

## 9. Glassware

### (1) Production, Exports, Imports

There are only 4 manufacturers in Malaysia which are presently producing glass products from mineral raw materials. Among them, one is a sheet glass manufacturer and the other 3 are glass container manufacturers. A small volume of glass tableware is also produced by the glass container manufacturers. From the results of the field interview survey, the total annual production volume of glassware (excluding sheet glass) is estimated at around 112.8 thousand tons in 1987, of which, about 33.0 thousand tons are exported.

Malaysia was still a net importer of glassware in 1987. However, the trade imbalance in glassware has been improved considerably due to the rapid increase of exports in recent years.

The total export value of glassware in 1987 was M\$33.9 million showing a rapid average annual increase rate of 17.6% during 1983-87. The major export item is glass containers occupying up to 84% of total exports. Major export markets are Singapore and Hong Kong. As for imports, the total import value of glassware in 1987 was M\$39.2 million. The major import item was glassware for office and household use, occupying about 65% of total imports.

### (2) Present Status of Production

**Glass containers:** At present there are no exclusive manufacturers of tableware in Malaysia. One of the glass container manufacturers produces glass tableware making use of a 12-head press-machine. The production capacity of the press-machine is around 7-8 tons per day. Other glass container manufacturers produce tableware by the same IS machines which are used for bottle forming. Because of machine constraints, the production items are limited to such products as tumblers, jugs or cups. Because all of these firms produce tableware from the same molten glass used for glass bottles, the product quality for glass tableware is not high.

**Other glass products:** Other glass products are not produced from mineral raw materials but are processed from semi-finished glass products. A joint venture between Malaysian and German firms is producing optical glass, pharmaceutical products or chemical and general laboratory glassware. Three firms, the largest of which is a subsidiary of a Dutch company, are producing incandescent and fluorescent lamps

making use of imported glass bulbs or glass tubes. Further, a subsidiary firm of the domestic sheet glass manufacturer started production of high-standard mirrors making use of domestically produced float glass.

### (3) Overseas Market Analysis

The total import value of glassware worldwide, according to the 1985 International Statistics Yearbook compiled by the United Nations, was more than US\$3 billion, and the average annual increase after 1983 was 1.3%. Regionally, Europe was the largest market, accounting for 47.8% of the total import value, followed by North America, Asia and the Middle East, accounting for 26.9%, 8.8% and 5.8%, respectively. Among major importing countries, the largest one was the U.S., accounting for 21.6% of the entire import value. Following the U.S. were West Germany, accounting for 8.1%, the United Kingdom (8.1%), France (7.4%), and Italy (4.5%).

On the other hand, Europe was the largest supplying (exporting) region of glassware, accounting for 80.0% of the entire export value in 1985. France, accounting for 24.1% of the entire value, occupied first place followed by West Germany (16.6%), Italy (10.2%), the U.S. (6.1%), the U.K. (5.7%) and Australia (5.6%).

As for the export of glassware from Malaysia, the largest importing country of Malaysian glassware was Singapore, accounting for 65% of the total export value of the products in 1987. By product item, more than half of the products exported to Singapore were glass containers. Following Singapore in value of imports of Malaysian glassware, were Hong Kong, accounting for 9.5%, Pakistan (5.8%), Thailand (3.5%), the Philippines (3.3%) and Bangladesh (3.3%). These five countries together accounted for 25% of the total export value of Malaysian glassware. By product item, the export of glass containers was especially focused on Singapore, accounting for 77%, followed by Hong Kong, accounting for 11%; these countries were, by far, the largest importing countries of Malaysian glass containers. Exports of glassware for laboratories varied among nations including Pakistan, Thailand, Bangladesh and the Philippines.

As for the import of glassware of Malaysia in 1987, France was the largest country to have exported glassware to Malaysia, accounting for 43.7% of the total import value. Singapore, accounting for 8.9% of the total import value, Indonesia (8.2%), Korea (7.8%), Japan (5.9%) and West Germany (5.0%) followed France. By category, the largest imported product item was household and office glassware, of which the major products were glass tableware. France, accounting for 61.3%, held the largest share of the supply followed by Indonesia, Korea, West Germany and Japan, accounting for 12.3%, 12.2%, 4.2% and 3.5%, respectively.

#### (4) Cost Analysis

In order to evaluate the approximate level of production costs of glass containers in Malaysia, some types of product were selected and their production costs both in Malaysia and in Japan were investigated and compared.

#### Glass Container Production Cost Comparison

Type of Product	(Unit: M\$)	
	Malaysia Firm A	Japan Firm C
(1) One-way soft drink bottle, no film sealing, 300ml	0.19	0.26
(2) Beer bottle, small-size, amber	0.22	0.48
(3) Soft drink bottle, orange juice	0.40	0.80

As an approach to analyze the factors which create the difference of production costs between Malaysia and Japan, the manufacturing cost structure among Malaysian glassware manufacturers and an average Japanese manufacturer was investigated and compared. The result shows that Malaysian glassware manufacturers have a cost advantage over Japanese manufactures both in raw materials and direct labour costs. Due to the difference in production volume, however, Japanese firms have an advantage in the cost burden of depreciation expenses for the production of one ton of glassware products. In a Malaysian firm, the share of interest expenses of the total production cost exceeds 12%, which badly affects their cost competitiveness.

#### (5) Specific Problems at Present

##### Glass containers:

Excess production capacity; The glass container industry is a highly capital intensive industry, and once a furnace is installed it has to be operated continuously for 24 hours per day. Because of this nature of the industry and the unsatisfactory growth of market demand for glass bottles, the production capacity of bottle manufacturers exceeds the domestic demand not only in Malaysia but also in many other nations such as Korea, Taiwan, South Africa or Turkey.

Unit production volume; Because of the small market size and diversified product demand in Malaysia, most Malaysian glass container manufacturers face the problem of productivity loss due to frequent job changes.

Distribution channels; In many other nations, the glass container manufacturers who have been confronted with the problem of over-production capacity to market demand have often succeeded by diversifying their product line to glass tableware. In Malaysia, however, most of the bottle manufacturers seem to be rather reluctant to expand their production in the field of tableware due to the more complicated domestic distribution structure of mass-consumption products such as tableware than glass containers.

Transportation; Malaysian manufacturers are favoured with a highly advanced road network, and there are no problems in transportation to domestic and Singaporean markets. However, for exports to other destinations using containers, Malaysian manufacturers occasionally meet with the problem of low frequency of stops or high container handling changes at Malaysian ports.

Financing; Due to the nature of the industry which is highly capital intensive, the financing requirement is very large in those capital investment cases such as facility modernization, facility expansion or diversification of product lines. Because investment fund recruitment is not so easy in Malaysia, some obsolete machinery and equipment were observed in some factories.

#### Glass Tableware:

Demand structure; The domestic market demand for glass tableware in Malaysia reaches as large as M\$50 million per annum, which is more or less the same size as with glass containers. However, the types of glass tableware demanded in Malaysia are widely diversified from very high quality type of products to lower-end products. Thus, the market size for a particular type of product often becomes smaller than minimum production scale for domestic production.

Product quality; At present, glass tableware in Malaysia is produced by glass container manufacturers on a limited scale, making use of the same molten glass used for container production. Accordingly, the present product quality is low and the type of products are limited to jugs and cups mainly used as promotional items of brewery and beverage firms.

Domestic market size; After starting production of the glass tableware factory presently planned by an Indonesian investor, the domestic demand for soda-lime type of products, which occupy the major portion of the market demand, would mostly be

fulfilled. Thus, the room for import substitution would be limited to high value-added types of products such as lead crystal ware and heat-resistant tableware. The domestic market demand for these types of products is, however, still very limited in Malaysia. Further, another problem is pointed out for the production of lead crystal ware that the quality of silica sand in Malaysia is not high enough for the production of lead crystal glass.

#### Other glass products:

Domestic processing volume; At present, such products as fluorescent and incandescent lamps, chemistry and general laboratory glassware or pharmaceutical containers are produced making use of imported glass tubes or semi-finished glass products. However, their present processing volume is still insufficient for manufacturers to start production from mineral raw materials.

Domestic market size; For those high value-added types of products such as optical glasses or pharmaceutical containers, domestic demand in Malaysia is quite limited. Most of these products produced or processed in Malaysia would have to be exported.

### (6) Measures to Promote Malaysian Glassware Industry

#### Glass container industry:

Product diversification; As a measure to cope with the over-production capacity problem of glass containers in Malaysia, a product diversification policy of glass container manufacturers is needed. At present, however, Malaysian manufacturers have not enough know-how of product diversification. For one thing, R & D efforts have to be made both in public and private sectors. For another, the establishment of a training facility to train technicians who could be used for the development and production of new products is needed.

Development of export market; Because the present production capacity exceeds domestic demand, the development of export markets is essential. Due to the nature of glass containers which are bulky and easy to break, the development of export markets is not easy, except for the market of Singapore to which road transport could be used. Efforts have to be made, both from public and private sectors, to gather sufficient overseas market information and to improve sea transportation conditions for container cargos.

#### Glass tableware:

Feasibility studies; Because most of the domestic demand for glass tableware is expected to be fulfilled by a newly established tableware factory, the new investment projects would have to be those which mainly aim at export markets. Among high-value-added products for export markets, lead crystal glassware has a disadvantage in raw materials because the quality of silica sand in Malaysia could not satisfy the required level for lead crystal glasses. More detailed and wide-range feasibility studies should be conducted in such product areas as hand-cut type of soda-lime glass tableware, hand-made lead crystal ware or heat-resistant tableware.

Overseas information; For the new investments for projects mainly targeted for overseas markets, constant efforts have to be made to collect overseas market information or information on new technology.

Capital or technical tie-ups with foreign manufacturers; In order to start the production of export oriented glass tableware in Malaysia, it is essential to promote the new capital investment of, or technical tie-ups with, foreign manufacturers which have an established brand image and distribution network in the overseas market. Constant promotion efforts for investment in Malaysia would have to be extended to overseas potential investors.

#### Other glass products:

Studies for starting production from mineral raw materials; For such glass products as electric lamps, pharmaceutical bottles or chemical-use measurers, only processing work is conducted in Malaysia. With the present processing volume, it is said to be economically unfeasible to start production from mineral raw materials. Joint efforts of both public sector and private manufacturers have to be made to study and identify the time and conditions which would make thorough processing feasible.

Capital and technical tie-ups with foreign manufacturers; As for high-value-added products such as optical glass or pharmaceutical containers, there is almost no domestic demand. Accordingly, the invitation of or technical tie-ups with foreign manufacturers which have strong sales capabilities in overseas markets would be the quickest and most practical way to start new production in Malaysia. To approach simultaneously potential overseas investors in the fields of both glass production and glass product processing would be recommended.

Inspection of export products; In order to compete in the very competitive export market, an established quality image for products is essential. For this purpose, the

introduction of an inspection system for exported glass products would be one of the most effective measures.

Soft-term financing scheme; In the glassware industry which is very capital intensive, the problem of fund raising is very heavy for most manufacturers, not only in the case of new investments, but also in those cases of modernization of machines and equipment or of expansion of facilities for product diversification. For those capital investment needs, some kind of credit schemes which would make available softer-term financing would be required. Especially, the modernization of furnaces which are already obsolete would directly improve the productivity of Malaysian manufacturers. The improvement of furnaces is one of the key areas to resolve the present bottleneck of production in some firms and improve thermal efficiency and total production cost performance.

Training facilities; At present there are no facilities to train glass product technicians in Malaysia, and most of them are fully depended on On-the-Job training in each factory. The establishment of some training facilities would be desired.

## **10. Recommendation**

### **(1) Comprehensive Promotion Programs Proposed for Each Industry**

Based on an analysis of (1) the present status of production and management in each target industry, (2) conditions of the major export markets and the major competing countries, and (3) the existing industry promotion schemes in Malaysia, the major problem areas that each industry faces were identified, and comprehensive promotion programs were proposed through an examination of effective problem solving measures.

The programs proposed for each industry and for a macro policy framework are as follows:

#### **Comprehensive Promotion Program of the Mould and Die Industry**

- Expansion of MIDECA
- Establishment of the Skill Development Centre
- Expansion of Polytechnics and ITI Activities
- Intensification of Training Schemes for Managers
- Introduction of a Mould and Die Model Factory System
- Introduction of Financial and Tax Incentives to Modernize Machinery and Equipment and to Strengthen Competitiveness
- Provision of Support Activities by Mould and Die Industry Organizations
- Promotion of Tie-Ups with Foreign Enterprises by MIDA

#### **Comprehensive Promotion Program of the Automotive Metal Parts Industry**

- Establishment of a Technical Development Unit for Automotive Parts in SIRIM
- Expansion of the Program to Educate Technicians and Workers in such organization as ITI or to Educate Managers at NPC
- Promotion of Technical Tie-Ups and Attraction of Investment by MIDA
- Strengthening of the Promotional Activities for Export of Automotive Parts by MEXPO



### Comprehensive Promotion Program of the Chinaware Industry

- Promotion of SIRIM Ceramic Technology Centre
- Geological Surveys of Ceramic Raw Materials
- Execution of Human Resources Development Programs by NPC
- Feasibility Study for the Establishment of a Ceramic Industrial Estate
- Intensive Promotion Activities for Foreign Investment and Technical Tie-Ups by MIDA
- Chinaware Export Promotion through MEXPO
- Establishment of a Financing Scheme for the Development of the Chinaware Industry, Particularly in Regard to Financing

### Comprehensive Promotion Program of the Glassware Industry

- Promotion of Ceramic Technology Centre (Glass Laboratory)
- Execution of Human Resources Development Programs
- Promotion of Activities for Foreign Investment and Technical Tie-Ups
- Glassware Export Promotion through MEXPO
- Establishment of a Financing Scheme for the Development of the Glassware Industry, Particularly in Regard to Financing

### Comprehensive Industry Promotion Program from the Macro Political Framework

- Expansion of Investment Attraction Activities by MIDA
- Expansion of Export Promotion Activities through MEXPO
- Promotion of the Scheme for the Assessment and Registration of Quality System by SIRIM
- Establishment of Manager Training Centre

#### (2) Integration of the Proposed Programs

Among the programs proposed from each industry sector, a relatively large number is common for more than 2 sectors. By integrating these common programs among sectors, the number of programs proposed in the study could be integrated into the following 13:

- MIDECA Expansion Program
- Skill Development Centre Program

- Establishment of a Technical Development Unit for Automotive Parts in SIRIM Program
- Ceramic Technology Centre Program
- Expansion of Existing SIRIM Activities (a mould and die model factory, good designs, inspection of exporting goods system, etc.)
- MIDA Activities Expansion Program
- Feasibility Study on New Financing Scheme
- MEXPO Export Promotion Activity Development Program
- Expansion of Manager Training Facilities Program (NPC)
- Expansion of Technical Training Facilities Program (Polytechnics, ITI, etc.)
- Intensification of Geological Surveys for Ceramic Raw Materials Program
- Feasibility Study for the Establishment of a Ceramic Industrial Estate
- Provision of Support Activities by Mould and Die Industry Organizations

### (3) Identification of Priority Projects

To develop the industries selected for this study, it is desired that all of the programs proposed as overall industry promotion programs for each industry sector be implemented at once with full efforts. In practice, however, it is necessary to make a rough priority selection to each proposed program in order to implement the program under the very tight limitations on both funds and human resources.

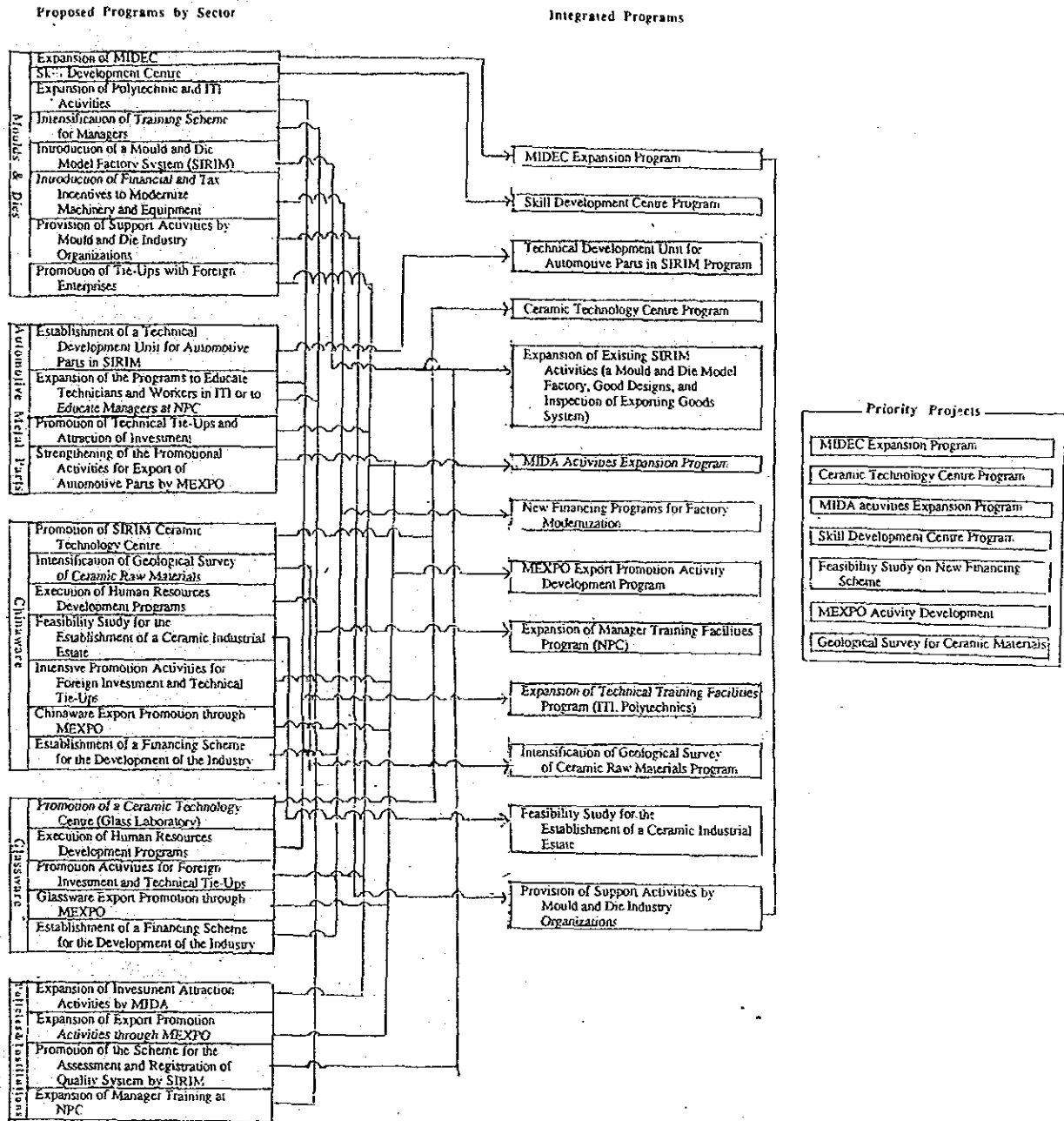
Because all the programs proposed in this study were not identified through sufficient feasibility studies, a priority ranking of each program could not be given using very strict criteria such as figures of the IRR (International Rate of Return) of each project. As a second best approach, the selection of priority projects was made based on the rather subjective judgement of the Study Team on the following basic criteria:

- (1) Existence of established organizations in charge of the project
- (2) Maturity level of the project
- (3) Urgency of the needs of the project
- (4) Investment scale of the project
- (5) Level of direct impact of the project on the development of the targeted industry
- (6) Necessity for support from other organizations
- (7) Industries to which the effects of the project would extend.

