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Development and Enhancement of Supporting Industries In Malaysia

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1. Introduction

Although it is one of the East Asian Miracle countries, Malaysia is now in an economic depression as a result of the economic crisis prevailing in East Asia. This country needs to move into a new stage of industrialization by improving and solving major issues at hand. One of major issues in Malaysian industries is the weakness of supporting industries and shortage of industrial links. Supporting industries (SIs) are small and medium scale industries (SMIs) in general, therefore the weakness of SMIs means that of SIs in Malaysia.

With above perspective in mind, this report will introduce the development and enhancement of supporting industries in Malaysia. Starting from an overview of major promotion policies and measures, some evaluation on these will be made through case studies and field surveys. Finally, tentative recommendations will be made in the last part of the report.

2. Promotion Policies and Measures

2.1. FDI Promotion by MIDA

For the promotion of foreign direct investment, tax incentives by ways of pioneer status and ITA (Investment Tax Allowance) are given to the following sub-sectors and products by MIDA (Malaysian Industrial Development Authority).

(1) manufacturing machinery and components thereof

(2) manufacturing transport equipment, and components and accessories thereof

(3) supporting industries and products thereof

(4) manufacturing electrical and electronic equipment, and parts and components thereof

(5) manufacturing plastic products

Tax incentives are 5 years tax respite and corporate tax levied to 30% of income. For projects approved in the states of Sabah and Sarawak and east coast areas of the Malaysian Peninsula, an additional 5 years tax respite will be given and corporate tax levied to 15% of income.

With regard to the promotion of FDIs in dies and molds, precision and high-tech parts, etc., Premier Choice Sdn. Bhd. was set up in 1995 to arrange for joint ventures for SMIs in Malaysia.

Effective on 18 Jan. 1998, a new definition for SMIs in the manufacturing sector was announced as follows:

- An SMI is defined as a company with not more then 150 employees and with an annual sales turnover not exceeding RM25 million.
- Administratively, the demarcation between a small and medium industry

is:

Small Company: a company with not more than 50 full time employees or with an annual sales turnover of not more than RM10 million.

Medium Company: a company with between 51 and 150 full time employees or with an annual sales turnover of RM10 million to RM25 million.

Small Industries (SIs) : manufacturing establishments employing between 5 to 50 employees or with shareholder funds of up to RM500,000 (US$200,000).

Medium Industries (MIs) : manufacturing establishments with share-holder funds of between RM500,000 (US$200,000) and RM2.5 million (US$1.0 million) or employing 50 to 75 full-time employees.

2.2. Development Programs for SMIs

The early years of development of SMIs were undertaken by the Ministry of International Trade and Industry (MITI). MITI acted as the “leading agency” for the following assistance programs for SMIs in the manufacturing sector.

(1) Vender Development Program

The Vendor Development Program (VDP) is an industrial marketing program aimed

at developing Malaysian SMIs as reliable manufacturers and suppliers of industrial components, machinery, equipment and related industrial services required by large enterprises and MNCs. It also provides integration and links between SMIs and large enterprises, MNCs and financial institutions. In this connection, the program includes the following schemes: -

The PROTON Components Scheme – This is a special scheme launched on 14 December 1988 with Perusahaan Otomobile Nasional Berhad in the automotive sector.

The Electrical and Electronics Components Scheme - launched on 8 June 1992 with Sharp-Roxy Appliances Corp (M) Sdn Bnd and Sapura Holdings Sdn Bnd as the anchor companies to develop SMIs in electrical and electronics sectors.

As of 20 April 1993, the VDP was expanded under a new concept referred to as the “Tripartite Concept”. Under this concept, MITI assume the role of coordinator, the MNCs or large local companies that of an Anchor Company that provides market, and the financial institutions or banks as the third party, which will provide the necessary funding. As of the end of October 1994, it was reported that a total of 40 MNCs and financial institutions had joined the VDP.

