linkages. Most of these projects, however, have long gestation periods and high commercial risks. It becomes imperative that the private sector should be encouraged to increase participation in the further development of heavy industries since the public sector is in the process of rationalizing its role and presence in industry.

In terms of average growth of production during the Fifth Plan period, the basic metal products subsector is expected to be the leading subsector for the non-resource based industries, growing at 12.0 per cent during the 1986-90 period. The sources of growth for this subsector will be the anticipated demand for iron and steel as the rate of industrialization accelerates. The IMP has forecasted domestic demand to be strongest in the market for flat and long products. By 1990, the subsector is expected to produce sufficient output to meet domestic market demand for wire rod, reinforcing bars, small bars, and sections.

The fabricated metal products subsector, which is expected to grow at 9.0 per cent annually during the Fifth Plan period, will lay the foundation for a sound and effective machinery and engineering base during the next decade in order to support other industries. Policy emphasis will be on product technology as opposed to production technology, which has dominated activities in the past. With regard to product strategy, the sector will be concentrating on the production of valves, pumps, motors, engines, compressors, gear boxes, pressings and bearings, dies, tools, and moulds.

Another non-resource-based industry, envisaged to grow at a significant rate of 9.0 per cent per annum, is the transport equipment subsector which is expected to be one of the most dynamic and fastest growing sector in manufacturing during the Fifth Plan period. The industry, which has remained essentially of the assembly type, will now develop into the production of transport equipment. During the Fifth Plan period, growth within the subsector will come principally from the production of medium range automobiles, motorcycles, and the construction of coastal vessels, fishing boats, and ship repairing. The importance of the transport equipment subsector lies in its potential linkage effects with other subsectors. Related industries, such as steel, non-ferrous metals, chemicals, electronics, glass, and textiles, are expected to expand with the growth of the subsector.

Another subsector that will be promoted will be the chemical and chemical processing industries which covers a wide range of chemical products, namely inorganics, fertilizers, petrochemicals, plastics and resins, soaps and detergents, pharmaceuticals, pesticides, and other products. This subsector is expected to grow at 7.0 per cent during the period 1986-90, and production will essentially be for meeting domestic consumption due mainly to the lack of indigenous technological capability, intense competition from advanced countries, and the risk associated with such undertakings. Priority products that will be encouraged during the Fifth Plan period will be polyethylene, polypropylene, vinylchloride, vinylacetate, and methanol derivatives, which entail the backward integration of the petrochemical subsector.

The electrical machinery subsector will continue to contribute significantly to growth during the Fifth Plan period, despite the current downturn in the demand for semiconductors. Although specific electronic products are experiencing sluggish demand in major international markets, the electronics industry in the country is anticipated to remain viable as the country is expected to move into high-technology electronic industries. In addition, there is also a growing domestic market for consumer electronics, selected industrial electronics, and non-semiconductor components, and efforts will be directed at increasing the shares of these products in total electronics output during the Fifth Plan period.

Apart from encouraging the development of consumer electronics, selected industrial electronics, and non-semiconductor components, efforts will also be directed at strengthening backward and forward linkages within the industry and strengthening material and component suppliers so that their product cost and quality are competitive with imports. This will entail introducing new production techniques and upgrading production capabilities in the manufacture of materials and components for the semiconductor assembly industry. The predominant thrust in the strategy for this subsector during the Fifth Plan period is to promote growth in the subsector, exploit existing and potential linkages so that value added is maximized, and to select and promote a range of high value-added products.

Changing the market orientation

In consonance with the export-led growth strategy, policy measures will continue to be directed at vigorously pursuing an outward-oriented industrialization policy through the expansion of manufactured exports. In order to ensure the expansion of exports and the exploitation of comparative advantage and economies of scale, balanced incentives will be provided for import-substitution and export activities. Apart from improving incentives to encourage exports, the Government will further intensify its exports promotion efforts which will include, *inter alia,* ensuring more adequate finance and exports insurance coverage.

Market penetration is a major factor in the strategy of export expansion. In addition to being confronted with restrictive trade policies adopted by the industrialized countries, the country also lacks marketing capabilities. The Government will encourage the setting up of more joint ventures, using foreign technology and local resources, with international corporations that already possess extensive global marketing links. Such joint ventures are expected to assist the country in the marketing of manufactured products and provide easy access to technology and research and development (R&D).