From the results of the review of the priority, the following 7 programs were selected as priority projects.

**MIDEC Expansion Program**  
**SIRIM/Ceramic Centre Program**  
**MIDA Activity Expansion Program**  
**Skill Development Centre Program**  
**Feasibility Study on New Financing Scheme**  
**MEXPO Activity Development**  
**Geological Survey for Ceramic Materials**

Fig. II.2-1 Integration of Programs and Priority Projects





**III. INDUSTRIAL AND EXPORT  
PROMOTION POLICIES AND FOREIGN  
INVESTMENT POLICIES**



### **III. INDUSTRIAL AND EXPORT PROMOTION POLICIES AND FOREIGN INVESTMENT POLICIES**

#### **1. State of Industrialization**

##### **1-1. Trends and History of Industrialization Policies**

###### **1-1-1. First Malaysia Plan**

In 1958, Malaysia enacted the Pioneer Industries Ordinance and began industrialization for import substitution. After the formal establishment of Malaysia as a nation in 1963, the First Malaysia Plan (1966 to 1970) was implemented. The objectives of the plan were to (1) promote cooperation between the states and peoples; (2) raise incomes and the level of consumption, (3) create new opportunities for employment, and (4) correct the overdependence on rubber and tin.

In 1967, the Federal Industrial Development Agency (FIDA) was established (name later changed to the MIDA), and in 1968, the Investment Incentive Act was established to take the place of the Pioneer Industries Ordinance.

During the First Malaysia Plan, the ratio of manufacturing in the GDP rose from 10% in 1965 to 13.4% in 1973, thus showing steady progress in the country's industrialization.

In May 1969, widespread unrest broke out due to the differences in the economic standards of the different racial groups. To create harmony among the races, the New Economic Policy (NEP) was formulated in 1970. The NEP set forth two major policy objectives: (1) the eradication of poverty and (2) the reorganization of the social structure. These were to be long-term objectives for national administration over a 20-year period from 1971 to 1990.

The specific long-term goals of the NEP are given as follows:

- (1) Achievement of a real growth rate of an average annual 8% and a growth rate in manufacturing of 12%
- (2) Lowering of the percentage of poverty level households from the 49.3% of 1970 to 15% by 1990
- (3) Reorganization of the equity share of the corporate sector to 30% Bumiputras, 40% other Malaysians, and 30% foreigners by 1990
- (5) Reorganization of the entire economic sector and the employment structure at all levels to percentages corresponding



to the racial makeup of Malaysia

### **1-1-2. The Second and Third Malaysia Plans**

The main goal of the Second Malaysia Plan, which was implemented in 1971, was to put into practice the contents of the New Economic Policy. The objectives of the Second Malaysia Plan (1971-1975) were to:

- (1) Raise productivity and income through the adoption of modern technology
- (2) Increase opportunities for the shift of employment from the agricultural sector to the industrial sector
- (3) Raise the standard of living of the low socio-economic group through the provision of low-cost housing and water supplies, etc.

The task of implementing the NEP was undertaken by the Economic Planning Unit and other related organizations.

In order to promote the Bumiputra Policy, organizations such as Malaysia Rubber Development Corporation (MARDEC), Rubber Industry Small Holders Development Authority (RISDA) and Perbadanan Nasional Berhad (PERNAS) were established in the early 1970s.

In 1971 the Free Trade Zone Act was enacted for the purpose of establishing 11 Free Trade Zones. Thus, in addition to promoting industrialization for import substitution, measures were also being taken to promote exports.

In the Third Malaysia Plan (1976-1980) more detailed emphasis was placed on commerce and industry. Owing to the shift to full-scale crude oil production and the increase in private investment, including foreign investment, which have taken place since the mid-1970s, the average annual growth rate recorded during the period of the plan was 8.6% higher than the annual rate of 7.1% achieved during the Second Malaysia Plan.

### **1-1-3. The Fourth Malaysia Plan**

The Second and Third Malaysia Plans succeeded in achieving a high growth rate without inflation during the 1970s. During the early 1970s Malaysia established light industries, such as the manufacture of wood and rubber products, for import substitution. Then from 1973-1981 the "easy first phase" of industrialization through import substitution was advanced.

The Fourth Malaysia Plan (1981-1985) was affected by the worldwide slump after the second oil shock that saw a decline in exports and a stagnation in private consumption.

During the 1980s Malaysia entered its second phase of import substitution and in 1981 the Heavy Industries Corporation of Malaysia (HICOM) was established in order to promote heavy chemical industrialization. As a result, constructive steps were taken for heavy industry projects such as those concerning automobiles, steel, and cement. In order to develop chemical industries based on petroleum and natural gas, the state-run petroleum corporation, PETRONAS, constructed oil refineries and liquified natural gas, ammonia, and urea plants.

In connection with the development of such basic industries, the Malaysian government began developing associated subcontracting and periphery industries, and introduced import substitution for intermediates and parts industries.

Due to the decline in the price of oil and primary products in the 1980s, Malaysia's foreign currency reserves, which depended heavily on the export of primary products, dropped considerably. As a result, it became all the more necessary to export manufactured goods. To this end, a number of measures were taken in 1983 in order to promote exports. These included increasing the export exemption rate for manufactured goods, raising the accelerated depreciation ratio for investment in modernizing plant and equipment in manufacturing companies where exports comprise more than 20% of output, and establishing general trading companies. Then, in 1984, particular emphasis was placed on export incentive policies related to foreign capital, such as the relaxation of regulations governing investment ratios for export-oriented industries. In 1985, the Industrial Co-ordination Act was revised and the requirements for acquiring manufacturing licenses were relaxed.

The Fourth Malaysia Plan featured a shift to the simultaneous implementation of policies aimed at import substitution and the industrialization of export-oriented industries through the promotion of heavy industries, industries related to processed natural resource products for export, and the promotion of manufactured goods for export.

#### **1-1-4. The Fifth Malaysia Plan**

In February 1986 the Industrial Master Plan (forecast period: 1986-1995) was announced. This is an extremely important plan which sets out the course of Malaysia's industrialization over a 10-year period beginning in 1986. The Industrial Master Plan (IMP) can be viewed as an indicative plan and specifies private-sector involvement in the

government's industrial plans and is to be put into practice on the basis of changes made to the industrial policies of the government's various administrative organs.

The Industrial Master Plan sets out the following as structural problems facing Malaysia:

- (1) the delay in industrialization as a result of an over-dependence on the export of primary products
- (2) weaknesses in the structure linking the various different industrial sectors
- (3) an over-dependence on foreign investment in the main sectors
- (4) weak exports of manufactured goods

The plan therefore sets out the following practical strategies:

- (1) outward-looking industrialization
- (2) protective measures for priority industries
- (3) the promotion of heavy industries
- (4) the development of technology and skilled personnel
- (5) changes to the structure of industries (the promotion of small-scale manufacturers and the development of peripheral industries);
- (6) the relocation of industries to the regional areas and the provision of infrastructure facilities
- (7) to maintain the incentive system and to make improvements to the system

The goal of the Fifth Malaysia Plan is "stable moderate growth". It goes without saying that the basic direction set out in the Industrial Master Plan has been incorporated in the Fifth Malaysia Plan.

The level of investment which increased during the period of the Fourth Malaysia Plan is reduced in the Fifth Malaysian Plan, which aims to reduce direct governmental intervention and instead to boost the role of the private sector in economic development. In fact, the proportion of GNP as represented by the fiscal deficit was successfully reduced from 19% in 1982 to 8% in 1986.

The Fifth Malaysia Plan estimates that the ratio of overall investment held by the private sector will increase from its share of 50.4% in 1985 to a share of 61.7% by 1990. To improve the investment environment, it relaxes existing restrictions on equity shares, licensing, etc.

Building-up the role of the private sector and planning the nurturing of export industries were characteristics of the Fifth Malaysia Plan. Since the scale of the domestic market is limited due to Malaysia's small population of 16 million, development of export-oriented industrialization is definitely important. Industrialization policies implemented in Malaysia up to the present are as shown in Table III.1-1.

These industrialization policies enabled Malaysia to raise its industrialization (ratio of the manufacturing sector to the GDP) to a point where it pulled ahead of the agricultural sector in 1984 (Fig. III.1-1). This reversal in the weight of the two sectors may be said to have shown that Malaysia's economic development was entering a new stage. This may also be seen through the trends in the ratio of industrial goods in exports. In 1981, the ratio of exports of industrial manufactures rose above that of the two traditional primary products of natural rubber and tin.

Malaysia may be said to have achieved relatively steady economic growth with the progress made in industrialization and the greater sophistication of its export structure. However, with the onset of the 1980s, it will be faced with the tasks of (1) expanding and diversifying exports, (2) developing its domestic industries, (3) and reconstructing its finances. Therefore, Malaysia must reconsider its development strategy. In this sense, the IMP, announced back in 1986, will become important in showing the future direction this nation will take.

## **1-2. Industrial Master Plan (IMP) and Features**

As mentioned earlier, Malaysia is now switching over its development strategies to ones based on exports of industrial manufactures and guided by private-sector investment. The Industrial Master Plan has been formulated as the new development strategy.

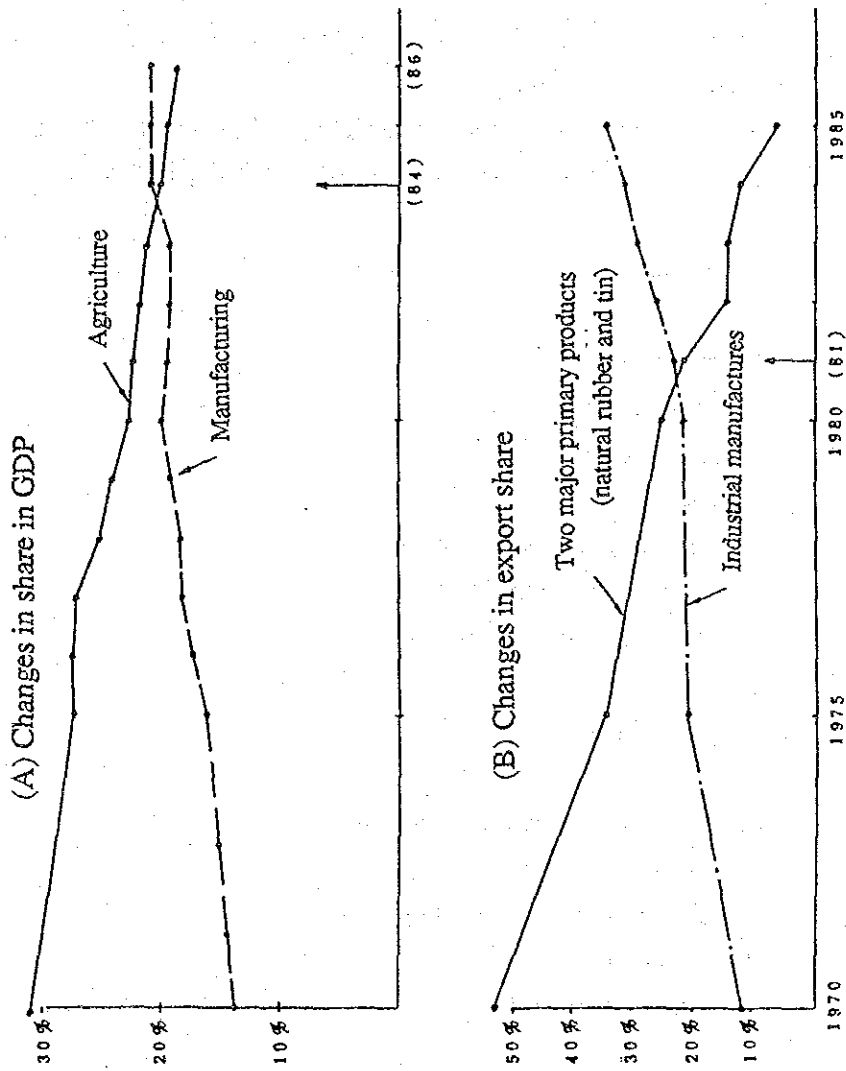
Work on the IMP began in July 1983 under the auspices of the United Nations Industrial Development Organization (UNIDO) and the Malaysian Industrial Development Authority (MIDA). The plan was unveiled in February 1986. The IMP is a large plan, comprising 3 volumes and 22 sub-volumes. It reveals clearly to the private sector the direction of industrialization which the government will take and is utilized as a basis for coordination of industrial policies of the various ministries and government organizations. The IMP is an "indicative plan" by nature, but holds the important position of a "pillar" of the industrial policies of the Malaysian government indicating to the private sector the future directions Malaysia will take. It has as its aim the guidance of potential investors in a certain direction through administrative guidance and incentives.

**Table III.1-1 Industrialization Policies of Malaysia**

	Industrial policies	Trends in industrial related policies	Foreign investment policies	National economic plans
1958	Rahman	• Diversification of primary products • Import substitution industrialization (primary light industries)	Enforcement of Pioneer Industries Ordinance	
1965			Amendment of Pioneer Industries Ordinance	1st Malaysia Plan (1966 to 1970)
1967			Establishment of FIDA	Positive introduction
1968		Introduction of export-oriented industrialization	Investment Incentive Act (enforced 1971)	
1969	Razak			
1970		Stress on fiscal guidance type industrialization	Increase of Non Financial Public Enterprises	2nd Malaysia Plan (1971 to 1975)
1972		Creation of FTZ	"New Economic Policy" (NEP, 1971 to 1990)	
1975			"Industrial Coordination Act"	Limitation on foreign equity ratio (to ensure ratio of Bumi capital) and, simultaneously, separate treatment for export-oriented investment (due to pressing need for industrialization)
1976	Hussein			3rd Malaysia Plan (1976 to 1980)
1981	Mahatir	• Heavy industrialization (secondary import substitution), medium level technology, capital intensive	Establishment of HICOM, start of heavy industrialization project for steelmaking, petrochemicals, and automobiles	4th Malaysia Plan (1981 to 1985)
1982		• Resource processed export type industrialization	Start of debt management Privatization of Non Financial Public Enterprises	Indication of clear rates of local content in auto parts
1983		Emphasis on consumer life		
1985			Amendment of "Industrial Coordination Act"	Loosening of obligation to obtain manufacturing license
1986		Stronger export orientation	"Promotion of Investment Act 86"	5th Malaysia Plan (1986 to 1990) Announcement of Industrial Master Plan (1986 to 1995)

Source: JETRO Sensor, November 1987

Fig. III.1.1 Trends in Industrialization in Malaysia (1970 to 1985)



Source: Ministry of Finance, "Economic Report", each year

The IMP points to several structural problems in the Malaysian economy: (1) delayed industrialization due to overdependence on exports of primary products, (2) weak linkages among industries, (3) overdependence on foreign investment in important fields, (4) a weak export structure of manufactured products (overreliance on exports of specific products), and (5) a low level of technical capability and a lack of its own technical expertise. The IMP determined the relation between these problems and stressed that the three sectors of technology, labor, and incentives were important focal points of interest in key policies (Fig. III.1-2).

The IMP projects, as shown in Table III.1-2, a GDP growth rate of 6.4% from 1985 to 1995 and sets a target for real growth in the manufacturing sector of 8.8%. It further sees the share of manufacturing in the GDP as rising from the 19.1% of 1985 to 21.7% in 1990 and 23.9% in 1995.

The IMP designates priority industrial fields and provides development strategies for each. The following 12 sectors were designated as priority industries:

[Resource-based industries]

1. Rubber products
2. Palm oil products
3. Food processing
4. Woodworking
5. Chemicals and petrochemicals
6. Nonferrous metal products
7. Nonmetallic mineral products

[Non-resource-based industries]

8. Electronics and electrical equipment
9. Transport equipment
10. Machinery and engineering products
11. Ferrous metals
12. Textiles and apparel

The framework of the development strategies of the IMP is shown in Fig. III.1-3. Here, there is clear indication of an outward-looking industrialization strategy aimed at overcoming the small size of the Malaysia domestic market.