(2) Subcontract Exchange Scheme

Subcontract Exchange is a computerized database of information on SMIs (as vendors) and large enterprises/MNCs (as buyers) in prioritized sectors, such as automotive, electrical and electronics, wood based, rubber based, plastic and light engineering.

The objective of the Exchange is to provide information on subcontracting opportunities and to identify suitable SMIs to fulfill the requirements of large enterprises/MNCs. Through these subcontracting links, large enterprises will create industrial markets to SMIs in manufacturing and related support industries.

(3) SMI EXPO and Industrial Fairs

The main objective of this program is to assist SMI manufacturers to expand their market and to enter new markets. Activities under this program include special promotions, product adaptation, seminars, workshops and participation in trade fairs and expositions at local, national, and international levels. A national level Expo for SMIs is held annually.

(4) Product and Market Segment Studies

The objective of this exercise is to enable SMI manufacturers and entrepreneurs to obtain relevant information on potential products and processes that can be adopted for their business ventures. With the assistance of institutions of higher learning, foreign economic cooperation agencies and private consulting firms performed a number of product and market segment studies intermittently over the past 2-3 years. JICA for example, is reported to have undertaken a study of supporting industries in the electrical and electronics and automobile sectors.

All these market promotion packages were introduced during the 1980s and early 1990s for the further enhancement of the contribution of SMIs to industrial development. Then, in May 1996, the Malaysian government established the Small

and Medium Industries Development Corporation (SMIDEC) to promote technology acquisition and research and development (R&D) commercialization, and introduced an incentive scheme for setting up International Procurement Centres (IPCs).

2.3. Small and Medium Industries Development Corporation (SMIDEC)

The small and Medium Industries Development Corporation was established in 1996. The establishment of SMIDEC was in recognition of the need for a specialized agency to further promote the development of Small and Medium Industries (SMIs) through the provision of advisory services, fiscal and financial assistance, infrastructural facilities, market access and other support programs.

SMIDEC strives to create resilient and efficient SMIs that are able to compete in the liberalized market. SMIDEC will promote SMIs to be an integral part of the national industrialization program and to become global and world-class manufacturers.

SMIDEC will serve as a national focal point in the overall development program for SMIs in Malaysia.

Apart from existing programs for SMI development, SMIDEC, as a specialized agency, has formulated six new programs aimed at developing Malaysian SMIs.

(1) Industrial Linkage Program (ILP)

ILP is a cluster-based industrial development program under Industrial Master Plan 2 (IMP 2, 1996-2005). Through ILP, local SMIs will be further promoted and nurtured into becoming reliable manufacturers and suppliers of critical components and services to the larger companies of MNCs which are involved in the core

manufacturing activities within a particular industry cluster as well as across other clusters. In this way, ILP contributes to the enhancing of value-added and the strengthening of industrial bases. Priority areas consist of: -

Electrical and Electronics Industry Group, which consists of following industry clusters: -

- consumer electronics
- semiconductor and electronic components
- computer, peripherals and apparatus
- electrical / electronic appliances and apparatus

Transportation Equipment Industry Group, which consists of the following clusters: -

- automotive and motorcycle
- marine
- aerospace

Machinery and Engineering Industry Group, which consists of: -

- machines and equipment
- machine tools
- molds and dies
- material handling and utilities

Other industry groups include: -

- chemical and petrochemical
- resource and agro-based

(2) Technology Development Program (TDP)

To develop a dynamic and competitive SMIs sector, it is critical that SMIs enhance their technological capability and capacity and undertake innovative R&D as well as adopt the best possible management practices.

SMIDEC will identify and support technical and research institutions as panel consultants for SMIs or undertake R&D for selected sectors.

RM100 million has been allocated under the Seventh Malaysian Plan (7^{th} MP, 1996-2000) to support the program whereby assistance will be given in the form of matching grants and financing of research and R&D projects.

(3) Technology Acquisition Program

This program is aimed at developing in-house, indigenous R&D capabilities and to assist SMIs in acquiring technology through possible joint ventures with larger companies.