Another measure of promoting the growth of exports is to ensure the availability of finance for exports and the existence of an effective export credit insurance scheme. The current Export Credit Refinancing (ECR) scheme has been reviewed. At the same time, efforts are being made to review the export credit insurance scheme. In particular, the ECR scheme is being revamped to extend its accessibility to as many exporters as possible, both direct and indirect, to increase the coverage of eligible products, extend the period of refinancing, and to institute new and more effective disbursement mechanisms. The ultimate aim is to enable exporters to obtain adequate financing for exports, including financing at the production level, and to ensure that goods will be available for export.

The Government has also liberalized equity guidelines in its attempt to attract foreign equity into the export-oriented industries. Foreign investors can now hold a greater proportion of investment depending on the proportion of output to be exported and factors such as the level of technology, potential for linkages, value of the investment, location of the factory, local resources utilized, and value added.

With emphasis on improvements in productivity, efficiency, and export competitiveness for the Fifth Plan, the export of manufactured goods is expected to achieve an average annual growth rate of 7.3 per cent during this period. Although this rate of growth is lower than that achieved during the Fourth Plan period, the share of exports of manufactures in total export earnings is expected to increase from 32.1 per cent in 1985 to 41.1 per cent by 1990. The principal sources of growth in exports during the Plan period will be from the petroleum products, chemical products and electronic products subsectors.

Exports from the resource-based industries, such as wood and rubber products, are expected to perform well during the Fifth Plan period. The product groups that are expected to make a major contribution include mouldings, joinery, and furniture, all of which are the highest value-added items in the wood products subsector, with the highest growth potential. Sources of growth of exports of rubber products will mainly come from latex products, footwear, and tyres and tyre-related products, and other rubber products.

Although the contribution of the machinery subsector to the world market is small, experience accumulated over the years in servicing resource extraction and processing sectors has made the subsector competitive in the production and export of tin mining equipment, rubber and palm oil processing machinery, and wood-working machinery. The increase in exports from the chemical subsector will be mainly attributable to the fertilizer product group. Exports from the non-metallic mineral products, transport equipment, ferrous metal, electrical industry, and non-ferrous metal subsectors are expected to be relatively insignificant during the Fifth Plan period.

The anticipated growth of exports during the Fifth Plan period hinges upon several key factors over and above the competitiveness of the country's exports, the rationalization of the incentive and tariff systems, and marketing strategies.The anticipated growth of developed countries and their increasingly restrictive trading policies can adversely affect policy measures to expand exports.

The outlook for the international economic environment during the second half of the 1980s remains uncertain and the threat of increasing protectionism on the part of developed countries is likely to increase, if the recession is prolonged. The performance of exports of manufactures will, therefore, depend fundamentally on both the growth of external demand and the accessibility to established markets for the country's products.

Improving the incentive system

The incentive system, which has contributed significantly towards rapid industrialization in the country in the past, is being reviewed. The overall incentive system has not been able to generate export-oriented activities to the expected level and has tended to favour import-substitution activities.

In addition to the recently introduced incentive revisions, other incentive measures are also being actively considered, in view of the weaknesses of the incentive system, particularly in as they tended to favour import-substitution activities and large-scale and capital-intensive investments. These incentive measures are expected to take effect during the Fifth Plan period. They will not only address the problems identified but they will also revitalize the sector. The new incentive system, which covers trade related incentives, investment incentives and other incentives, is expected to transform the manufacturing sector during the Fifth Plan period into one where competitiveness, entrepreneurial spirit, and accumulation of skills and technologies, will prevail.

During the Fifth Plan period, the implementation of trade-related incentives will provide exporters automatic access to the benefits specified. Lowering the protection rates will also enable resources to be allocated more efficiently, and this is expected to provide an impetus for overall growth of the sector, and exports in particular.

The new system of investment incentives during the Fifth Plan period will encourage private investment in industries in which the country possesses comparative advantage or expects to have in the near future. More resources will, therefore, be directed into export sectors, resource-based industries, and strategically selected heavy industries.

The investment targets required for achieving the growth planned for the sector in the Fifth Plan are very demanding. In the promotion of industrial development, private investors have a crucial role to play as Government participation in the sector will be constrained by the availability of financial resources. The investment incentives will encourage investments in the resource-based industries, namely rubber processing, processed foods, and targetted non-resource-based industries such as electrical machinery, basic metal, transport equipment, non-electrical machinery, and fabricated metal. Aside from the liberalization of equity guidelines, the recently announced New Investments Fund will enable investors to obtain loans at preferential interest rates for agricultural, manufacturing, and tourism projects. Electricity rates and rates for international telephone and telex, and other telecommunication services have been reduced to assist manufacturers to lower their costs of production. These counter-measures are expected to help investors weather the adverse effects of worldwide recession.