The strategies given in the IMP are as follows:

Table III.1-2 Malaysia: Growth Projections of Selected Macro-Economic Variables, 1985-1995 (Million Ringgit in 1981 Constant Prices)

	1985*	1990	1995	Average Annual Growth Rate (%)		
				1985-90	1990-95	1985-95
GDP	69,465	94,361	129,278	6.3	6.5	6.4
Current Account Balance	-3,624**	-3,098	-5,472	-	-	-
Total Investment Requirement	20,145	26,422	34,905	5.6	5.7	5.7
Manufacturing Value-Added	13,268	20,476	30,897	9.1	8.6	8.8
Share of Manufacturing in GDP	19.1%	21.7%	23.9%	-	-	-
Investment Requirement for the Manufacturing Sector***	3,848	5,734	8,342	8.3	7.8	8.0
Manufacturing Employment***	758,508	1,064,126	1,463,939	7.0	6.6	6.8

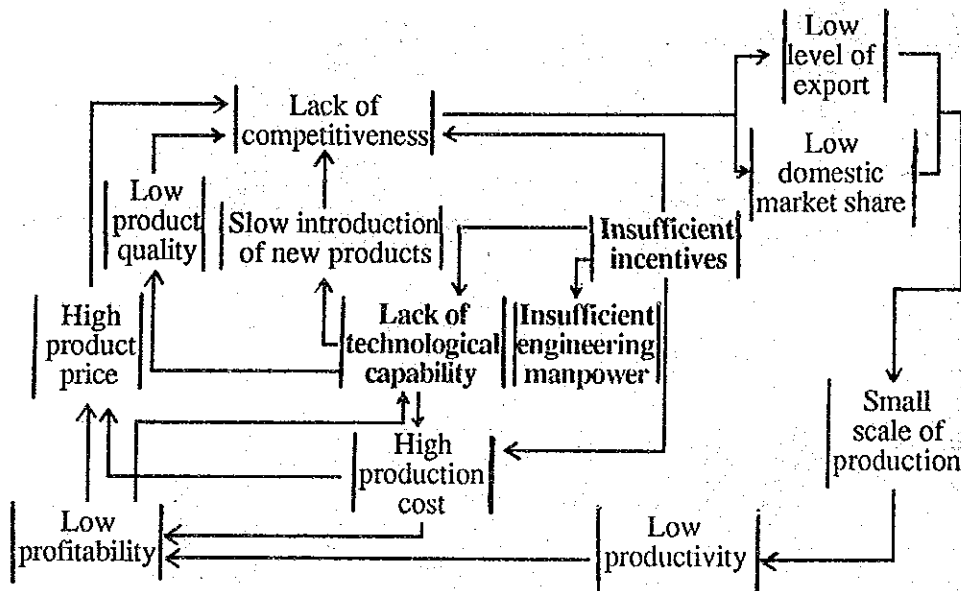
Note: \* Figures for 1985 were from Bank Negara, Annual Report, 1984.

\*\* Actual figure for 1984.

\*\*\* Figures are the author's own estimates.



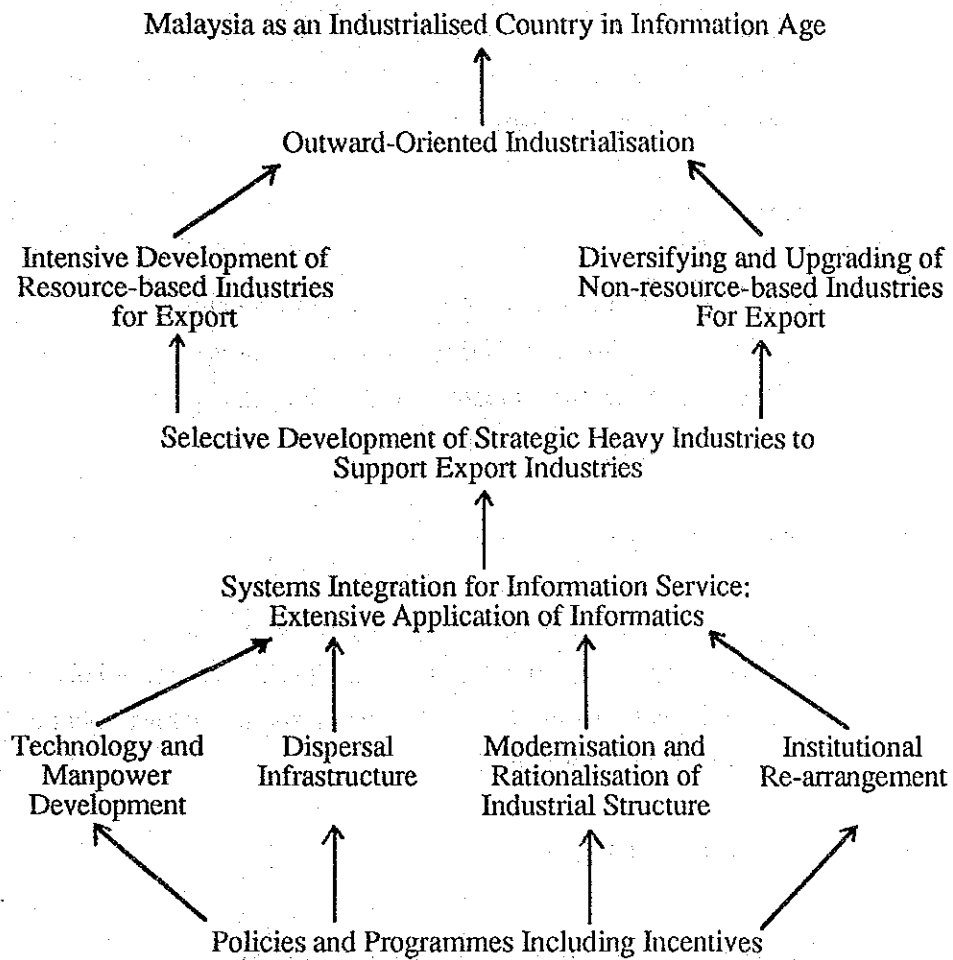
Fig. III.1-2 Casual Relationships of Problems in Basic Industrial Plans



Words in bold = Fundamental causal problems  
 Words in not bold = Consequential problems

Source: IMP

**Fig. III.1-3 Framework of Development Strategies**



- [1] Outward looking industrialization
  - a. Balanced incentives for import substitution and exports
  - b. Application of the free trade system to all exporters
  - c. Reduction to a minimum of discrimination in effective protection in the manufacturing sector in customs tariffs
  - d. Enablement of automatic use of export incentives by businesses engaged in export activities without distinction as to the type of products
  
- [2] Priority industries
  - a. Shortening of the period of protection of immature industries and making said protection temporary
  - b. Orienting immature industries so that they can enter the export market at an early stage
  
- [3] Heavy industries
  - a. Development of select, strategic heavy industries
  - b. Building of strong foundation enabling achievement of balanced growth faster than in the next 10 years and the achievement of high industrial capabilities
  
- [4] Technical development
  - a. Incentives by Malaysian businessmen are vital.  
In particular, technology should be able to be acquired by reverse engineering.
  - b. For greater technical expertise, (1) development of human resources in the research area, (2) establishment of requisite institutions, and (3) incentive type policy measures
  
- [5] Human resource development
  - a. Ensurement of a supply of high grade technicians and engineers

b. Ensurement of a supply of skilled and semiskilled labor

[6] Positive adjustment of the industrial structure

a. Positive incentives for support of development efforts in the small-scale industrial sector to enable a supply of quality components and parts

b. Positive government measures to assist the rationalization of industries which are inefficient and tottering, but are important and crucial to the national economy in a dynamic sense

[7] Relocation of industries to regional areas and provision of infrastructure facilities

Encouragement of relocation along the western corridor of the western side of the Malay Peninsula. Further, development of a minicorridor linking Kota Bharu, Trengganu, and Kuantan.

[8] Incentive system

a. Improvement of export incentives

b. Improvement of investment incentives

c. Support of small-scale industries

d. Support of technical development

[9] Establishment of new systems

a. Strengthening of planning function of MIDA

b. Establishment of National Science and Technology Council and Malaysian Science and Technology Institute

c. Reevaluation of role of ICA (Investment Coordination Act)

d. Establishment of an export target system and holding of periodic national conferences on trade promotion headed by the prime minister

[Review of IMP]

The IMP report was prepared primarily based on data dated 1981. Therefore, the Malaysian government is engaged in an on-going process of reevaluation of the data in the IMP and checks on the state of progress in the matters raised by the IMP. As part of this

reevaluation work, the Ministry of Trade and Industry released an Annual Report on the IMP in March 1988. (Note <sup>1</sup>)

Of note in this report was the indication of the growth rate in the Malaysian manufacturing sector as being 12%, more than twice the growth in the agricultural sector (5.3%) (New Straight Times, March 6, 1988). Further, the rate of contribution of the manufacturing sector to the growth of the GDP has risen from the 19.7% in 1985 to 20.8% in 1987 and 21.7% in 1987. Also, the increase in the added value in the manufacturing sector rose from -3.8% in 1985 to 6.7% in 1986. This growth in the manufacturing sector has been based on the increase in exports since 1986.

The report further made a comparison of the export targets set in the IMP and the actual results for 13 industrial sectors. Actual exports beat the IMP export targets in textiles, rubber, ferrous metals, electronics, electrical equipment, etc., but fell below the targets in oil, chemicals, and nonferrous metals (Table III.1-3).

However, while exports of electronics and textiles grew, imports also increase and rose above the import targets (that is, target reduced imports) set by the IMP. This is a reflection, in figures, of the structural problems in the Malaysian economy, which relies on imports for the parts and intermediates required for production of electronics and other manufactured goods, and shows the need for promotion of parts and intermediates industries and strengthening of linkages between industries.

This survey was conducted in line with the policies of the IMP, and the selected industries for the survey are contained in IMP's priority industrial areas. The IMP can be said to be the backbone of this survey.

---

<sup>1</sup> Annual Report 1986/1987, Industrial Master Plan, Sectoral Task Force

**Table III.1-3 Annual Reports of Sectoral Task Forces  
on Industrial Master Plan (1986/87, announced March 1988)**

Industrial sector (Unit)	Production			Exports			Approved projects
	1986 IMP target	1986 results	Differ- ence (%)	1986 IMP target	1986 results	Differ- ence (%)	
Rubber products (Million M\$)	1,029.4	830.0	-9.7	329.5	397.9	20.8	39 projects
of which,							
Tires and tubes	486.9			47.9	23.6	-50.7	
Latex	233.6			178.0	246.0	38.5	
Rubber	193.4			48.8	51.7	5.9	
Palm oil products (1,000 tons)							27 projects
Processed palm oil	3975.0	5,700.0	43.4	3,975.0	4,188.1	5.4	
Processed palm kernel oil	60.0	87.8	46.3	60.0	51.9	-13.5	
Oleo chemicals	150.0	88.9	-40.7	147.4	84.4	-42.7	
Processed foods (Million M\$)	5,921.5	—	(26.1)	915.1	895.7	-2.1	55 projects
of which,							(in addition,
Fish and shellfish products	472.3			351.8	305.1	-15.7	24
Fruit, nut, and vegetable processing	254.3			81.7	85.5	4.7	agricultural projects receiving preferential tax treatment under Investment Incentive Law)
Sugar and sugar confectionery	669.9			52.1	77.0	47.8	
Coffee, cocoa, tea, spices	578.5			239.5	216.3	-9.7	
Processed cereals and cereal preparations	1,020.0			32.6	41.4	27.0	
Beverages	1,068.9			38.2	33.3	-12.8	
Wood products (Million M\$)	3,235.1			1,655.0	1,779.9	7.6	24 projects
of which,							
Sawn timber	1,727.5			980.5	1,235.9	26.1	
Panel products	673.1			353.0	282.7	-19.9	
Mouldings & Joinery	516.8			288.3	232.3	-19.4	
Furniture	317.1			33.2	29.0	-12.7	
Chemical products (Million M\$)	2,049.6			379.1	555.1	46.4	65 projects, of which 31 chemical products, 7 petroleum and coal, and 27 plastics
of which,							
Fertilizers	357.1			69.7	69.3	-0.6	
Building materials and intermediates	198.5			91.8	130.1	41.7	
Plastic resins	107.7			29.2	49.8	70.5	
Paints and dyes	229.9			6.5	13.4	106.2	
Insecticides	212.9			24.3	35.8	47.3	
Cosmetics and soap	389.2			57.8	55.1	12.6	

Industrial sector (Unit)	Production			Exports			Approved projects
	1986 IMP target	1986 results	Difference (%)	1986 IMP target	1986 results	Difference (%)	
Nonferrous metals (Million M\$)	264.7	252.9	-4.5	33.5	73.6	119.7	12 projects
of which,							
Tin products	32.5	52.0	59.8	15.1	18.3	21.3	
Aluminum products	166.4	154.0	-7.5	15.5	41.7	169.7	
Lead products	65.8	46.9	-28.7	3.0	13.6	357.3	
Nonferrous mineral products (Million M\$)	2,928.2			210.7	152.7	-27.5	31 projects
of which,							
Cement (1,000 tons)	6,300.0	3,510.0	-44.3	1,100.0	980.0	-10.9	
Ceramic tiles (1,000 tons)	83.0	55.6	-21.0	4.0	2.3	-42.5	
Sheet glass (Million M\$)	85.2	75.2	-11.7	32.7	21.0	-35.8	
Electronic and electrical equipment (Million M\$)	7,221			5,111	7,480	46.4	76 projects
of which,							
Electronic components	4,691			4,250	5,391	39.6	
Home electronic equipment	791			371	904	143.7	
Industrial electronic equipment	290			207	143	-30.9	
Electrical appliances	1,449			283	501	77.0	
					Imports		
Transportation equipment (Million M\$)	4,544.6			2,045.0			96 projects
of which,							
Passenger cars (1,000 units)	115.3	42.0	-36.4	125.9	36.5	-71.0	
Commercial vehicles (1,000 units)	35.6	20.0	-56.1	39.8	20.7	-47.8	
Motorcycles (1,000 units)	233.2	110.0	-47.2	233.2	82.7	-65.0	
Auto parts (Million M\$)	1,360.2	N.A.	N.A.	150.6	129.9	-13.7	
Shipbuilding (including repair) (1,000 tons)	21.1			4.5			
Coastal (1,000 tons)	14.1			4.5			
Pelagic (1,000 tons)	7.0			0			
Machinery (Million M\$)	2,821			443			50 projects
of which,							
Castings	135			10	0.6	-93.0	
Fabricated metal products	1,523			184	127	-31.0	
Machinery and equipment	1,163			250	699	180.0	
Ferrous metals (Million M\$)	1,028	1,305	27.0	38.2	250	553.0	22 projects
Textiles (Million M\$)	2,390.8			934.1	1,700.1	82.0	48 projects
Textiles	1,255.7			353.5	591.9	67.4	
Apparel	1,135.1			580.6	1,108.2	90.9	

Source: Information from Japanese Embassy in Malaysia

## **2. State of Industrial Promotional Policies**

### **2-1. Industrial Promotion Policies and Major Implementing Organizations**

Malaysia's industrial promotion policies are based on the IMP and are executed by its various ministries and government organizations. The current Fifth Malaysia Plan has as its object "stable moderate growth," aiming at promotion of export industries and a stronger role of the private sector. This reflects deeply the principles of the IMP.

Below, a look will be taken at the current policies and main implementing organizations from the standpoints of export promotion policies, foreign investment policies, SMI promotion policies, human resource development, promotion of science and technology, and the financial system.

#### **2-1-1. Export Promotion Policies**

For Malaysia, export promotion, particularly increased exports of the manufacturing industries, has become a keypoint of current policies. For this reason, various export incentives are being offered to try to achieve greater awareness of exports in the business sector.

The main export promotion systems in effect are as follows: (1) the preferential measures such as double deductions for exporters under the Investment Incentive Act and the Income Tax Act, (2) the drawbacks of tariffs under the Tariff Act, (3) export credit refinancing, and (4) free trade zones and licensed manufacturing warehouses. Foreign capital affiliated export companies are given special treatment such as looser application of foreign investment controls, reduction of import duties on imported materials, and streamlining of export procedures.

The main implementing organizations for export promotion are the Ministry of Trade and Industry, which exercises overall control, and MEXPO (Malaysia Export Trade Center), a sub-organ of the ministry, which is responsible for export promotion projects. Further, the ministry has established in it the Export Promotion Council, which facilitates communication among officials and is comprised of high officials of government organizations and representatives of the Federation of Malaysian Manufacturers and other key export-related private organizations. These people discuss various problems in export promotion and measures for their resolution and submit recommendations based on the same. According to the FMM, the Council's recommendations are being put into effect and thus are held in high regard. The post of chairman of the Council is being held by Secretary General of Trade and Industry.



The Ministry of Trade and Industry has further established an Export Award system to stimulate export-mindedness in private business. Each year, it gives awards to companies which have made remarkable achievements in the field of exports.

For export insurance, the Malaysia Export Credit Insurance Berhad (MECIB) has been established. The organization is not, however, being used much and the Bank Negara is considering revamping it. (Note)

In export financing, the commercial banks provide private businesses with export credit refinancing (ECR) and overdrafts. There are no specialized trade-financing institutions such as in Japan and South Korea.