The acquisition of state-of-the-art technology will help develop technology-oriented SMI companies with product development, designing and prototyping capabilities.

SMIDEC will provide seed money or direct financial assistance to acquire technology for SMIs.

(4) Upgrading of Skills Program

Skill Development/Upgrading Program will enhance the productivity and efficiency of SMIs, and in the long term, enable them to assume the role of reliable and efficient

intermediate suppliers.

The aim of the program is to upgrade knowledge and enhance technical and managerial skills among SMIs in critical areas such as electronics and information technology, industrial design and engineering, TQM, marketing and packaging.

SMIDEC, in collaboration with existing trading and technical institutions, industry associations and larger companies, will organize workshops, business clinics, seminars, training modules and attachment programs in suitable manufacturing establishments.

(5) Export Development Program

The Export Development Program is being formulated to develop and nurture export-oriented SMIs to eventually become world class manufacturers. The program will be conducted in collaboration with the Malaysian External Trade Development Corporation (MATRADE).

The EDP is to be promoted in the following manner: -

Establishment of SMI-Link

Exhibition / Expo

Trade and Investment Missions

Information System Center

SMI Infonet

Resource Center

Export through General Trading Corporations (GTCs)

(6) Infrastructure Development Program

This program is formulated to assist SMIs purchase or lease affordable factories in industrial sites. These industrial sites are equipped with necessary common user facilities such as testing lab, waste disposal, central warehouse, administration center and also housing facilities to attract SMIs to move into these areas.

Under the 7th MP, the Government has allocated RM100 million to finance the establishment of a SMIs industrial park which will be identified by SMIDEC in conjunction with the various State Governments and MIEL (Malaysian Industrial Estates Sendirian Berhad).

3. Implications from Case Study and Field Survey

3.1. A Case Study of Technical Cooperation From Japan

JETRO has extended various kinds of industrial cooperation to ASEAN countries under the “Asian Cooperation Scheme” since early 1980s. During the initial stages, sub-sectors covered in this cooperation scheme were mainly labour intensive industries like garments and wooden furniture. Recently, in line with the development of the machinery and equipment industry in ASEAN countries including Malaysia, JETRO’s cooperation has placed emphasis on high technology industries such as automobile, electrical and electronics.

For the enhancement of these industries, which are assembling many parts and components, supporting industries are quite important in terms of value addition and quality of final products. Generally speaking, supporting industries have not yet developed in developing countries including ASEAN countries. In reaction to this,

JETRO has recently started new cooperation schemes to the boost the development of supporting industries in ASEAN countries.

There are three kinds of cooperation schemes for supporting industries as follows:

(1) Promotion of FDI by foreign manufacturers of parts and components

(2) Technical guidance by Japanese experts to local manufacturers

(3) Arrangements made for business meetings between assemblers and parts suppliers

Among the cooperation schemes above, there might be good lessons to be learnt from (2) technical guidance to local manufacturers by Japanese experts over the last three years, because there have been remarkable improvements in operations of local manufacturers concerned. More than 20 local manufacturers of supporting industries were selected for technical guidance by Japanese experts, in consultation with Malaysian governmental organizations such as MIDA and SMIDEC. Technical guidance schemes comprise of factory diagnosis in Malaysia by Japanese experts twice a year for three consecutive years and factory visits in Japan by Malaysian managers or engineers.

Major remarkable achievements or improvements under this scheme are summarized below.

(1) Six companies among more than twenty companies showed remarkable progress in quality control, productivity and competitiveness of their products. They are now regarded as model or leading suppliers of supporting industries in Malaysia who could sell their products to Japanese

assemblers there or foreign customers overseas. Examples of operational improvements are shown in the Table 1.

(2) Common basic points noticed in model companies are the adoption of 5S movement, maintenance of dies and molds, and preparation for gauges and measuring apparatus. 5S movement is the basis for Japanese management and means “A Clean Workplace is for Productivity, Quality, Cost Down, Delivery on Time, Safety, Morale”.