The Government is also actively considering other incentives to complement the incentives in international trade and investment during the Fifth Plan period. These incentives will serve to boost the growth of small-scale enterprises which are essential for closer linkages between the export and domestic sectors and desirable for its positive effects on employment and training opportunities. In addition to the incentives to encourage the growth of small-scale enterprises, the Government is also expected to implement specific incentives to upgrade the level of industrial technology, either by the further adoption of foreign technologies or by developing indigenous technologies. The incentives under consideration will provide an environment where private firms will be encouraged to increase their spending on technological improvements.

The challenge to undertake these potential investments, therefore, lies with risk-taking private entrepreneurs taking on the opportunities of breaking into and competing in international markets. Private entrepreneurs will also need to direct efforts at attaining higher levels of efficiency, product design, and innovation to enable the country to evolve into a global marketer for selective items of its manufactured products. Essentially, the Fifth Plan prospects for the manufacturing sector will depend primarily on the response of private enterpreneurs to the growth opportunities created by the Government.

Industrial dispersal

The marginal impact of industrial dispersal strategies necessitates a different approach in directing the location of industries during the Fifth Plan period. The major thrust of industrial dispersal in the Fifth Plan will be guided by market and efficiency criteria. Industrial type and market orientation will, therefore, determine where specific industries will be located. Industries earmarked for the export market, using highly skilled labour and imported inputs, are expected to be located in areas enjoying agglomeration economies. Industries of an import-substitution nature, and footloose industries will be encouraged to be located in the smaller towns so that over time, the intervening areas between established urban growth centres will be developed. Heavy industries are expected to be located in areas convenient to the supply of their inputs and ports, if they are export-oriented.

The village industries will continue to be actively promoted during the Fifth Plan period, especially in view of the difficult years ahead that are expected to adversely affect the livelihood of rural households that are largely dependent on agricultural commodities. Organized handicraft activities are expected to be further developed with programmes such as craft entrepreneurial development, craft development programme, skills training and management training programmes.

Increasing Bumiputera participation

The prospects of increasing Bumiputera participation in the manufacturing sector during the Fifth Plan period has to be viewed in the light of the financial resources of the Government. While the trust agencies and other public enterprises will continue to undertake programmes to promote Bumiputera participation in the manufacturing sector, the major thrust in the Fifth Plan will be towards promoting greater self-reliance, and to depend more on their self-generated funds. Another significant change in emphasis during the Fifth Plan period is the important role that will be accorded to private Bumiputera entrepreneurs. The brunt of sustaining the momentum of growth of Bumiputera participation in manufacturing is expected to be borne by private Bumiputera entreneurs themselves, although the Government will continue to provide the necessary support, such as management training, and consultancy programmes especially in the development of small-scale industries. Efforts will also be directed at encouraging Bumiputera entrepreneurs to invest in a wider range of manufacturing activities in order to widen and diversify their base. This is expected to significantly expand Bumiputera participation and investment in the manufacturing sector. Bumiputera participation in the food and wood-based industries are also expected to be upgraded. At the same time, Bumiputera employment in the manufacturing sector is expected to increase marginally from 41.7 per cent in 1986 to 42.3 per cent in 1990.

Increasing employment opportunities

In line with the output growth targets of the Fifth Plan, employment in the manufacturing sector is expected to increase moderately at a rate of 2.6 per cent per annum compared with 1.9 per cent per annum achieved during the Fourth Plan period. In terms of share of overall employment, the manufacturing sector is projected to contribute 15.4 per cent in 1990. In terms of job generation, the sector is targetted to contribute 113,100 new jobs or 17.5 per cent of the total new employment opportunities to be generated in the economy.

The sources of employment growth in the manufacturing sector are envisaged to come from the subsectors of food production, textiles, wood products, rubber products, plastic products, basic metals, and electronics. With greater industrialization and changes in the structure of industry during the Fifth Plan period, the composition of labour demand is also expected to change significantly. Production processes requiring higher skills will be increasing. This is expected to result in a greater demand for highly skilled and experienced labour.

In consonance with the greater utilization of skills, productivity within the manufacturing sector is expected to increase with the anticipated structural transformation of the sector and the emphasis on design, engineering, and R & D activities. Efforts to promote skill training and R & D are expected to make the transfer of technology more meaningful in the future.