(For more details on export promotion, see the following section III.3.) (Note <sup>1</sup>)

#### **2-1-2. Foreign Investment Promotion Policies**

Since the Investment Incentive Act was established in 1968, Malaysia has welcomed investment in export industries. In particular, in recent years, it has found a rising need for export-oriented industrialization and thus has more relaxed restrictions on investment and offered new incentives. The new foreign-investment incentives announced in October of 1986 ease the application of restrictions on foreign investment in accordance with the export ratio of the products and the number of workers employed, enlarge the framework of employment of foreign nationals in accordance with the paid-up capital, and extend the period of the exemption on income tax for pioneer industries from the old 5 years to a maximum 10 years. Further, the licensing obligations under the Industrial Coordination Act were eased in December 1985 so as to cover companies with capitals of M\$1 million or more and 50 permanent employees or more instead of the old M\$250,000 and 25 employees and were further eased in October 1986 to cover companies with capitals over M\$2.5 million and 75 permanent employees.

Due in part to the easing of these restrictions, the value of approved foreign investment projects soared in 1987 to M\$750.7 million from the M\$524.5 million of the previous year. In particular, the investment from Japan shot up, supported by the yen appreciation.

The Malaysian Industrial Development Authority (MIDA) plays an important role as the organization for promoting investment in Malaysia.

---

<sup>1</sup> Bank Negara Malaysia Annual Report 1987, p. 115 etc.

As for the infrastructure in Malaysia, industrial complexes have been established at 101 sites around the country and these are administered by the respective State Economic Development Corporation (SEDC).

Also, Free Trade Zones have been established at 8 locations in order to promote exports. In addition to the Free Trade Zones, Licensed Manufacturing Warehouses (LMW) have been established, and they enjoy the same advantages as the Free Trade Zones.

According to MIDA there are plans to develop 50 more industrial complexes (covering 7,014 hectares). Upon the completion of the construction of these complexes, the present area of industrial complexes (7,565 hectares) will have been nearly doubled.

Under the Fifth Malaysia Plan, plants for export-oriented products are to be located in areas which will amass economic profits and the siting of import-substitution industries in smaller towns is encouraged. (note: for further details on foreign investment policy, refer to section III-4)

### **2-1-3. SMI Promotion Policies**

The small- and medium-scale industries (SMIs) play a very great role in the Malaysian economy. According to statistics compiled by the Statistics Department in 1981, 89.5% of all manufacturing companies had less than 50 employees. At the same time, however, they accounted for only 28.2% of the number of workers and 16.4% of all fixed assets. In the recommendations of the World Bank for Malaysia, small- and medium-scale industries were defined as those with less than 200 employees. (Note <sup>1</sup>) If the definition of SMIs is expanded to those with less than 200 workers, then the SMIs would account for about half of the employment and assets.

In the 1980s, Malaysia entered a phase of industrialization in the heavy machinery and chemical sectors. Promotion of the SMIs, which constitute the ancillary industries, has become essential for this industrialization phase.

Further, the old foreign multinationals have entered the FTZs and are importing raw materials and intermediates from abroad, processing them in the FTZs, then re-exporting them in what has now become a general pattern. These constitute types of "enclaves" which have little effect on the ancillary industries. As mentioned too in the

---

<sup>1</sup> The scale of companies referred to as being small and medium in Japan differs from that in Malaysia. In the case of Malaysia, it is necessary to note that even smaller firms are being referred to. In this report, no special definition is given to the size of the SMIs, but in general what are referred to here are those with less than 200 employees and M\$500,000 capital.

previously cited IMP Annual Report, the fact that increases in exports of manufactured goods such as electronic equipment are accompanied by corresponding increases in imports of intermediates shows the absence of industrial linkages.

From this viewpoint, Malaysia has been trying to promote positively the SMIs constituting the heart of the supporting industries. In the 1988 Budget (Note <sup>2</sup>), stress was laid on production of auto parts, light civil engineering, electrical and electronic components, and rubber, plastic, and other parts. Further, the limit on loans under the Special Loan Scheme of the Credit Guarantee Corporation (CGC) for such industries has been raised.

SMI promotion in Malaysia is founded on 2 basic concepts: (1) the Umbrella Concept and (2) the Industrial Production Complex Concept.

Under the Umbrella Concept, giant corporations are envisioned as providing support to SMIs as their subcontractors. This covers the case, for example, of the Proton Saga automobile industry. This assumingly would fill the gap between the large corporations and the small enterprises in technology and would promote establishment of linkages among industries. According to the Small-scale Enterprise Division of the Ministry of National and Rural Development, this method is used for 2 products currently being marketed: food and furniture (wood and steel) which are primarily supplied for governmental organizations. In this case, the government plays the role of the umbrella.

The Industrial Production Complex Concept calls for the use of the multinationals in the existing FTZs so as to form backward industrial linkages. According to Dr. Kamal Sali of the Malaysian Institute of Economic Research, by having such multinationals strengthen their linkages with local firms, it would be possible to deepen the process of ancillarization. In a trial experiment, the Penang Development Corporation has compiled a directory of small- and medium-scale suppliers by product and has arranged meetings between multinationals in the FTZs and local firms. These positive measures are being watched with interest.

On the private business side, the Federation of Malaysian Manufacturers (FMM) has initiated a "Clearing House" in January 1988 to strengthen the linkages between the large corporations and the SMIs. This Clearing House plays a matchmaking role through the supply of basic information on both the large corporations and SMIs and, further,

---

<sup>2</sup> The 1988 Budget, Speech by Minister of Finance, October 23, 1987

**Table III 2-1 State of Distribution of Employees  
in Malaysian Manufacturing Companies (1981)**

Total Employment Size Group	No. of Establishments	%	Total No. of Workers Employed	%	Value of Fixed Assets (\$'000)	%
Below 5	8,816	43.2	20,846	3.6	101,172	1.0
5-9	4,140	20.3	27,009	4.7	178,499	1.7
10-19	2,770	13.5	38,025	6.5	349,492	3.4
Sub-Total (5-9)	6,910	33.8	65,034	11.2	527,991	5.1
20-29	1,350	6.6	32,203	5.5	398,391	3.8
30-49	1,202	5.9	45,494	7.9	675,967	6.5
Sub-Total (20-49)	2,552	12.5	77,697	13.4	1,074,358	10.3
50-99	1,065	5.2	74,291	12.9	1,395,104	13.4
100-199	615	3.0	84,789	14.7	2,085,284	19.9
Sub-Total (50-199)	1,680	8.2	159,710	27.6	3,480,388	33.3
200-499	306	1.5	91,655	15.8	2,250,411	21.5
500-999	107	0.5	71,931	12.4	1,732,600	16.6
1,000 and above	51	0.3	91,809	16.0	1,271,065	12.2
Sub-Total (200 & above)	464	2.3	255,395	44.2	5,254,076	50.3
<b>TOTAL</b>	<b>20,422</b>	<b>100.0</b>	<b>578,682</b>	<b>100.0</b>	<b>10,437,986</b>	<b>100.0</b>

Table III.2-2 Basic Indicators by Scale of Asian Manufacturing Industries

	Philippines	Thailand	Indonesia	Singapore
1. Standards of classification of scale of manufacturing companies				
Classification by number of employees	Small Enterprise Agency of Ministry of Trade and Industry	Saeng, Narong, and other surveys	Central Bank Research Department and Ministry of Internal Affairs Labor Bureau	Ministry of Trade and Industry, Small Enterprises Survey Report 1985
Cottage industries	Less than 10 persons (before 1985, less than 5 persons)	Less than 10 persons	Less than 10 persons	Less than 50 persons
Small companies	10-99 (before 1985, 5-99)	10-49	10-49	50-99
Medium companies	100-199	50-199	50-299	100 persons or more
Large companies	200 persons or more	200 persons or more	300 persons or more	more
Classification by assets	Philippine Development Bank	Industrial Finance Corporation (only definition of enterprise)	Small Enterprise Finance Department (small industry promotion program)	Economic Development Agency -SIFS, SITAS
Cottage industries	Less than 250,000 pesos	Fixed assets	Fixed assets or registered	Fixed assets: Less than S\$3 million
Small companies	250,000-less than 2.5 million			Fixed assets: S\$3-8 million
Medium companies	2.5-less than 10 million	Less than 10 million baht	200,000-5 million baht	
Large companies	10 million or more			
2. Number of places of business in manufacturing				
			1. Total business assets: 100 million rupiah or less 2. Investment in production facilities and equipment, excluding land and buildings: 70 million rupiah or less 3. Per capita employee capital: US\$1,000 or less	

industries, number of employees, and added value	Philippine University Small Industry Institute 1982 estimates (excluding cottage industries)	Factory Bureau (end of 1984) (Factory Bureau: excluding rice polishing factories)	Central Statistics Bureau industrial statistics survey 1979 (excluding oil refining and natural gas liquifaction)	Industrial Census Report 1983
Survey organization, years covered (No. of places of business)				
Cottage industries	-	26,019 (63.8)	1,417,803 (92.1)	-
Small companies	30,558 (96.3)	11,921 (29.2)	113,024 (7.4)	Less than 50 persons: (72.7)
Medium companies	568 (1.8)	2,187 (5.4)	7,960 (0.5)	50-99: 483 (13.4)
Large companies	588 (1.9)	653 (1.6)		100 persons or more: 503 (13.9)
Total	31,714 (100.0)	40,780 (100.0)	1,538,787 (100.0)	3,616 (100.0)
(No. of employees)		Ministry of Internal Affairs, Labor Bureau		
Cottage industries	-	164,847 (14.8)	2,794,833 (62.2)	-
Small companies	330,268 (40.2)	260,199 (23.4)	827,035 (18.4)	Less than 50 persons: 52,589 (19.4)
Medium companies	79,993 (9.7)	265,570 (23.8)	870,019 (19.4)	50-99: 33,284 (12.3)
Large companies	411,905 (50.1)	421,885 (37.9)		100 persons or more: 185,233 (68.3)
Total	822,166 (100.0)	1,112,501 (100.0)	4,491,887 (100.0)	271,106 (100.0)
(Added value)				
Cottage industries	-		291.4 billion rupia	-
Small companies	5,030 million pesos (7.2)		187.3 billion	Less than 50 persons: 1,317 (13.4)
Medium companies	15,062 million (21.6)		187.3 billion	50-99: 1,138 (11.6)
Large companies	49,769 million (71.2)		1,660.5 billion	100 persons or more: 7,367 (75.0)
Total	69,861 million (100.0)		2,139.2 billion (100.0)	9,822 (100.0)

1. Standards of classification of scale of manufacturing companies

No clear provisions. However, under Factory Registration Law, factories with 10 or more employees must register.

Ministry of Industry

Survey by Victor Sit

Department of Commerce and Industry, Central Committee for Business Cooperation, Small and Medium Enterprise survey Report

Small and Medium Enterprise Survey Report

Cottage industries  
Small companies

20 persons or less

Less than 5 persons

Medium companies  
Large companies

21-300  
301 persons or more

5-100  
101 persons or more

Classification by assets  
Cottage industries  
Small companies  
Medium companies  
Large companies

Note: In this law, there are special industries set in which enterprises are regarded as small or medium in size even when the number of employees exceeds the above limits. There is in principle no limitation on assets, but for some specific industries, enterprises with total assets exceeding certain levels are excluded from small and medium enterprises.

Industrial Development Agency

From fiscal 1985, companies with fixed assets of 10 million rupees or more are considered large enterprises and those with less small enterprises. (National income statistics) Note that up to fiscal 1984, the line was 5 million rupees.

Less than 1 million rupees

More than 1 million rupees

2. Number of places of business in manufacturing industries, number of employees, and added value

Survey organization,

Economic Planning Agency,

Industrial production survey 1983 Manufacturing Industry Sample Manufacturing Industry

years covered (No. of places of business)	Industrial Census Report 1984	Survey 1980	Census 1980/81
Cottage industries	5-19: 24,530 (59.0)	Less than 5 persons (35.8)	9 persons or less: 715 (18.7)
Small companies	20-299: 15,960 (38.4)	5-100: (50.3)	10-49: 2,075 (54.6)
Medium companies	300 persons or more: 1,059 (2.6)	101 persons or more: (13.9)	50-99: 387 (10.1)
Large companies			100-249: 276 (7.2)
Total	41,549 (100.0)		250-499: 153 (4.0)
(No. of employees)			500 persons or more: 207 (5.4)
Cottage industries		Less than 5 persons: (2.3)	3,813 (100.0)
Small companies	5-19: 236,075 (10.1)		
Medium companies	20-299: 1,050,959 (44.9)	5-100: (15.7)	9 persons or less: 4,672 (1.0)
Large companies	300 persons or more: 1,056,559 (45.1)	101 persons or more: (82.0)	10-49: 46,123 (10.2)
Total	2,343,593 (100.0)		50-99: 26,743 (5.9)
(Added value)			100-249: 45,433 (10.1)
Cottage industries			250-499: 55,195 (12.2)
Small companies	5-19: 1,052,985 (4.3)		500 persons or more:
Medium companies	20-299: 7,907,302 (32.1)	Less than 5 persons: (0.8)	273,544 (60.6)
Large companies	300 persons or more: 15,694,120 (63.6)	5-100: (9.6)	451,710 (100.0)
Total	24,654,407 (100.0)	101 persons or more: (10.4)	(Unit: 1,000 rupees)
			9 persons or less: 237.5 (0.2)
			10-49: 1,090.0 (0.9)
			50-99: 4,975.3 (3.9)
			100-249: 12,229.4 (9.6)
			250-499: 30,648.9 (61.4)
			500 persons or more
			78,482.9 (61.4)
			127,663.7 (100.0)

Source: Institute of Developing Economics, "Hatten Tojokoku Chushokigyo Kenkyuhokokusho" (Research Report on Small and Medium Enterprises of Developing Countries), March 1987



**Table III.2-3 State of Implementation of Loan Guidelines  
of Central Bank by Commercial Banks**

	Minimum Terms	State as of End of 1987			
		M\$ million	Balance of of Total Financing	No. of Non- Implementing Banks	M\$ million
<b>&lt;Financing&gt;</b>					
To Bumiputras	20% (Note)	15,489	32.3	11	195
To Farm and Food Production	6%	2,597	5.4	15	465
Special Loan Scheme (SLS)					
Total	M\$150 million	217	-	12	23
To Bumiputras	M\$75 million	64	-	23	19
<b>&lt;Housing Loans&gt;</b>					
	Target		Commitments		
Total	80,000 units	6	8,342 units	26	18,471 units
Low Cost Housing	48,000		29,772	30	19,851
To Bumiputras	24,000		17,380	31	8,087

Note: Percent of loan balance as of end of 1985  
Source: Bank Negara Malaysia, "Annual Report 1987", p.29

supplies information on existing incentive systems to the SMIs. The Special Committee on Small- and Medium-Sized Industries of the FMM has published a domestic Malaysian directory of industrial estates entitled "Handbook for Small- and Medium-Sized Industries" in which it provides basic data on the price of industrial sites, lease terms, etc. According to FMM, the Malaysian government has become much more interested in promoting SMIs in these past few years. This reflects the government's recognition of the importance of the SMIs.

#### (1) Main Implementing Organizations

There are quite a variety of implementing organizations to promote SMIs in Malaysia. Among the governmental agencies, there are 9 ministries and 30 other agencies involved directly or indirectly (Note <sup>1</sup>). As a coordinating body for these agencies, the Small-Scale Enterprise Division (SSED) was established in 1981 under the Ministry of Trade and Industry. SSED was transferred to the Ministry of National and Rural Development in 1986. SSED plays the role of a coordinating body, holding regular meetings of a "Coordination Council for Development of Small-Scale Industries" composed of 35 SMI promotion related agencies. Also, SSED runs a "Subcontract Exchange" program for matchmaking between small suppliers and large corporations. For this program, it inputs into a computer 1600 small- and medium-scale subcontractors so as to deepen the linkage with large users.

SMIs are defined by the SSED as small-scale enterprises with shareholders' fund or net assets of M\$500,000 or less and medium-scale enterprises with funds or assets of M\$2.5 million or less. Table III 2-2, incidentally, shows the definitions of SMIs (manufacturing) in key Asian countries, the share of such SMIs, and the state of distribution thereof. Each country defines them differently according to their national circumstances. Note that to obtain information of the state of the SMIs, it is necessary to collect data, but the latest data available at the Statistics Department was dated 1981. The data is being updated now and is scheduled to be announced around July of this year.

To pinpoint problems and obtain information of the current situation, the Implementing and Coordinating Unit of the Prime Minister's Department and other bodies are now engaged in a reevaluation of the SMI policies and are scheduled to come up with

---

<sup>1</sup> Datuk Dr. Yusof, Minister in the Prime Minister's Department, speech on February 22, 1988.

a new policy . Toward this end, the staff of the ICU have been sent to Japan for study of Japan's small and medium enterprise policies. The work is thus being positively pushed forward.

From the aspect of financial assistance to SMIs, there is the Special Loan Scheme of the Credit Guarantee Corporation (CGC). Further, according to Bank Negara regulations, commercial banks are committed to provide a certain amount of loans to SMIs. Specifically, they are obliged to provide SMIs with loans under the CGC SLS of at least M\$150 million (total value of commercial banks combined). Of this, half, or M\$75 million, must go to Bumiputra enterprises. However, in practice, some commercial banks are unable to meet this commitment. As of the end of 1987, 12 banks were unable to do so (Table III.2-3). Note that the Bank Negara, when releasing its Annual Report at the end of March this year, announced that it was raising the obligations of the commercial banks to provide loans to SMIs from the minimum M\$150 million to M\$300 million and changing the definition of SMIs from companies with capitals of less than M\$250,000 to those with less than M\$500,000.

In addition to the loans through the commercial banks, loans are available to the SMIs from the Malaysian Industrial Development Finance and the Development Bank of Malaysia.

SMIs, however, have difficulties obtaining access to the loans due to a lack of suitable collateral, which makes them seem to be high risks to the bankers, and cumbersome procedures from the SMI's viewpoint.

Although the Malaysia government prepares various incentive schemes in terms of export, investment, and finance, these schemes are, in principle, equally available to all applicants regardless of the scale of the company. The result is the bigger enterprises are the ones which generally benefit from the concessions.