(3) It is desirable that technical guidance of this kind be continued and expanded. At the same time, model companies are expected to play a leading role in Malaysian supporting industries. Governmental organizations like MIDA and SMIDEC could support activities by model companies to others for the enhancement of supporting industries as a whole.

Table 1. Examples of Operational Improvement by Malaysian SMIs in Supporting Industries

	Year	No. of Employees	Sales (Million Ringit)	Rate of Inferiority (%)
A	1993	77	1.5	2
	94	113	5.0	2
	95	141	15.0	2
	96	125	17.0	1.9
	97	184	31.0	1.7
B	1993 / 94	10	1.5	—
	94 / 95	10	3.6	—
	95 / 96	25	7.5	0.3
	96 / 97	45	11.0	0.3
	97 / 98	71	17.5	0.3
C	94	70	2.0	5
	95	100	6.0	4
	96	150	10.0	3
	97	130	12.0	0.25
	98	97	15.0	0.10

Note: A and B companies are located in Selangore state and engaged in press stamping and die manufacturing. C company is located in Penang state and is engaged in manufacturing dies.

3.2. A Field Survey of Supporting Industries in Malaysia

A field survey on supporting industries in Thailand, Malaysia and Singapore was conducted late in 1998 to overview recent development and major issues for further development. Under the limitation of schedule management, dies and molds were paid special attention in the field study among various supporting industries.

There is no unified definition of supporting industry. It is regarded in general as the industry that supports the assembly of final products through the supply of parts

and components or other intermediate goods. In other words, final product industries like automobile and electrical or electronic equipment manufacturing require various kinds of supporting industries and the latter are quite important for the development of the former.

Among various kinds of supporting industries, dies and molds are most important because these are basic tools for the mass production of parts and components. The production of dies and molds requires technical know-how and experience, both of which are lacking in most of ASEAN countries, so the status of die and mold production is less developed than that of other supporting industries.

In the field survey, efforts were made to identify major issues for improvement and invite some recommendations on foreign collaborations through interviews with key persons of local and foreign manufacturers of dies and molds, their association, governmental organizations like MIDA (Malaysian Industrial Development Authority) and TPM (Technology Park Malaysia Corp.), and others. Although further studies will be required for confirmation and elaboration, the major findings or recommendations are summarized as follows.

(1) MIDA

There are no accurate supply and demand statistics compiled. According to MIDA approvals for incentives, 300 firms were approved in production of dies and molds and 150 firms were in operation as of the end of 1997. In addition to these, more SMI (small and medium scale industry) firms, which are not covered by MIDA, are engaged in production.

Although domestic demand of supporting industries appears sluggish because of the economic crisis, imports of dies and molds have been increasing as shown in Table 2. The reason behind this trend seems to be the limitation of domestic production, particularly that of dies and molds for the electrical and electronic equipment industry. Import dependency ratio against domestic demand is estimated at some 70 percent at present.

Supporting industries are promoted for priority investment under various incentives. Those for automobiles have been developed to some extent, but those for electrical and electronic equipment not yet developed enough compared with automobiles.

Table 2. Malaysian Import of Dies and Molds by Types (RM Million)

Year	Plastic / Rubber Products	Metal Products	Glass Products	Mineral Material Products	Total
1990	209.31	127.02	7.16	15.80	359.29
1991	272.50	152.60	10.83	19.70	455.63
1992	349.70	261.47	7.60	41.16	659.93
1993	426.07	223.91	8.15	49.93	708.06
1994	546.26	225.17	17.08	61.18	849.69
1995	595.72	302.68	28.67	62.17	989.24
1996	556.61	301.61	25.87	55.52	939.61
1997 Provisional	583.06	309.76	18.33	76.33	987.48

(Source) MIDA

(2) TPM

The Malaysian government MITI set up this R&D institute originally, and in 1996 it was privatized into the present corporation for assisting private companies. Located in MSC (Multimedia Super Corridor) and equipped with high-tech machinery, TPM is rendering R&D of high technology, skill training, incubator functions, etc. When we visited TPM, it seemed that there might be few private companies users of these functions.