IV. THE INDUSTRIAL MASTER PLAN:

REORIENTATION OF INDUSTRIAL STRATEGIES

Based on the evaluation of past progress and strategies aimed at industrialization, a reorientation of existing strategies will be undertaken during the Fifth Plan period. This will be carried out on the basis of the findings and recommendations of the MIPS and IMP which have identified a series of measures that will have to be implemented in order to maximize the growth potential of the sector. This is necessary because the generally favourable conditions during the past decade are not expected to prevail and the changing environment calls for a more systematic and consistent approach towards moving the sector from an essentially inward looking domestic-oriented sector to one which is more outward-oriented. The key elements of this new strategy will include improving the incentive system, expanding exports, upgrading and modernizing the small-scale industries, industrial dispersal, developing R & D activities, and strengthening the institutions responsible for the development of the manufacturing sector.

The incentive system

The incentive system is expected to be reoriented to foster greater efficiency and competitiveness so that resources can be allocated optimally to maximize the growth of the sector during the Fifth Plan period. Toward this end, trade related incentives, investment incentives, and other incentives will be improved to bring about the optimal direction of growth. Trade related incentives are expected to be reoriented so that resources can be allocated more efficiently to export-oriented industries. In consonance with this, the system of investment incentives is expected to encourage private investment in industries with comparative advantage and contribute to the expansion of private capital formation in the light of the anticipated reduction of Government presence in the manufacturing sector. In addition, the Government is considering the reorientation of other incentives pertaining to small-scale enterprises, R & D, technology, and manpower development.

Expansion of exports

In reorientating strategies to attain an outward looking export-oriented manufacturing sector, current incentives need to be restructured to ensure that resource allocation according to comparative advantage is attained and protection mechanisms are systematically attuned to the overall goals of industrialization. In order to accelerate the growth of exports, shifts in the product composition of manufactured products will be encouraged. Efforts aimed at changing the export product-mix will be determined by the long-term comparative advantage of the country in terms of its abundant natural resources.

Efforts are expected to be directed at improving the marketing of exports not only to traditional export markets but also extending export markets to the socialist block countries of Eastern Europe, the Middle East, newly industrialized countries, and developing countries including the countries belonging to the Association of Southeast Asian Nations. Existing Government institutions such as MIDA, Malaysian Export Trade Centre (MEXPO), and the network of Malaysian trade commissioners overseas will be more fully utilized to disseminate information to both Malaysian businessmen who wish to know more about market conditions overseas and foreign buyers who are interested in exploring the Malaysian market for supplies. Trade missions, displays of Malaysian-made products in trade commissions overseas, trade information, listings of the names and addresses of useful contacts overseas, and publications on potential markets will continue to be undertaken as part of the overall promotional activities.

Small-scale industries

The role of small-scale industries will be further enhanced during the Fifth Plan period to ensure the development of a sound industrial structure for long-term sustained growth. The contribution of small-scale industries to many existing industries is substantial and their potential to create interindustry linkages is vast. In addition, almost all small-scale industries are locally owned and managed.

The Government has undertaken and will continue to undertake several measures to actively encourage small-scale industries to expand, upgrade and modernize their activities. In this regard, the Government, with the co-operation of the World Bank, has designed a Special Programme for the Development of Small-scale Industries which became operational since early 1985 and which will continue until 1988. A number of Government agencies have been identified for active participation in the programme and they include BPMB, Forest Research Institute of Malaysia (FRIM), Malaysian Agricultural Research and Development Institute (MARDI), National Productivity Centre (NPC), Standards Industrial Research Institute of Malaysia (SIRIM), and the MIDF. The Small-scale Industries Division of the Ministry of Trade and Industry has been entrusted with the co-ordination of the activities of each of the agencies under the programme. The programme, which involves a total financial assistance of about $234 million, will benefit small-scale entrepreneurs in various sectors except agriculture.

Bumiputera entrepreneurs, in particular, will be given credit facilities and technical assistance through BPMB. Over the four year period, the programme is expected to benefit a total of about 1,100 small-scale entrepreneurs.

Several measures will also be undertaken to assist small-scale industries in export promotion. This is expected to entail establishing links between small-scale industry organizations with research agencies such as SIRIM, MARDI, FRIM, Rubber Research Institute of Malaysia, and Palm Oil Research Institute of Malaysia (PORIM), to ensure the highest standards in product design and quality in order to be more competitive. Links with MEXPO will ensure up-to-date information on potential external markets. Another measure that is expected to assist small-scale industries is the extension of technical and consultancy services by the R & D institutions of the Government to these industries.

Industrial dispersal

Industrial dispersal strategies during the Fifth Plan period will be reoriented to concentrate development on existing growth centres enjoying agglomeration economies so that existing infrastructure, communications, ancillary services, and skilled manpower can be more fully utilized. Such a strategy, based on market forces and efficiency criteria, is necessary in the light of the recession, structural adjustment, and financial prudence. This approach will differ from the previous strategies since it will maximize the use of existing infrastructure and resources, and avoid thinly distributing industrial estates to regions that cannot sustain their pace of growth.