The only incentive provided preferentially to the small industries is the 5% reduction in taxes for 5 consecutive years from the commencement of business in the scheme of abatement of adjusted income under the Investment Incentive Act of 1986. Therefore, it is only natural that there are criticisms that there are only limited incentives given to SMIs and that the incentives can be more readily used by the large corporations. Note that the government tried to promote investment in the SMIs by raising the upper limit on investments for which approval can be obtained by just notification to MIDA under the Industrial Coordination Act to over M\$2.5 million, by an amendment of October 1986 (up until then, the limit had been M\$1 million). This measure represents an important change in promoting investment in the SMIs.

## (2) Problems in SMIs

The Institute for Developing Economies ran a survey of the SMIs of Malaysia from August to October 1986 (Note<sup>1</sup>). This survey covered 161 SMIs and 125 large enterprises. Among the SMIs, there were 48 enterprises which were exporting in some form or another and 113 local enterprises producing solely for the domestic market. Among the large enterprises, there were 71 indigenous companies and 54 foreign affiliates.

Problems given as confronting the SMIs were, for the export companies, "competition in the overseas markets", "high costs", and "procurement of raw materials" and for the local firms, in financing, "difficulties in obtaining loans", "insufficient owned assets", and "heavy interest rates" plus, in marketing, "competition" and "the small size of the domestic market".

As to the requests to the Malaysian government, the export companies asked for abatement of taxes, streamlining of export procedures, and subsidies, while the local companies asked for exemption from taxes, easier loans, and subsidies.

A look at the degree of familiarity with the existing SMI policies of the government shows that of the 41 companies responding, 7 (17.1%) knew nothing at all, 26 (63.4%) knew a little, and 8 companies (19.5%) knew a lot. Note, however, that these 41 companies were SMIs with business relations with large firms. In the case of the export companies, of the 47 companies responding, 19 companies (40.4%) knew nothing at all, 20 companies (42.6%) knew a little, and 8 companies (17.0%) knew a lot. The percentage of companies not knowing anything at all was a high 40%.

Of the 38 SMIs with business relations with large firms and giving responses, only 5 were receiving the benefits of the government measures. Specifically, 2 firms were receiving tax exemptions, 2 financing, 1 information, and 2 other benefits. As to the export companies, of the 38 responding, there were as many as 29 which indicated that they were not receiving any benefits of the policies. As to the benefits received, 6 companies were receiving tax exemptions, 2 each loans and information, and 1 each marketing assistance and other benefits.

The facts that the government measures on SMIs are not fully known and that there were few companies making use of the government benefits indicate that the government's services have not reached the SMIs.

---

<sup>1</sup> Institute for Developing Economies, "Hatten Tojokoku Chushokigyo Kenkyu Hokokusho" (Report on Study of Small and Medium-sized Enterprises in Developing Countries), March 1987.

Note that in the telephone interviews, covered in the later III-5, there was a higher percentage of companies which indicated they knew of the government incentives. This is believed to be due to the fact that the number of companies surveyed differed from that of the questionnaire survey of the Institute for Developing Economies and to differences in the industries covered and export experience.

Regarding the relations between parent companies and subcontractors, of the 16 companies responding, 37.5% indicated that they were receiving financial assistance from the parent companies for their subcontracting work, 31.3% indicated they were being supplied with raw materials, and 18.8% that they were receiving technical guidance. The ratio of financial assistance was thus higher than that of technical guidance.

A look at subcontracting orders shows of the 55 indigenous large companies and 38 foreign affiliates, or a total of 125 firms, 74.4% did not place any orders to subcontractors. This indicates that Malaysia still does not have a sufficient system of subcontracting. Further, a look at the years in which subcontracting commenced shows that of the 13 indigenous large companies responding and the 16 foreign affiliates responding, 5 of each began subcontracting out work from 1970 to 1979 and 6 and 7 after 1980, showing that subcontracting is relatively new.

The Malaysian government is moving to strengthen the subcontracting system and to raise the percentage of subcontracting in the future.

How do the Malaysian SMIs evaluate the foreign affiliates. 61.2% replied that they are contributing to the national economy. As to the details of this contribution, 83.9% mentioned creation of new employment and 71% transfer of technology. Looking at this from another perspective, we can say that the local SMIs wish these two things from the foreign affiliates. Up until now, the general evaluation seems to have been that foreign investment has positive effects on the SMIs.

As mentioned later, the same problems were uncovered by the interview and questionnaires run in the field by the study group. It is necessary to publicize the use of the existing system among the SMIs and to promote more effective use of the incentives by them.

#### **2-1-4. Human Resources Development (HRD)**

Regarding HRD, as public institutions, the Ministry of Labor, the Ministry of Education, the Ministry of Youth and Sports, and Majlis Amanah Rakyat (MARA) play important roles in the drafting of policies and implementation of HRD projects. Further, on the private level, the Federal Institute of Technology and the Workers Institute of

Table III.2-4 Outlook of New Graduates by Course

Course	Enrolment				Increase (%)				Graduates			
	1980	1985	1990	1981-85	1986-90	1986	1987	1988	1989	1990	1981-85	1986-90
Degree	9,727	17,121	27,476	76.0	60.5	3,451	4,441	5,663	6,501	7,723	14,802	27,779
Arts	(48.6)	(50.0)	(48.7)			(46.7)	(52.3)	(51.3)	(54.0)	(55.7)	(55.2)	(52.6)
(%)	5,347	8,722	12,024	63.1	37.9	2,074	2,522	2,902	3,415	3,662	8,573	14,575
Arts and humanities <sup>1</sup>	4,029	7,770	14,299	92.9	84.0	1,256	1,781	2,577	2,811	3,746	5,775	12,171
Economics and business <sup>2</sup>	351	629	1,153	79.2	83.3	121	138	184	275	315	454	1,033
Law	8,046	12,505	17,748	55.4	41.9	2,962	2,816	3,735	3,775	4,219	9,317	17,507
Science	(40.2)	(36.4)	(31.5)			(40.1)	(33.2)	(33.8)	(31.3)	(30.4)	(34.7)	(33.1)
(%)	1,411	2,248	2,737	59.3	21.8	445	448	444	447	498	1,290	2,282
Medicine and dentistry	729	1,240	1,399	70.1	12.8	316	261	458	334	357	1,037	1,726
Agriculture and related sciences <sup>3</sup>	3,696	3,087	3,865	-16.5	25.2	600	515	726	591	736	3,442	3,168
Pure sciences <sup>4</sup>	2,210	5,930	9,747	168.3	64.4	1,601	1,592	2,107	2,403	2,628	3,548	10,331
Others <sup>5</sup>	2,245	4,674	11,134	108.2	138.2	972	1,227	1,643	1,769	1,929	2,719	7,540
Technical	(11.2)	(13.6)	(19.8)			(13.2)	(14.5)	(14.9)	(14.7)	(13.9)	(10.1)	(14.3)
(%)	1,668	3,662	9,219	119.5	151.7	672	900	1,089	1,288	1,411	1,780	5,360
Engineering	338	549	876	62.4	59.6	95	139	329	234	269	457	1,066
Architecture and town planning	187	283	455	51.3	60.8	97	67	70	87	85	285	406
Surveying	52	180	584	246.2	224.4	108	121	155	160	164	197	708
Others <sup>6</sup>	20,018	34,300	56,358	71.3	64.3	7,385	8,484	11,041	12,045	13,871	26,838	52,826
Total	(100.0)	(100.0)	(100.0)			(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
(%)	5,063	13,126	19,744	159.3	50.4	3,006	3,032	3,532	4,253	4,631	9,808	18,454
Diploma	(41.3)	(52.4)	(43.4)			(54.6)	(51.1)	(50.9)	(49.5)	(46.8)	(42.9)	(50.1)
Arts	1,800	3,979	7,345	121.1	84.6	1,314	1,072	1,341	1,711	1,992	3,444	7,430
(%)	3,263	9,147	12,399	180.3	35.6	1,692	1,960	2,191	2,542	2,639	6,364	11,024
Arts and humanities <sup>7</sup>	3,279	5,133	10,167	56.5	98.1	1,150	1,397	1,507	1,668	2,231	5,636	7,953
Economics and business <sup>8</sup>	(26.7)	(20.5)	(22.4)			(20.9)	(23.5)	(21.7)	(19.4)	(22.6)	(24.7)	(21.6)
(%)	981	1,847	1,128	88.3	-38.9	541	663	605	483	632	1,646	2,924
Agriculture and related sciences												

Others <sup>9</sup>	2,298	3,286	9,039	43.0	175.1	609	734	902	1,185	1,599	3,990	5,029
Technical	3,920	6,787	15,573	73.1	129.5	1,348	1,509	1,898	2,670	3,023	7,404	10,448
(%)	(32.0)	(27.1)	(34.2)			(24.5)	(25.4)	(27.4)	(31.1)	(30.6)	(32.4)	(28.3)
Engineering <sup>10</sup>	2,394	4,865	10,732	103.2	120.6	1,001	1,148	1,391	1,965	2,228	4,757	7,733
Architecture and town planning	566	876	2,240	54.8	155.7	167	178	218	331	361	993	1,255
Surveying	612	547	1,355	-10.6	147.7	114	112	167	205	233	1,027	831
Others <sup>11</sup>	348	499	1,246	43.4	149.7	66	71	122	169	201	627	629
Total	12,262	25,046	45,484	104.3	81.6	5,504	5,938	6,937	8,591	9,885	22,848	36,855
(%)	(100.0)	(100.0)	(100.0)			(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)

Source: Ministry of Education, Fifth Malaysia Plan

Notes:

1. Include Islamic studies, language, literature and Malay culture, social sciences, library science, and art and design.
2. Include accountancy, business management, resource economics, and agri-business.
3. Include home science technology and human development.
4. Include biology, chemistry, physics, and mathematics.
5. Include pharmacy, applied sciences, environmental studies, food technology, and science with education.
6. Include property management.
7. Include law and administration, mass communication, art and design, library science, and secretarial studies.
8. Include accountancy, banking, and hotel management and catering.
9. Include computer studies, applied sciences, and mathematics.
10. Include building technology, automotive technology, and electronic technology.
11. Include property management and material technology.

Technology are active. In addition, on the individual company level, there is in-house training.

The Industrial Master Plan (IMP) pointed to the need to strengthen HRD in order for Malaysia to achieve export-oriented industrialization. In particular, it gave as problems in the Malaysian HRD (1) the low level of technical expertise and the lack of indigenous technical ability, (2) the insufficient supply of human resources of the engineer and technician level, and (3) the insufficient incentive systems for industrial training.

Vocational training programs are split among the various ministries and organizations and sometimes overlap, so the IMP recommended that a coordinating body be established to coordinate activities of the organizations in charge of the vocational training and HRD. In view of this recommendation, Malaysia is moving in the direction of establishment of a National Vocational Training Council (NVTC) administered by the Ministry of Labor. This Council would be comprised of not only the related government organizations but also, from the private sector, representatives of the Federation of Malaysian Manufacturers (FMM), the National Chamber of Commerce and Industry, and other industrial groups and should play an important role as a forum of the exchange of ideas in the public and private sector on vocational training and HRD. The NVTC is scheduled to include a Standard and Certification Committee and a Training Advisory Committee.

According to the Fifth Malaysia Plan, Malaysia was expected to produce from 1986 to 1990 a total of 52,826 persons with degrees and 36,855 with diplomas. Broken down, there should be 27,779 degrees in the arts, 17,507 in the sciences, and 7,540 in technology. In the diploma class, there should be 18,454 in the arts, 7,953 in the sciences, and 10,448 in technology. A look at the increase in the number of graduates from 1986 to 1990 by course shows the number of degree holders in the arts rising from 3,451 in 1986 to 7,723 in 1990, or a 2.2-fold rise, and diploma holders from 3,006 in 1986 to 4,631 in 1990, or a 1.5-fold rise, the number of degree holders in the sciences rising from 2,962 in 1986 to 4,219 in 1990, or a 1.4-fold rise, and diploma holders from 1,150 in 1986 to 2,231 in 1990, or a 1.9-fold rise, and the number of degree holders in technology rising from 972 in 1986 to 1,929 in 1990, or a 2.0-fold rise, and diploma holders from 1,348 in 1986 to 3,023 in 1990, or a 2.2-fold rise. In other words, there should be greater growth in the technical sector.

The Malaysian government is expending effort to increase the number of scientific and technical course graduates and improved the ratio of art students to science and technology students from the 52:48 of 1980 to 50:50 in 1985.



In addition, there were many students studying at overseas universities. In 1981 to 1985, 26,800 students obtained degrees.

Table III.2-6 and Table III.2-7 show outlook by Public Training Center of supply of skilled and semi-skilled workers.

Skilled labor and semi-skilled labor are primarily supplied by the Industrial Training Institutes (ITI) of the Ministry of Labor and Vocational Institute (IKM) of MARA. The Ministry of Labor currently has 5 ITIs where it trains some 2,843 workers (number enrolled as of 1985). The Fifth Malaysia Plan calls for the establishment of a further 5 ITIs. The ITIs give 3-step courses: (1) basic, (2) intermediate, and (3) advanced for different trade categories. There are 36 trade categories (Note <sup>1</sup>) (See Table III.2-5). After finishing the curriculum and passing the exams, the graduates are given certificates by the National Industrial Technology Training Certification Board (NITTCB). The NITTCB was established in 1971 for the supply of skilled labor and is comprised of 24 members, including employers, representatives of employees, a chairman, and a secretary general. The Board gives tests twice a year for certification, but it is up to the employers whether to give any raises etc. to employees which have received certification. After the inception of the National Vocational Training Council, the Council is scheduled to absorb the NITTCB.

The Ministry of Labor instituted a double deduction incentive for training costs to promote in-house training in the manufacturing industries. This incentive was announced during the speech on the 1987 budget in October 1986 by the Minister of Finance and was implemented from June 1987. A condition is imposed, however, that the training programs must be those for (1) new or improved skills required for production of new products or improved products or (2) new or improved skills for improving the production process along with employment of new technology. The double deduction system may also be used by foreign affiliated companies. According to the Ministry of Labor, there were about 100 applications for the deduction as of March 1988.

The Center for Instructor and Advanced Skill Training (CIASST), under the Ministry of Labor, has begun training with the cooperation of Japan. The period of cooperation from Japan was initially to end in August 1987, but was extended to March 1990 later. The courses offered include automobiles, machine tools, molds and dies, metalworking, heavy industry, electrical and electronic equipment, etc. Experts are sent from Japan to train local counterparts and training is also provided to students sent from other ASEAN nations as well. The requirements for receiving training are that the person

---

<sup>1</sup>As of June 1985. According to the Ministry of Labor, these have been since increased to 50.

**Table III.2-5 List of Job Categories Designated  
by National Industrial Trade Training Certification Board**

1. MOTOR VEHICLE MECHANIC
2. EARTH MOVING EQUIPMENT &  
CONSTRUCTIONAL MACHINERY MECHANIC
3. HEAVY COMMERCIAL VEHICLE MECHANIC
4. DIESEL ENGINE MECHANIC
5. AGRICULTURAL MACHINERY MECHANIC
6. AUTO ELECTRICIAN
7. MOTORCYCLE MECHANIC
8. SPRAY PAINTER
9. BRICKLAYER & MASON
10. PLUMBER (DOMESTIC)
11. CARPENTER & JOINER
12. CABINET MAKER
13. REFRIGERATION & AIR-CONDITIONNING MECHANIC
14. ELECTICAN (DOMESTIC & INDUSTRIAL)
15. RADIO & TELEVISION MECHANIC
16. TRANSMITTER & RECEIVER MECHANIC
17. VIDEO SYSTEM MECHANIC
18. GENERAL MECHANIC-FILTER
19. TURNER
20. GENERAL MACHINIST
21. GENERAL MACHINIST-MILLER
22. GENERAL MACHINIST-GRINDER
23. WELDER-GAS
24. WELDER-ARC
25. SHEET METAL WORKERS
26. SAWDOCTOR
27. STEEL FABRICATOR AND ERECTOR
28. TOOL AND DIE MAKER
29. HAND COMPOSITOR
30. MACHINE COMPOSITOR-LINOTYPE & INTERTYPE OPERATOR
31. PRESSMAN-FLAT BED LETTERPRESS
32. BOOKBINDER
33. OFFSET LITHOGRAPHY-CAMERAMAN & PLATEMAKER

- 34. OFFSET LITHOGRAPHY-PRESSMAN & PLATEMAKER
- 35. TAILOR & CUTTER
- 36. DRESSMAKER

Source: NITTCB

Note: List as of June 1985, added to later.

Table III.2-6 Outlook by Public Training Center of Skilled and Semi-skilled Workers

Institution	Enrolment				Increase (%)				Output			
	1980	1985	1990	1981-85	1986-90	1986	1987	1988	1989	1990	1981-85	1986-90
Vocational schools	12,675	13,883	35,455	9.5	155.4	8,062	10,605	10,943	13,827	16,658	32,664	60,095
Technical schools	5,370	6,230	6,080	16.0	-2.4	2,960	3,040	3,040	3,040	3,040	14,433	15,120
Youth Training Centres	975	750	1,203	-23.1	60.4	810	837	851	852	821	3,792	4,171
Agricultural Institutes	1,017	1,015	1,200	-0.2	18.2	390	400	400	400	400	1,769	1,990
Industrial Training Institutes	1,472	2,843	10,330	93.1	263.4	3,283	4,225	5,716	6,549	7,085	7,829	26,858
MARA Vocational Institutes	4,198	4,801	6,647	14.4	38.5	2,698	3,004	3,340	3,872	4,336	10,794	17,250
MARA Commercial Institutes	323	441	1,100	36.5	149.4	292	300	500	400	600	878	2,092
Tunku Abdul Rahman College	451	1,222	2,358	171.0	93.0	355	435	531	740	884	1,818	2,945
Polytechnics	2,030	5,373	11,995	164.7	123.3	2,003	1,991	2,753	3,203	3,625	5,663	13,575
TOTAL	28,511	36,558	76,368	28.2	108.9	20,853	24,837	28,074	32,883	37,449	79,640	144,096

Source: Ministry of Education and various institutions.