(3) Manufacturers

This vendor scheme covers or targets mainly Bumiputra or Malay sub-contractors and not secondary or thirdly sub-contractors in support industries. Die and mold making is tough work and is done mostly by Chinese firms, which are not entitled to get incentives under the scheme.

Die and mold manufacturing in Malaysia has not yet developed enough and there is weakness in cost competitiveness. When viewed by types, they could make a better quality of plastic molds, but they could not make press dies, or precision ones for electronic equipment in particular. Taking the expansion of demand into account, most of the local manufacturers interviewed expressed strong concerns of technical tie-ups and joint ventures with Japanese manufacturers.

One reputed Japanese manufacturer of precision press dies located in Selangore state pointed out major issues for local production. These are shortage of supporting

industries for die and mold making, lack of understanding of basic technology, and weak cooperation among governmental institutions, industrial associations, respective firms and academic people. Basic technology includes manual machining operations for die making and maintenance, drafting expertise, or experience in the application of CAD/CAM apparatus. In many cases, governmental officials in charge and managers or engineers are said to ignore basic technology or skills, but they expect to get high technology instead.

(4) Industrial Associations

There are two important associations: SAFTMADA, Selangore and Federal Territory Mold and Die Association and FOMFEIA, Federation of Malaysia Foundary and Engineering Industry Association. SAFTMADA is the Malaysian member of FADMA, Federation of Asian Die and Mold Association. SAFTMADA is planning now to cover all territories in Malaysia. Although being not so strong an industrial association, SAFTMADA is compiling a directory of die and mold businesses in Malaysia, claimed to be the first directory of its kind in this country.

(5) Intra-ASEAN Cooperation

Supporting industry manufacturers, whether local or foreign, expressed strong requests for implementation of AFTA and AICO schemes. If AFTA and AICO were implemented, they could sell their products to the ASEAN-wide market instead of segmented market of each country. Intra-ASEAN cooperation is useful for the promotion of supporting industries as well.

When it comes to intra-ASEAN cooperation, other areas like technical training could be implemented. In addition to their respective training facilities, member countries could send trainees to training facilities in other countries. The Institute of Technical Education in Singapore seems to be a good example of cooperation in technical training, because this Institute has accepted many foreign trainees already.

4. Tentative Recommendations on Development of Supporting Industries

1. The importance of supporting industries in assembly industries such as automobiles, electrical and electronic equipment is now acknowledged in many ASEAN countries, including Thailand and Malaysia. These countries adopt various kinds of promotional measures and policies for the development of supporting industries, and foreign assemblers are trying to procure parts and components locally. There seems a good potential in principle, therefore, for the development of supporting industries in the future.

2. Supporting industries have no unified definition and cover a very wide range of parts and components used in the assembly of final products. Local production of supporting industries has been increasing recently, but that of dies and molds has been limited and local production ratio against demand accounts for only about 30 percent in total. Domestic production of dies and molds for automobiles has shown a remarkable increase under vendor development schemes, but for the electrical and

electronic equipment industry, domestic production has been small and domestic demand has been met by imports in the case of precision press stamping dies in Malaysia.

3. Malaysia needs more and improved promotional measures for the development of supporting industries, particularly with dies and molds. These measures include continuation or follow-up of promotional policies, technical cooperation from foreign countries, better coordination among governmental organizations concerned, industrial associations and SMIs, etc. As for industrial associations, activation of SAFTMADA and FADMA would be desirable, and there might be room for Japan or JETRO to provide support as well.

(Note) Major sources of information on 2. Promotion Policies and Measures are various publications by MIDA and the report by JETRO entitled “Electric and Electronics Industries In Selected APEC Economies－Focusing on Small and Medium-sized Enterprises”, March 1999.