The locations of industries during the Fifth Plan period will largely be determined by the market orientation of manufacturing concerns. Export-oriented industries will be encouraged to be located in areas enjoying agglomeration economies, while footloose industries and industries producing for the domestic market will be encouraged to be located in smaller towns.

Research and development

The development of indigenous technological capability will be given high priority during the Fifth Plan period, particularly with regard to increasing the absorptive and adaptive capabilities of the country. Measures to encourage the development of indigenous technological capability are expected to cover the development of research manpower, improved institutional arrangements, and incentives for R & D. A programme for the interchange of R & D personnel between the public and the private sectors is envisaged in the Fifth Plan. Existing research institutes undertaking industrial research are expected to be expanded, a research fund primarily for industrial research is being considered, and the private sector will be encouraged to increase their R & D activities. The private sector is expected to contribute an increasing proportion of R & D expenditure during the

Fifth Plan period, for developmental research. The current R & D related incentives are also being reviewed to make them more effective in the development of R & D capability in the country.

High priority will be accorded to the development of information resources to assist in the gathering of market intelligence in order that the country remains an effective competitor in manufactured goods. Information processing technologies, which are important to the planning processes of both the public and private sectors, will be promoted.

Manpower development

In line with the need to develop indigenous technological capability for the future development of the manufacturing sector, the Government is expected to take measures to increase the supply of engineers and technicians in the country. The number of technicians and engineers required will be substantial, and the demand will be for graduates with skills suitable for industry, in particular electronics and chemical engineering.

A more interactive approach to manpower planning is expected to be adopted which will involve the private sector in the planning for and provision of funds for vocational training. Efforts will also be directed at co-ordinating the match between the demand for and the supply of manpower to meet the industrial requirements of the country. This will be in respect of both local and foreign trained graduates.

V. ALLOCATION

The development allocation and estimated expenditure for the period 1981-85 and the allocation for the period 1986-90, for manufacturing are shown in Table 11-7.

VI. CONCLUSION

The manufacturing sector is embarking on a more dynamic outward-looking industrialization strategy to achieve accelerated growth of the sector in an environment of increasing liberalization, competition, efficiency, entrepreneurial initiative, human resource development, and technological advancement. This change in thrust and direction, based on intensive appraisal of past strategies, and recommendations of the MIPS and IMP, is expected to raise the growth of the manufacturing sector and to place it on a more sound footing for more efficient and optimal development for the future.

On the external front, there are uncertainties over the demand for the manufactured exports of the country and increasingly restrictive trade conditions. The Government, however, will vigorously promote the expansion of the export base, efficiency, investment, and marketing and technological capabilities which are expected to reduce the vulnerability of the sector to adverse developments in the international economy. With positive response from the private sector to an environment which will be made more conducive to growth and private entrepreneurship, the manufacturing sector is expected to sustain its contribution to GDP during the Fifth Plan period.

TABLE 11-7

MALAYSIA: PUBLIC DEVELOPMENT EXPENDITURE FOR THE MANUFACTURING SECTOR, 1981-90
($ million)

Agency	*Fourth Plan allocation, 1981-85*	*Estimated expenditure, 1981-85*	*Fifth Plan[1] allocation, 1986-90*
HICOM	330.61	330.61	1,148.49
PERNAS	22.60	22.60	35.00
MARA	18.80	18.00	88.08
SEDCs	351.74	351.74	402.72
ASEAN projects	558.33	429.93	0.09
Ministry of Trade and Industry (MICEB and Small-scale Division)	21.65	11.63	12.15
Syarikat Gula Padang Terap Berhad	72.00	72.00	-
MIDA	6.64	4.78	1.00
Perbadanan Kemajuan Kraftangan Berhad	10.93	10.93	45.18
Syarikat Malaysia Explosives Sendirian Berhad	3.65	3.65	23.00
PUSPATI	58.42	55.71	90.02
SIRIM	33.08	31.22	88.37
Food Industries of Malaysia	42.30	42.30	36.20
Syarikat Jengka Sendirian Berhad	22.20	19.60	-
Bahagian Industri Kampung	12.18	12.18	38.50
PETRONAS	-	-	1,140.85
Total	1,265.13	1,788.09	3,149.65

Note: [1] Under the Fifth Plan, the public sector has been redefined to include the non-financial public enterprises (NEPEs), which previously were tretaed as belonging to the private sector.