**Table III.2-7 Projections on Supply of Skilled and Semi-skilled Labor by Course (1981 to 1990)**

Courses	1986	1987	1988	1989	1990	1981-85	1986-90
Engineering trades	12,531	15,227	17,196	20,156	23,102	47,091	88,212
Mechanical trades	6,687	8,195	9,328	10,957	12,428	24,778	47,595
Electrical trades	4,171	5,296	6,036	7,265	8,526	13,543	31,294
Civil engineering trades	1,622	1,674	1,770	1,872	7,994	8,621	8,932
Other engineering trades	51	62	62	62	154	149	391
Building trades	2,510	3,071	3,671	4,414	5,110	8,162	18,776
Printing trades	64	116	121	181	193	460	675
Commerce	2,101	2,477	2,872	2,937	3,317	9,230	13,704
Agriculture	1,046	1,053	1,053	1,213	1,373	4,459	5,738
Home science	1,186	1,070	1,074	1,394	1,722	5,847	6,446
Others	737	939	1,208	1,548	1,731	2,954	6,163
Skill-upgrading	678	884	879	1,040	901	1,437	4,382
<b>TOTAL</b>	<b>20,853</b>	<b>24,837</b>	<b>28,074</b>	<b>32,883</b>	<b>37,449</b>	<b>79,640</b>	<b>144,096</b>

Source: Ministry of Education and various institutions

be (1) a vocational training instructor or supervisor and (2) hold an intermediate-course certification of the NITTCB and have 2 or more years practical experience. Since May 1984, 1,729 persons have undergone the program. Looking by year, there were 112 in 1984, 330 in 1985, 594 in 1986, and 693 in 1987. In 1988, it is expected that more than 1,000 persons will undergo the program. Most of the participants are officers of government related organizations. Private corporations do not have enough leeway to dispatch workers there. Further, foreign-affiliated companies provide their own in-house training. CIAST has the latest audio-visual equipment.

Note that industry needs for molds and dies are becoming more sophisticated, so consideration is being given to addition of a course in that field to the industrial training institutes. A mold and die course is planned to be established in the ITI at Ipoh. At the present time, instructors are being dispatched abroad for study. The facilities should be completed by 1989. Casting facilities will also be provided and about 30 persons a year trained. Courses on molds and dies are given at the ITIs at Penang and Kuantan, but even with the Ipoh project, only about 100 persons will be able to be trained a year, which is nowhere near the amount required to satisfy the demand of industry. For ceramic ware, there are plans to provide a training course at the Kota Bharu ITI 2 years from now.

#### [Majlis Amanah Rakyat (MARA)]

MARA is under the jurisdiction of the Ministry of National and Rural Development and is staffed by over 3000 persons. It provides vocational training for Bumiputras. Under MARA is a Vocational Training Division and under that division 8 training institutions in West Malaysia and 1 in Sarawak. The training institutions have some 750 instructors.

A look at the number of students in 1987 shows 3,150 new entrants, 15,945 enrolled, and 2,626 graduates. A total of 39 courses were offered, with those with the most enrollees being domestic and industrial electrical (1,477), gas welding and arching making (1,377), making of wooden framework for houses (1,201), brickmaking (1,159), mechanical drafting (1,072), etc.

A look at the trends in graduates by course in the fields of automobiles and molds and dies for 1985, 1986, and 1987 shows 108, 110, and 125 graduates in general engineering, 156, 148, and 159 graduates in general machinery, 41, 17, and 13 in foundries, 97, 90, and 127 in motor mechanical engineering, and 27, 28, and 26 in heavy commercial vehicle engineering. There has thus been no striking changes in recent years. MARA's vocational training is provided normally as a 2-year course. It covers vocational

training of the intermediate level for Form 3 to 4 graduates, i.e., middle school level graduates.

To meet with the growing needs in industry for molds and dies, Malaysia is in the process of establishing an Industrial Production and Electronics Institution. Malaysia hopes to receive technical assistance from West Germany and funding assistance from other countries. The EPU is studying this project. If realized, the institution reportedly would be able to turn out an annual 200 technicians skilled in molds and dies. Industry now requires technicians with quality-refined technology and the current training programs, which aim at process workers, do not meet this demand.

MARA graduates account for 60% of the floor workers at the Proton Saga factory. Company M (Japanese affiliated firm) hires MARA foreman level workers. Company M has a joint project with MARA and is training instructors for TV technicians for MARA. U.S. affiliated firms under the American Business Council are also sending staff for providing guidance to MARA instructors.

MARA employs 150 instructors a year for vocational training. Of these, 100 are sent to Australia for 2 years of training. MARA also sends a total of 20 or so people to Japan, South Korea, and West Germany each year.

#### (Other Organizations)

Managers are being trained by the National Productivity Center (NPC), a statutory body under the Ministry of Trade and Industry, which aims at raising the awareness of Malaysian managers and improvement of productivity, holds seminars, issues publications, and offers consulting and other advice. The NPC was offering 602 courses in 1986 and had enrolled on its registers some 12,626 persons. It operates on the basis of a M\$8.27 million operational budget and M\$5.94 million development budget.

The NPC was established in 1962 with the cooperation of the United Nations and was made a statutory body in 1966 with the enactment of a special law.

The NPC receives technical assistance from the United Nations and other organizations. In 1986, it received 7 experts from West Germany, one from the World Bank, and one from the ITC. Note that the West German technical assistance program was completed at the end of 1986. In addition, the NPC receives assistance from UNIDO, the ILO, UNDP, and other groups.

The NPC was staffed by 298 people at the end of 1986. According to the NPC, the average age of the staff was a young 33 and the center was having problems with consulting due to insufficient experience. The NPC is exerting effort in raising the

Table III 2-8 Trends in Students in MARA Vocational Training Institute by Course

Course	1985		1986		1987				
	Intake	Existing Graduate	Intake Existing Graduate	Intake Existing Graduate	Intake Existing Graduate	Intake Existing Graduate			
1. Brick Making	175	1,007	180	183	1,076	166	243	1,159	187
2. Painting and Decorating Building	22	148	27	27	151	22	27	161	28
3. Plumbing	128	731	128	128	746	113	184	821	124
4. Making of the Wooden Framework for Houses	179	1,000	178	186	1,099	165	250	1,201	187
5. Domestic and Industrial Electrical	230	1,206	195	233	1,358	186	307	1,477	236
6. Refrigeration	52	307	57	52	302	46	54	312	52
7. Fashion Designing	0	110	26	0	15	0	-	-	-
8. Dressing Making for Men	0	243	27	59	271	28	64	348	61
9. Dress Making for Ladies	0	168	0	0	29	0	-	-	-
10. Metal Strip Making	25	143	31	14	139	19	38	143	27
(e.g. in letter boxes and pails)									
11. Gas welding & Arching Making	220	1,222	197	222	1,287	192	268	1,377	211
12. Ship Welding	28	164	28	28	164	27	29	166	34
13. General Engineering	137	679	1008	82	712	110	100	550	125
14. General Machinery	174	942	156	103	911	148	187	834	159
15. Foundry (Steel Making)	21	138	41	20	131	17	21	131	13
16. Electroplating	24	136	23	27	155	24	24	255	26
17. Fabrication	14	133	26	14	97	25	23	94	14
18. Mechanical Drafting	201	1,003	170	192	1,093	181	202	1,072	185
19. Architecture Drawing	149	522	71	143	771	107	176	852	152
20. Structural Drawing	70	235	16	78	408	51	98	426	94
21. Motor Mechanical									



22.	Engineering Heavy Machine	107	584	97	165	732	90	167	988	127
23.	Engineering Marine Engineering	27	164	26	26	158	27	24	165	26
24.	Spray Painting Panelling	27	157	28	27	169	25	22	168	28
25.	Heavy Commercial Vehicle Engineering	83	476	76	74	455	73	77	444	70
26.	Saw doctoring Kiln Drying and Panelling	28	177	27	28	162	28	39	178	26
27.	Sawmill Operation Mill Wrihti (Technical Term Used for Sawmill)	13	81	14	14	81	13	13	81	14
30.	Furniture Making Wood Making	186	988	189	166	1,059	159	229	1,058	170
31.	Wood Panelling & Moulding	28	75	7	13	83	0	11	78	14
32.	Sewing of Cushions & Canvas	20	79	15	12	86	14	17	85	14
33.	Radio & TV Engineering Electronic Instrument	28	168	28	26	167	28	27	163	28
34.	Engineering Hair Designing	49	301	48	55	323	31	88	351	60
35.	Motor Cycle Repairing Furniture Making	0	116	57	0	0	0	0	0	0
36.	Electronic Industry (see note)	0	0	0	14	14	0	28	58	28
37.		0	0	0	0	0	0	13	28	0
38.		0	0	0	0	30	0	0	215	15
39.		0	0	0	0	0	0	0	0	0
TOTAL		2,537	14,238	2,401	2,532	14,994	2,201	3,150	15,945	2,626

Note: Trainees are taken from graduates of Technical Instrument Electronic.  
Source: MARA

awareness of SMI managers also. It has a staff of 45 for this purpose and offers seminars and the like in the Malaysian language toward this end.

Note that the NPC is a member of the Asian Productivity Organization and exchanges information and the like with various other Asian nations.

Regarding university education, the MARA Institute of Technology (ITM), which is under the jurisdiction of the Ministry of Education, has some 30,000 students. It is a comprehensive university with 11 departments, including an Engineering Department. Ceramics are handled by the Art Design School, which is a leading force in the design field. SIRIM and ITM are jointly engaged in a Whiteware Project for raising the level of technology in Chinaware and Porcelain. Graduates of the ITM Design School are employed at Proton Saga as well. The Engineering Department has some 2,000 students enrolled. They study molds and dies as one course of Mechanical Engineering. In 1985, a total of 76 students completed this course at the diploma level (Table III.2-9). There is a shortage of training courses and educational materials for training middle and higher class engineers in molds and dies.

Penang's Universiti Sains Malaysia (USM) moved its Engineering and Mineral Materials Department to Ipoh a year and a half ago. This department teaches courses on molds and dies and ceramics. USM started an Industrial Research and Consultancy service in 1981 to deepen its contact with the industrial world. Under this service, it makes available university testing facilities to private enterprises and offers consulting services to the private sector. In 1986, some 230 companies made use of the services. Among these were the U.S. affiliated Franklin Porcelain and Associated Kaolin Industries and Japanese affiliated companies.

USM has ties with the Penang Development Corporation as well for cooperation in promotion of Penang SMIs. USM has some 9,000 students and 1,000 to 1,500 graduates, of which 80% become employed in government-related posts. Recently, however, the economic recession and government fiscal deficits have made employment in government institutions difficult. Some graduates willingly find employment in American-affiliated companies or Japanese-affiliated companies, but this is because the jobs are attractive due to their good fringe benefits. By way of note, the annual budget of USM is M\$2 million. The budget has recently been kept steady.

#### **2-1-5. Promotion of Science and Technology**

Malaysia does not yet have a comprehensive program for promotion of science and technology. The various ministries and agencies work separately in this regard. In 1976, however, the government established the Ministry of Science, Technology, and

**Table III.2-9 Breakdown of Graduates of MARA Institute of Technology by Sector (1985)**

Field	1985
<b>Post Graduate Diploma</b>	
Post Graduate Diploma in Library Science	6
Diploma in Systems Analysis	8
<b>Degree</b>	
Bachelor of Business Administration	33
<b>Diploma</b>	
Accountancy	46
Law	20
Town and regional Planning	14
Architecture	8
Quantity Surveying	8
Estate Management	33
Business Administration (Transport)	33
Business Studies (Marketing)	18
Business Studies (Insurance)	13
Statistics	9
Civil Engineering	68
Electrical (Electronics) Engineering	20
Electrical (Power) Engineering	14
Mechanical Engineering	11
Advance Diploma in Land surveying	
Art Teachers Diploma	28
<b>Overseas Courses</b>	
Institute of Chartered Secretaries and Administration (U.K.)	3
Institute of Marketing (U.K.)	
Chartered Institute of Transport (U.K.)	16
<b>Diploma</b>	
Accountancy	559
Art and Design	
Graphic	33
Textile	24
Fine Metal	10
Industrial Design	19
Pottery Ceramics	11
Fashion Design	5
Fine Art	19
Photography	16
Public Administration	330
Law	25
Town and Regional Planning	26
Architecture	19
Quantity Surveying	67
Estate Management	56
Building	57
Interior Design	45
Rubber and plastic Technology	23
Microbiology	36

Industrial Chemistry	28
Food Technology	23
Wood Technology	14
Textile Technology	17
Science	100
Planting & Industrial Management	119
Business Studies	616
Banking Studies	280
Credit Management	50
Investment Analysis	39
Computer Science	78
Statistics	41
Actuarial Science	12
Civil Engineering	170
Electrical (Electronics) Engineering	73
Electrical (Power) Engineering	53
Mechanical Engineering	76
Land Surveying	41
Hotel and Catering Management	31
Tourism Administration	31
Institute and Cat. Management	31
Chef Training	2
Mass Communication	
Journalism	40
Public relations	39
Broadcasting	12
Advertising	16
Library Science	44
Stenography	244
Certificate	
Town & Regional Planning	16
Insurance	58
Hotel & Restaurant Services	
Assistant Cook	110
Front Office Receptionist	76
Waiting	56
Housekeeping	53
Certificate in Programming	39
Grand Total	4,518

Source: Min. of Labour  
Labour and Manpower Report 1984/85

Table III.2-10 Breakdown of Graduates  
of University Science Malaysia

Course	Year	1980	1981	1982	1983	1984	1985
Doctorate							
Applied Science		-	1	-	-	-	-
Humanities		-	1	-	-	-	-
Biology		2	-	-	2	-	1
Chemistry		1	-	-	1	-	-
Physics		-	-	-	1	-	1
Sain Perubatan		-	-	-	-	-	1
Doctor of Philosophy							
Social Science		-	-	-	-	1	-
Master Degree							
Applied Science		-	3	-	-	2	-
Biology		-	1	2	1	1	3
Mathematics		-	1	2	1	1	3
Housing Building and Planning		-	8	6	7	4	7
Humanities		-	1	-	1	1	2
Social Science		-	1	1	3	2	1
Education		-	3	4	1	-	-
Physics		-	-	1	1	1	1
Chemistry		-	-	2	-	1	1
Philosophy		-	-	1	-	-	-
Literature		-	-	1	-	-	-
Fine Arts		-	-	1	-	-	-
Pharmacy		-	-	-	1	3	-
Sains (Planning)		-	-	-	-	-	7
Basic Degree							
Science		110	93	147	157	212	233
Science with Education		78	95	143	163	157	172
Pharmacy		49	48	46	54	61	57
Applied Science		27	28	30	48	54	61
Housing, Building and Planning		51	36	42	47	71	65
Arts		-	51	-	-	150	117
Arts with Education		-	60	-	-	76	73
Social Science		174	62	160	152	213	191
Humanities		138	-	137	110	-	117
Humanities and Education		52	-	58	65	-	73
Certificate							
Mass Communication		-	-	-	-	13	19
Creative Arts		-	-	-	-	11	17
Education Technology		-	-	-	-	28	25
TOTAL		682	493	783	817	1,063	1,247

Source: Ministry of Education

Environment. The Ministry serves as the central body for technical transfers, research and development, and other scientific and technical programs.

The National Council for Scientific Research and Development (NCSRD), an advisory body of the ministry, also plays a large role. The NCSRD is in charge of planning, coordination, development, and execution of all activities relating to technology. In the Fifth Malaysia Plan, the government is trying to centralize its scientific and technical programs through the NCSRD for more efficient management and coordination of the scientific and technical sector. For technical transfers, the government has established the Coordinating Council for Industrial Technology Transfer. The CCITT started a special committee for drafting scientific and technical programs in October 1987.

Malaysia's recent technical programs have been oriented toward promotion of domestic research and development. Prime Minister Mahathir laid down guidelines on research and development in his report before the NCSRD in February 1987, wherein he stressed (1) the research and development performed domestically in Malaysia should be applied research, (2) it should match the social, cultural, and economic needs of Malaysia, and (3) priority should be given to the development of suitable technology leading to the development of designs and manufacturing processes suited to Malaysia.

A look at the scale of research and development in Malaysia shows, as illustrated in Table III.2-11, such activities worth about M\$290 million in 1982, accounting for about 0.5% of the GNP. An estimate of 0.66% was announced for 1984. Compared with the value for South Korea, 0.95% in 1982, this is not that bad. However, a look at the content of the research and development shows that there was little R&D in the private sector and that the fields covered were primarily agriculturally oriented, i.e., there was still little R&D in the industrial field. Private sector R&D accounts for only 10% of all R&D in Malaysia, compared with 45% in South Korea and 70% in Japan. The IMP calls for R&D expenditures to be raised to 1.5% of the GNP by 1995 and for at least 1% of output in the manufacturing sector to be directed to industrial R&D. The Fifth Malaysian Plan divides research into three types: basic, applied, and development and sets down the shares of the same as desirably 18:35:47.

#### (1) Coordinating Council for Industrial Technology Transfer

The CCITT was established to help the implementation of the IMP. In October 1987, the CCITT established a committee for formulating a National Plan for Industrial Technology Development. This committee is studying the preparation of a comprehensive plan of action. It also functions to publicize among the people the need for research and development and promotion of science and technology. To raise the technical level in the

Malaysian manufacturing sector, it is necessary to correct the current inability to absorb technology. At the present time, however, there is no program in Malaysia aiming at the development of indigenous industrial technology. In Japan and South Korea, the governments have taken the lead in the promotion of technical development. In Malaysia too, the Government must formulate the long-term strategies for technical programs. This committee was launched with this understanding. Specifically, the committee is to formulate selective sectoral technology plans for 12 commodity groups designated as requiring priority in the IMP. A member's list and the work schedule of the committee are given below.

#### (2) Standards and Industrial Research Institute of Malaysia (SIRIM)

The Standards and Industrial Research Institute of Malaysia (SIRIM), an organization under the Ministry of Science, Technology, and the Environment, plays an important role as an implementing organization for science and technology. SIRIM is a statutory body and is staffed by 751 people, of which 217 are researchers or management staff (20 researchers at the Research Unit in charge of R&D). SIRIM aims at the standardization and promotion of technical transfers and has established a SIRIM mark system. The SIRIM mark system is aimed at improving the quality of Malaysian products and was established based on the British Standard. In auto parts, a SIRIM mark has been established for spark plugs.

SIRIM established three centers with technical cooperation from Japan, i.e., (1) the Metal Industry Technology Center (MITEC), (2) the Metal Industry Research and Development Center (MIRDC), and the (3) National Metrology Laboratory Center. MITEC and MIRDC have since merged to form the Metal Industry Development Center (MIDEC). In addition, SIRIM is preparing to establish a Forging Unit with cooperation from Japan.

MIDEC and the like are the central organizations for the transfer of mold and die technology to Malaysian industry. These also provide advisory services to the private sector. The needs of the private sector for high-grade molds and dies have been rising and establishment of such facilities is being demanded. Regarding the demand for molds and dies, Proton Saga reportedly makes requests to SIRIM for new parts when making its model changes.

The Ceramics Department of SIRIM is pushing forward with the idea of the establishment of a Ceramic Technology Center. It has already submitted a proposal to the Malaysian Government and requested M\$8 million in funding. Of this, M\$6 million has been approved, but due to fiscal difficulties, only M\$1 million was allocated for fiscal

**Table III. 2-11 Comparison of R&D Expenditures of Key Nations**

	Unit (Million)	Total	Government	Government Research Organizations	Univer- sities	Private Companies	Ratio of GNP(%)
Malaysia (1982)	M\$	290,0-295 (100%)	-	253.0 (85%)	12-17 (5%)	25.0 (10%)	0.5
Korea (1982)	Won	457,688.5	-	186,076.5	66,610.0	205,002.0	0.95
Japan (1982)	Yen	5,881,539.0 (100%)	-	894,310.0 (15.2%)	948,211.0 (16.1%)	4,039,018.0 (68.7%)	2.78
US (1980)	US\$	62,220.0 (100%)	7,929.0 (12.7%)	2,130.0 (3.4%)	8,284.0 (11.4%)	43,879.0 (64.2%)	2.86
UK (1975)	Pound	3,622.3 (100%)	769.2 (21.2%)	116.6 (3.2%)	412.2 (11.4%)	2,324.3 (64.2%)	2.47 (78)
W.Germany (1977)	DM	41,320.0 (100%)	3,130.0 (7.6%)	4,390.0 (10.6%)	6,520.0 (15.8%)	27,280.0 (66.0%)	3.04 (81)

Source: Dato Seri Radin Soenarno Al-Haj, Director-General, EPU, "Research and Development and Economic Growth" (National Seminar on R&D Collaboration for Industrial Development held at KL, 21/1/1986). p. 25



**Table III.2-12 The Committee on a National Plan  
for Industrial Technology Development**

(1) Member List

CHIARMAN: Dr. Noordin Sopiee	Director-General, Institute of Strategic and International Studies (ISIS) Malaysia.
Secretary: Puan Maimun Din	Deputy Secretary-General, Ministry of Science, Technology and the Environment.
<b>Members</b>	
1. Dr. Abdullah bin Mohd. Tahir	Director, Industrial Division, Economic Planning Unit, Prime Minister's Department.
2. Dr. Ahmad Zaharudin bin Idrus	Controller, Standards and Industrial Research Institute of Malaysia
3. Y.B. Tan Sri Datuk Dr Ir Haji Mohd Hassan Wahab	Chairman and Director, Operasi Minconsult Sdn Berhad.
4. Encik Lim Ho Pheng	Secretary, National Council for Scientific Research and Development.
5. Y.B Datuk Dr. Mokhzani Abdul Rahim	Executive Chairman, Innovest Berhad.
6. Prof. Dr. Omar bin Abdul Rahman	Science Adviser, Prime Minister's Department
7. Dr. Rozali Mohamed Ali	Senior Planning Engineer (Generation) National Electricity Board.
8. Encik N. Sadasivan	Director-General, Malaysian Industrial Development Authority
9. Encik Soong Siew Hoong	Federation of Malaysian Manufacturers.
10. YAM Tunku Imran ibni Tuanku Ja'afar	Director, Antah Holdings Berhad.
11. Encik Yong Poh Kon	Managing Director, Selangor Pewter Co Sdn Berhad.

## (2) Work Schedule

Before the end of January 1988	Completion of the design of the study, Terms of Reference for full-scale studies.
In February 1988	Commissioning of the first round of full-scale studies.
Before the end of May 1988	Completion of fund raising, invitation of foreign experts, and commissioning of additional papers for the First National Congress on Industrial Technology
August 1988	The First National Congress on Industrial Technology
Before the end of October 1988	At least a dozen Committee brainstorming sessions and National Hearings.
Before mid-December 1988	Finalisation of the Preliminary Draft of the Comprehensive Plan of Action and its submission to the Council.
By the end of January 1989	Discussion of the Preliminary Draft by the Council.
By the end of February 1989	Submission of the Final Draft to the Council.
In March 1989	Finalisation of the Cabinet Paper by the Council.

1989. Once the center is established, it will become the heart of technical transfers and research and development in the field of ceramics in Malaysia.

The Ceramic Department has plans for six ceramic-related projects from 1988 to 1990. These are joint projects with Japanese research institutes and include research on silicon carbides.

The Institut Teknologi MARA (ITM) and SIRIM are also engaged in a Whiteware Project aimed at the improvement of the level of ceramic technology.

In regard to quality, SIRIM has established a System for Assessment and Registration of Quality, under which it will ensure a certain level of quality for registered companies. At present, applications have reportedly been made by 30 companies, including some Japanese affiliates. This scheme is expected to reduce the trouble in quality checks by user companies and to help deliveries of products from subcontractors.

In addition, the SIRIM is engaged in an Incubation Program to raise the level of technical expertise of the SMIs wherein it helps to identify financial sources and markets. The following three companies have been selected for the program for the time being: (1) Janshah Industries Sdn Bhd. (manufacturer of molds and dies), (2) Magnitrade Sdn Bhd. (electroplating), and (3) Techtrans Holdings Sdn Bhd (printed circuit boards).

Note that there has apparently been no progress in the plans for establishment of the Science and Technology Institute of Malaysia (STIM), proposed under the IMP. According to the IMP, STIM would play a central role in formation of technology, taking charge of fields such as biochemistry, metallurgy, electronics, and ceramics.

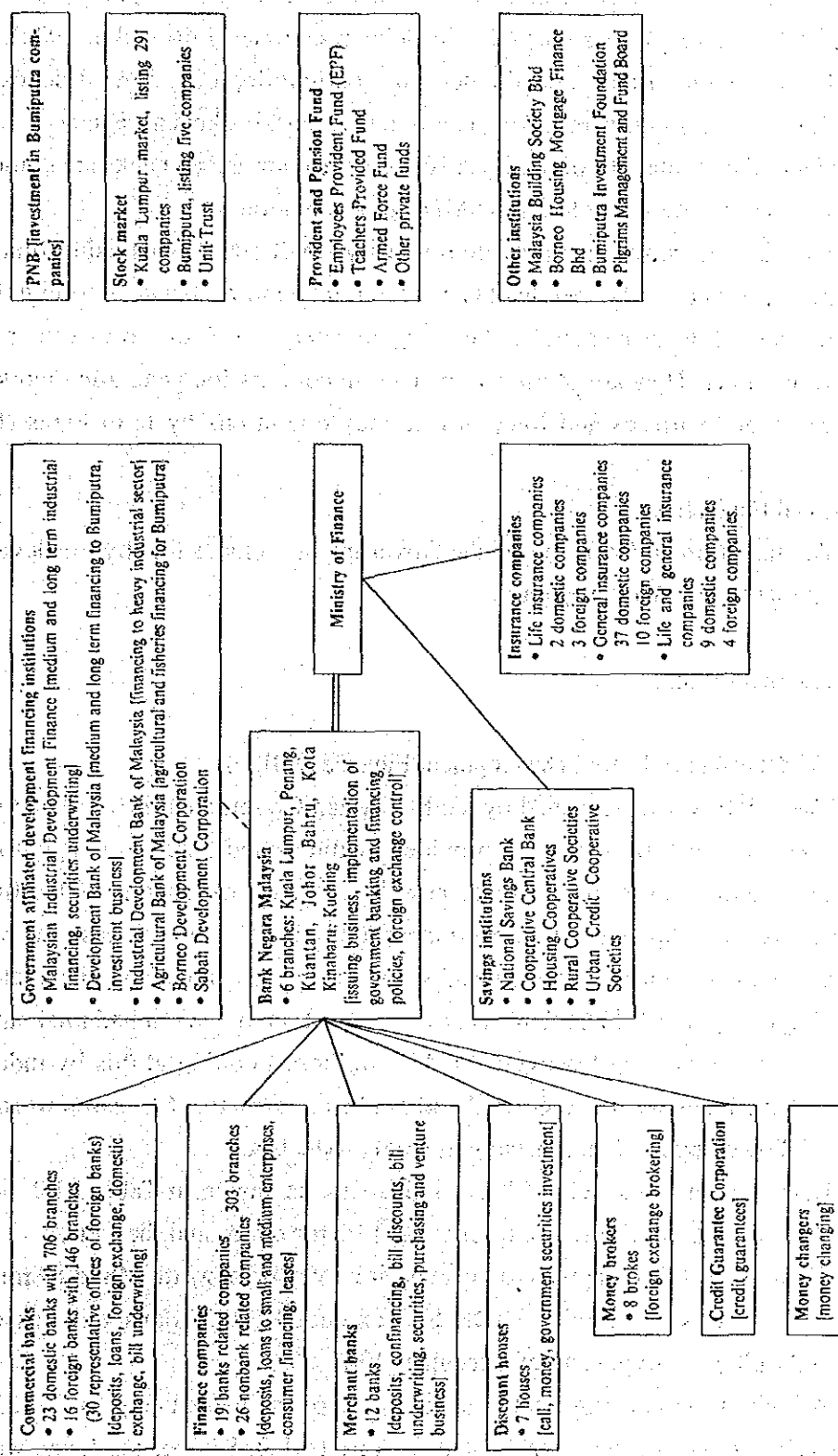
#### **2-1-6. Financial System**

The Fig.III.2-1 illustrates the financial system of Malaysia. The banking system is comprised of commercial banks, the finance companies, the merchant banks, money brokers, and discount houses, all of which are under the supervision of the Bank Negara. In addition, there are government related development financing institutions, savings institutions, insurance companies, etc. under the Ministry of Finance, the Ministry of Trade and Industry, and other government agencies.

The Bank Negara is based in Kuala Lumpur and has branches in 6 locations throughout the country. It issues the currency, holds the official payment reserves, and manages and supervises the other commercial banks. Further, it is in charge of financial policies such as fund operations and control of interest rates and manages foreign exchange.

The commercial banks are the most important of Malaysia's financial institutions. According to the Asian-Pacific Development Center, the commercial banks have achieved

Fig. III.2-1 Malaysian Financial Institutions (as of June 1987)



Source: "Malaysia no kinyu jijo" (Financing Situation in Malaysia), Bank of Tokyo, Kuala Lumpur branch

high growth rates of an average annual 20% since 1970. As a result, they account for as much as 45.5% of all gross assets in the financial system (as of the end of 1984).

The commercial banks handle deposits (current deposits, normal deposits, time deposits), loans (over drafts, revolving credit, term loans, bankers acceptances, etc.)

Under the regulations of the Bank Negara, the commercial banks are committed to providing a certain amount of loans to SMIs and Bumiputra.

The finance companies provide primarily small sized loans using funds raised from time deposits etc. The merchant banks are joint ventures between foreign financial institutions and Malaysian capital and must by law derive 30% or more of their earnings from commissions. They are primarily engaged in commission generating work such as management of securities and long-term money operations by term loans (loans on deeds).

[Institutional Financing]

The institutional financing by the Government includes that by the development banks and that by the Bank Negara.

#### (1) Development Banks

##### 1) Malaysian Industrial Development Finance (MIDF)

The MIDF was established by the Malaysian Government in 1960 and was later reorganized by the World Bank. It provides medium- and long-term capital funds to Malaysian manufacturers to facilitate new investment, expansion of facilities, and modernization of equipment. The Government holds 43.8% of the shares. The remainder is held by commercial banks, foreign banks, and insurance companies. The total assets of the MIDF group run to M\$1 billion. As of the end of March 1987, it had total outstanding approved loans (including leases) of M\$48.7 million. Looking at this by industry, the majority of the loans went to the metal and engineering sector (618 cases worth M\$294 million), followed by food, nonmetallic mineral products, etc.

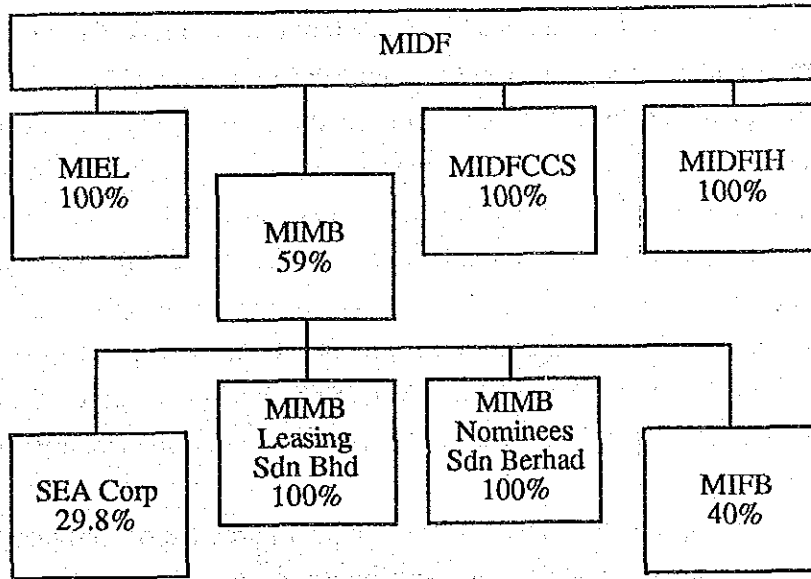
Loans given to the selected four industries, as shown in Table III.2-14, totaled M\$19.71 million (51 cases) for auto parts, M\$1.97 for molds and dies, etc.

There were 40 loans given to Japanese joint ventures, worth M\$74.89 million.

In all industrial fields, MIDF had extended 3785 loans and leases worth M\$1,834.3 million as of the end of December 1987.

A look at the loans by scale shows 73.2% of the loans being for M\$250,000 or less. In value, however, these accounted for just 14.1%. 83% of the loans were under M\$500,000, equivalent to 22.4% in value (in both cases, as of the end of March 1987).

**Fig. III.2-2 Subsidiaries of MIDF**



- MIDF — Malaysian Industrial Development Finance Berhad.
- MIEL — Malaysian Industrial Estates Sendirian Berhad.
- MIDFCCS — MIDF Consultancy and Corporate Services Sendirian Berhad.
- MIDFIH — MIDF Investment Holdings Sdn. Bhd.
- MIMB — Malaysian International Merchant Bankers Berhad.
- SEA Corp — South East Asia Development Corporation Berhad.
- MIFB — Malaysian International Finance Berhad.

Source: MIDF Annual Report

and based on approved loans). This shows the large number of small loans made by MIDF.

However, these small-sized loans are considered high in risk. Credit guarantees for the loans are provided through the Credit Guarantee Corporation (CGC).

The loans provided by the MIDF come in the form of (1) project loans, (2) machinery loans, (3) lease finance, (4) factory mortgage loans, etc. The interest rates are 10 to 11% in the general scheme for (1), (2), and (4) and 7.75% for the World Bank scheme (Note). The repayment term is 5 to 15 years, with the term differing depending on the nature of the project. The MIDF interest rate is a fixed rate, so there is the problem that it is overly high when commercial loan terms are eased. At the present time, the base lending rate (BLR) is a low 7% and borrowers find the interest rate of the MIDF unattractive. Further, the fund raising costs of the MIDF are high, so there are times when it operates at a loss.

The MIDF, in addition to loans, engages in equity participation, provides advisory services, and acts as an intermediary in joint ventures with foreign firms. Further, through the Malaysian Industrial Estates Sdn Bhd. (MIEL), it acts as an intermediary in sales and rentals of ready built standard factories to SMIs.

(Note) In this case, SMIs are defined as companies with capitals of less than M\$750,000.

The pretax net profit of the MIDF fell in both 1986 and 1987 reflecting the sluggishness of the economy. The money demand in the industrial world has also fallen, resulting in slow growth in loans. In 1987, the Bank Negara reported ensured the necessary liquidity of the MIDF by loaning it M\$30 million in a 3-year roll-over from its New Investment Fund. However, it is also true that there has been difficulty in growth of general loans of the MIDF since the low interest NIF loans and World Bank scheme are provided at the same time.

The MIDF has under it the above-mentioned MIEL and a consulting company etc. The group is comprised as shown in Fig. III.2-2 and is staffed by 180 in the MIDF proper and a total of 300 for the subsidiaries for a total of 480 in all.

## (2) Bank Pembangunan (BPMB)

In 1973, under the New Economic Policy (NEP), Malaysia established the Bank Pembangunan (BPMB) to encourage the growth of Bumiputra companies through the extension of medium- and long-term funding. It lays particular stress on such industrial sectors as food, plastics, and electronics. In the loans provided by the BPMB under the

**Table III.2-13 Balance of Loans by Industry  
of Malaysian Industrial Development Finance**

(Units: M\$ million)

Industry	Balance of Approvals at End of March 1986		Balance of Approvals at End of March 1987	
	Cases	M\$ million	Cases	M\$ million
Metals and Engineering	605	272.5	618	294.0
Food, Beverages, Tobacco	469	223.6	500	247.2
Nonferrous Mineral Products	136	146.0	139	150.7
Wood Products	330	136.3	342	141.5
Textiles and Apparel	229	121.2	234	124.7
Plastic Products	311	82.2	318	84.1
Rubber Products	152	76.4	160	79.6
Paper and Printing	374	71.9	381	74.5
Products	76	76.7	78	73.7
Leather Products	26	3.0	26	3.1
Other Products	62	31.0	61	30.6
Ores and Stones	25	12.0	26	12.8
Other Nonmanufactured Products	107	32.2	107	32.2
<b>TOTAL</b>	<b>2,902</b>	<b>1285.0</b>	<b>2,990</b>	<b>1348.7</b>

Source: MIDF, Annual Report



**Table III.2-14 Gross Cumulative Loans of Leases Approved by MIDF**

	<u>No.</u>	<u>1,000M\$</u>
<b>Moulds&amp; Dies Sector</b>		
As at March 31, 1987	12	1,517.0
April-December 1987	<u>3</u>	<u>269.0</u>
	15	1,786.0
<b>Automotive Metal Parts Sector</b>		
As at march 31, 1987	51	19,709.2
April-December 1987	<u>-</u>	<u>-</u>
	51	19,709.2
<b>Chinaware (Tableware &amp; Decorativeware) Sector</b>		
As at March 31, 1987	7	11,340.0
April-December 1987	<u>1</u>	<u>3,000.0</u>
	<u>8</u>	<u>14,340.0</u>
<b>Glassware (Except Sheet Glass) Sector</b>		
As at March 31, 1987	2	700.0
April-December 1987	<u>-</u>	<u>-</u>
	<u>2</u>	<u>700.0</u>
<b>All Sectors</b>		
As at March 31, 1987	3,666	1,727.7 (mil. M\$)
April-December 1987	<u>119</u>	<u>106.6 (mil. M\$)</u>
	<u>3,785</u>	<u>1,834.3 (mil. M\$)</u>

Japanese Joint Ventures

As at March 31, 1987	37	68,885.7
April-December 1987	<u>3</u>	<u>6,000.0</u>
	40	<u>74,885.7</u>

Source: MIDF

**Table III.2-15 Loans by MIDF by Size**  
**(Based on Approved Projects, as of end of March, 1987)**

Loan Size	Cases	Share	Value	Share
			(M\$ million)	
M\$50,000 or Less	998	33.4	29.3	2.2
Over M\$50,000 to M\$100,000	492	16.5	39.1	2.9
Over M\$100,000 to M\$150,000	322	10.8	42.3	3.1
Over M\$150,000 to M\$250,000	376	12.6	79.2	5.9
Over M\$250,000 to M\$500,000	295	9.9	112.2	8.3
Over M\$500,000 to M\$1 million	198	6.6	157.6	11.7
Over M\$1 million to M\$2 million	156	5.2	245.9	18.2
Over M\$2 million to M\$3 million	60	2.0	162.6	12.1
Over M\$ 3 million	93	3.1	480.5	35.6
<b>TOTAL</b>	<b>2,990</b>	<b>100%</b>	<b>1,348.7</b>	<b>100%</b>

Source: MIDF

World Bank scheme, emphasis is placed on 6 industries, including food, lumber, metals, and machinery. Under the Small-Scale Enterprise Scheme of the BPMB, the Malaysian government and the World Bank will be lending SMIs a total of M\$150 million through the BPMB by 1990. (The Malaysian Government will be borrowing funds from the World Bank for a three year period at an interest rate of 5%.) This scheme was limited to the Bumiputra companies in 1985, so only a little funds were loaned out, but in 1986 was opened up to non-Bumiputra companies, which accounted for 30% of the total loans that year. In 1987, the loan ceiling was raised to M\$3 million. Bumiputra enterprises are mostly small in size, including many noodle shops, gasoline stands, and furniture stores. The non-Bumiputra companies borrowing funds are primarily in the field of electronics. This financial system is also being used by Japanese-affiliated enterprises.

The interest rates are 7.75% per year for loans and 5.5% per year for leases - preferential rates. Collateral corresponding to 70 to 100% of the loan is required, depending on the appropriateness of the project. Due to the recent poor business conditions in Malaysia, there have been cases where loans could not be recovered or were frozen. There were further cases where the BPMB sent its staff to help out companies which had fallen into difficult managerial straits. In October 1986, the BPMB established a Project Rehabilitation Division to help reconstruct such companies.

A look at the loans of the BPMB shows 231 loans worth M\$48.71 million being approved in 1986. In 1985, it had approved 292 loans worth M\$96.55 million, so the 1986 figures represented a drop of 26.4% in loan cases and 98.2% in loan value. The manufacturing industries accounted for 151 of the loans in 1986 (65.4% of the total), incidentally, the largest share.

In 1986, the BPMB extended 207 loans to SMIs (89.6%) for a total of M\$15.9 million (32.7%). (In this case, the SMIs were defined as enterprises with capitals of less than M\$300,000.)

Under the Small Scale Enterprises Scheme, the BPMB approved 313 projects worth M\$31.8 million from October 1984 to December 1986. In 1986, it approved 156 projects worth M\$16.7 million. Of this, nine projects worth M\$1.5 million were of non-Bumiputra enterprises.

The BPMB is also engaged in a Nursery Factory Scheme under which it is easing the entry of Bumiputra enterprises into new businesses by helping them to secure land and put up factory buildings and by providing consulting. The first NFS was started in February 1985 in the Kelantan Industrial Estate and included 25 factory units and 2 stores and management offices.

In addition, the BPMB is engaged in a Plant Hire Operations project - a sort of turnkey lease system under which it lends Bumiputra everything from the factories to the

**Table III.2-16 Loans to Industrial Sector by Financial Institution**

	1986	1987	At end 1987
	Change in %		\$ million
<b>Banking System</b>	3.7	0.8	10,517
Commercial Banks	4.4	1.8	9,124
Finance Companies	-6.6	-3.8	555
Merchant Bnaks	4.2	-5.7	838
<b>Industrial Finance Institution</b>	0.7	-16.7	642
Sabah Development			
Bank Berhad	-6.4	-67.4	44
Malaysian Industrial			
Development			
Finance Berhad	-11.6	-11.4	296
Development Bank of			
Malaysia Berhad	39.0	0.7	165
Industrial Development			
Bank of			
Malaysia Berhad	18.9	5.1	109
Borneo Development			
Corporation			
Sendirian Berhad	-5.7	-8.1	11
Malaysian Industrial Estates			
Sendirian Berhad	-10.9	-22.6	17
<b>TOTAL</b>	3.5	-0.4	11,159

Source: Bank Negara Malaysia Annual Report 1987

machinery and equipment and even the machine operators. A look at the rentals up to now shows 1139 cases in 1985, including 677 new clients. In 1986, however, this fell to 968 cases and 633 new clients, respectively. At the end of 1986, this project had a staff of 120, of which 66 were plant operators. Revenues from rentals totaled M\$3.9 million in 1986, down 17% from the previous year.

In addition, the BPMB runs entrepreneur training programs jointly with MARA, the National Productivity Center (NPC), and other organizations. By the end of 1986, 1540 managers had undergone training. Of these, 233 borrowed a total of M\$14 million in funds from the BPMB to start or expand their businesses. Looking at just 1986, 445 managers underwent training, of which 23 received financial assistance from the BPMB totaling M\$1.2 million.

The BPMB has a total staff of 470 (as of the end of 1986) and exerts effort in their training. It has even dispatched personnel to Japanese banks for training there. Further, it has sent personnel for training at South Korean banks.

### (3) Other Development Banks

In addition to the above two banks, there are the Bank Kemajuan and the Bank Pertanian development banks. The former provides engineering loans for the shipbuilding and heavy machinery and chemical industries and export credits for capital assets. The latter extends agricultural loans along with the National Agricultural Policy. In addition, regional development is being funded by the Saba Development Bank and the Borneo Development Corporation.

The following table shows a breakdown of the financing of the industrial sector. The banking system provided the industrial sector with M\$10,517 million in funding as of the end of 1987, of which the commercial banks provided 87%. Government-related institutions provided industry with M\$642 million in loans, of which MIDF accounted for the major portion.

Note that the ASEAN Japan Development Fund (AJDF) is scheduled to extend the portion of its US\$2 billion in funding directed to Malaysia to individual private firms through the above four development banks.

### (4) New Investment Fund

Other institutional financing engaged in by the Bank Negara include the New Investment Fund (NIF) and the Credit Guarantee Corporation (CGC).

The NIF was established in September 1985 with an initial funding of M\$1 billion for the purpose of promoting new capital investment in the country. However, it reached its limits at the end of December 1987 in all but some special categories and thus abolished loans to the manufacturing and tourism sectors.

The interest rates on the loans are the funding rate (the current funding of the Bank Negara is 5%) plus a margin of 1.5% and further another 1.25% as loan risk, imposed by the commercial banks. Therefore, the maximum lending rate of the commercial banks is 7.75%. The commercial banks are responsible for giving credit.

The loan conditions are a maximum of 75% of the project cost or M\$5 million per project and a repayment period of up to 5 years.

According to the Bank Negara, the NIF was cut off at the end of December 1987 because the commercial bank interest rates were low and the money supply loose, so the timing for cutting it off was good.

At the start of the NIF, only the commercial banks could apply for the fund; but starting from February 1986, approval was given to applications by merchant banks, the Malaysian Industrial Development Finance (MIDF), and the Bank Kemajuan as well.

The following table shows the interest rates (Table III.2-17).

A look at the approvals of the NIF at the end of June 1987 by industrial sector shows the manufacturing sector accounting for M\$585.7 million, or 67.7% of the total approvals (M\$865.7 million).

A look at the number of loan cases by type of bank shows 16 regional commercial banks accounting for 87 cases (35.7% of the total 244 cases), eight foreign banks accounting for 82 cases (33.6%), and two development banks for 49 cases (20 %).

Further, a look at the NIF approvals to non-resident controlled companies (NRCC) shows the NRCCs accounting for 35.6% of total approvals, or M\$307.8 million. That is, non-resident controlled companies used over one-third of the funds (Table III.2-19).

A look by manufacturing field shows electrical goods accounting for 19 approved applications, out of a total of 180, metal industries for 18, etc. (Table III.2-20).

The NIF offered loans with low interest rates aimed primarily at the manufacturing industries and thus was very popular among private businesses. Since being cut off in December 1987, there have been strong calls for its restoration, but Governor Tan Sri Jaffar Hussein of the Bank Negara, in a press conference at the end of March 1988, stated that commercial interest rates were sufficiently lowered (the current lending rate of commercial banks is 9.7 %), so there was no need for restoring the NIF.

### III.2-17 NIF Lending and Funding Rates

Effective	Maximum Lending Rate	Funding Rate
	%per annum	
September 17, 1985	11.00	8.25
October 24, 1986	10.00	7.25
February 18, 1987	9.00	6.25
April 1, 1987	8.25	5.50
June 1, 1987	7.75	5.00

Source: Bank Negara Malaysia Quarterly Bulletin, September 1987

### Table III.2-18 NIF Approvals by Sector

Sector	Projects	Applications		Project Cost	Amount Approved
	Pproved	No.	% of Total		
		No.	% of Total	\$million	
Agriculture	51	56	23.7	694.2	246.9
Manufacturing	161	180	73.5	1,011.2	585.7
Touism	6	8	2.8	57.5	33.1
Mining	-	-	-	-	-
<b>TOTAL</b>	<b>218</b>	<b>244</b>	<b>100.0</b>	<b>1,762.9</b>	<b>865.7</b>

Source: Bank Negara Malaysia Quarterly Bulletin, September 1987



**Table III.2-19 NIF Loans to Foreign Affiliated Companies**

Banks					
	Domestic	Foreign	Merchant	Development	Total
Project					
Cost	288.5	126.6	87.5	18.1	520.7
Amount					
Approved (\$m)	157.4	104.9	34.3	11.2	307.8
% of Total					
Approved	(18.2)	(12.1)	(4.0)	(1.3)	(35.6)
No. of					
Applications	23	20	11	6	60
of Which	Project	Amount	No. of		
	Cost	Approved	Applications		
		\$million			
Agriculture	27.8	15.9	5		
Manufacturing	492.9	291.9	55		
TOTAL	520.7	307.8	60		

**Table III.2-20 Breakdown of NIF Loans  
to Manufacturing Sector**

Product Description	Project Cost	Amount Approved \$m	% of Amount Approved	Draw- down \$m	No. of Applications	No. of Projects
Processing	102.9	64.3	10.9	48.4	18	18
Food	79.0	37.5	6.4	21.6	26	22
Beverages	7.9	5.8	0.9	4.8	2	2
Textiles	37.5	22.7	3.9	11.5	7	6
Wood Products	14.4	8.9	1.5	0.4	9	9
Paper Products	8.6	6.0	1.2	5.5	8	8
Printing	18.8	13.8	2.4	13.8	3	3
Chemicals	54.6	20.0	3.4	7.5	9	8
Petroleum	3.3	2.4	0.4	-	1	1
Rubber Goods	28.1	17.5	3.0	7.4	11	11
Plastic	29.8	14.0	2.4	9.8	10	9
Non Metallic	54.6	26.7	4.6	14.3	13	12
Metal						
Industries	177.2	96.6	16.5	46.0	18	18
Machinery	19.0	11.7	2.0	11.7	4	3
Electrical	297.4	207.7	35.4	96.3	28	19
Transport						
Equipment	12.5	4.9	0.8	3.9	7	6
Others	65.7	25.2	4.3	6.8	6	6
<b>TOTAL</b>	<b>1,011.2</b>	<b>585.7</b>	<b>100.0</b>	<b>309.8</b>	<b>180</b>	<b>161</b>

Totals do not add up due to rounding.

#### (5) Credit Guarantee Corporation (CGC)

The Credit Guarantee Corporation was established in 1972 under the Company act of 1965 so as to facilitate financing to SMIs with low credit ratings. CGC is a government-affiliated financial institution owned 20% by the Bank Negara and the remainder by 38 commercial banks. It functions to guarantee loans made by commercial banks to SMIs with capitals of less than M\$250,000. SMIs generally are large business risks and commercial banks are reluctant to lend them money. The CGC was established to eliminate this problem. The commercial banks can obtain a guarantee of 60% of the loans by paying the CGC a fee of 0.5%.

Three types of loans are provided to SMIs based on the CGC guarantees:

- (1) General Guarantee Scheme (GGS)
- (2) Special Loan Scheme (SLS)
- (3) Hawkers and Petty Traders Loan Scheme (HPT)

The General Guarantee Scheme was established in 1973 and covers loans made by over drafts or loans on deed. The loan ceiling is M\$200,000 for Bumiputra companies and M\$100,000 for non-Bumiputra companies. Also covered are clear basis loans of under M\$30,000.

The Special Loan Scheme was started in 1981 and was meant to promote loans to SMIs on a clear basis. The scheme covers enterprises with a paid-in capital of M\$250,000 or less and total credit ceilings of M\$250,000 or less.

The Hawkers and Petty Traders Loan Scheme was started in the middle of 1986 and is run through the Bumiputra Bank, Malayan Banking Bhd., and another 2 banks. The scheme was started to enable unemployed to obtain jobs at outside stalls and other small operations. M\$30 million in funding was provided for this scheme from the NIF. The loan ceiling is a low M\$2,000 (minimum M\$500), the interest rate 4% a year, and the maximum repayment term 3 years. No collateral is required.

Out of the M\$750.48 million in loans outstanding as of the end of 1986, the SLS accounted for M\$642.89 million (85.7%). A total of 397 loans worth M\$13.34 million were extended in 1985, but this fell to 337 loans worth M\$11.67 million in 1986, i.e., loans under the SLS scheme have been falling. A look at the loans under the SLS in 1986 by industrial sector shows business loans (primarily to retailers and outside stalls) accounting for 5854 cases worth M\$104 million, industrial loans 337 cases worth M\$12 million, and agricultural loans 499 cases worth M\$11 million. Business loans thus account for 87.5% of the loan cases and 82% of the loan value. In other words, industrial loans account for just a small 10%. A breakdown of the industrial loans by industry

shows most going to building materials, wood products and furniture, and food. Loans to the metal industry accounted for only M\$480,000 (1986).

The issue for the future will be how to promote loans to the SMIs which constitute the Malaysian supporting industries.

According to the CGC, there are plans to combine the present three schemes into one. Further, since there has been slow growth in the loans of the CGC schemes, due to the sluggishness of domestic business in general, there are new plans being considered so as to facilitate loans by commercial banks through the positive uncovering of promising SMI projects and provision of guarantees by the CGC.

The interest rate for the CGS and SLS was 10% in 1986, but was lowered to 9% from April 1, 1987. Further, as mentioned earlier, the commercial banks are committed by regulations of the Bank Negara to provide a certain amount of loans to the SMIs based on the CGC schemes, but there are in fact many banks which have not been able to meet their commitments.

The CGC has a staff of 46. It engages in exchanges of opinion with the credit guarantee related organizations of the SMIs of Japan and reportedly has plans to establish an association of similar guarantee organizations of the ASEAN nations.